Engin Karadağ *Editor*

Leadership and Organizational Outcomes

Meta-Analysis of Empirical Studies

Springer

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Preface

A newly married couple decides to go on a trip in Cappadocia region [in our neighborhood]. While they are walking around underground cities, a turnout appears suddenly. They also realize that there are no signposts. The young man starts to shout in a hurry:

Is there anybody? Help!

They only hear an echo of their own voice for a while. Around 15 min later, they hear someone saying:

Hellooo! You are lost!

Being demoralized, the man *stamps his foot in frustration*. On the other hand, the young woman shrugs her shoulders calmly:

This voice must belong to a *scientist*.

Being vexed by the woman's calmness, the young man asks:

Come on! How do you know that?

'I have three reasons for this', the woman says and continues:

First of all, the response takes longer than it takes to arrive.
Secondly, he is right, we are lost.
Thirdly, the response is no use for anyone.

The reason I start with this narrative for the preface is that although there is a considerable increase in the volume of research in the field of leadership, I am one of those who believe that there is still a significant disconnect between several approaches and results. Being motivated by this thought, we focused on the effect of leadership on organizational outcomes and tried to summarize the current research findings in the field. We observe that there is a considerable amount of independent research on this specific issue, and the studies have conflicting results in some cases. This is an important challenge for research in organizational studies and also indicates at the need for inclusive and interpretive studies. Inclusionary and reliable studies need to be conducted in order to interpret leadership literature

and suggest new pathways for further studies. In general, results from studies in social sciences drawn from either a single study or experiment cannot be expected to cover a broad range of social phenomena. Usually, researchers conduct studies in a restricted area due to the restrictions placed by cost, time, and location. From this point of view, it is difficult to reach coherent or consistent findings in the literature produced in different contexts, periods, and from different theoretical perspectives. Meta-analysis allows us to show the big picture to the researchers by analyzing and combining the findings from different independent studies. Despite the existence of meta-analytic studies on the relationship between leadership and organizational outcomes in the literature, the scope of those studies is narrow. Therefore, this in-depth book compiles various studies examining the relationship between the leadership and 13 organizational outcomes separately. The philosophy behind this book is to direct future research and practices rather than addressing the limits of current studies.

We went through a complex process to arrange independent chapters and to produce this book. Firstly, all writers gathered and exchanged their ideas regarding the status of our weekly assigned tasks. We also made suggestions in relation to the changes that could be made in the planning. Secondly, we formed a common framework for each chapter, made the final changes to the chapter titles, eliminated any redundancies, and paid attention to include key topics. Thirdly, we revised the chapters and made necessary corrections. When problems arose, we either handled them on our own or consulted an expert. Finally, each one of us read and revised all chapters independently for coherence and consistency.

In spite of our rigorous efforts, we may still have some mistakes or shortcomings in the book. We may correct these in the future editions of the book if you would care to share your views, opinions, or suggestions with us. Finally, all the detailed tables and figures that we have been unable to include in the book may be reached at the book's Web site: www.leadershipeffect.org

Eskişehir, Turkey Engin Karadağ

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Conceptual Perspectives on Leadership

Nazım Çoğaltay

Abstract From a historical development perspective, numerous approaches and theories based on these approaches have been developed to explain the nature of leadership. We can state that each approach or theory has brought about a different perspective in terms of the conceptualization of leadership. The *trait approach*, *behavioral approach*, *situational approach and contemporary approach* complement one another chronologically and are all valid in certain ways. The main reason for the intensive research on the concept of leadership and the various approaches and theories is that the results are either directly or indirectly observed in organizations. A leader and his/her behaviors affect the performance of employees, job satisfaction, perceptions of justice, sense of trust toward one another and toward the organization, and—more essentially and generally—the culture and atmosphere that determine the entire dynamic of an organization. In this chapter, the concept of the leadership is explained by associating to organizational outputs. The leadership and organizational outputs are tried to be analyzed theoretically in the axis of some research findings.

1 Introduction

Although leadership has been the subject of research in various areas in the social sciences, consensus regarding its definition has not been reached. One of the reasons for this lack of consensus stems from the differences in the reflection and priority of leadership in different areas, i.e., the concept of leadership is shaped according to the meaning attributed to it by individuals, similar to the shaping of concepts such as democracy, love and peace (Nourthouse, 2010). In other words, leadership is '*similar to beauty; it is hard to define, but you know it when you see it*' (Bennis, 2003).

Leadership is a concept related to management science and working life as well as to psychology, sociology and similar sciences (Şişman 2011), and it is possible to

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discuss four components of leadership: (1) leadership is a process, (2) it is required to create impact, (3) it is emergent in groups, and (4) it requires drawing attention to common goals (Nourthouse, 2010). Kouzes and Posner (2002) discussed leadership in five fundamental practices: (1) being a role model, (2) being a source of inspiration for a shared vision, (3) managing a process, (4) motivating others and (5) providing encouragement.

2 Concepts of Leadership

The origins of the terms leader, leadership and lead are from the Anglo-Saxon term 'lead,' which means a road, a path or the route of a ship at sea. To go, to travel or to lead or to have done so are the causative forms related to the verb 'leaden'. The 'ship' suffix in 'leadership' stems from the term 'shape', which means to give shape to something. As demonstrated by the root of the word, leadership is a concept that can be related to a journey (Adair, 2012). For this reason, a leader is a person who leads the path for the persons with whom she/he travels. This steersman metaphor remains valid today despite different views on the precise role of leaders. It is possible to use two groups to describe those who argue for this metaphor: (1) those who view leaders as the persons moving chess pieces on a human scale and (2) those who see leaders as the people who convince others to join in the journey by addressing their collective imagination. While the first type of leader can generally only mobilize people, the second type of leader motivates employees to commit their loyalty in the fullest sense in a large-scale way (Vries, 2007).

Leadership is such a concept that, when examined from different perspectives, can be analyzed in different forms and defined various ways. Generally, it is possible to list four components of leadership (Nourthouse, 2010):

- *Leadership is a process*: Leadership exists through the dual interaction between a leader and his/her followers. In other words, the leader is the one who both influences and is influenced by his/her followers. This component underlines that leadership is regarded as both a linear effect and an interaction process.
- *Leadership requires effect*: This component is the sine qua non of leadership, as it is not possible to mention leadership without the effect. Maxwell (1993) stated that although everyone has an idea of the definition of leadership, few people actually grasp it, and although many people aspire to be leadership, few manage to become leaders. As a summary of his 40 years of leadership studies, he defined leadership as impact—neither more nor less. This impact is the ability to attract followers (Maxwell, 1993).
- *Leadership is emergent in groups*: This component describes the setting in which leadership emerges. Leadership involves having a specific group reach a common goal. This specific group can be a small group, a task team or a large group. In any case, the leader is responsible for influencing the group in consideration of the shared common goals.

- *Leadership requires drawing attention to common goals*: A leader is the person who directs the energy of group members to realize common goals. In this sense, the leader must propose goals in a clear, understandable and transparent manner and ensure that they are acceptable for all group members. In addition, she/he must arrange activities that enable the clear understanding of these common goals by all members.

According to Palestini (2009), the first responsibility of a leader is to create a realistic vision, and the second responsibility is to express gratitude. Palestini argued that a leader must be the servant of the servants between these two responsibilities. In this context, Palestini underlined that being a leader means that having opportunities that can make a significant difference in the lives of followers; in short, the leader addresses the heart of the matter and alleviates pain rather than creating it. Robbins and Judge (2012) defined leadership as the ability to influence a group in achieving its goals and vision. The source of this impact either can be a formal right extended to administrative positions in the organization or can emerge simultaneously. In this context, not all executives are not expected to be leaders, and not all leaders should be executives (Koçel, 2005). These two styles of leadership shall be conceptualized as follows (Nourthouse, 2010):

- *Assigned Leadership*: This type of leadership evolves based on a formal position held within an organization. Examples of this type of leadership include team leaders, executives, department heads and principals.
- *Emergent Leadership*: This type of leader is considered to be effective and influences the group through his/her natural abilities and behaviors despite lacking the power of position obtained from a formal assignment. Leadership that emerges naturally rather than through assignment leadership is more realistic.

The relationship between leadership and power is fundamental to the conceptualization of leadership. If we are to define power as the capacity or potential for impact (Nourthouse, 2010), then leadership can be defined as using power to reach the common goals set for group members (Bolman & Deal, 2008). As power is a relational concept, it emphasizes the relationships among individuals. In this sense, it is meaningless to call someone powerful on an individual level and associate him with others (Koçel, 2005). Furthermore, there are many different classifications with respect to the source of power that leaders hold. In this sense, the most widespread classification in the literature is French and Raven's classification (1959):

- *Referent Power*: This type of power is related to the love that a leader shows to followers and how they view him/her. For example, the power that a teacher holds that is appreciated by his/her students is referent power.
- *Expert Power*: This type is related to the competence and ability of a leader with respect to followers. For example, the experience of a tour guide in a foreign country is his/her expert power.

- *Legitimate Power*: This type defines the legal power that a leader holds because of his/her status. The authority that a judge exercises in the courtroom is an example of legitimate power. *Reward-based Power*: This type of power refers to the capacity to support others by rewarding them. For example, an executive may reward a high-performing employee with a bonus.
- *Coercive Power*: This power refers to the capacity to punish others. For example, a coach who does not include a player in the next game because she/he performed poorly is exercising this power.

3 Leadership Approaches, Theories and Styles

From a historical development perspective, numerous approaches and theories based on these approaches have been developed to explain the nature of leadership. We can state that each approach or theory has brought about a different perspective in terms of the conceptualization of leadership. The *trait approach, behavioral approach, situational approach and contemporary approach* complement one another chronologically and are all valid in certain ways.

3.1 Trait Approach

The trait approach, which we refer to as the first approach to leadership, is one of the approaches that scientists became interested in at the beginning of the twentieth century. This approach is based on the assumption that a number of characteristics that are either inherent or subsequently gained shall make them powerful leaders. For this reason, the theories proposed by this approach are called *great man theories* in the literature (Nourthouse, 2010; Palestini, 2009).

This approach aims to explain why some people can be influential leaders while others lack this ability on the basis of individual characteristics (Keçecioğlu, 1998). This approach involves examining which individual characteristics contribute to making a great leader and emphasizes a number of personal characteristics. In his research, Stogdill (1948, 1974) proposed the most widely used leadership characteristics by combining studies undertaken to determine the characteristics of influential leaders from 1904 to 1974. The most referenced personal characteristics in the literature are enumerated as follows (Kirkpatrick & Locke, 1991; Mann, 1959; Stogdill, 1948; Zaccaro, Kemp, & Bader, 2004):

- *Intelligence*: Numerous studies have found a positive relationship between leadership and intelligence. Zaccaro et al. (2004) asserted that leaders have a higher level of intelligence than those who are not leaders. Strong verbal abilities, judgment ability and emotional intelligence are the intellectual abilities that make an individual a powerful leader.

- *Self-Confidence*: A characteristic that helps an individual to become a leader is self-confidence. This characteristic is related to the skills and abilities of a person lacking self-doubt. Self-confidence is related to a person's belief and feeling that she/he can appropriately and effectively influence others.
- *Decisiveness*: A common characteristic of many leaders is their decisiveness, which involves the capacity to struggle against obstacles and the decision to achieve a task. Its components are determination, power and initiative (Nourthouse, 2010).
- *Consistency*: This important leadership characteristic reflects honesty and reliability. With no contradictions between his/her statements and actions, this type of leader inspires confidence in others. This confidence gives power to the leader in affecting and mobilizing followers (Woolfe, 2002).
- *Sociability*: An important personal characteristic is sociability, which is the tendency of leaders to seek and find appropriate social relationships. These types of leaders are sensitive to the needs of others and interested in their welfare.

3.2 Behavioral Approach

By the mid-twentieth century, interest in great man theories had decreased gradually. It became more commonly accepted that leadership, which had been explained only through individual characteristics, is actually a more complex process. Stogdill (1948) stated that an individual cannot be a leader simply by possessing certain leadership characteristics and that there is no single form of leadership that is valid in all cases. The behavioral approach was found to have an increasing impact in leadership studies during that period. The basis for the behavioral approach is the assumption that leaders have two different types of behavior. These dual behavior types are based on studies undertaken at the Ohio State and Michigan Universities.

One of the first studies that contributed to the development of behavioral leadership theory is the leadership studies undertaken at the Ohio State University. Studies conducted on many military and civilian directors sought to determine how followers defined leaders. These studies concluded by identifying two dimensions defining leadership behavior: (1) initiating structure and (2) consideration (Palestini, 2009).

- *Initiating structure*: This dimension primarily involves the activities involved in the realization of a goal. For example, it could be stated as follows: 'by any means necessary, and the rest is mere details'. This dimension involves such behaviors as the completion of work on time, goal establishment, the organization of group members, the determination of the communication system, the determination of periods related to work and the provision of direct instructions (Koçel, 2005).

- *Consideration*: This dimension involves behaviors such as confidence and respect that a leader instills in his/her followers as well as making connections with followers. Followers see a leader as the representative of their requests and needs. This dimension is an expression of a more humanistic approach to leadership behaviors.

Research undertaken at Michigan University also contributed important studies within the scope of behavioral approach to determine leadership behaviors. These studies defined two types of leadership behavior as a result of studies of small groups: (1) employee oriented and (2) production oriented.

- *Employee oriented*: This type of leadership behavior underlines the extent of the strong humanistic relations that a leader establishes with followers. A leader perceives followers as humans rather than as machines and positions his/her behaviors by considering their personal needs and interests (Nourthouse, 2010).
- *Production oriented*: This type of leadership behavior emphasizes the technical and production dimension of work. A leader sees followers as machines that must be successful to realize organizational goals.

The results and assumptions reached by these studies at Michigan and Ohio State Universities were converted into a matrix known as the leadership grid by Blake and Mouton (1964). The details are presented in Fig. 1 (Nourthouse, 2010), and the behaviors of the leaders are explained below.

Thus, leaders exhibit two types of leadership behavior according to the grid developed by Blake and Mouton (1964): (1) production oriented and (2) human oriented. In addition, each dimension is divided into nine sections displaying the degrees related to leadership types. According to this matrix, various leadership types can easily be identified. While the 9.1 type of executive heavily emphasizes production and results, the 1.9 type of executive emphasizes the feelings of his/her followers. By contrast, a 5.5 type of leader finds a balance between these two extreme behavior types and emphasizes both the goals and feelings of his/her followers and thus finds a middle ground. This grid may help leaders to conceptualize their leadership behaviors and raise their awareness.

3.3 Situational Approach

The situational leadership approach is relevant to those who claim that personal traits and behavioral approaches are insufficient to explain the nature of leadership and the description of powerful leadership. The situational leadership approach is based on the 3-D administrative style theory of Reddin (1967). Hersey and Blanckhard (1969) developed the situational leadership theory based on Reddin's theory. As can be understood from its name, this leadership approach aims to describe leadership behavior in different situations. Thus, different situations require different leadership behaviors. In this respect, a powerful leader thoroughly

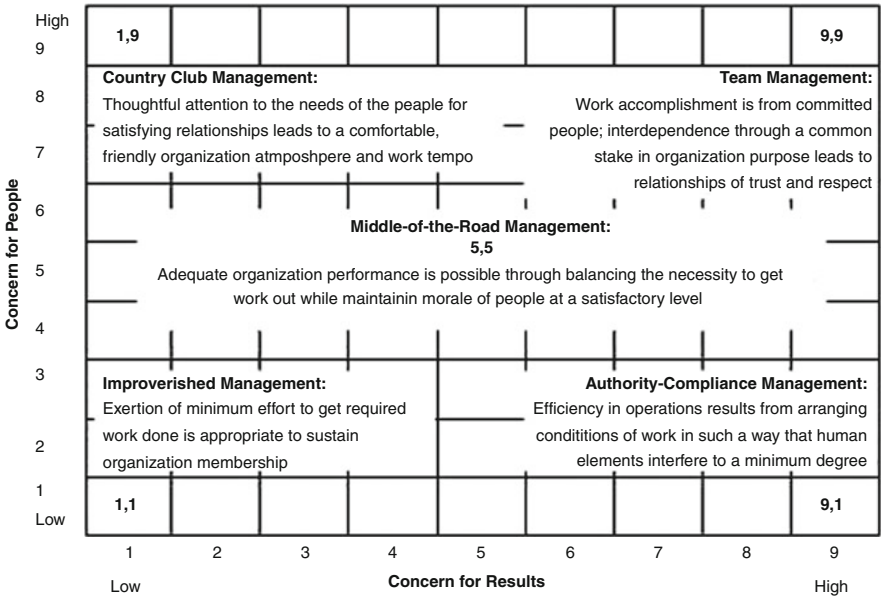

Fig. 1 Blake and Mouton's leadership grid matrix

analyzes situations or the requirements based on conditions and positions his/her leadership style according to those requirements. Two dimensions of a leader's behavior come to the fore: (1) directive behavior and (2) supportive behavior. Hersey and Blanckhard (1969) identified four different leadership styles by converting the two dimensions of leadership behavior into a coordinate system on a vertical and horizontal axis. These researchers argued that powerful leadership can be attained through the harmony between the four development levels of followers and the four leadership styles.

3.3.1 Contingency Theory

The contingency theory that Fiedler (1964, 1967) proposed was one of the first theories based on the situational leadership approach, and this leader matching theory aims to match leaders with adequate situations. This theory asserts that powerful leadership is based on the harmony among the leadership style, time and setting. The reason that it is termed contingency theory stems from the attempt to adjust leadership styles according to the present situation and the description of this adjustment (Nourthouse, 2010).

Fiedler (1964, 1967) developed this theory by examining numerous leaders working in different areas, primarily those working in the military field. Fiedler aimed to identify which type of leadership is effective for certain situations or conditions by examining the leadership styles displayed in their working

Table 1 Fiedler's contingency model

Leader-member relationship	Good				Poor			
Task structure	High		Low		High		Low	
Position power	Strong	Weak	Strong	Weak	Strong	Weak	Strong	Weak
Preferred leadership style	Low and middle LPCs		High LPCs				Low LPCs	

conditions. In short, contingency theory is a theory concerned with the relationship between styles and situations. The contingency theory model of Fiedler (1967) is presented in Table 1.

The situational variables in Fiedler's theory (1964, 1967) are determined as follows:

1. *Leader-member relations*: This situational variable is related to the group atmosphere. If there is a relationship based on trust and respect between a leader and followers and if the leader is accepted by the followers and the followers feel commitment to and confidence in the leader, then the group atmosphere is positive. In the opposite case, the group atmosphere is negative. Leader-follower relations are defined as strong when the group atmosphere is favorable and weak otherwise.
2. *Task structure*: This variable is related to the degree of structure of the work that is performed. In a structured task, the goal and work are communicated in an open and clear manner, and responsibilities are defined. The sound definition of tasks provides the leader with an opportunity to obtain effective and full control; the opposite of this situation leads to ineffectiveness and inadequate control.
3. *Position power*: This variable is related to the capacity of a leader to reward or punish followers, i.e., the authority power. If a leader has a high level of position power, then she/he can recruit, discharge or reward individuals, whereas a leader with little position power does not have sufficient authority to perform such activities.

As a result, two types of leadership styles are defined: (1) *task motivated* and (2) *relationship motivated* leadership styles. Task-motivated leaders primarily focus on the realization of organizational goals, while relationship-motivated leaders focus on developing close interpersonal relationships with their followers. Fiedler (1967) attempted to determine leadership tendencies based on the Least Preferred Co-Worker (LPC) Scale that he developed; leaders with lower grades on this scale are task motivated, and those with higher scores are relationship motivated.

3.3.2 Path-Goal Theory

Path-goal theory is related to how leaders motivate their followers to achieve specific goals. This theory was first found in the works of Evans (1970) and House (1971); thus, this theory is considered to have been developed by Evans (1970) and House (1971).

Path-goal theory underlines the relationship between a leader's style and the employees and work setting characteristics. Based on principles of the situational approach, path-goal theory argues that followers should be motivated to fulfill the determined goals (Nourthouse, 2010). A path describes a road used by ovine animals such as goats and sheep. In this sense, researchers such as Adair (2012) who attempted to define leadership with the shepherd metaphor noted that leaders have the task of finding the most appropriate path for followers. The leader is the individual who clearly proposes the path that leads to the goal, removes obstacles on the path and persuades followers to head for the path she/he has determined and motivating them.

This theory is also based on the assumption that leaders exhibit two types of dialectic behavior: (1) instructing-supportive and (2) success oriented-participatory behaviors (House & Mitchell, 1974). These types are identical to the leadership styles used in research based on the behavioral approach. In this theory, the characteristics of followers determine how they interpret the behavior of the leader. Some of the characteristics of followers are listed below (Evans, 1970; House, 1971; House & Mitchell, 1974);

- *Commitment:* Because these followers are dependent on their leader, they require support. Because they work in an uncertain setting, they also require a 'telling' leadership style. The leader must clarify and explain the appropriate path to his/her followers.
- *Control desire:* This desire has both internal and external dimensions. Followers who believe in internal control hold themselves responsible for everything that they face in their lives, while those believing in external control relate the occurrences in their lives to fate, fortune or other external forces. A participatory leader is more effective for followers with internal control. Because these followers feel responsible for the work that they perform, participation in the decision-making process motivates them. For followers who have external control, a telling leadership style is more suitable because they believe events are controlled by external forces.
- *Self-competence perceptions:* This characteristic is related to the perceptions of followers regarding whether their self-competences are sufficient to fulfill the assigned tasks. When their perceptions of their own capability increase, their need for telling leadership decreases.

3.3.3 Transformational Leadership

Transformational leadership understanding is a form of leadership understanding that has gained great importance and interest in contemporary administrative theory and research. This leadership concept was first proposed by the political scientist Burns (1978). According to this approach, leaders determine their own values that will direct their actions and the values of other individuals in the organization; thus, they develop a common and conscious behavior and action style. Transformational leaders are interested in the essence of leadership and delegate authority to other people (Owen, Hodgson, & Gazzard, 2011).

As a popular theory, transformational leadership has been the subject matter of many studies since the 1980s, and one can currently find numerous studies of this form of leadership. For this reason, transformational leadership has a central place in the literature on leadership (Nourthouse, 2010). Bass and Riggio (2006) stated that the popularity of transformational leadership stems from its emphasis on internal motivation and the development of followers, and they view this form of leadership as a change and transformation process for followers. Transformational leadership is related to emotions, values, standards and long-term goals.

Burns (1978) defined leadership in two different dimensions: (1) sustainer leadership and (2) transformational leadership. Sustainer leadership emerges as a result of the exchange between followers and the leader as a reflection of the reciprocal interest between them. An example of sustainer leadership is the following statement of politicians before elections designed to win votes: 'if I win the elections, there will not be any new taxes' (Burns, 1978). Similarly, the provision of rewards and premiums for employees by executives to encourage greater production is related to sustainer leadership (Bass & Riggio, 2006). There is an exchange between a leader and followers in terms of votes based on taxes and more product premiums that leads to the emergence of sustainer leadership. However, it should be recalled that the lack of one exchange object can leave a leader in a difficult position.

In contrast to sustainer leadership, transformational leadership is related to improvements in the performance and potential of followers. Transformational leaders have strong values and ideals; they transform themselves and transform their followers in accordance with their own changes. The strong communication between followers and leaders results in increased levels of motivation and moral value for both parties. Mahatma Gandhi is a classic example of this type of leader. Gandhi fed and developed the hopes and needs of millions of people, thus transforming them (Nourthouse, 2010), and this situation made victory inevitable. The transformational leadership model is presented in Table 2.

Transformational leadership involves improving the performance and potential of followers. A person who chooses transformational leadership should be capable of organizing one's internal values and ideals and mobilizing his/her followers by motivating them. Table 2 indicates which leadership factors are associated with each leadership dimension. The first four factors are related to transformational

Table 2 Transformational leadership model

Transformational leadership	Transactional leadership	Laissez-Faire leadership
1. Idealized influence 2. Inspirational motivation 3. Intellectual stimulation 4. Individualized consideration	5. Contingent reward 6. management-by-exception	7. Laissez-faire (nontransactions)

leadership, and the next two factors are related to sustainer leadership. The last factor refers to a leadership factor that provides an alternative to these two leadership styles. It is possible to explain these factors as follows (Bass & Riggio, 2006; Hoy & Miskel, 2010; Nourthouse, 2010):

- *Idealized effect*: This factor is related to the extent to which a leader is a role model for followers. Followers know their leaders very well and greatly envy him/her because the leader has substantial moral and ethical standards and thus implements actions appropriately.
- *Inspirational motivation*: This factor includes behaviors that can be inspirational for followers, including the expression of high expectations, the use of symbols to provide focus for followers and correct behavior sampling (Owen et al., 2011). In practice, the leader uses a number of symbols, and his/her emotional charisma motivates followers in line with the targeted success by to consider beyond their personal interests (Nourthouse, 2010).
- *Intellectual stimulation*: This factor pertains to the organization of necessary intelligence to enable followers to become creative, problem-solving individuals (Owen et al. 2011). This type of leader supports his/her followers to gain new perspectives and encourages innovative pursuits within an organization.
- *Individual support*: This factor is related to the personal support and interest shown by leaders to their followers. Such leaders thoughtfully listen to and care about their followers and consider their personal needs and interests. Such behaviors promote the formation of a supportive atmosphere in an organization.
- *Conditional reward*: This factor relates to sustainer leadership and reflects the conditional utilitarian approach shared by a leader and his/her followers. The leader gives rewards to his/her followers to reach the specified goals and in turn expects followers to be more active. Pertinent examples include employers providing rewards and politicians asking for votes.
- *Management by expectations*: This leadership factor involves such behaviors as corrective criticism, negative feedback and negative reinforcement. Such behaviors can be either active or passive. An active leader monitors his/her followers to control behavior by preventing the violation of rules and offering constructive criticism. A passive leader intervenes if the targeted standards are not met or if a problem occurs.
- *Non-sustainer*: This type of leader does not assume any responsibilities, postpones decisions, never provides feedback and makes little effort to address the needs of his/her followers. There is no exchange with followers. This type reflects the case in which there is no true leadership.

Since the 1990s, new theories have emerged based on situational leadership in leadership studies: distributive leadership (Elmore, 2000; Gronn, 2000, 2002; Spillane, 2005), ethical leadership (Brown & Trevino, 2006), cultural leadership (Sergiovanni & Starrat, 1998), spiritual leadership (Fry, 2003) and authentic leadership (Gardner, Cogliser, Davis, & Dickens, 2011), among others. These leadership theories offer different formulas for the formation of powerful leadership by developing different perspectives on the nature of leadership.

In the first study of *distributive leadership,* Gibb (1954) stated that distributive leadership has a group feature. Leadership—when viewed from a distributive perspective—is a system composed of the resultant interaction among the leader, followers and situations. In this sense, the system consisting of the interaction among the leader, followers and situations means more than the sum of each component; thus, they should be evaluated and understood together. Therefore, the situation does not have a clear independent effect on the behavior of a leader from the distributive leadership perspective because the behavior of the leader stems from this interaction. The relationship between situations and behaviors is dual from a distributive leadership perspective. In this dual relationship, behaviors transform situations, and situations activate or limit behaviors (Spillane, 2005, 2006).

Ethical leadership expresses rules about what must be done rather than rules about what must not be done (Rubenstein, 2003). In the ethical sense, a leader must respect and serve others; she/he must be fair and must demonstrate behaviors such as honesty and building community. The leader must show that she/he is listening to his/her subordinates even if they have opposing ideas by conveying empathy and warmth. Similarly, she/he must act in a consistent manner and is expected to behave consistently and treat all employees equally. For an ethical leader, being honest is not simply telling the truth; she/he must also be open to others as much as possible and be sensitive to their feelings and thoughts. Finally, as mentioned in the definition of leadership, all employees must collaborate to attain a common goal. The ability to forming a community that shares values and beliefs with an organization in attaining the same goal is among the fundamental behaviors that an ethical leader must demonstrate (Nourthouse, 2010).

Cultural leadership involves forming, developing and protecting cultural values in an organization (Sergiovanni & Starrat, 1998). However, it is not easy to determine the scope of cultural leadership behavior because it may not be feasible to identify a single culture upon which the organization is based or to maintain and form the basis for a behavior style because it must be determined what culture is—as culture is complex and specific to each individual society. Studies on culture and leadership around the world identify different leadership behaviors in different cultures. However, these studies cannot offer us a single theory to explain the leadership process or leadership styles. Nevertheless, the findings obtained in these studies can help leaders to understand their own cultural prejudices and priorities. In addition, such findings can provide an understanding of what it means to be a good leader in the cultural sense. The understanding of culture that leaders develop and the differences in understanding of this concept will encourage

them to be more empathetic toward employees and the organization from other cultural contexts and promote the use of a clear communication style (Nourthouse, 2010).

There are different views of *spiritual leadership*. Fleming (2004) regarded spiritual leadership as an entirely worldly effort, whereas Thompson (2004) viewed spiritual leadership as a type of leadership that focuses on the organizational sense. Fry (2003) noted that individuals must meet certain basic needs in leading their lives and regarded spirituality as a basic need that must be met. Sanders, Hopkins, and Geroy (2004) defined spiritual leadership as a type of leadership that provides employees with a sense of working for a goal, developing commitment and sensemaking, and increasing labor productivity through organizational spirituality. In addition, spiritual leadership is the sum of all efforts involving the feeling of organizational spirituality by employees, forming a sense of unity in the workplace through devotion and providing meaning to their work.

Authentic leadership which is based on positive psychology, has emerged as a leadership behavior because of the decrease in the prevalence of ethical behavior in organizations and in the popularity of ethical leadership. Essentially, an authentic leader can be defined as an individual who is devoted to his/her values, beliefs and attitudes and to himself/herself in an integrated approach. The authentic leader behavior must reflect his/her own goals and values to employees while promoting transparency. An authentic leader is expected to show behaviors that will contribute to and strengthen the positive atmosphere in an organization in accordance with the goals of the organization and the development of positive relationships with employees (Cooper, Scandura, & Schriesheim, 2005; Gardner, Avolio, Luthans, May, & Walumbwa, 2005; Kesken & Ayyıldız, 2008; Klenke, 2007).

4 Leadership Effects in Organizational Outcomes

The main reason for the intensive research on the concept of leadership and the various approaches and theories is that the results are either directly or indirectly observed in organizations. A leader and his/her behaviors affect the performance of employees, job satisfaction, perceptions of justice, sense of trust toward one another and toward the organization, and—more essentially and generally—the culture and atmosphere that determine the entire dynamic of an organization.

It is difficult to determine the individual or organizational impact of leadership. Beginning with the criteria for the effectiveness of leadership proposed by Yukl (2010) might be useful in explaining the impact of leadership on organizations with complex and specific structures. In addition, a certain perspective on leadership and effectiveness can hinder determination of the impact of leadership on organizations. For example, a leader who is showing behaviors in favor of increasing organizational productivity may lack the qualifications expected from him/her in human relations, or a leader who emphasizes positive behaviors in human relations may be associated with decreased organizational productivity. In this respect, it is

necessary to evaluate the effectiveness of a leader in terms of organizational outcomes from an integrated perspective and to discuss the impact of the leader in the organizational sense while considering the human factor.

Among the determinants of a leader's effectiveness include his/her performance in promoting attainment of the goals of an organization. Performance is a concept that is used often in the field of human resources management; however, a consensus has not yet been reached regarding its definition and boundaries (Çalık, 2003). Performance is defined as job completion or the degree of success shown in a job. In its simplest meaning, performance is the contribution of an employee to the goals of an organization (Bass, 1985).

Two dimensions of performance are (1) individual and (2) organizational performance. From the individual perspective, performance evaluation is related to the measurement of success of employees working in an organization, and from the organizational perspective, performance refers to the activities completed and the goods and services that the organization produces based on criteria such as prudence, productivity and effectiveness (Köseoğlu, 2005). One of the factors that affect performance from both the organizational and individual perspectives is the leadership behaviors of management (Bass, 1985). Existing studies propose a relationship between the leadership behaviors of managers and the performance of employees (Friedkin & Slater, 1994; Ishikawa, 2012; Jung, Moon, & Hahm, 2008; Lowe, Kroeck, & Sivasubramaniam, 1996; Rowold, 2011; Wang, Oh, Courtright, & Colbert, 2011).

One of the other ways that a leader can influence organizational outcomes is observed in the perception and attitudes of followers toward leadership. This impact is reflected as employee satisfaction, commitment to and trust in their organization. An employee who is committed to his/her organization, who trusts the organization and who is satisfied with the organization is expected to have the greatest contribution to the organization. For this reason, the perception and attitude of a leader toward his/her followers with respect to organizational outcomes is among the important indicators of the leader's effectiveness. Trust is present an individual believes that the behaviors of another person will develop in a manner that meets his/her expectations without any pressure while showing openness without the need to defend his/her own actions (Curral & Epstein, 2003). Additionally, trust is one of the important components of effective relationships (Clarke, 2002). Lewicki, McAllister, and Bies (1998) defined organizational trust as a state that arises when an individual is certain about how the organization's practices and policies will affect him/her and supports these practices even in cases involving risks. The feeling of trust that emerges naturally generates commitment. Mayer and Allen (1991) identified commitment as a behavior that shapes the relationship of an employee with his/her organization and that aids him/her in making the decision to be a permanent member of the organization, which is also addressed as a necessary relative power in terms of the key organizational output supporting the effectiveness of the leader in the integration of the individual with the organization (Mowday, Porter, & Steers, 1982). Another important indicator of the effectiveness of a leader in terms of organizational output is job satisfaction. Job satisfaction is

related to an employee's general attitude toward all job components, regardless of whether she/he loves his/her job (Shields, 2007; Shraibman, 2008). In this sense, job satisfaction is the combination of (1) emotional, (2) cognitive and (3) behavioral characteristics (Wilson, 2009). According to certain definitions, job satisfaction refers to how happy a person is while performing his/her job duties (Wray, Luft, & Highland, 1996). The ambiguity in what makes a person happy and to what extent that would make another person happy is indicative of the difficulty of defining the concept of job satisfaction. Schultz and Schultz (2005) and Verner (2008) defined job satisfaction as the positive and negative emotions that an individual has toward his/her job. In short, employees' feelings of satisfaction, commitment and trust are primarily related to the perceptions and attitudes toward their leaders. By contrast, negative organizational outputs may occur in the form of absenteeism, burnout, slow work output and various cases of sabotage.

Another impact of leadership is measured by the contribution to group processes. The foremost question that must be answered involves the collaboration and persuasiveness of a leader in reaching the goals specified for group members. A leader can reach these aims by displaying supportive behavior to solve the problems of their followers or to make decisions or resolve conflicts with the aim of increasing the efficiency of the organization (Hoy & Miskel, 2010; Nourthouse, 2010; Yukl, 2010). Adair (2004) identified the most important actions of the leader as follows: (1) delegating authority, (2) being inspirational, (3) establishing a team, (4) serving as a role model, and (5) being accepted by members. Hoy and Miskel (2010) defined leadership as a social process affecting the interpretation of the internal and external issues of group members, goal setting, the arrangement of activities, individual motivation and abilities, power relations and shared goals. The authors also noted that leadership is a social impact process that makes no assumptions regarding the goals and results affecting initiatives composed of both logical and emotional components. Good leaders have the power to change organizations, whereas very good leaders have the power to change individuals because the hearts of organizations are individuals. Particularly in places such as schools, simply by changing an individual, one can promote a substantially positive culture that encourages development and growth (Hoerr, 2005).

References

Adair, J. (2004). *Handbook of management and leadership*. London: Replika.

Adair, J. (2012). *Hz. Muhammed örneğinden hareketle liderlik* [Leadership of Muhammad] (Trans. A. Çavuşoğlu). İstanbul: Ufuk.

Bass, B. M. (1985). *Leadership and performance beyond expectations*. New York, NY: Free.

Bass, B. M., & Riggio, R. E. (2006). *Transformational leadership*. Mahwah, NJ: Lawrence Erlbaum Associates.

Bennis, W. (2003). *On becoming a leader*. New York, NY: Basic Books.

Blake, R. R., & Mouton, J. S. (1964). *The managerial grid*. Houston, TX: Gulf.

Bolman, L. G., & Deal, T. E. (2008). *Organizasyonları yeniden yapılandırmak: Yetenek, tercih ve liderlik* [Reframing organizations: Artistry, choice, leadership] (Trans. A. Aypay; A. Tanrıöğen). Ankara: Seçkin.

Brown, M. E., & Trevino, L. K. (2006). Ethical leadership: A review and future directions. *The Leadership Quarterly, 17*, 595–616.

Burns, J. M. (1978). *Leadership*. New York, NY: Harper & Row.

Çalık, T. (2003). *Performans yönetimi: Tanımlar, kavramlar, ilkeler* [Performance management: definitions, concepts, principles] Ankara: Gündüz Eğitim.

Clarke, J. (2002). *Maymuncuk: İş yerinde iletişim ve politika* [Savvy: Dealing with people, power and politics at work] (Trans. Dicleli, Z.). İstanbul: MESS.

Cooper, C. D., Scandura, T. A., & Schriesheim, C. A. (2005). Looking forward but learning from our past: Potential challenges to developing authentic leadership theory and authentic leaders. *The Leadership Quarterly, 16*(3), 475–493.

Curral, S. C., & Epstein, M. J. (2003). The fragility of organizational trust: Lessons from the rise and fall of enron. *Organizational Dynamics, 32*(2), 193–206.

Elmore, R. F. (2000). Building a new structure for school leadership. *The Albert Shanker Institute*. Retrieved from http://www.shankerinstitute.org

Evans, M. G. (1970). The effects of supervisory behavior on the path-goal relationship. *Organizational Behavior and Human Performance, 5*, 277–298.

Fiedler, F. E. (1964). A contingency model of leadership effectiveness. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 1, pp. 149–190). New York, NY: Academic.

Fiedler, F. E. (1967). *A theory of leadership effectiveness*. New York, NY: McGraww-Hill.

Fleming, K. Y. (2004). Soulful leadership: Leadership characteristics of spiritual leaders contributing to increased meaning in life and work. *Dissertation Abstracts International*, *65*(01), 211A (UMI No. 3120403).

French, J. R. P., & Raven, B. H. (1959). The bases of social power. In D. Cartwright (Ed.), *Studies in social power*. Ann Arbor, MI: Institute for Social Research.

Friedkin, N. E., & Slater, M. R. (1994). School leadership and performance: A social network approach. *Sociology of Education, 67*(2), 139.

Fry, L. W. (2003). Toward a theory of spiritual leadership. *The Leadership Quarterly, 14*, 693–727.

Gardner, W. L., Avolio, B. J., Luthans, F., May, D. R., & Walumbwa, F. (2005). Can you see the real me? A self-based model of authentic leader and follower development. *The Leadership Quarterly, 16*, 343–372.

Gardner, W. L., Cogliser, C. C., Davis, K. M., & Dickens, M. P. (2011). Authentic leadership: A review of the literature and research agenda. *The Leadership Quarterly, 22*, 1120–1145.

Gibb, C. A. (1954). Leadership. In G. Lindzey (Ed.), *Handbook of social psychology* (pp. 877–917). Reading, MA: Addison-Wesley.

Gronn, P. (2000). Distributed properties: A new architecture for leadership. *Educational Management and Administration, 28*(3), 338–371.

Gronn, P. (2002). Distributed leadership as a unit of analysis. *The Leadership Quarterly, 13*, 423–451.

Hersey, P., & Blanckhard, K. H. (1969). Life-cycle theory of leadership. *Training and Development Journal, 23*, 26–34.

Hoerr, T. R. (2005). *The art of school leadership*. Alexandria, VA: ASCD.

House, R. J. (1971). A path goal theory of leader effectiveness. *Administrative Science Quarterly, 16*, 321–328.

House, R. J., & Mitchell, T. R. (1974). Path-goal theory and leadership. *Journal of Contemporary Business, 3*, 81–97.

Hoy, W. K., & Miskel, C. G. (2010). *Eğitim yönetimi: Teori, araştırma ve uygulama* [Educational administration: Theory, research and practice] (Ed. & Trans. Turan, S.). Ankara: Nobel.

Ishikawa, J. (2012). Leadership and performance in Japanese R&D teams. *Asia Pacific Business Review, 18*(2), 241–258.

Jung, K., Moon, M. J., & Hahm, S. D. (2008). Exploring the linkage between ministerial leadership and performance in Korea. *Administration & Society, 40*, 667–690.

Keçecioğlu, T. (1998). *Liderlik ve liderler: Değişim yolunda iyi bir öğrenci ve iyi bir öğretmen* [Leadership and leaders: A good student and teacher in the way of change]. İstanbul: Kalder.

Kesken, J., & Ayyıldız, N. A. (2008). Liderlik yaklaşımlarında yeni perspektifler: Pozitif ve otantik liderlik [New perspectives in leadership approaches: Positive and authentic leadership]. *Ege Akademik Bakış, 8*(2), 729–754.

Kirkpatrick, S. A., & Locke, E. A. (1991). Leadership: Do traits matter? *The Executive, 5*, 48–60.

Klenke, K. (2007). Authentic leadership: A self, leader, and spiritual identity perspective. *International Journal of Leadership Studies, 13*(1), 68–97.

Koçel, T. (2005). *İşletme yöneticiliği* [Business management]. İstanbul: Arıkan.

Köseoğlu, Ö. (2005). Belediyelerde performans yönetimi [Performance management in municipalities]. *Türk İdare Dergisi., 77*(447), 211–235.

Kouzes, J. M., & Posner, B. Z. (2002). *The leadership challenge*. San Francisco, CA: Jossey-Bass.

Lewicki, R. J., McAllister, D. J., & Bies, D. J. (1998). Trust and distrust, new relationships and realities. *Academy of Management Review, 23*, 438–458.

Lowe, K. B., Kroeck, K. G., & Sivasubramaniam, N. (1996). Effectiveness correlates of transformational and transactional leadership: A meta-analytic review. *The Leadership Quarterly, 7*, 385–425.

Mann, R. D. (1959). A review of the relationship between personality and performance in small groups. *Psychological Bulletin, 56*, 241–270.

Maxwell, J. C. (1993). *Developing the leader within you*. Nashville: Injoy Inc.

Mayer, J. P., & Allen, N. J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review, 1*(1), 61–89.

Mowday, R. T., Porter, L. W., & Steers, R. M. (1982). *Employee- organization linkages, the psychology of commitment absenteeism and turnover*. New York, NY: Academic.

Nourthouse, P. G. (2010). *Leadership: Theory and practice*. New York, NY: Sage.

Owen, H., Hodgson, V., & Gazzard, N. (2011). *Liderlik el kitabı* [The leadership manual]. (Trans. M. Çelik.), İstanbul: Optimist.

Palestini, R. (2009). *From leadership theory to practice: A game plan for success as a leader*. New York, NY: Rowman & Littlefield Education.

Reddin, W. J. (1967). 3-D Management style theory-typology based on task and relationships orientations. *Training and Development Journal, 21*(4), 8–17.

Robbins, S. P., & Judge, T. A. (2012). *Organizational behaviour*. Harlow: Pearson.

Rowold, J. (2011). Relationship between leadership behaviors and performance: The moderating role of a work team's level of age, gender, and cultural heterogeneity. *Leadership & Organization Development Journal, 32*(6), 628–647.

Rubenstein, H. (2003). *Ethical leadership*. Retrieved July 01, 2013, from http://www.conservativemonitor.com/opinion03/28.shtml

Sanders, J. E., Hopkins, W. E., & Geroy, G. D. (2004). *A causal assessment of the leadership-commitment relationship*. Paper presented at the annual meeting of the Academy of Management, New Orleans, LA.

Schultz, D. P., & Schultz, S. E. (2005). *Psychology and work today*. Harlow: Pearson.

Sergiovanni, T., & Starrat, R. (1998). *Supervision: A redefinition*. Boston, MA: McGraw-Hill.

Shields, J. (2007). *Social service work and job satisfaction: Revisiting Herzberg, Mauser & Snyderman*. Unpublished master thesis, B.S Southwest Missouri State University, USA.

Shraibman, F. K. (2008). *An examination of the job satisfaction of the certified public accountants as it relates to their area of practice and their locus of control*. Unpublished doctoral dissertation, New York University, New York, NY.

Şişman, M. (2011). *Öğretim liderliği* [Instructional leadership]. Ankara: PegemA.

Spillane, J. (2005). Distributed leadership. *The Educational Forum, 69,* 143–150.

Spillane, J. P. (2006). *Distributed leadership*. San Francisco, CA: Jossey-Bass.

Stogdill, R. M. (1948). Personal factors associated with leadership: A survey of the literature. *Journal of Psychology, 25*, 45–71.

Stogdill, R. M. (1974). *Handbook of leadership: A survey of theory and research*. New York, NY: Free Press.

Thompson, R. L. (2004). The automatic hand: Spiritualism, psychoanalysis, surrealism. *Invisible Culture: An Electronic Journal for Visual Culture, 7*, 1–18.

Verner, J. P. (2008). *A descriptive study of educator job satisfaction and valued communications*. Unpublished doctoral dissertation, University Of West Georgia, Carrollton, GA.

Vries, M. K. (2007). *Liderliğin gizemi* [Leadership mystique] (Trans. Dicleli, Z.). İstanbul: MESS.

Wang, G., Oh, I. S., Courtright, S. H., & Colbert, A. E. (2011). Transformational leadership and performance across criteria and levels: A meta-analytic review of 25 years of research. *Group & Organization Management, 36*(2), 223–270.

Wilson, C. (2009). *Relative influences of Arizona high school principals' job satisfaction*. Unpublished doctoral dissertation, The University of Arizona, Tucson, AZ.

Woolfe, L. (2002). *The bible on leadership*. New York, NY: AMACOM.

Wray, R. D., Luft, R. G., & Highland, P. J. (1996). *Human relations*. Cincinnati, OH: South-Western Educational.

Yukl, G. (2010). *Leadership in organizations*. Upper Saddle River, NJ: Prentice Hall.

Zaccaro, S. J., Kemp, C., & Bader, P. (2004). Leader traits and attributes. In J. Antonakis, A. T. Cianciolo, & R. J. Stenberg (Eds.), *The nature of leadership* (pp. 101–124). Thousand Oaks, CA: Sage.

Introduction to Meta-Analysis

Nazım Çoğaltay and Engin Karadağ

Abstract As a means to synthesize the results of multiple studies, the chronological development of the meta-analysis method was in parallel to a variety of definitions in the literature. Meta-analysis can be defined in different ways: as a means of summarizing and combining the quantitative results of research or as a method used to reach the quantitative effect size based on individual studies. Meta-analysis uses many quantitative approaches and calculation formulas when compiling multiple research findings. In this sense, no researcher needs to be an expert in all types and calculation formulas for all types of meta-analysis. However, if the researcher lacks familiarity with at least some of the main concepts of meta-analysis, then the correct results may not be obtained. This chapter aims to explain some of the main concepts of meta-analysis.

1 Introduction

The question of how to bring together and interpret research studies that are independent from one another is a basic and important question in all sciences. Hence, the inability to conduct research studies with large samples to represent a wider population because of obstacles such as time, cost and expert researchers and the discussion of how effective the findings of a single study can be have necessitated the synthesis of the results of a multitude of studies. The inadequacy of the results of a single study and the need to synthesize findings by scientists have led to the development of methodologies that allow for combining the results of many independent studies.

Many methods have been used to synthesize the findings of multiple studies. The first attempts at synthesizing studies can be observed in the efforts made to merge

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findings in the fields of astronomy and physics. Subsequently, experts in the field of agriculture began to develop statistical techniques that would allow for the compilation of repeated measurements (Hedges & Olkin, 1985). The compilation of data from multiple studies was conducted by means of narrative compilations. An expert in the field would read a study on a particular topic, summarize the findings and provide a conclusion regarding the summary of findings. However, this method was deemed ineffective because of limitations such as the varying subjectivity of different researchers (criteria, reliability, and validity) and the fact that only studies with a consistent effect size could be compared. These limitations of the narrative compilation method motivated scientists to seek a different methodology, and as a result, the methods of systematic review and meta-analysis emerged (Borenstein, Hedges, Higgins, & Rothstein, 2009).

Systematic review and meta-analysis are two approaches aimed at synthesizing different studies that are independent of one another but also compatible. When both methods are used together, it is possible to compile the quantitative evidence, analysis and scientific approaches as a whole. This approach makes it possible to obtain a large sample size and to provide new perspectives on developing social policies. However, these two approaches are not synonymous; they represent two different approaches. Many meta-analysis studies are not systematic reviews. Meta-analysis studies can be a part of a systematic review, but this is not true of all meta-analyses (Littel, Corcoran, & Pillai, 2008).

It is believed that the first meta-analysis study was conducted by Karl Pearson in 1904 when he attempted to synthesize the independent vaccine studies concerning typhoid (Littel et al., 2008). However, it was not until the 1970s that social and behavioral scientists began using meta-analysis. Glass (1976) coined several statistical terms for synthesizing the results of more than one study. Studies from that period aimed to synthesize the results of independent studies on topics such as the effects of psychotherapy (Smith & Glass, 1977), the effects of classroom populations on achievement (Glass & Smith, 1978), the effect of interpersonal expectations (Rosenthal & Rubin, 1979) and the validity of race-based employment tests (Hunter, Schmidt, & Hunter, 1979). After the 1980s, scientists began to develop statistical methods or meta-analysis (Cooper, 1998; Cooper & Hedges, 1994; Hedges & Olkin, 1985; Light & Pillemer, 1984), and thus, meta-analysis became a statistical technique.

As a means to synthesize the results of multiple studies, the chronological development of the meta-analysis method was in parallel to a variety of definitions in the literature. Glass (1976), who first proposed the concept of meta-analysis, discussed primary analysis, secondary analysis and meta-analysis concepts and emphasized that these types of analyses were not to be confused with one another. He defined primary analysis as the analysis conducted in an original study, defined secondary analysis as the use of statistics to better understand the problem discussed in the original research or the use of data to find answers to new problems, and defined meta-analysis as the analysis of analyses. Meta-analysis can be defined

in different ways: as a means of summarizing and combining the quantitative results of research (Glass, McGaw, & Smith, 1981) or as a method used to reach the quantitative effect size based on individual studies (Durlak, 1995). The meta-analysis method differs from other quantitative review methods that attempt to test the correctness of hypotheses (Littel et al., 2008). Meta-analysis is the method of conducting a statistical analysis of the research findings of many independent studies conducted on a certain topic (Borenstein et al., 2009; Cohen, Manion, & Morrison, 2007; Glass, 1976; Hedges & Olkin, 1985; Littel et al., 2008; Petitti, 2000).

Meta-analysis uses many quantitative approaches and calculation formulas when compiling multiple research findings. In this sense, no researcher needs to be an expert in all types and calculation formulas for all types of meta-analysis. However, if the researcher lacks familiarity with at least some of the main concepts of meta-analysis, then the correct results may not be obtained. This chapter aims to explain some of the main concepts of meta-analysis.

2 Effect Size and Types

The main objective of the meta-analysis method is to determine a summary effect size by synthesizing data from multiple research studies. The effect size in meta-analysis is a measure of the strength and direction of the relationship between variables (Littel et al., 2008). This term may be expressed in different ways for various fields. In the field of medicine, the effect size is expressed as the application effect and is sometimes expressed as the odds ratio, the risk ratio or the risk difference. In social sciences, the term ‘effect size’ is used frequently but is sometimes expressed as the standardized mean difference or relationships (Borenstein et al., 2009).

The most frequently used effect size calculations fall into these categories: (1) proportions, (2) averages and (3) correlation coefficients. There is more than one way to calculate effect size in these categories. The preferred calculation of effect size will differ according to the aim and design of the study and the data format. Studies testing the effect of an intervention or studies aiming to make a variety of causal inferences (between pre- and post-test or between groups receiving and not receiving treatment) are in the category that use proportions and averages. Studies investigating the relationship between variables, besides causal direction inferences, are in the category of correlational meta-analysis (Littel et al., 2008). In other words, if the results of the effect size are numerical, then averages are used; if the results are nominal, then proportions are used; and if the results show a relationship, then correlations are preferred (Cohen et al., 2007). In addition,

it is also possible to classify meta-analysis studies into one of two categories: (1) comparison of groups and (2) correlational meta-analysis (Durlak, 1995).

There are two important differences in the calculations of effect size: dichotomous data and continuous data. Dichotomous variables are based on only two categories and frequently represent the presence or lack of a feature or situation. Pregnancy, high school graduation, and gender are examples of such variables. Continuous variables can have a range of values that can be expressed on a numeric scale. Examples of such variables include the number of pregnancies, the duration of training, and the duration of hospitalization. Test and scale results such as achievement tests or depression inventories can be considered continuous variables (Littel et al., 2008).

3 Effect Size in Dichotomous Data (Proportioning)

The effect size of dichotomous results is based on whether a phenomenon was observed. The most frequently used effect size measures are the *odds ratio (OR)*, the *risk ratio (RR)* and the *risk difference (RD)*. The odds ratio is the expression of the comparison of whether something has a probability of occurring (Littel et al., 2008). That is, the effect size is obtained from the proportion of two possibilities (Borenstein et al., 2009). The risk ratio, similar to the odds ratio, pertains to risk and is the ratio of risks to one another. The risk difference is the difference between two risks. The effect size of the odds ratio or the risk ratio is reached by converting data into logarithmic data, and the risk difference uses raw data to calculate the effect size. The odds ratio is the proportioning of the ratio of whether a certain phenomenon is observed in the experimental group to whether the phenomenon is observed in the control group. These effect size calculations are generally used in the fields of health and agriculture (*for more information, please see* Borenstein et al., 2009; Hedges & Olkin, 1985; Kulinskaya, Morgenthaler, & Staudte, 2008; Petitti, 2000). A hypothetical example showing calculations of the effect size of dichotomous data is shown in Table 1 (Littel et al., 2008).

Table 1 Effect size for dichotomous data in a hypothetical data table

	Event	No event	Total N	Odds	Risk
Experiment	4	6	10	4/6	4/10
Control	2	8	10	2/8	2/10
Odds ratio (OR) = (4/6)/(2/8) = 2.67 Risk ratio (RR) = (4/10)/(2/10) = 2.0 Risk difference (RD) = 0.40 − 0.20 = 0.20					

4 Average Effect Size Between Groups for Continuous Data

The effect size obtained from continuous data can be divided into two main categories: (1) the non-standardized mean difference (D) and (2) the standardized mean difference (d) or (g). Of these two types, raw data are used to calculate D means, and d or g is calculated using standardized techniques to convert raw data into other forms. These mean difference effect sizes are calculated using different techniques for each of the categories of data obtained from mean differences between groups independent of one another and from differences between the pre- and post-tests in the same group or matched groups (for further information concerning the techniques used, please see Borenstein et al., 2009; Hedges & Olkin, 1985).

The non-standardized mean difference (D) is used when all of the research included in the study is reported using the same scale. In such cases, meta-analysis is conducted by calculating the raw differences of the direct means to determine the effect size. However, the standardized mean difference (d) or (g) is used when results are reported based on different scales or methods in the studies included in the analysis. To compute the standardized mean difference, the resulting data are calculated by standardizing the standard deviation to equal 1 within the groups (Borenstein et al., 2009; Hedges & Olkin, 1985; Kulinskaya et al., 2008; Littel et al., 2008).

5 Correlational Effect Size for Continuous Data

The relational values obtained from research reporting the relationship between two continuous variables are the calculated effect sizes. The effect size of studies is generally obtained by calculating the Pearson correlation coefficient, *r*. Studies that provide this coefficient or that provide the opportunity to calculate this coefficient are included in the analysis. As this correlation coefficient is a value between +1 and −1, calculations are performed by transforming the *r* value into its corresponding *z* table value. The correlation coefficient is itself considered the coefficient of effect size and is also symbolized by *r* (Borenstein et al., 2009; Hedges & Olkin, 1985; Littel et al., 2008).

The effect width is considered when interpreting the effect size. This effect width is categorized in many different ways by various researchers; however, the most important categorization belongs to Cohen (1988), as shown in Table 2.

Table 2 Cohen's (1988) classification of effect width

Es metric	Small effect	Medium effect	Large effect
OR	1.5	2.5	4.3
SMD	0.2	0.5	0.8
r	0.1	0.25	0.4

OR odds ratio, *SMD* standardized mean difference, *r* correlation coefficient

6 Choice of Model

There are two main models used in meta-analysis studies: the (1) fixed effect model and the (2) random effect model. When deciding which model to use, the researcher must assess the characteristics of the research to determine which of the models' pre-conditions the study meets. In general, these two models use different processes to calculate the weights of studies, the average effect size and the confidence intervals for the average effects when calculating the effect size (ES). Therefore, to obtain the correct results in the processes of meta-analyses, it is important to choose the correct model in relation to the characteristics of the specific studies involved (Borenstein et al., 2009).

The fixed effect model has the (1) same assumption as the function of the research and (2) the aim of calculating only the effect size for the population. If it is determined that the function of the research is the same, that it shares a real effect and that the calculation of the real effect is not supposed to be generalized to wider populations, then the choice of model should be the fixed effect model. For example, a pharmaceutical company intended to conduct a drug trial study with 1,000 patients but has only been able to research one patient group at a time. Thus, the research was conducted more than once with repeated tests. In such cases, the model to be used to compile the repeated tests is the fixed effect model because the study was conducted by the same researchers and used the same doses and tests in patients from the same sample pool. Thus, all studies share the same real effect and meet all conditions for the fixed effect model, as the effect of the drug is investigated only in the identified population. It is important to note that it is uncommon to find meta-analysis studies of this type. It is nearly impossible to find research studies that meet the pre-conditions of the fixed effect model, especially in the social sciences and educational sciences.

In regard to the random effect model, it is assumed that the effect differs between sample groups and among studies. In summary, if the conditions of the fixed effect model are not met, then the random effect model should be used. The effects can differ in relation to the variables in the studies, such as the health, age, and education status of the sample subjects. For example, the effect size for a practice in the field of education may show variation among factors such as students, classroom populations and ages. In such cases, the appropriate model for meta-analysis is the random effect model.

It is important for a meta-analysis to correctly identify which model should be used for which type of research. As noted above, the choice of model should be made after identifying which pre-conditions are met by the studies. Borenstein et al. (2009) argued that to select a model based on the results of the heterogeneity test or to use the fixed effect model followed by the random effect model for the meta-analysis is not the correct approach and should be criticized. Further, the belief that the fixed effect model results in a stronger analysis is completely false. Therefore, it is not appropriate for researchers to use the fixed effect model under the assumption that it provides stronger results. The correct process is to select a

model by ascertaining which features of the studies included in the meta-analysis meet the pre-conditions of the model.

6.1 Heterogeneity

A heterogeneity analysis is the measure that shows how the effect width differs from study to study. This statistic tests whether the effects found by the different studies are caused by a sampling error or by a systematic difference between the studies in addition to a sampling error (Hedges & Olkin, 1985). The different effect sizes of the studies included in the meta-analyses make it necessary to find the size of the variance between the distributions. Therefore, heterogeneity tests are conducted to determine the conformity of the normal distribution of effect sizes. The impact value observed between studies show differences for two reasons. The first reason is the real heterogeneity of the effect size, and the second reason is related to errors within the studies. If researchers do not seek to test the heterogeneity, then they must separate the observed differences between the two components and focus on the first situation above (Borenstein et al., 2009).

The most common means of testing heterogeneity and determining whether the heterogeneity is statistically significant is the Q (df) statistic based on the χ^2 test. Structurally, all studies establish and test a null hypothesis to argue for a shared common effect (Hedges & Olkin, 1985). Under the null hypothesis, the Q value should follow the degrees of freedom equal to $k - 1$ and the central χ^2 distribution. When the effect sizes are heterogeneous, a statistically significant χ^2 value shows that the studies have different distributions and thus do not share a wide effect (Hedges & Olkin, 1985). The Q calculation formulas for meta-analysis studies are complimentary and homogeneous to one another and can be calculated in three different ways. Although all studies use Q_{Total} to test the common effect size (that is, the heterogeneity), $Q_{Between}$ is used to test heterogeneity between studies, and Q_{Within} is used while testing the heterogeneity within each particular study. There is an equality in $Q_T = Q_B + Q_W$ (Hedges & Olkin, 1985).

It is possible to test heterogeneity using several statistical techniques. The most common technique involves the Q statistic and is the sum of weighted squares, which aims to find the significance level of the differences observed in studies. T^2 is the variance of real effects. This value is used to calculate the weightings of studies under the random effect model. T is the standard deviation of real effects and is the same as the standard deviations of the effects of the same tests. This coefficient is used to predict the real effect distributions and is used when considering the important effects of these distributions. I^2 is the actual ratio of the observed distributions. The effects are not dependent on testing and can range in value from 0 % to 100 % (Borenstein et al., 2009).

7 Publication Bias

One of the components of greatest interest to researchers in meta-analysis studies is the effect of variance on the results observed. Have publication bias, the study design, sample characteristics or moderator variables influenced the observed effect? The identification of these or similar variables that have played a role in the resulting effect is important for meta-analysis and assists in the determination of correct results. This section attempts to explain the importance of publication bias in meta-analysis studies and how it is identified in meta-analysis studies.

Publication bias is based on the assumption that not all studies on a particular topics are published. Because studies that do not find statistically significant relationship or that find only a weak relationship are deemed unworthy of publication, they are believed to negatively affect the total effect or to create bias in increasing the average effect size (Borenstein et al., 2009; Kulinskaya et al., 2008). This publication bias effect, which can also be considered missing data, has a negative impact on the total effect of a meta-analysis. Therefore, publication bias should be considered in meta-analysis studies. To examine the publication bias of a study, researchers should consider the following questions (Borenstein et al., 2009):

- Is there any evidence of publication bias?
- Is it possible that the general effect size is the result of publication bias?
- To what degree is the total effect due to publication bias?

To answer the above questions using statistical methods, a series of calculations are used in the meta-analysis. One of the most popular of these methods is the funnel plot method. The figure obtained with this method may not be completely objective, but it provides the opportunity to determine whether publication bias affects such studies. A funnel plot conducted for a meta-analysis is shown in Fig. 1.

In the funnel plot above, there is no evidence of publication bias for the studies included in the meta-analysis. To speak of a publication bias, the funnel plot would need to present a serious degree of asymmetry. If a concentration of studies were plotted at the bottom end of the funnel below the line indicating the average effect size and skewed to one end (especially toward the right side), then a publication bias would be evident. The figure of a funnel plot can be interpreted as not representing serious publication bias for the effect size of the related studies.

Statistical techniques in regard to publication bias are not limited to the funnel plot technique. The more frequent use of the funnel plot may be explained by the practicality in its application and the visual aspect. In addition, one of the other techniques developed by Rosenthal (1979) is the *failsafe N* or the *file drawer number* technique. This technique assumes that it is possible to calculate the actual number of missing studies and argues that finding studies to include in a meta-analysis is necessary before determining whether the *p* value is significant. The use of this technique assumes that the main effect of missing studies have no effect. In addition, there is also the Duval and Tweedie *Trim-and-Fill* method (Duval &

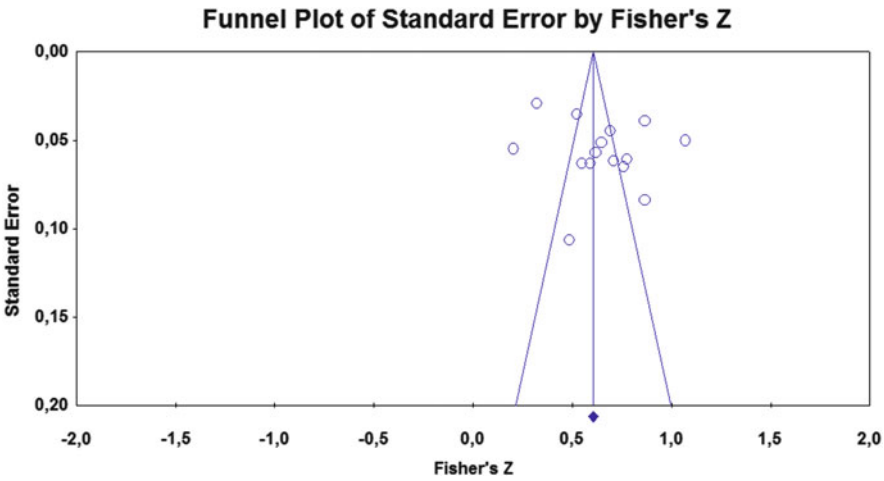

Fig. 1 Funnel plot of standard error by correlation coefficient (*r*)

Tweedie, 2000), which uses a repeated technique to remove small studies at the extreme ends of the positive end of the funnel diagram. The trimming and filling process is repeated until the funnel diagram is symmetric in regard to the effect size (Duval, 2005).

8 Sub-group Analysis and Moderator Analysis

A meta-analysis not only predicts the average effect based on all studies included in the analysis but also allows for the calculation of the average effects of various subgroups of studies and enables comparisons between these effects. Subgroup and moderator analyses are methods developed to test the statistical significance of differences between groups.

A subgroup analysis is a comparison of the effects of two or more groups. Three methods are used for the analysis of subgroups. A *Z* test is used to compare the average effect sizes of two groups, and a variance analysis or *Q* test is used to compare two or more groups. All three methods are based on mathematical formulas (Borenstein et al., 2009). Moderator analysis is an analysis method that attempts to test the differences between the average effect sizes of variables (moderators) and the direction of these differences. In a meta-analysis study, subgroup and moderator analysis are well planned in regard to the objective of the study, and the processes are conducted as planned (Littel et al., 2008).

The statistical significance between the difference of the subgroup analysis and moderator variables is tested using the Q statistic. In this method, Q is divided into two, as Q_{Within} (Q_w) and $Q_{between}$ (Q_b), and the analysis aims to find meaning based on the two Q values. Q_w attempts to test the homogeneity within the group or

moderator and determines whether the variance within the groups is statistically significant, Q_b tests the homogeneity among groups or variables and attempts to determine whether the variance between the groups is statistically significant, and Q_T determines whether the groups are statistically significant (Borenstein et al., 2009; Hedges & Olkin, 1985; Kulinskaya et al., 2008).

References

Borenstein, M., Hedges, L. V., Higgins, J. P. T., & Rothstein, H. R. (2009). *Introduction to meta-analysis*. Chichester: Wiley.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Hillside, NJ: Lawrence Erlbaum.

Cohen, L., Manion, L., & Morrison, K. (2007). *Research methods in education*. London: Routledge.

Cooper, H. (1998). *Synthesizing research*. Thousand Oaks, CA: Sage.

Cooper, H., & Hedges, L. V. (1994). *Handbook of research synthesis*. New York: Russell Sage Foundation.

Durlak, J. A. (1995). *Reading and understanding multivariate statistics*. Washington, DC: American Psychological Association.

Duval, S. (2005). The trim and fill method. In H. R. Rothstein, A. J. Sutton, & M. Bornstein (Eds.), *Publication bias in meta-analysis: Prevention, assessment, and adjustments* (pp. 11–33). Chichester: Wiley.

Duval, S., & Tweedie, R. (2000). Trim and fill: A simple funnel-plot-based method of testing and adjusting for publication bias in meta-analysis. *Biometrics, 56*, 455–463.

Glass, G. V. (1976). Primary, secondary, and meta-analysis of research. *Educational Researcher, 5*, 3–8.

Glass, G., McGaw, B., & Smith, M. L. (1981). *Meta-analysis in social research*. Beverly Hills, LA: Sage.

Glass, G. V., & Smith, M. K. (1978). Meta-analysis of research on the relationship of class size and achievement. *Educational Evaluation and Policy Analysis, 1*, 2–16.

Hedges, L. V., & Olkin, I. (1985). *Statistical method for meta-analysis*. San Diego, CA: Academic Press.

Hunter, J. E., Schmidt, F. L., & Hunter, R. (1979). Differential validity of employment tests by race: A comprehensive review and analysis. *Psychological Bulletin, 86*, 721–735.

Kulinskaya, E., Morgenthaler, S., & Staudte, R. G. (2008). *Meta analysis: A guide to calibrating and combining statistical evidence*. London: Wiley.

Light, R. J., & Pillemer, D. B. (1984). *Summing up: The science of reviewing research*. Cambridge, MA: Harvard University Press.

Littel, H. J., Corcoran, J., & Pillai, V. (2008). *Systematic reviews and meta-analysis*. New York: Oxford University Press.

Petitti, D. B. (2000). *Meta analysis, decision analysis and cost effectiveness analysis: Methods for quantitative synthesis in medicine*. New York: Oxford University Press.

Rosenthal, R. (1979). The file drawer problem and tolerance of null results. *Psychological Bulletin, 86*, 638–641.

Rosenthal, R., & Rubin, D. B. (1979). Interpersonal expectancy effects: The first 345 studies. *Behavioral and Brain Sciences, 3*, 377–386.

Smith, M. L., & Glass, G. V. (1977). Meta-analysis of psychotherapy outcome studies. *American Psychologist, 32*, 752–760.

The Effect of Leadership on Job Satisfaction

Esra Çakmak, Özge Öztekin, and Engin Karadağ

Abstract The effect of leadership on job satisfaction was examined in this meta-analysis study. A total of 602 research studies were collected during the literature review, out of which 318 were included in the meta-analysis. The 318 research studies were compiled to obtain a sample size of 148,501 subjects. The results of the random effect model showed that leadership has a *medium-level positive effect* on job satisfaction. The moderators identified for the study were leadership style/approach, sample group/sector, publication type and year of publication, of which leadership style/approach and sample group/sector were found to be moderator variables.

1 Introduction

Conditions conducive to joy have always been a topic of interest; the topic has been examined in the framework of life satisfaction (Tuzgöl Dost, 2007). One of the main factors to ensure people are happy in their lives and for their lives to gain meaning is to ensure life satisfaction. One of the ways in which a person can gain life satisfaction is to have satisfaction in the area where they spend most of their lives, their working life; in other words, life satisfaction is possible with *job satisfaction* (Yiğit, Dilmaç, & Deniz, 2011). Job satisfaction is the positive emotional state experienced as a result of a person's appreciation for their profession or professional experiences (Locke, 1983). Job satisfaction not only occurs when an employee is appreciative but is also the joy an employee experiences when they receive material gains for the job, when they have colleagues with whom they enjoy working and when they feel the satisfaction of completing a task, product or service (Eren, 1984). In brief, job satisfaction is the sum of employees' emotional states and

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positive attitudes in relation to their work and work environment (Robbins, 1998) and the joy they experience in their work and working life (Başaran, 2000).

Job satisfaction is based on various theories, such as Maslow's hierarchy of needs theory, Herzberg's two-factor theory, Vroom's expectancy theory and Porter-Lawler's expectancy theory, which expands on Vroom's theory. According to Maslow's hierarchy of needs theory, individuals have a series of needs that must be fulfilled for self-actualization. The needs are in a certain hierarchical order from basic to complex needs, starting with physiological needs (thirst, hunger, sex), followed by needs for security, love, acknowledgement and ending with self-actualization. Although needs that are met have a motivational role in behavior until they arise once again, needs that are not met no longer play a motivational role in behavior (Maslow, 1954). Although there are job satisfaction studies based on this theory (Kuhlen, 1963; Worf, 1970), this theory has been criticized for not considering the cognitive processes that are instrumental in the development of attitudes and has lost is popularity over time (Spector, 1997).

Compared to Maslow's theory, Herzberg's two-factor theory is more contemporary and theorizes that there are internal and external factors that motivate individuals. According to this theory, job satisfaction is generally shaped by internal and external factors. External factors, known as *hygiene factors*, motivate the employee and may include policies of an organization, management, renumeration, interpersonal relationships and working conditions, whereas internal factors, known as *motivators*, are internal factors that affect emotions, such as achievement, acknowledgement or responsibility (Herzberg & Mausner, 1959).

According to Vroom's expectancy theory (Vroom, 1964), the factors that motivate an employee are his/her expectations as a result of beliefs and displayed behaviors. In this scope, according to the constructed job satisfaction, the expectation that an employee shall achieve an outcome as a result of the desire to work and the exertion of efforts shall ensure the employee reaches the outcome and lay a foundation for the emergence of job satisfaction and high-level performance. This theory was extended by Lawler and Porter (1966), who included different variables in the theory, such as equality in the workplace and rewards, as variables that affect attitudes.

Although explanations are sought by means of various theories, Luthan's (1989) proposes that job satisfaction has three important dimensions:

- Job satisfaction is an employee's emotional reaction to his/her work environment. Thus, it cannot be observed, only expressed.
- Job satisfaction is generally the identification of the degree to which benefits and expectations are met. If employees perceive that they are being rewarded less, even though they are working more, they will develop a negative attitude towards their colleagues, managers and work.
- Job satisfaction represents the various attributes that are related to each other. Among these are salary, opportunities for promotion, colleagues and the work itself.

Research on job satisfaction has suggested that job satisfaction has a direct relationship with personal concepts such as employee turnover (Cano & Miller, 1992;

Glick, 1992), absenteeism (Lucas, Atwood, & Hagaman, 1993; Mobley, 1977; Taunton, Krampitz, & Woods, 1989), burnout (Dyer & Quine, 1998; Koustelios & Tsigilis, 2005; Penn, Romano, & Foat, 1988; Sucuoğlu & Kuloğlu-Aksaz, 1996; Wolpin, Burke, & Greenglass, 1991) and stress (Ahsan, Abdullah, Fie, & Alam, 2009; Bartram, Joiner, & Stanton, 2004; Pugliesi, 1999), in addition to organizational concepts such as leadership (Cohen & Cohen, 1983; Madlock, 2008; Medley & Larochelle, 1995).

When a leader transfers his/her emotions and thoughts to employees in a strong way, it affects employees' emotions, performance (Goleman, 2002) and job satisfaction of the employees. This is because leaders have an effect not only on employees' emotions and thoughts but on also their motivations-values, needs-demands and desires-expectations, which are instrumental in their actions towards identified objectives (Burns, 2007).

A review of the literature showed that the relationships between job satisfaction and leadership styles/approaches such as transformational leadership (Chen, 2005a, 2005b; Derzsy, 2003; Rothfelder, Ottenbacher, & Harrington, 2013; Shibru & Darshan, 2011; Walumbwa, 2002), instructional leadership (Thompson, 2005; Westley, 2000); ethical leadership (Einstein, 2013; Ruiz-Palomino, Sáez-Martínez, & Martínez-Cañas, 2013), authentic leadership (Darvish & Rezaei, 2011; Giallonardo, Wong, & Iwasiw, 2010; Stearns, 2012), charismatic leadership (Holloway, 2012; Vlachos, Panagopoulos, & Rapp, 2013), servant leadership (Barnes, 2011; Caffey, 2012; Drury, 2004; Hebert, 2003; Miears, 2004; Wilson, 2013), supportive leadership (Lowhorn, 2009; Tomsheck, 1985) and participatory leadership (Gharibvand, 2012; Kim, 2002; Nongmak, 1986); additionally, leadership behaviors (Konto, 1986; Lin, 1998; Marra, 1978; Oberlin, 1980; Prest, 1993), leadership practices (Bathini, 1996; Miller, 2003; Roelle, 2010; Taylor, 1996), leadership skills (Abraham & Grant, 2008; Ivie, 2007) and leadership efficiency (Henson, 1984; McElhaney, 2003; Schulman, 1989) were investigated.

In this context, this study examined the effect of leadership on job satisfaction. Further, the moderators that were expected to have a medium-level effect in this study were identified as: (1) leadership style/approach, (2) sample group/sector of the research studies, (3) type of publication of the study and (4) year of publication. All such variables, along with the results of previous research results, were used to test the following hypotheses of this study:

H_1 Leadership has a positive effect on job satisfaction.
H_2 Publication type is a moderator for the positive effect of leadership on job satisfaction.
H_3 The year of publication is a moderator for the positive effect of leadership on job satisfaction.
H_4 The sample group/sector is a moderator for the positive effect of leadership on job satisfaction.
H_5 Leadership style/approach is a moderator for the positive effect of leadership on organizational commitment.

2 Method

2.1 Study Design

In this study, the effect of leadership on job satisfaction was tested with a meta-analysis design.

2.2 Review Strategy and Criteria for Inclusion/Exclusion

To determine the research studies to include in the meta-analysis, the Science-Direct, Proquest and Ebsco academic databases were used to conduct a literature review. For this process, the terms *leadership* and *job satisfaction* included in the titles of the studies were used to screen the research studies. The end date for the research studies included in the research was identified as March 2014. Doctoral dissertations and peer-reviewed journals were included in the study.

Many strategies were used to identify the research studies that were appropriate for the meta-analysis of the study. First, a research study pool (602 research studies) was established; it included all studies with leadership and job satisfaction in their titles. The abstracts of these studies were reviewed, and all were found to be appropriate to include in the study. In the second stage, all research studies in the pool were examined in detail. The results of the examination found that 318 of the research studies in the pool were appropriate, and 291 were not found to be suitable. The descriptive statistics of the 318 research studies included in the analysis are presented in Table 1.

The criteria for inclusion of the research studies in the analysis study were identified as follows:

- To have the statistical information necessary for correlational meta-analysis (n and r, or R^2 values)
- To be a study measuring the correlation between leadership and job satisfaction

Reasons for not including a research study in the meta-analysis:

- Having no quantitative data (qualitative research)
- Not having a correlation coefficient
- Not focusing on job satisfaction
- Not focusing on leadership

Table 1 Characteristics of the studies included in the meta-analysis

Variables		1	2	3	4	5	Total
Publication year		Before 1990	1990–1999	2000–2009	2010 and beyond		
	n	37	43	125	113		318
	%	11.6	13.5	39.3	35.5		100
Publication type		Dissertations	Articles				
	n	208	110				318
	%	65.0	34.4				100
Sample group/ sector		Education	Service	Health	Security	Sport	
	n	121	137	49	8	3	318
	%	38.1	43.1	15.4	2.5	0.9	100

2.3 Coding Process

The coding process was essentially a data sorting process used to ascertain which data were clear and suitable for the study. In this scope, a coding form was developed before the statistical analysis was conducted, and the coding was conducted according to the form. The main aim was to develop a specific coding system that allowed the study to see the entirety of the research studies in general and that would not miss any characteristics of each individual research study. The coding form developed in the study was comprised of:

- References for the research
- Sample information
- Sample group/sector
- Leadership style/approach
- Data collection tool(s)
- Quantitative values

2.4 Statistical Processes

The effect size acquired in meta-analysis is a standard measure value used in the determination of the strength and direction of the relationship in the study (Borenstein, Hedges, Higgins, & Rothstein, 2009). Pearson's correlation coefficient (r) was determined to be the effect size in this study. Because the correlation coefficient has a value between $+1$ and -1, the r value calculated was evaluated by converting this value into the value as it appears in the z table (Hedges & Olkin, 1985). Provided that more than one correlation value is given between the same structure categories in correlational meta-analysis studies, two different approaches are used in the determination of the one to be used in the meta-analysis (Borenstein et al., 2009; Kulinskaya, Morgenthaler, & Staudte, 2008). For this study, (1) first, if

the correlations were independent, all the related correlations were included in the analysis and were considered to be independent studies, and (2) if there were dependent correlations, then the *highest correlation value* was accepted. A *random effect model* was used for the meta-analysis processes in this study. The *Comprehensive Meta-Analysis* program was used in the meta-analysis process.

2.5 Moderator Variables

To determine the statistical significance of the differences between the moderators of the study, only the Q_b values were used. Four moderator variables that were expected to have a role in the average effect size were identified in the study. The first of these considered *leadership style/approach* as a moderator in regards to the relationship between job satisfaction and leadership styles/approaches. The second was *sample group/sector,* which was expected to influence the average effect of leadership perceptions and job satisfaction. The third variable was the publication's *year of research,* and the last variable was the *type of research study*.

2.6 Publication Bias

A funnel plot for the research studies included in the meta-analysis of can be seen in Fig. 1. Evidence that publication bias affected the research studies included in the meta-analysis can be seen in Fig. 1. A serious asymmetry would be expected in the funnel plot if there were a publication bias. The concentration of plots on one side under the line of average effect size, particularly in the bottom section of the funnel, suggests the probability of a publication bias in the research studies. Evidence for publication bias was observed for the 318 research studies included in the meta-analysis study.

A publication bias was observed in the funnel plot, and the results of *Duval and Tweedie's trim and fill test*, which was applied to determine the effect size related to partiality in the publications that was acquired with the meta-analysis using the random effect model, are shown in. As seen in Table 2, there is a difference between the observed effect size and the virtual effect size established to correct the effect of the publication bias. The reason for the difference is the asymmetry of the concentration on both sides of the center line and the studies plotted to the left of and above the center line, skewing the symmetry.

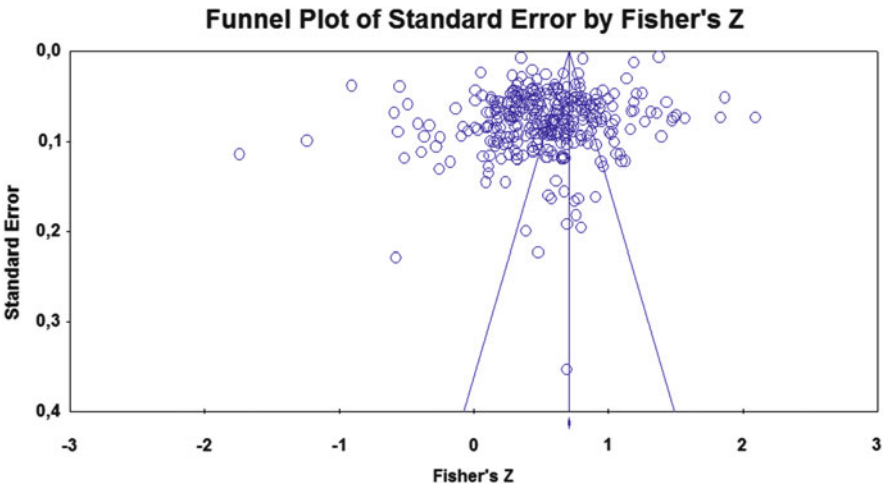

Fig. 1 Effect size funnel for publication bias

Table 2 Duval and Tweedie's trim and fill test results

	Excluded study	Point estimate	CI (Confidence interval)		Q
			Lower limit	Upper limit	
Observed values		0.48	0.44	0.52	30,939.6
Adjusted values	80	0.34	0.28	0.40	91,909.5

3 Findings

Table 3 shows the results of the meta-analysis of leadership effects on job satisfaction. The findings supported H_1, which predicted there would be a positive relationship between leadership and job satisfaction. The effect size of leadership on job satisfaction was calculated to be 0.48. This value shows that leadership has a *medium-level effect* (see Cohen, 1988) on job satisfaction.

The findings did not support hypothesis H_2, which argued that the type of publication would play a moderating role in the effect of leadership on job satisfaction. Although the moderator analysis did not find a statistically significant difference between the effect sizes of the sample groups ($Q_b = 0.80$, $p > 0.05$), the effect size of articles [$r = 0.45$] and dissertations [$r = 0.49$] was found to be of a medium level.

The research did not support H_3, which hypothesized that year of publication would play a moderating role in the effect of leadership on job satisfaction. Although the moderator analysis did not find a statistically significant difference between the effect sizes of the publication years ($Q_b = 4.63$, $p > 0.05$), effect size of publications before 1990 [$r = 0.40$] and from 1990 to 1999 [$r = 0.47$] were found to be of a medium level; for 2010 and beyond [$r = 0.53$], was is found to be high.

Table 3 Findings of the correlations between leadership and job satisfaction: results of meta-analysis

Variables	k	N	r	Confidence interval		Q	Q_b
				Lower limit	Upper limit		
Job satisfaction	318	148,501	0.48*	0.44	0.52	30,939.6*	
Moderator (publication type)							0.80
Article	110	102,004	0.45*	0.38	0.52		
Dissertation	208	46,497	0.49*	0.44	0.54		
Moderatör (Yayım yılı)							4.63
Before 1990	37	8,137	0.40*	0.27	0.52		
1990–1999	43	10,737	0.47*	0.35	0.58		
2000–2009	125	99,233	0.53*	0.47	0.59		
2010 and beyond	113	30,394	0.45*	0.37	0.52		
Moderator (sample group/sector)							1.59
Education	121	57,560	0.46*	0.39	0.52		
Service	137	77,124	0.48*	0.41	0.53		
Security	8	1,344	0.58*	0.32	0.75		
Health	49	11,925	0.52*	0.41	0.61		
Spor	3	548	0.42	−0.08	0.76		
Moderator (leadership style/approach)							30.76*
Othantic	5	1,160	0.53*	0.17	0.76		
Democratic	3	1,695	0.28	−0.23	0.67		
Others	34	8,364	0.34*	0.19	0.47		
Distributive	2	1,900	0.00	−0.56	0.57		
Ethical	2	415	0.52	−0.07	0.84		
Instructional	2	328	0.37	−0.26	0.78		
Entellectual	2	1,319	0.37	−0.25	0.77		
Leadership behaviors	70	18,792	0.44*	0.35	0.53		
Leadership skills	3	16,348	0.81*	0.54	0.93		
Leadership efficiency	6	826	0.21	−0.17	0.54		
Leadership practices	31	7,345	0.51*	0.37	0.62		
Participatory	7	3,366	0.50*	0.20	0.72		
Servant	20	10,252	0.73*	0.61	0.81		
Supportive	4	20,765	0.40	−0.02	0.71		
Transformational	125	55,113	0.49*	0.42	0.55		
Charismatic	2	513	0.54	−0.05	0.85		

*$p < 0.01$

The results of the moderator analysis showed that H_4, regarding the moderating role of the sample group on the effect size of leadership and job satisfaction, was not supported. The moderator analysis did not find a statistically significant difference in the effect size between the sample groups ($Q_b = 30.76$, $p > 0.05$). A medium-

level effect size was found for education sector employees [$r = 0.46$] and service sector employees [$r = 0.48$], and the level was high for security sector employees [$r = 0.58$] and health sector employees [$r = 0.52$]. The effect size of leadership on job satisfaction for employees of the sporting sector was not found to be significant.

The findings supported H_5, i.e., that leadership style/approach played a moderating role in the effect leadership has on job satisfaction. According to the findings of the moderator analysis, the difference between the effect size of leadership styles was statistically significant ($Q_b = 30.76$, $p < 0.05$). The most effective leadership styles/approaches regarding job satisfaction in the research studies included in the meta-analysis were found to be, respectively, leadership skills [$r = 0.81$], servant leadership [$r = 0.73$], authentic leadership [$r = 0.53$], leadership practices [$r = 0.51$], participatory leadership [$r = 0.50$], transformational leadership [$r = 0.49$] and leadership behaviors [$r = 0.44$].

Conclusion

A total of 318 research studies were included in this meta-analysis study to examine the magnitude of the effect of leadership on job satisfaction. Publication type, year of publication, sample group/sector and leadership style/approach were considered as moderator variables in the study. The results of the meta-analysis found a *medium-level effect* of leadership on job satisfaction. This finding is in parallel with studies that have found that leadership leads to an increase in employees' performance (Goleman, 2002; Locke & Latham, 1990; Petty, McGee, & Cavender, 1984) by increasing their motivation (Burns, 2007) and, in turn, increasing their job satisfaction (Kouzes & Posner, 2002). The finding that there is a significant positive relationship between leadership and job satisfaction is congruent with the findings of many other studies (Brown, 1989; Chen, 2005a, 2005b; Madlock, 2008; Parkinson, 2008; Shieh, 1996; Temple, 2009; Walumbwa, 2002).

The findings of the moderator variable analyses conducted for the sample groups used by the studies did not find a statistically significant difference between sample groups. However, it was found that the strongest effect among sample groups was for the security sector group, which includes soldiers and police officers, whereas the weakest effect was found for the education sector. Because soldiers must always be ready for the breakout of war and are expected to defend the country with a minimum number of soldiers, they are in need of a leader to keep them motivated (Department of the Army, 1999). A similar situation is the case for police officers. In addition to the significant effect police leaders have on the beliefs, values and actions of police officers (Friedmann, 1992), it was also seen that police leaders have an effect on a series of attitudes (e.g., interpretation of legislation, degree of support, and supervision; Tang & Hammontree, 1992) that affect job satisfaction.

(continued)

Similarly, according to the findings of the moderator analysis, the difference in the effect size of different publication years is not statistically significant. However, the studies conducted from 2000 to 2009 have found that leadership has a strong effect on job satisfaction, and studies for other years show a medium effect. Type of publication was not found to be a significant moderator of the effect of leadership on job satisfaction, but a medium-level effect was found for articles and dissertations.

Another moderator variable considered in the study was leadership style/approaches. According to the findings, leadership style/approach is a significant moderator on the effect of leadership on job satisfaction. The leadership style/approach most effective for job satisfaction is leadership skills because the display of basic leadership skills increases the job satisfaction of employees (Bentley & Rempel, 1972). The least effective leadership style/approach on job satisfaction is leadership behaviors. The behaviors of leaders affect employees' behaviors (Bass, 1990) and job satisfaction. However, because leadership skills have a stronger effect on job satisfaction than leadership behaviors do, it is important to note that leaders should not simply display leadership behaviors; they should also show employees that they have the necessary fundamental leadership skills to increase employees' job satisfaction. A further finding concerning leadership style/approaches is that distributive, democratic, ethical, instructional, intellectual, supportive and charismatic leadership styles have no effect on job satisfaction.

References[1]

Abd-El-Salam, E. M., Shawky, A. Y., El-Nahas, T., & Nawar, Y. S. (2013). The relationship among job satisfaction, motivation, leadership, communication, and psychological empowerment: An Egyptian case study. *S.A.M Advanced Management Journal, 78*(2), 33–50.*

Abou Harash, H. (2010). *An analysis of the relationship between the perceived leadership styles of educational leaders and the job satisfaction of faculty members who serve under them within community colleges*. (Order No. 3423555, Pepperdine University).*

Abouelenein, M. S. (2012). *CIOs' transformational leadership behaviors in community colleges: A comparison-based approach to improving job satisfaction of information technology workers*. (Order No. 3535722, University of Phoenix).*

Abraham, J., & Grant, L. A. (2008). Leadership competencies and employee satisfaction in nursing homes. *Seniors Housing & Care Journal, 16*(1), 11–23.*

Adadevoh, E. K. (2003). *The relationship between transformational and transactional leadership behaviors of nursing managers and job satisfaction and organizational commitment among hospital nursing staff*. (Order No. 3185860, Nova Southeastern University).*

Adebayo, O. O. (2010). *Obstetric nurses' perceptions of manager's leadership style on job satisfaction and organizational commitment*. (Order No. 3468112, University of Phoenix).*

[1] References marked with an asterisk indicate studies included in the meta-analysis. The in-text citations to studies selected for meta-analysis are not followed by asterisks.

Adeyemi, T. O., & Adu, E. T. (2013). Head teachers' leadership styles' and teachers job satisfaction in primary schools in Ekiti State, Nigeria. *International Journal of Academic Research in Economics and Management Sciences, 2*(2), 69–79.*

Afam, C. C. (2012). *The influence of leadership practices on faculty job satisfaction in baccalaureate degree nursing program.* (Order No. 3510178, The University of North Carolina at Charlotte).*

Ahmad, A. R., Adi, M. N. M., Noor, H. M., Rahman, A. G. A., & Yushuang, T. (2013). The influence of leadership style on job satisfaction among nurses. *Asian Social Science, 9*(9), 172–178.*

Ahsan, N., Abdullah, Z., Fie, D. G., & Alam, S. S. (2009). A study of job stress on job satisfaction among university staff in Malaysia: Empirical study. *European Journal of Social Sciences, 8* (1), 121–131.

Aiken, W. J., Smits, S. J., & Lollar, D. J. (1972). Leadership behavior and job satisfaction in state rehabilitation agencies. *Personnel Psychology, 25*(1), 65–73.*

Aina, O. A. (2013). *Effect of leadership style on employee job satisfaction and organizational commitment in the communications industry.* (Order No. 3576344, University of Phoenix).*

Alarcon, R. R. (2005). *An investigation of the relationships between officers' ratings of their leaders' leadership style and officers' ratings of job satisfaction in a law enforcement environment.* (Order No. 3164477, Our Lady of the Lake University).*

Al-shuwairekh, K. (2005). *The impact of the managerial leadership style on the levels of job satisfaction of staff members: A study at al-imam university (AU) in Riyadh, Saudi Arabia.* (Order No. 3166833, Virginia Commonwealth University).*

Al-Swidi, A. K., Nawawi, M. K. M., & Al-Hosam, A. (2012). Is the relationship between employees' psychological empowerment and employees' job satisfaction contingent on the transformational leadership? A study on the Yemeni Islamic Banks. *Asian Social Science, 8* (10), 130–150.*

Amadeo, C. A. (2008). *A correlational study of servant leadership and registered nurse job satisfaction in acute health-care settings.* (Order No. 3350849, University of Phoenix).*

Amburgey, W. O. D. (2005). *An analysis of the relationship between job satisfaction, organizational culture, and perceived leadership characteristics.* (Order No. 3188100, University of Central Florida).*

Amin, M., Shah, S., & Tatlah, I. A. (2013). Impact of principals/directors' leadership styles on job satisfaction of the faculty members: Perceptions of the faculty members in a Public University of Punjab, Pakistan. *Journal of Research & Reflections in Education*, *7*(2), 97–112.*

Amoroso, P. F. (2002). *The impact of principals' transformational leadership behaviors on teacher commitment and teacher job satisfaction.* (Order No. 3066129, Seton Hall University, College of Education and Human Services).*

Anderson, K. P. (2005). *A correlational analysis of servant leadership and job satisfaction in a religious educational organization.* (Order No. 3162292, University of Phoenix).*

Anderson, K. A. (2011). *The impact that leadership practices of the nurse manager and nursing practice environments have on job satisfaction of registered nurses in two urban teaching hospitals.* (Order No. 3576886, University of Maryland Eastern Shore).*

Azanza, G., Moriano, J. A., & Molero, F. (2013). Authentic leadership and organizational culture as drivers of employees' job satisfaction. *Revista de Psicología Del Trabajo y de las Organizaciones, 29*(2), 45–50.*

Bare-Oldham, K. (1999). *An examination of the perceived leadership styles of Kentucky public school principals as determinants of teacher job satisfaction.* (Order No. 9967193, West Virginia University).*

Barnes, L. F. (2007). *The influence of health care CIOs' transformational leadership behavior on workers' job satisfaction.* (Order No. 3299212, University of Phoenix).*

Barnes, L. L. (2011). *Job satisfaction and organizational commitment: An empirical investigation of the effects of servant leadership in distance education programs.* (Order No. 3465555, Capella University).*

Bartram, T., Joiner, T. A., & Stanton, P. (2004). Factors affecting the job stress and job satisfaction of Australian nurses: Implications for recruitment and retention. *Contemporary Nurse, 17*(3), 293–304.

Başaran, İ. E. (2000). *Örgütsel davranış insanın üretim gücü*. Ankara: Bilim Kitap Kırtasiye.

Bass, B. M. (1990). *Bass and Stogdill's handbook of leadership: Theory, research, and applications*. New York, NY: Free Press.

Bathini, V. S. (1996). *Relationship between leadership practices of Seventh—day Adventist administrators and teacher job satisfaction of Seventh—day Adventist teachers in India*. (Order No. 9704964, La Sierra University).*

Bell-Roundtree, C. (2004). *Does manager behavior influence knowledge worker job satisfaction and organizational commitment attitudes? A validation of kouzes and posner's transformational leadership theory*. (Order No. 3119012, The University of Alabama in Huntsville).*

Bentley, R. R., & Rempel, A. M. (1972). *Purdue teacher opinionaire*. West Lafayette, IN: Purdue University.

Berson, Y., & Linton, J. D. (2005). An examination of the relationships between leadership style, quality, and employee satisfaction in R&D versus administrative environments. *R&D Management, 35*(1), 51–60.*

Bhatti, N., Maitlo, G. M., Shaikh, N., Hashmi, M. A., & Shaikh, F. M. (2012). The impact of autocratic and democratic leadership style on job satisfaction. *International Business Research, 5*(2), 192–201.*

Bilimoria, D., Perry, S. R., Liang, X., Stoller, E. P., Higgins, P., & Taylor, C. (2006). How do female and male faculty members construct job satisfaction? The roles of perceived institutional leadership and mentoring and their mediating processes. *The Journal of Technology Transfer, 31*(3), 355–365.*

Blankenship, S. L. (2010). *The consequences of transformational leadership and/or transactional leadership in relationship to job satisfaction and organizational commitment for active duty women serving in the air force medical service*. (Order No. 3398823, Nova Southeastern University).*

Borenstein, M., Hedges, L. V., Higgins, J. P. T., & Rothstein, H. R. (2009). *Introduction to meta-analysis*. Chichester: Wiley.

Bormann, L. B. (2011). *The relationship between staff nurse perception of nurse manager leadership behavior and staff nurse job satisfaction in a hospital applying for magnet recognition status*. (Order No. 3491514, University of Louisville).*

Bowden, A. G. (2002). *Collaborative leadership in middle schools and teacher job satisfaction: A search for relationships*. (Order No. 3045935, University of San Diego).*

Bowling, S. R. (1973). *Leadership behavior of chief student personnel administrators and its relationship to morale and job satisfaction*. (Order No. 7403802, The University of Tennessee).*

Bratt, M. M., Broome, M., Kelber, S., & Lostocco, L. (2000). Influence of stress and nursing leadership on job satisfaction of pediatric intensive care unit nurses. *American Journal of Critical Care, 9*(5), 307–317.*

Braun, S., Peus, C., Weisweiler, S., & Frey, D. (2013). Transformational leadership, job satisfaction, and team performance: A multilevel mediation model of trust. *The Leadership Quarterly, 24*(1), 270–283.*

Breaux, P. J. (2009). *An investigation of the relationships between emergency medical technician's ratings of emergency medical service (EMS) director's transformational leadership and job satisfaction in rural EMS environments*. (Order No. 3354206, Our Lady of the Lake University).*

Brollier, C. (1985). Managerial leadership and staff OTR job satisfaction. *Occupational Therapy Journal of Research, 5*(3), 170–184.*

Brown, N. J. (1989). *The relative contribution of organizational climate, supervisory leadership, and peer leadership to job satisfaction, performance, and retention*. (Order No. 9004056, University of Denver).*

Brown, S. M. (1996). *Leadership practices, job satisfaction and leadership activities of trained reading recovery (RTM) teachers*. (Order No. 9720739, University of Bridgeport).*

Brown, K. A. (2009). *Educators jump ship: A study of leadership style and teachers' job satisfaction*. (Order No. 3355846, Capella University).*

Bruning, P. (2010). *Transformational leadership and group affective well-being and job satisfaction: A group-level test of two potential moderators.* (Order No. MR69723, University of Manitoba (Canada)).*

Burchell, J. M. (2011). *The relationship between the use of software development methodology, leadership style, and job satisfaction.* (Order No. 3482296, Walden University).*

Burke, J. S. (1982). *Leadership styles of school principals as predictors of organizational climate and teacher job satisfaction.* (Order No. 8309365, University of Kansas).*

Burns, J. D. (2007). *Analyses of transactional and transformational leadership on job satisfaction of college faculty.* (Order No. 3294383, Northcentral University).*

Bushra, F., Usman, A., & Naveed, A. (2011). Effect of transformational leadership on employees' job satisfaction and organizational commitment in banking sector of Lahore (Pakistan). *International Journal of Business and Social Science, 2*(18), 261–267.*

Caffey, R. D. (2012). *The relationship between servant leadership of principals and beginning teacher job satisfaction and intent to stay.* (Order No. 3530849, University of Missouri—Columbia).*

Cano, J., & Miller, G. (1992). A gender analysis of job satisfaction, job satisfier factors, and job dissatisfier factors of agricultural education teachers. *Journal of Agricultural Education, 33*(3), 40–46.

Carnes, K. K. (2007). *Credentials for change: A descriptive analysis of teacher perceptions of transformational leadership and job satisfaction in the secondary school setting.* (Order No. 3274685, Capella University).*

Catalano, P. (2002). *The relationship between transformational and transactional leadership and job satisfaction in an aerospace environment.* (Order No. 3059410, Nova Southeastern University).*

Çetin, M., Karabay, M. E., & Efe, M. N. (2012). The effects of leadership styles and the communication competency of bank managers on the employee's job satisfaction: The case of Turkish banks. *Procedia Social and Behavioral Sciences, 58*, 227–235.*

Chambliss, A. (2013). *The relationship between job satisfaction of teachers and the level of servant leadership of their campus administrators.* (Order No. 3562276, Lamar University - Beaumont).*

Chan, D. S. (2005). *Relationship between generation-responsive leadership behaviors and job satisfaction of generations X and Y professionals.* (Order No. 3194291, University of Phoenix).*

Chang, Y. (2003). *Nursing in Taiwan: Chinese philosophy impact on leadership styles and job satisfaction.* (Order No. 3091356, The University of Wisconsin—Milwaukee).*

Chang, S. C., & Lee, M. S. (2007). A study on relationship among leadership, organizational culture, the operation of learning organization and employees' job satisfaction. *The Learning Organization, 14*(2), 155–185.*

Chen, H. (2004a). *The relationship between leadership styles and faculty job satisfaction in Taiwan.* (Order No. 3120579, The University of Utah).*

Chen, L. Y. (2004b). Examining the effect of organization culture and leadership behaviors on organizational commitment, job satisfaction, and job performance at small and middle-sized firms of Taiwan. *Journal of American Academy of Business, 5*(1/2), 432–438.*

Chen, H. (2005a). *The influence of nursing directors' leadership styles on Taiwanese nursing faculty job satisfaction.* (Order No. 3172100, University of South Dakota).*

Chen, L. (2005b). *Exploring the relationship among transformational and transactional leadership behavior, job satisfaction, organizational commitment, and turnover on the IT department of research and development in shanghai, china.* (Order No. 3169070, Nova Southeastern University).*

Chen, N. (2008). *Causal relationship analysis between leadership behavior, organizational commitment, job satisfaction, and turnover intentions for employees of college athletic departments in Taiwan.* (Order No. 3306413, United States Sports Academy).*

Chen, H. C., & Baron, M. (2006). Nursing directors' leadership styles and faculty members' job satisfaction in Taiwan. *The Journal of Nursing Education, 45*(10), 404–411.*

Chen, H. C., Beck, S. L., & Amos, L. K. (2005). Leadership styles and nursing faculty job satisfaction in Taiwan. *Journal of Nursing Scholarship, 37*(4), 374–380.*

Chieffo, A. N. (1991). Factors contributing to job satisfaction and organizational commitment of community college leadership teams. *Community College Review, 19*(2), 15–25.*

Chiok Foong Loke, J. (2001). Leadership behaviours: Effects on job satisfaction, productivity and organizational commitment. *Journal of Nursing Management, 9*(4), 191–204.*

Choi, K. (2006). *The impact of motivational language and transformational leadership of the pastor on volunteers' job satisfaction in Korean southern Baptist churches in the United States*. (Order No. 3243509, Regent University).*

Chou, H. (2012). Effects of paternalistic leadership on job satisfaction-regulatory focus as the mediator. *International Journal of Organizational Innovation (Online), 4*(4), 62–85.*

Chu, I. Y. (1993). *The relationship of teachers' job satisfaction and their perceptions of principals' leadership styles in private vocational high schools in a selected metropolitan area of Taiwan*. (Order No. 9420287, University of Northern Iowa).*

Chu, H. (2008). *Employee perception of servant leadership and job satisfaction in a call center: A correlational study*. (Order No. 3326206, University of Phoenix).*

Chung, J. Y., Jung, C. S., Kyle, G. T., & Petrick, J. F. (2010). Servant leadership and procedural justice in the US National Park Service: The antecedents of job satisfaction. *Journal of Park and Recreation Administration, 28*(3), 1–15.*

Cisneros-Rowan, J. (2009). *The relationship between nurses' job satisfaction and perceptions of nurse managers' leadership behaviors*. (Order No. 3350090, Pepperdine University).*

Clemens, E. V., Milsom, A., & Cashwell, C. S. (2009). Using leader-member exchange theory to examine principal-school counselor relationships, school counselors' roles, job satisfaction, and turnover intentions. *Professional School Counseling, 13*(2), 75–85.*

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Hillside, NJ: Lawrence Erlbaum Associates.

Cohen, P., & Cohen, J. (1983). *In applied multiple regression/correlation analysis for the behavioral sciences*. Hillsdale, NJ: Lawrence Erlbaum Associates.

Collins, B. J., Burrus, C. J., & Meyer, R. D. (2014). Gender differences in the impact of leadership styles on subordinate embeddedness and job satisfaction. *The Leadership Quarterly*, *25* (4):660–671 .*

Collmer, J. (1989). *A correlational study of principals' leadership styles and teachers' job satisfaction*. (Order No. 9014129, East Texas State University).*

Craig, P. (2013). *The relationship between leadership and employee job satisfaction in a military community*. (Order No. 3538842, University of Phoenix).*

Crane, D. N. (2012). *The relationship between leadership behavior, the thirteen core competencies, and teacher job satisfaction*. (Order No. 3529956, The University of Memphis).*

Cummings, G. G., Olson, K., Hayduk, L., Bakker, D., Fitch, M., Green, E., et al. (2008). The relationship between nursing leadership and nurses' job satisfaction in Canadian oncology work environments. *Journal of Nursing Management, 16*(5), 508–518.*

Dale, J. C. (2012). *The correlation of the perceived leadership style of middle school principals to teacher job satisfaction and efficacy*. (Order No. 3546181, Liberty University).*

Daniels, S. C. (1981). *Principals' leadership in inner-city schools: A comparative study of leadership behavior, job satisfaction and student achievement*. (Order No. 8204896, Northwestern University).*

Darvish, H., & Rezaei, F. (2011). The impact of authentic leadership on job satisfaction and team commitment. *Management & Marketing, 6*(3), 421–436.*

Dauffenbach, V. K. (1995). *Leadership practices and job satisfaction: An examination of the relationship between academic deans and department chairpersons*. (Order No. 9537089, Western Michigan University).*

Davis, D. D. (1994). *Leadership styles, job satisfaction, self-efficacy and task structure of choice, conventional, and conventional with choice high school principals*. (Order No. 9423698, Wayne State University).*

Denker, R. W. (1995). *The relationship of job satisfaction, leadership behavior and locus of control of human resource development professionals.* (Order No. 9529637, Loyola University of Chicago).*

Denton, R. T. (1976). *The effects of differing leadership behaviors on the job satisfaction and job performance of professional mental health workers.* (Order No. 7624584, The Ohio State University).*

Department of the Army. (1999). *Army leadership: Be, know, do. (Field manual 22-100).* Washington, DC: Author.

Derzsy, M. (2003). *The relationship between leadership styles of sales managers and employee job satisfaction: An empirical examination.* (Order No. 3117407, Capella University).*

Despres, K. K. (2011). *Perceived leadership styles of nurse managers' and nurses' job satisfaction: A correlational study.* (Order No. 3538848, University of Phoenix).*

Detamore, J. A. (2008). *An analysis of the relationships between job satisfaction, leadership, and intent to leave within an engineering consulting firm.* (Order No. 3289494, Capella University).*

Ding, W. (1992). *Relationships among principals' leadership behavior, principals' authenticity, and teacher job satisfaction in selected junior high schools.* (Order No. 9235577, University of Northern Colorado).*

DiPasquale, N. A. (1978). *The relation of organizational structure and leadership style to the job dissatisfaction and job satisfaction of teachers in suburban elementary schools.* (Order No. 7824110, New York University).*

Dono-Koulouris, M. (2003). *Leadership style, teacher empowerment, and job satisfaction in selected catholic elementary schools.* (Order No. 3107132, St. John's University (New York), School of Education and Human Services).*

Drury, S. (2004). *Employee perceptions of servant leadership: Comparisons by level and with job satisfaction and organizational commitment.* (Order No. 3146724, Regent University).*

Dungca, C. U. (1988). *The relationship between perceived middle manager leadership behavior style and first line manager job satisfaction.* (Order No. 8824361, Columbia University Teachers College).*

Dyer, S., & Quine, L. (1998). Predictors of job satisfaction and burnout among the direct care staff of a community learning disability service. *Journal of Applied Research in Intellectual Disabilities, 11*(4), 320–332.

Ecker, M. A. (1979). *The relationship between leadership style and teacher job satisfaction.* (Order No. 8007621, United States International University).*

Einstein, J. E. (2013). *Ethical leadership and service climate: The relationship with job satisfaction and organizational identification.* (Order No. 3561141, Nova Southeastern University).*

Ejimofor, F. O. (2007). *Principals' transformational leadership skills and their teachers' job satisfaction in Nigeria.* (Order No. 3298282, Cleveland State University).*

Eldred, J. A. (2010). *A study to determine the relationship between the perceived leadership styles of school principals and teacher job satisfaction at selected elementary schools.* (Order No. 3412477, Capella University).*

El-Nahas, T., Abd-El-Salam, E. M., & Shawky, A. Y. (2013). The impact of leadership behaviour and organisational culture on job satisfaction and its relationship among organisational commitment and turnover intentions. A case study on an Egyptian company. *Journal of Business & Retail Management Research, 7*(2), 13–43.*

Elpers, K., & Westhuis, D. J. (2008). Organizational leadership and its impact on social workers' job satisfaction: A national study. *Administration in Social Work, 32*(3), 26–43.*

Emery, C. R., & Barker, K. J. (2007). The effect of transactional and transformational leadership styles on the organizational commitment and job satisfaction of customer contact personnel. *Journal of Organizational Culture, Communications, and Conflict, 11*(1), 77–90.*

Emu, K. E. (2012). *Impact of full-range leadership styles on employee job satisfaction in Nigerian banks*. (Order No. 3536874, University of Phoenix).*

English, E. M. (2011). *Principals' servant leadership and teachers' job satisfaction*. (Order No. 3492651, University of La Verne).*

Eren, E. (1984). *Yönetim psikolojisi*. İstanbul: İstanbul Üniversitesi Yayınları. No: 3182.

Erickson, E. L. (2013). *When in the service of your fellow being: A mixed method study of servant leadership and job satisfaction in a state government setting*. (Order No. 3604532, Grand Canyon University).*

Ezeabasili, S. (2010). *The interplay of leadership and job satisfaction in the organizational management of people with mental retardation*. (Order No. 3418038, Capella University).*

Frazier, E. (2013). *Small business leadership and organizational culture, job satisfaction and performance: Correlational research*. (Order No. 3569145, University of Phoenix).*

Friedmann, R. R. (1992). *Community policing: Comparative perspectives and prospects*. New York, NY: Harvester Wheatsheaf.

Froelich, S. D. (1995). *The impact of transformational leadership behaviors on nurses' job satisfaction and organizational commitment*. (Order No. 1375281, Madonna University).*

Furtado, L. C., Batista, M. G., & Silva, F. J. (2011). Leadership and job satisfaction among Azorean hospital nurses: An application of the situational leadership model. *Journal of Nursing Management, 19*(8), 1047–1057.*

Gallato, C. G., Rashid, S., Warokka, A., Reamillo, K. A. G., & Abdullah, H. H. (2012). Fostering niches among SMEs in Malaysia through organizational commitment, leadership, organizational culture and job satisfaction. *Journal of Innovation Management in Small & Medium Enterprises, 2012*(2012), 1–12.*

Garrett, B. H. (1989). *The relationship between leadership preferences, perceived head nurse leader behavior, and job satisfaction of staff nurses*. (Order No. 8918174, State University of New York at Albany).*

Gellis, Z. D. (1999). *The relationship between leadership style and coping style on job stress and job satisfaction among social workers in health care*. (Order No. NQ41155, University of Toronto (Canada)).*

Gharibvand, S. (2012). The relationship between Malaysian organizational culture, participative leadership style, and employee job satisfaction among Malaysian employees from semiconductor industry. *International Journal of Business and Social Science, 3*(16), 289–298.*

Gharibvand, S., Mazumder, M. N. H., Mohiuddin, M., & Su, Z. (2013). Leadership style and employee job satisfaction: Evidence from Malaysian semiconductor industry. *Transnational Corporations, 5*(2), 93–103.*

Ghorbanian, A., Bahadori, M., & Nejati, M. (2012). The relationship between managers' leadership styles and emergency medical technicians' job satisfaction. *The Australasian Medical Journal, 5*(1), 1–7.*

Giallonardo, L. M., Wong, C. A., & Iwasiw, C. L. (2010). Authentic leadership of preceptors: Predictor of new graduate nurses' work engagement and job satisfaction. *Journal of Nursing Management, 18*(8), 993–1003.*

Gipe, L. A. (1997). *Transformational leadership and job satisfaction*. (Order No. 1387531, Bellarmine College).*

Glick, N. L. (1992). Job satisfaction among academic administrators. *Research in Higher Education, 33*(5), 625–639.

Goleman, D. (2002). *Yeni liderler*. Nayır, F. and Deniztekin, O. (Çev.), İstanbul: Varlık Yayınları.

Griffith, J. (2004). Relation of principal transformational leadership to school staff job satisfaction, staff turnover, and school performance. *Journal of Educational Administration, 42*(3), 333–356.*

Grill, P. A. (1998). *The relationship between leadership roles and job satisfaction among elementary teachers*. (Order No. 9919571, University of Florida).*

Handsome, J. D. (2009). *The relationship between leadership style and job satisfaction*. (Order No. 3379818, Walden University).*

Harris, I. M. (2013). *Evaluating directors of nursing: Self-perceptions on leadership, job satisfaction, and personnel retention*. (Order No. 3601086, Capella University).*

Hassell, J. M. G. (1985). *Leadership as an aspect of organizational climate, job satisfaction, and perceived organizational effectiveness of faculty (nursing, management, evaluation)*. (Order No. 8601451, The University of Utah).*

Hatchett, M. E. (1995). *An analysis of teacher empowerment, transformation leadership and job satisfaction in the elementary school*. (Order No. 9607937, The Florida State University).*

Hebert, S. C. (2003). *The relationship of perceived servant leadership and job satisfaction from the follower's perspective*. (Order No. 3112981, Capella University).*

Hedges, L. V., & Olkin, I. (1985). *Statistical method for meta-analysis*. London: Academic.

Henson, P. R. (1984). *The relationship between perceived superintendent leadership adaptability, principal role-based stress, and job satisfaction*. (Order No. 8504212, Washington State University).*

Herzberg, F., & Mausner, B. (1959). *The motivation to work*. New York, NY: Wiley.

Hitson, M. C. (2008). *An analysis of leadership methodology and job satisfaction among virtual team members*. (Order No. 3324077, University of Phoenix).*

Ho, T. V. (2013). *Relationship between leadership styles and employee job satisfaction at local companies in Vietnam*. (Order No. 3569904, Northcentral University).*

Holder, C. A. (1984). *Principal leadership behavior and teacher job satisfaction in public elementary schools in Columbus (Ohio)*. (Order No. 8426406, The Ohio State University).*

Holloway, K. (2012). *An examination of the relationship between charismatic leadership and job satisfaction*. (Order No. 3542615, Capella University).*

Holloway, J. B. (2013). *Employee job satisfaction, psychological state, and change-oriented leadership behavior in community behavioral health organizations*. (Order No. 3578591, Regent University).*

Horn-Turpin, F. (2009). *A study examining the effects of transformational leadership behaviors on the factors of teaching efficacy, job satisfaction and organizational commitment as perceived by special education teachers*. (Order No. DP19027, Virginia Polytechnic Institute and State University).*

Hsu, C. (2007). *Employees' perception of managers' leadership style, employees' motivation levels, and job satisfaction in mainland china and Taiwan*. (Order No. 3286902, University of the Incarnate Word).*

Hsue, Y. (1997). *The relationship between teacher job satisfaction and their perceptions of leadership practices in Taiwanese kindergarten settings*. (Order No. 9734439, The University of Alabama at Birmingham).*

Hu, Y. (2005). *Transformational leadership of sales managers and job satisfaction of sales associates in the fast moving consumer goods industry in Taiwan*. (Order No. 3217961, Lynn University).*

Hui, H., Salarzadeh Jenatabadi, H., Ismail, B., Azina, N., Radzi, W. M., & Jasimah, C. W. (2013). Principal's leadership style and teacher job satisfaction: A case study in China. *Interdisciplinary Journal of Contemporary Research in Business, 5*(4), 175–184.*

Hulpia, H., & Devos, G. (2009). Exploring the link between distributed leadership and job satisfaction of school leaders. *Educational Studies, 35*(2), 153–171.*

Hulpia, H., Devos, G., & Rosseel, Y. (2009). The relationship between the perception of distributed leadership in secondary schools and teachers' and teacher leaders' job satisfaction and organizational commitment. *School Effectiveness and School Improvement, 20*(3), 291–317.*

Ismail, A., Zainuddin, N. F. A., & Ibrahim, Z. (2010). Linking participative and consultative leadership styles to organizational commitment as an antecedent of job satisfaction. *UNITAR e-Journal, 6*(1), 11–26.*

Ivie, S. C. (2007). *School leaders' behavior informed by thirteen core leadership competencies and the relationship to teacher job satisfaction*. (Order No. 3263702, The University of Memphis).*

Jackson, K. A. (2013). *Principals' leadership styles and ESL teachers' job satisfaction.* (Order No. 3592600, Capella University).*

Jaskyte, K. (2004). Assessing changes in employees' perceptions of leadership behavior, job design, and organizational arrangements and their job satisfaction and commitment. *Administration in Social Work, 27*(4), 25–39.*

Jernigan, E., & Beggs, J. (2010). Substitutes for leadership and job satisfaction: Is there a relationship. *Journal of Organizational Culture, Communications, and Conflict, 14*(2), 97–106.*

John, A. K. (2006). *The effects of five specific leadership behaviors on productivity, job satisfaction and organizational commitment at a private for-profit college.* (Order No. 3238573, Capella University).*

Johnson, J. A. (2005). *The relationship between leadership behaviors of principals as perceived by special education teachers and the teacher's job satisfaction within residential mental retardation facilities of the Mississippi department of mental health.* (Order No. 3190565, The University of Mississippi).*

Johnson, T. L. (2007). *The impact of principal leadership styles on teacher motivation and job satisfaction.* (Order No. 3361398, South Carolina State University).*

Johnson, L. R. (2008). *An exploratory study of servant leadership, emotional intelligence, and job satisfaction among high-tech employees.* (Order No. 3371530, University of Phoenix).*

Karadağ, E., Başaran, A., & Korkmaz, T. (2009). İlköğretim okulu öğretmenlerinin algıladıkları liderlik biçimleri ile iş doyumları arasındaki ilişki. *Balıkesir Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 12*(21), 32–45.*

Kazlauskas, D. W. (1993). *Leadership practices and employee job satisfaction in the academic libraries of the state university system of Florida.* (Order No. 9505669, University of Florida).*

Kim, S. (2002). Participative management and job satisfaction: Lessons for management leadership. *Public Administration Review, 62*(2), 231–241.*

Kim, W. G., & Brymer, R. A. (2011). The effects of ethical leadership on manager job satisfaction, commitment, behavioral outcomes, and firm performance. *International Journal of Hospitality Management, 30*(4), 1020–1026.*

Kirkman, M. (2004). *Leadership style of community college department chairs and the effects of faculty job satisfaction.* (Order No. 3164520, University of Missouri—Columbia).*

Klein, J. J. (2007). *The relationship between job satisfaction and leadership practices: A survey-based analysis of full-time business faculty in the Wisconsin technical college system.* (Order No. 3266275, Capella University).*

Kong, P. (2007). *A study of the church staff organization's servant leadership tendency and job satisfaction of the pastor and of another ministerial staff person in southern Baptist convention churches in Tarrant county, Texas.* (Order No. 3289561, Southwestern Baptist Theological Seminary).*

Konto, E. J. K. (1986). *The relationship of vocational and technical instructors' job satisfaction and their perception of the area vocational technical school director's leadership style in vocational technical schools in the state of Missouri.* (Order No. 8701385, University of Missouri—Columbia).*

Koustelios, A., & Tsigilis, N. (2005). The relationship between burnout and job satisfaction among physical education teachers: A multivariate approach. *European Physical Education Review, 11*(2), 189–203.

Kouzes, J. M., & Posner, B. Z. (2002). *The leadership challenge*. San Francisco, CA: Wiley.

Kposowa, T. S. (1984). *Faculty job satisfaction: Effects of relationships between chairperson's leadership behavior and chairperson's value system.* (Order No. 8426426, The Ohio State University).*

Kratina, S. H. (1990). *Organizational culture and head nurse leadership: The relationship to nurses' job satisfaction and turnover in hospital settings.* (Order No. 9022837, Georgia State University—College of Education).*

Kruglanski, A. W., Pierro, A., & Higgins, E. T. (2007). Regulatory mode and preferred leadership styles: How fit increases job satisfaction. *Basic and Applied Social Psychology, 29*(2), 137–149.*

Kruse, S. K. G. (1986). *An analysis of job characteristics, leadership, teamwork, and job satisfaction in the cooperative extension service*. (Order No. 8627126, Iowa State University).*

Kuhlen, R. G. (1963). Needs, perceived need satisfaction opportunities, and satisfaction with occupation. *Journal of Applied Psychology, 47*(1), 56–64.

Kulinskaya, E., Morgenthaler, S., & Staudte, R. G. (2008). *Meta analysis: A guide to calibrating and combining statistical evidence*. London: Wiley.

LaFalce, S. P. (2012). *The relationships among stress, leadership, and job satisfaction of information technology professionals*. (Order No. 3495267, Walden University).*

Lawler, E. & Porter, L. (1966). *The effect of performance on job satisfaction*. New York, NY: Industrial Relations.

Leary, T. G. (2010). *The relationship among dysfunctional leadership dispositions employee engagement, burnout, and job satisfaction*. (Order No. 3445876, Texas A&M University—Commerce).*

Lee, J. H. (2005). *An analysis of the relationship between the senior pastor leadership style and the job satisfaction of associate pastors in churches in Korea*. (Order No. 3167909, The Southern Baptist Theological Seminary).*

Lee, Y. Y. (2005). *Teachers' perceptions of principals' transformational leadership and teachers' job satisfaction and school commitment*. (Order No. 3178858, Fordham University).*

Lennon, P. A. (1992). *An investigation of teacher locus-of-control, principal leadership and job satisfaction*. (Order No. 9219095, Seton Hall University, School of Education).*

Liao, L. L. (2006). *The relationship between president's leadership style and faculty's job satisfaction at upgraded universities of technology in Taiwan*. (Order No. 3228604, University of Montana).*

Lin, C. H. (1998). *Perceived presidential leadership styles and faculty job satisfaction at Taiwanese institutes of technology. (Order No. 3114016, University of South Dakota).**

Lin, T. (2003). *An examination of the influence of private kindergarten director leadership styles on teacher job satisfaction and retention in Kaohsiung city, Taiwan*. (Order No. 3103354, Spalding University).*

Lin, Y. (2003). *The effects of employees' perceptions of leader's leadership style on the job satisfaction of employees at small and medium enterprises in Taiwan*. (Order No. 3086265, Spalding University).*

Lin, L. (2004). *The relationship between managers' leadership style and employee job satisfaction in Taiwan fashion retail department stores*. (Order No. 3133651, University of the Incarnate Word).*

Lin, L. F., & Tseng, C. C. (2013). The influence of leadership behavior and psychological empowerment on job satisfaction. *International Journal of Organizational Innovation, 5*(4), 21–29.*

Liu, L. (2005). *A study of university physical education department director leadership behavior and physical education teacher job satisfaction in northern Taiwan*. (Order No. 3165943, University of the Incarnate Word).*

Liu, C. (2006). *The effects of transformational leadership on organizational commitment and job satisfaction in Taiwan's information technology industry*. (Order No. 3222256, Nova Southeastern University).*

Locke, E. (1983). The nature and causes of job satisfaction. In M. D. Dunnette (Ed.), *Handbook of industrial and organisational psychology*. Chicago, IL: Rand McNally.

Locke, E. A., & Latham, G. (1990). Work motivation and satisfaction: Light at the end of the tunnel. *Psychological Science, 1*, 240–246.

Lok, P., & Crawford, J. (2004). The effect of organisational culture and leadership style on job satisfaction and organisational commitment: A cross-national comparison. *Journal of Management Development, 23*(4), 321–338.*

Lowhorn, G. L. (2009). *The effect of supportive organizational leadership, organizational socialization, and satisfaction with supervision on turnover as mediated by organizational commitment and job satisfaction in faculty*. (Order No. 3377768, Regent University).*

Lucas, M. D., Atwood, J. R., & Hagaman, R. (1993). Replication and validation of anticipated turnover model for urban registered nurses. *Nursing Research, 42*, 29–35.

Luthans, F. (1989). *Organisational behaviour* (5th ed.). New York, NY: McGraw-Hill.

Macdonald, D. H. (1988). *The relationship of job satisfaction of chief executive officers of national sports organizations to leadership behavior and other selected variables*. (Order No. 8907263, The Ohio State University).*

Madlock, P. E. (2008). The link between leadership style, communicator competence, and employee satisfaction. *Journal of Business Communication, 45*(1), 61–78.*

Mancheno-Smoak, L. (2008). *Transformational leadership, work-related cultural values, and job satisfaction*. (Order No. 3312018, Nova Southeastern University).*

Mancini, B. A. (2008). *The relationship of transformational and transactional leadership to job satisfaction and organizational commitment within for-profit organizations on long island, New York*. (Order No. 3312894, Dowling College).*

Marion-Landais, C. (1999). *Dyadic agreement about ideal leadership behaviors and its relationship to job satisfaction and performance ratings*. (Order No. 9943884, University of South Florida).*

Marra, P. R. (1978). *Principal's leadership behavior, teacher's decisional participation, teacher's job satisfaction and student achievement*. (Order No. 7816572, Fordham University).*

Martin, F. C. (2006). *The relationship between leadership practices and job satisfaction: A survey analysis of national aeronautics and space administration employees at the Langley research center*. (Order No. 3226189, Capella University).*

Martino, A. M. (2003). *Leadership style, teacher empowerment, and job satisfaction in public elementary schools*. (Order No. 3104415, St. John's University (New York), School of Education and Human Services).*

Maslow, A. (1954). *Motivation and personality*. New York, NY: Harper and Row.

Mason, A. M. (1998). *Perceptions of presidential leadership by chief academic officers and their relationships to job satisfaction, motivation toward extra effort, and perceived effectiveness in American community colleges: A composite model of transformational and transactional leadership*. (Order No. 9826008, North Carolina State University).*

Mathieu, C., Neumann, C. S., Hare, R. D., & Babiak, P. (2014). A dark side of leadership: Corporate psychopathy and its influence on employee well-being and job satisfaction. *Personality and Individual Differences, 59*, 83–88.*

McCabe, J. B. (1985). *Leadership behavior and job satisfaction of medical technologists: A path-goal approach (initiation of structure, consideration, task structure, role ambiguity)*. (Order No. 8603032, The Ohio State University).*

McElhaney, R. F. (2003). *Perceptions of nurse managers' leadership style by nurse managers and RN staff: Job satisfaction as perceived by RN staff*. (Order No. 3093847, Louisiana State University Health Sciences Center School of Nursing).*

McKenzie, R. A. (2012). *A correlational study of servant leadership and teacher job satisfaction in a public education institution*. (Order No. 3537800, University of Phoenix).*

McNeese-Smith, D. (1991). *The impact of leadership behaviors upon job satisfaction, productivity, and organizational commitment of followers*. (Order No. 9129739, Seattle University).*

Medcalf, S. A. (2008). *Predicting job and leader satisfaction via the leadership constellation*. (Order No. 3310098, Alliant International University, San Francisco Bay).*

Medley, F., & Larochelle, D. R. (1995). Transformational leadership and job satisfaction. *Nursing Management, 26*(9), 641–649.*

Mehta, S., & Maheshwari, G. C. (2013). Consequence of toxic leadership on employee job satisfaction and organizational commitment. *Journal of Contemporary Management Research, 8*(2), 1–23.*

Miears, L. D. (2004). *Servant-leadership and job satisfaction: A correlational study in Texas education agency region X public schools.* (Order No. 3148083, Texas A&M University—Commerce).*

Mikolajczak, D. J. (1983). *The relationship of absenteeism of instructors with supervisor's leadership style and job satisfaction in a large metropolitan vocational, technical, and adult school in Wisconsin.* (Order No. 8409280, Marquette University).*

Miles, W. L. (2010). *Correlational study of leadership style and teacher job satisfaction in two head start programs.* (Order No. 3426048, Capella University).*

Miller, G. G. (2003). *Leadership behavior of east Tennessee directors of public schools and the job satisfaction of principals.* (Order No. 3119290, The University of Tennessee).*

Mirza, S. (2005). *Job satisfaction among research and development scientists: The relationship of leadership practices and job characteristics.* (Order No. 3178467, Capella University).*

Mobley, W. H. (1977). Intermediate linkages in the relationship between job satisfaction and employee turnover. *Journal of Applied Psychology, 62*(2).

Moneke, N. I. (2012). *Critical-care nurses' perceived leadership practices, organizational commitment, and job satisfaction in a non-profit healthcare organization.* (Order No. 3510596, University of Phoenix).*

Munir, F., Nielsen, K., Garde, A. H., Albertsen, K., & Carneiro, I. G. (2012). Mediating the effects of work-life conflict between transformational leadership and health-care workers' job satisfaction and psychological wellbeing. *Journal of Nursing Management, 20*(4), 512–521.*

Munir, R. I. S., Rahman, R. A., Malik, A. M. A., & Ma'amor, H. (2012). Relationship between transformational leadership and employees' job satisfaction among the academic staff. *Procedia Social and Behavioral Sciences, 65*, 885–890.*

Negussie, N., & Demissie, A. (2013). Relationship between leadership styles of nurse managers and nurses' job satisfaction in Jimma University Specialized Hospital. *Ethiopian Journal of Health Sciences, 23*(1), 50–58.*

Nguni, S., Sleegers, P., & Denessen, E. (2006). Transformational and transactional leadership effects on teachers' job satisfaction, organizational commitment, and organizational citizenship behavior in primary schools: The Tanzanian case. *School Effectiveness and School Improvement, 17*(2), 145–177.*

Nielsen, K., Yarker, J., Randall, R., & Munir, F. (2009). The mediating effects of team and self-efficacy on the relationship between transformational leadership, and job satisfaction and psychological well-being in healthcare professionals: A cross-sectional questionnaire survey. *International Journal of Nursing Studies, 46*(9), 1236–1244.*

Nongmak, C. (1986). *The relation between teacher job satisfaction and the leadership behavior of primary school principals in Thailand.* (Order No. 8716714, University of Missouri—Columbia).*

Nwankwoala, R. O. K. (2014). *Examining the relationship between leadership and job satisfaction among Nigerian prison officers.* (Order No. 3610685, Capella University).*

Nzuzu, E. (2011). *An investigation of the relationship between the perception of managerial leadership behavior and job satisfaction of substance abuse counselors.* (Order No. 3465846, Capella University).*

O'Hanlon-Nichols, T. M. (1989). *The relationship between locus of control and perceived head nurse leadership behavior on job satisfaction of registered nurses.* (Order No. 8904948, State University of New York at Albany).*

Oberlin, M. H. (1980). *Effects of leadership on perceived job satisfaction and influence among intermediate school district special education personnel in Michigan.* (Order No. 8020726, Michigan State University).*

Okwendi, S. J. (2013). *Relationship between leadership and officers' job satisfaction: Impact on public safety in Nigeria.* (Order No. 3601476, Capella University).*

Olasupo, M. O. (2011). Relationship between organizational cultures, leadership style and job satisfaction in a Nigerian manufacturing organization. *IFE Psychologia: An International Journal, 19*(1), 159–176.*

Omar, W. W., & Hussin, F. (2013). Transformational leadership style and job satisfaction relationship: A study of structural equation modeling (SEM). *International Journal of Academic Research in Business & Social Sciences, 3*(2), 346–365.*

Owens-Vance, B. (1993). *The relationship of leadership and other selected variables to job satisfaction and turnover of nurse managers.* (Order No. 9409910, Georgia State University).*

Ozbaran, Y. (2010). *The relationship between Turkish traffic enforcement officers' job satisfaction and officers' perception of their leaders' leadership styles.* (Order No. 3421480, The University of Texas at Dallas).*

Paris, T. d. J. (2003). *Acculturation, assimilation, leadership styles and its consequences on job satisfaction.* (Order No. 3088536, Union Institute and University).*

Parker, T. M. (2013). *The relationship between transformational leadership and employee job satisfaction in a virtual workplace.* (Order No. 3606371, Capella University).*

Parkinson, K. E. (2008). *An examination of the relationship between the perceived leadership style of the principal and late career teacher job satisfaction in selected elementary schools.* (Order No. 3296802, The University of Arizona).*

Patterson, D. R. (1997). *A study of the relationship between leadership behaviors of pastors and the job satisfaction of members of the church staff in southern Baptist churches with resident membership over 1500.* (Order No. 9819519, Southwestern Baptist Theological Seminary).*

Penn, M., Romano, J. L., & Foat, D. (1988). The relationship between job satisfaction and burnout: A study of human service professionals. *Administration in Mental Health, 15*(3), 157–165.

Perkins, C. M. (1991). *A study to investigate experienced teachers' job satisfaction and the teachers' perception of their principals' leadership style.* (Order No. 9207926, The University of North Carolina at Chapel Hill).*

Petty, M. M., McGee, G. W., & Cavender, J. W. (1984). A meta-analysis of the relationships between individual job satisfaction and individual performance. *Academy of Management Review, 9*, 712–721.

Podsakoff, P. M., MacKenzie, S. B., & Bommer, W. H. (1996). Transformational leader behaviors and substitutes for leadership as determinants of employee satisfaction, commitment, trust, and organizational citizenship behaviors. *Journal of Management, 22*(2), 259–298.*

Politis, J. D. (2006). Self-leadership behavioural-focused strategies and team performance: The mediating influence of job satisfaction. *Leadership & Organization Development Journal, 27* (3), 203–216.*

Pool, S. W. (1997). The relationship of job satisfaction with substitutes of leadership, leadership behavior, and work motivation. *Journal of Psychology, 131*(3), 271–283.*

Prest, G. S. (1993). *A study of instructional assistants' job satisfaction and supervising teachers' leadership behavior.* (Order No. 9328319, University of Minnesota).*

Pritchett, W. P. (2006). *The relationship between the president's leadership style(s) at Tennessee's public four-year institutions and the job satisfaction of their chief academic leaders.* (Order No. 3211920, Tennessee State University).*

Pugliesi, K. (1999). The consequences of emotional labor: Effects on work stress, job satisfaction, and well-being. *Motivation and Emotion, 23*(2), 125–154.

Rad, A. M. M., & Yarmohammadian, M. H. (2006). A study of relationship between managers' leadership style and employees' job satisfaction. *Leadership in Health Services, 19*(2), 11–28.*

Ramsey Hearn, D. V. (2013). *A relational study of principal leadership styles, faculty morale, and faculty job satisfaction at selected elementary schools.* (Order No. 3577619, The University of Southern Mississippi).*

Riaz, A., & Hussain Haider, M. (2010). Role of transformational and transactional leadership with job satisfaction and career satisfaction. *Business and Economic Horizons, 1*, 29–38.*

Robbins, S. (1998). *Organizational behaviour* (8th ed.). Upper Saddle River, NY: Prentice Hall.

Roberts, H. E., & Foti, R. J. (1998). Evaluating the interaction between self-leadership and work structure in predicting job satisfaction. *Journal of Business and Psychology, 12*(3), 257–267.*

Robinson, G. H. (1993). *A study of the relationship of leadership styles of principals and teacher job satisfaction.* (Order No. 9434925, University of Arkansas).*

Roelle, R. J. (2010). *Better school superintendents, more effective principals? A study of the relationship between superintendent leadership practices and principal job satisfaction.* (Order No. 3407464, Fordham University).*

Rosenthal, J. S. (1976). *Leadership role perceptions of vocational education administrators as related to job satisfaction of teacher-coordinators in Michigan.* (Order No. 7627271, Arizona State University).*

Ross, B. R. (1986). *The interacting effect of leadership behavior and situational variables on teacher job satisfaction.* (Order No. 8709747, Oklahoma State University).*

Rothfelder, K., Ottenbacher, M. C., & Harrington, R. J. (2013). The impact of transformational, transactional and non-leadership styles on employee job satisfaction in the German hospitality industry. *Tourism and Hospitality Research, 12*(4), 201–214.*

Rubino, M. J. (2012). *Descriptions of organizational servant leadership practices, job satisfaction, and organizational commitment at faith-based higher education institutions.* (Order No. 3528063, Dowling College).*

Ruiz-Palomino, P., Sáez-Martínez, F. J., & Martínez-Cañas, R. (2013). Understanding pay satisfaction: Effects of supervisor ethical leadership on job motivating potential influence. *Journal of Business Ethics, 118*(1), 31–43.*

Rupe, R. M. (2007). *A retail bookstore chain: An examination of managers' leadership styles and subordinates' job satisfaction levels.* (Order No. 3274759, Capella University).*

Saad-Ur-Rehman, Mansoor, M., & Bilal, R. U. (2012). The impact of leadership styles on job satisfaction at work place. *Arabian Journal of Business and Management Review (Oman Chapter), 1*(12), 26–42.*

Sadeghi, A., & Pihie, Z. A. L. (2013). The role of transformational leadership style in enhancing lecturers' job satisfaction. *International Journal of Business and Social Science, 4*(8), 264–271.*

Sakiru, O. K., D'Silva, J. L., Othman, J., Silong, A. D., & Busayo, A. T. (2013). Leadership styles and job satisfaction among employees in small and medium enterprises. *International Journal of Business and Management, 8*(13), 34–41.*

Sancar, M. (2009). Leadership behaviors of school principals in relation to teacher job satisfaction in north Cyprus. *Procedia Social and Behavioral Sciences, 1*(1), 2855–2864.*

Sarwat, N., Hayat, K., Qureshi, J. A., & Ali, M. (2011). Impact of strategic leadership on organizational performance, in the context of job satisfaction and organizational commitment, evidence form educational institutions of Pakistan. *Interdisciplinary Journal of Contemporary Research in Business, 3*(4), 658–675.*

Schulman, J. M. (1989). *Power behavior, job satisfaction and leadership effectiveness in public school principals.* (Order No. 8921859, University of Bridgeport).*

Schyns, B., van Veldhoven, M., & Wood, S. (2009). Organizational climate, relative psychological climate and job satisfaction: The example of supportive leadership climate. *Leadership & Organization Development Journal, 30*(7), 649–663.*

Sebera, K. E. (2005). *An analysis of the relationship between leadership attributes and the overall job satisfaction of professional school counselors in the United States.* (Order No. 3191719, Ohio University).*

Sellgren, S. F., Ekvall, G., & Tomson, G. (2008). Leadership behaviour of nurse managers in relation to job satisfaction and work climate. *Journal of Nursing Management, 16*(5), 578–587.*

Setyaningdyah, E., Nimran, K. U., & Thoyib, A. (2013). The effects of human resource competence, organisational commitment and transactional leadership on work discipline, job satisfaction and employee's performance. *Interdisciplinary Journal of Contemporary Research in Business, 5*(4), 140–153.*

Shead, L. M. (2010). *An investigation of the relationship between teachers' ratings of their principals' leadership style and teachers' job satisfaction in public education.* (Order No. 3421740, Our Lady of the Lake University).*

Sheih, C. S. (1998). *The effect of perceived leadership behavior on the job satisfaction of subordinates in Taiwan's university libraries.* (Order No. 9826394, The University of Wisconsin—Madison).*

Shibru, B., & Darshan, G. M. (2011). Effects of transformational leadership on subordinate job satisfaction in leather companies in Ethiopia. *International Journal of Business Management & Economic Research, 3*(5), 284–296.*

Shieh, H. (1996). *A study of the perceptions of transformational versus transactional leadership style as an influence on nursing faculty job satisfaction in associate and baccalaureate degree programs in Taiwan.* (Order No. 9639842, University of Maryland, Baltimore).*

Shieh, H. L., Mills, M. E., & Waltz, C. F. (2001). Academic leadership style predictors for nursing faculty job satisfaction in Taiwan. *The Journal of Nursing Education, 40*(5), 203–209.*

Shim, S., Lusch, R., & O'Brien, M. (2002). A hierarchical model of values, leadership, job satisfaction and commitment: Human resources management implications for the retail industry. *Journal of Marketing Channels, 10*(1), 65–87.*

Shoemaker, M. E. (1994). *The impact of sales managers' transformational leadership behaviors on the role clarity, self-efficacy, and job satisfaction of individual salespeople.* (Order No. 9521184, Drexel University).*

Shoemaker, M. E. (1999). Leadership practices in sales managers associated with the self-efficacy, role clarity, and job satisfaction of individual industrial salespeople. *The Journal of Personal Selling and Sales Management, 19*(4), 1–19.*

Simon, D. (1997). *The relationship of leadership styles of selected West Virginia college deans and department chairs to job satisfaction of departmental faculty members.* (Order No. 3318811, West Virginia University).*

Singh, I. (1984). *The effects of the headmaster's leadership on teacher job satisfaction and morale as perceived by the teachers in Nepal.* (Order No. 8411289, Columbia University Teachers College).*

Singh, J. (1998). *Use of leadership practices by the managers and their impact on the job satisfaction of employees in the hotel industry.* (Order No. 1393768, University of Nevada, Las Vegas).*

Smith, J. P. II. (2011). *The effects of self-efficacy and spirituality on the job satisfaction and motivation to lead among redeploying soldiers as moderated by transformational leadership.* (Order No. 3447893, Regent University).*

Snowden, D. C. (2011). *The relationship between leadership and job satisfaction in call centers in the electric utility industry.* (Order No. 3468107, University of Phoenix).*

Snyderman, G. M. (1988). *Leadership styles of head nurses and the job satisfaction of registered nurses and aides.* (Order No. 8818856, Temple University).*

Son, J. H. (2000). *The impact of Confucianism on Korean principal's leadership style and job satisfaction.* (Order No. 9962067, The University of Nebraska - Lincoln).*

Spector, P. E. (1997). *Job satisfaction: Application, assessment, causes, and consequences.* London: Sage.

Stearns, M. (2012). *The relationship of leadership behaviors to staff RN job satisfaction and retention.* (Order No. 3523913, Grand Canyon University).*

Stevens, J. A. (2013). *The relationship between job satisfaction and educational leadership among teachers in secondary education.* (Order No. 3570213, University of Phoenix).*

Stumpf, M. N. (2003). *The relationship of perceived leadership styles of North Carolina county extension directors' to job satisfaction of county extension professionals.* (Order No. 3099023, North Carolina State University).*

Sucuoğlu, B., & Kuloğlu-Aksaz, N. (1996). Özürlü çocuklarla çalışan öğretmenlerde tükenmişliğin değerlendirilmesi. *Türk Psikoloji Dergisi, 10*(36), 44–60.

Sullivan, E. M. (2012). *A correlational study of perceived transformational leadership styles and job satisfaction among social workers.* (Order No. 3514795, University of Phoenix).*

Sung, C. (2007). *Relationship among supervisors' transformational and transactional leadership styles, and teachers' job satisfaction in Taiwan higher education.* (Order No. 3274174, Lynn University).*

Sušanj, Z., & Jakopec, A. (2012). Fairness perceptions and job satisfaction as mediators of the relationship between leadership style and organizational commitment. *Psihologijske Teme, 21* (3), 509–526.*

Svoboda, S. N. (2008). *A correlational study of servant leadership and elementary principal job satisfaction in Ohio public school districts.* (Order No. 3310169, Northcentral University).*

Swearingen, S. (2004). *Nursing leadership characteristics: Effect on nursing job satisfaction and retention of baby boomer and generation X nurses.* (Order No. 3163629, University of Central Florida).*

Tang, T. L., & Hammontree, M. L. (1992). The effects of hardiness, police stress, and life stress on police officers' illness and absenteeism. *Public Personnel Management, 21*(4), 493–510.

Taş, A., & Önder, E. (2010). The effect of administrator's leadership behaviors on staff job satisfaction. *Electronic Journal of Social Sciences, 9*(32), 17–30.*

Taunton, R. L., Krampitz, S. D., & Woods, C. Q. (1989). Absenteeism-retention links. *Journal of Nursing Administration, 19*(6), 13–20.

Taylor, C. D. (1996). *An investigation of the relationships between perceived leadership behaviors, and staff nurse job satisfaction, and organizational commitment.* (Order No. 1381005, Bellarmine College).*

Temple, R. S. (2009). *An empirical analysis of nurse manager leadership practices and staff nurse job satisfaction.* (Order No. 3356436, Walden University).*

Tengilimoğlu, D., & Yiğit, A. (2005). Determining the effects of leadership behaviors on the job satisfaction of personnel in hospitals: A field study. *Hacettepe Sağlık İdaresi Dergisi, 8*(3), 374–400.*

Thamrin, H. M. (2012). The ınfluence of transformational leadership and organizational commitment on job satisfaction and employee performance. *International Journal of Innovation, Management and Technology, 3*(5), 566–572.*

Thompson, E. A. W. (1998). *Leadership attitudes and job satisfaction in physical therapy clinical education.* (Order No. 9906229, Georgia Southern University).*

Thompson, M. K. (2005). *Involvement in instructional leadership and job satisfaction among assistant principals.* (Order No. 3188217, University of Wyoming).*

Tinti, L. A. (1995). *The effect of leadership behavior on subordinate employees' perceived level of organizational support, organizational commitment, and job satisfaction.* (Order No. 1377464, California State University, Long Beach).*

Tok, T. N., & Bacak, E. (2013). The relationship between job satisfaction of teachers and their perception of transformational leadership characteristics for their school administrators. *International Journal of Human Sciences, 10*(1), 1135–1166.*

Tomsheck, L. E. (1985). *The impact of self-persuasion communication, leadership, involvement, and role differences on commitment and job performance in volunteer extension advisory councils: A path and experimental analysis (satisfaction, reward, role ambiguity, feedback, meeting attendance).* (Order No. 8529548, University of Oregon).*

Tsai, Y. (2011). Relationship between organizational culture, leadership behavior and job satisfaction. *BMC Health Services Research, 11*(1), 98–106.*

Tseng, H. C., & Kang, L. M. (2009). Regulatory focus, transformational leadership, uncertainty towards organizational change, and job satisfaction: In a Taiwan's cultural setting. *Asia Pacific Management Review, 14*(2), 215–235.*

Tuzgöl Dost, M. (2007). Examining life satisfaction levels of university students in terms of some variables. *Pamukkale University Journal of the Faculty of Education, 2*(22), 132–143.

Ugboro, I. O., & Obeng, K. (2000). Top management leadership, employee empowerment, job satisfaction, and customer satisfaction in TQM organizations: An empirical study. *Journal of Quality Management, 5*(2), 247–272.*

Vazquez, J. H. (1982). *An analysis of the relationship of athletic director job satisfaction and leadership behavior in the three divisions of the N.C.A.A. and in the N.A.I.A.* (Order No. 8229161, The Florida State University).*

Vivian, T. P. (1983). *The relationship between perceived leadership style, size of school and non-instructional time on teacher job satisfaction.* (Order No. 8319284, University of South Carolina).*

Vlachos, P. A., Panagopoulos, N. G., & Rapp, A. A. (2013). Feeling good by doing good: Employee CSR-induced attributions, job satisfaction, and the role of charismatic leadership. *Journal of Business Ethics, 118*(3), 577–588.*

Vroom, V. H. (1964). *Work and motivation*. New York, NY: Wiley.

Walker, E. G. (2010). *Correctional officer job satisfaction and leadership: A correlational study.* (Order No. 3452768, University of Phoenix).*

Walumbwa, O. F. (2002). *The relationships between leadership styles, cultural orientation, organizational commitment, job satisfaction and perceptions of organizational withdrawal behaviors.* (Order No. 3044253, University of Illinois at Urbana-Champaign).*

Walumbwa, F. O., Orwa, B., Wang, P., & Lawler, J. J. (2005). Transformational leadership, organizational commitment, and job satisfaction: A comparative study of Kenyan and US financial firms. *Human Resource Development Quarterly, 16*(2), 235–256.*

Wang, X., Chontawan, R., & Nantsupawat, R. (2012). Transformational leadership: Effect on the job satisfaction of registered nurses in a hospital in China. *Journal of Advanced Nursing, 68*(2), 444–451.*

Washington, R. R. (2007). *Empirical relationships among servant, transformational, and transactional leadership: Similarities, differences, and correlations with job satisfaction and organizational commitment.* (Order No. 3265529, Auburn University).*

Watson, L. M. (2008). *The influence of supervisor leadership behaviors on motivators affecting job satisfaction of medical imaging professionals.* (Order No. 3302629, University of Phoenix).*

Weatherly, K. S. (1991). *A comparative analysis of nurse leaders' degree of transformational leadership and staff nurse job satisfaction.* (Order No. 1344684, Old Dominion University).*

Webb, K. S. (2003). *Presidents' leadership behaviors associated with followers' job satisfaction, motivation toward extra effort, and presidential effectiveness at evangelical colleges and universities.* (Order No. 3117283, University of North Texas).*

Westley, E. E. (2000). *An examination of the relationships between catholic grade school teachers' perceptions of job satisfaction and their expectations of leadership effectiveness.* (Order No. 9992285, Wayne State University).*

Westlund, S. G. (2007). *Retaining talent: Assessing relationships among project leadership styles, software developer job satisfaction, and turnover intentions.* (Order No. 3288701, Capella University).*

Wilkinson, R. F. (2010). Leadership role profile and job satisfaction of restaurant general managers. *Journal of Foodservice Business Research, 13*(4), 331–345.*

Williams, M. D. (2009). *The relationship of principal leadership behaviors with school climate, teacher job satisfaction, and student achievement.* (Order No. 3367212, The University of Southern Mississippi).*

Williams, T. L. (2012). *Transformational leadership and job satisfaction of retired army noncommissioned officers in South Korea.* (Order No. 3546346, Walden University).*

Wilson, D. F. (2013). *Servant leadership and job satisfaction in a multicultural hospitality organization: A quantitative, non-experimental descriptive study.* (Order No. 3597448, Grand Canyon University).*

Winkler, A. L. (1983). *The relationships between elementary school teacher perceptions of principal leadership style/style adaptability and teacher job satisfaction/satisfaction with supervision*. (Order No. 8414778, The Catholic University of America).*

Wolpin, J., Burke, R. J., & Greenglass, E. R. (1991). Is job satisfaction an antecedent or a consequence of psychological burnout? *Human Relations, 44*(2), 193–209.

Wood, R. D. (2010). *Correlation of conductor leadership style, musician employment status, organizational participation to orchestra musician job satisfaction*. (Order No. 3488630, University of Phoenix).*

Worf, M. G. (1970). Need gratification theory: A theoretical reformulation of job satisfaction/dissatisfaction and job motivation. *Journal of Applied Psychology, 54*, 87–94.

Wu, M. (2003). *A study of presidential leadership style and teacher job satisfaction in institutes of technology in Taiwan*. (Order No. 3103636, University of the Incarnate Word).*

Wu, F. Y. (2006). *A study of leadership styles and foreign English teachers' job satisfaction in adult English cram schools of Taipei and Kaohsiung cities in Taiwan*. (Order No. 3239324, University of the Incarnate Word).*

Yaghoubipoor, A., Tee, O. P., & Ahmed, E. M. (2013). Impact of the relationship between transformational and traditional leadership styles on Iran's automobile industry job satisfaction. *World Journal of Entrepreneurship, Management and Sustainable Development, 9*(1), 14–27.*

Yang, Y. F. (2009). An investigation of group interaction functioning stimulated by transformational leadership on employee intrinsic and extrinsic job satisfaction: An extension of the resource-based theory perspective. *Social Behavior and Personality: An International Journal, 37*(9), 1259–1277.*

Yang, Y. F. (2011). Leadership and change commitment in the life insurance service context in Taiwan: The mediating-moderating role of job satisfaction. *Perceptual and Motor Skills, 112*(3), 889–914.*

Yang, M. L. (2012a). Transformational leadership and Taiwanese public relations practitioners' job satisfaction and organizational commitment. *Social Behavior and Personality: An International Journal, 40*(1), 31–46.*

Yang, Y. F. (2012b). Studies of transformational leadership in the consumer service workgroup: Cooperative conflict resolution and the mediating roles of job satisfaction and change commitment. *Psychological Reports, 111*(2), 545–564.*

Yang, Y. F. (2014). Transformational leadership in the consumer service workgroup: Competing models of job satisfaction, change commitment, and cooperative conflict resolution. *Psychological Reports, 114*(1), 33–49.*

Yang, Y. F., & Islam, M. (2012). The influence of transformational leadership on job satisfaction: The balanced scorecard perspective. *Journal of Accounting & Organizational Change, 8*(3), 386–402.*

Yang, F. H., Wu, M., Chang, C. C., & Chien, Y. (2011). Elucidating the relationships among transformational leadership, job satisfaction, commitment foci and commitment bases in the public sector. *Public Personnel Management, 40*(3), 265–278.*

Yang, L. R., Yen, H. F., & Chiang, Y. F. (2012). A framework for assessing impacts of leadership competency on police project performance: Mediating role of job satisfaction and moderating role of project type. *Policing: An International Journal of Police Strategies & Management, 35*(3), 528–550.*

Yeldell, P. A. (2012). *The relationship between principals' perception of their leadership style and teachers' perception of their job satisfaction.* (Order No. 3547204, Capella University).*

Yiğit, R., Dilmaç, B., & Deniz, M. (2011). İş ve yaşam doyumu: Konya emniyet müdürlüğü alan araştırması. *Turkish Journal of Police Studies, 13*(3).

Yiing, L. H., & Ahmad, K. Z. B. (2009). The moderating effects of organizational culture on the relationships between leadership behaviour and organizational commitment and between organizational commitment and job satisfaction and performance. *Leadership & Organization Development Journal, 30*(1), 53–86.*

Yusof, A. (1999). *The relationship between transformational leadership behaviors of athletic directors and leadership substitutes variables with the job satisfaction of coaches at NCAA division I and III institutions*. (Order No. 9924313, The University of Connecticut).*

Zahari, I. B., & Shurbagi, A. M. A. (2012). The effect of organizational culture and the relationship between transformational leadership and job satisfaction in petroleum sector of Libya. *International Business Research, 5*(9), 89–97.*

Zigrang, C. B. (2000). *The correlation between a principal's leadership style and teacher personality, as perceived by the teacher, and its effect on teacher job satisfaction*. (Order No. 9974042, Regent University).*

The Effect of Leadership on Organizational Commitment

Özge Öztekin, Sabiha İşçi, and Engin Karadağ

Abstract The effect of leadership on organizational commitment was examined in this meta-analysis study. A total of 420 research studies were collected as a result of the review activity, out of which 202 were included in the meta-analysis. The 202 research studies were compiled to obtain a sample group size of 63,753 subjects. The analysis results of the random effect model showed that leadership has a *medium-level positive effect* on organizational commitment. Of the moderators identified, such as sample group/sector, type of publication, leadership style/approach, year of publication and type of commitment, it was found that only type of publication was a moderator variable.

1 Introduction

The relationship between the organization and its employees, *organizational commitment*, is not only one of the important concepts in terms of management and behavioral sciences; it is also central to studies regarding individual and organizational performance (Swailes, 2002). To date, many different definitions for this concept have been suggested (Buciuniene & Skudiene, 2008; Fields, 2002), and the reason for this is that it has a multi-dimensional structure that includes the attitude and behavioral components of commitment to work (Meyer, Allen, & Smith, 1993). In one study, organizational commitment was defined as the strength of an employee's identification with the organization (Porter, Steers, Mowday, & Boulian, 1974). According to this definition, organizational commitment consists of three components: (1) having absolute belief in the objectives and values of the organization, (2) making all efforts necessary for the benefit of the organization and (3) having a strong desire to continue with that organization. It is also emphasized that it is a process. Similarly, Luthans (2002) states that organizational commitment is the process by which the members of the organization feel they have a share in the well-being and success of the organization and a type of attitude that reflects the

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commitment to an organization. Additionally, organizational commitment occurs when an employee feels he is a part of an organization (Marchiori & Henkin, 2003). Another study on this topic states that organizational commitment aims to explain the attitude and behavior one has toward the organization for which they work (Mathews & Shepherd, 2002); it is a concept that should be considered in detail, considering the role it plays for organizations, whose employees have internalized the values of the organization to reach its targets and contributed to its success.

Meyer and Allen (1991) have suggested a three-component organizational commitment model by encompassing the dimensions and factors previously suggested by other studies:

1. *Affective commitment:* This is when employees of an organization identify themselves with the organization and become committed with an emotional bond to the organization and its environment. This affective commitment includes concepts such as trust, self-identity and commitment to the organization. A person who is emotionally connected to an organization makes efforts at the highest level with feelings of high loyalty and tries to realize the objectives of the organization with a feeling of deep affection, even if there is no monetary gain to be made.
2. *Continuance commitment:* When an employee feels obliged to stay in an organization so as not to lose years of investment with the idea that their departure would take a heavy toll on organization. When benefits such as retirement, insurance, health or compensation may be the case, a continuance commitment may emerge (Shaw, Delery, & Abdulla, 2003). In this case, the commitment of an employee to an organization may be motivated by what they stand to gain.
3. *Normative commitment:* Organizational commitment for reasons related to ethical standards and social norms is known as normative commitment. Therefore, normative commitment may be considered an obligation or necessity. Because normative commitment is perceived as a social responsibility, employees who have a high degree of normative commitment believe that they must be permanent in the organization. To summarize, affective commitment is governed by emotional bonds, continuance commitment is due to various material reasons, and normative commitment is an employee's desire to stay in an organization due to ethical reasons, by which they increase the probability of the organization's continuation (Dwahan & Mulla, 2012).

In this context, previous research studies have emphasized workplace experiences in the scope of organizational aims and objectives, productivity, effectiveness, absenteeism, job satisfaction and personal and certain organizational factors as the predecessors of organizational commitment (Meyer & Allen, 1997; Meyer et al., 1993; Mowday, Porter, & Steers, 1982; Organ & Ryan, 1995). One of the personal and organizational factors of key importance for organizational commitment is leadership. In recent studies on leadership, the relationship between leadership approaches and organizational commitment has been examined. A review of findings show that a positive relationship has been identified between organizational commitment and paternalistic leadership (Erben & Güneşer, 2007; Saher,

Naz, Tasleem, Naz, & Kausar, 2013), supportive leadership (Huang, 2000; Lowhorn, 2009), transformational leadership (Acar, 2012; Adebayo, 2010; Akbolat, Işık, & Yılmaz, 2013; Avolio, Zhu, Koh, & Bhatia, 2004; Baek, 2012; Gakovic, 2002; Lo, Ramayah & Run 2010; Nordin 2011; Pillai & Williams, 2004; Wang & Walumbwa, 2007; Yang 2012a, 2012b), ethical leadership (Kim & Brymer, 2011; Uğurlu & Üstüner, 2011), servant leadership (Barnes, 2011; Drury, 2004), charismatic leadership (Huang, Shi, Zhang, & Cheung, 2006) and a variety of leadership behaviors (Chen, 2011; Mckee Valentino, 1995; McNeese-Smith, 1991; Parrish, 2001).

This study examined the effect of leadership on organizational commitment. Furthermore, the moderators that were thought to have a medium-level effect in this study were identified as: (1) the sample group/sector of the research studies, (2) the type of publication of the study, (3) the year of publication, (4) the leadership style/approach and (5) the type of commitment. These variables, along with the results of previous research, were used to test the following hypotheses of this study:

H_1 Leadership has a positive effect on organizational commitment.
H_2 The sample group/sector is a moderator of the positive effect of leadership on organizational commitment.
H_3 The type of publication is a moderator of the positive effect of leadership on organizational commitment.
H_4 The year of publication is a moderator of the positive effect of leadership on organizational commitment.
H_5 Leadership style/approach is a moderator of the positive effect of leadership on organizational commitment.
H_6 The type of commitment is a moderator of the positive effect of leadership on organizational commitment.

2 Method

2.1 Study Design

In this study, the effect of leadership on organizational commitment was tested with the meta-analysis design.

2.2 Review Strategy and Criteria for Inclusion/Exclusion

To determine the research studies to include in the meta-analysis, the Science-Direct, Proquest and Ebsco academic databases were used to conduct a literature review. For this process, the terms *leadership*, *commitment* and *organizational commitment* included in the titles of the studies were used to screen the research

studies. The end date for the research studies included in the research was identified as March 2014. Doctoral dissertations and peer-reviewed journals were included in the study.

Many strategies were used to identify the research studies that were appropriate for the meta-analysis. First, a research study pool (420 research studies) was established of all studies with leadership and organizational commitment in their titles. The abstracts of these studies were reviewed, and all were found to be appropriate to include in the study. In the second stage, all research studies in the pool were examined in detail. It was found that 202 of the research studies in the pool were appropriate, and 218 were not found to be suitable. The descriptive statistics of the 202 research studies included in the analysis are presented in Table 1.

The criteria for the inclusion of the research studies in the analysis were as follows:

- To have the statistical information necessary for correlational meta-analysis (n and r, or R^2 values)
- To be a study measuring the correlation between leadership and organizational commitment

Reasons for not including a research study in the meta-analysis were:

- Having no quantitative data (qualitative research)
- Not having a correlation coefficient
- Not focusing on organizational commitment
- Not focusing on leadership

2.3 Coding Process

The coding process was essentially a data sorting process used to ascertain which data were clear and suitable for the study. In this scope, a coding form was developed before the statistical analysis was conducted, and the coding was conducted according to the form. The main aim was to develop a specific coding system that allowed the study to see the entirety of the research studies in general

Table 1 Characteristics of the studies included in the meta-analysis

Options		1	2	3	4	Total
Year of publication		Before 1990	1990–1999	2000–2009	After 2010	–
	n	1	11	81	109	202
	%	0.5	5.4	40.1	54	100
Publication type		Dissertation	Article	–	–	–
	n	83	118			202
	%	41.6	58.4			100

and that would not miss any characteristics of each individual research study. The coding form developed in the study was comprised of:

- References for the research
- Sample information
- Sample group/sector
- Leadership style/approach
- Data collection tool(s)
- Quantitative values

2.4 Statistical Processes

The effect size acquired in meta-analysis is a standard measure value used in the determination of the strength and direction of the relationship in the study (Borenstein, Hedges, Higgins, & Rothstein, 2009). Pearson's correlation coefficient (r) was determined to be the effect size in this study. Because the correlation coefficient has a value between +1 and −1, the *r* value was evaluated by converting this value into the value as it appears in the *z* table (Hedges & Olkin, 1985). Provided that more than one correlation value is given between the same structure categories in correlational meta-analysis studies, two different approaches are used in the determination of the one to be used in the meta-analysis (Borenstein et al., 2009; Kulinskaya, Morgenthaler, & Staudte, 2008). For this study, (1) first, if the correlations were independent, all the related correlations were included in the analysis and were considered to be independent studies, and (2) if there were dependent correlations, then the *conservative estimation value* was accepted. A *random effect model* was used for the meta-analysis processes in this study. The *Comprehensive Meta-Analysis* program was used in the meta-analysis process.

2.5 Moderator Variables

To determine the statistical significance of the difference between the moderators of the study, only the Q_b values were used. Five moderator variables that were expected to have an average effect size were identified in the study. The first of these, *leadership style/approach*, was expected to be a moderator of the relationship between organizational commitment and leadership styles/approaches. The second, *sample group/sector*, was expected to affect leadership perceptions and organizational commitment. The third was the *publication year of the research*, the fourth was the *type of research study*, and the fifth was the *type of commitment*.

2.6 Publication Bias

A funnel plot for the research studies included in the meta-analysis can be seen in Fig. 1. Evidence of an effect of publication bias in the research studies included in the meta-analysis can be seen in Fig. 1. A serious asymmetry would be expected in the funnel plot if there were a publication bias. The concentration of plots on one side under the line of the average effect size, particularly in the bottom section of the funnel, suggests the probability of a publication bias. In this study, no evidence of partiality of the publications was observed in any of the 202 data subjected to meta-analysis.

Although no partiality in publications was observed in funnel plot, the results of Duval and Tweedie's trim and fill test, which was applied to determine the effect size of partiality in publications acquired with the meta-analysis using the random effect model, are given in Table 2. As seen in Table 2, there is no difference between the effect observed and the artificial effect size created to fix the effect of the partiality of publications. The research on each side of the centerline is symmetrical, and this is the indicator of non-difference. Because there is no evidence of lost data on either side of the centerline, the difference between the fixed effect size and the observed effect size is zero.

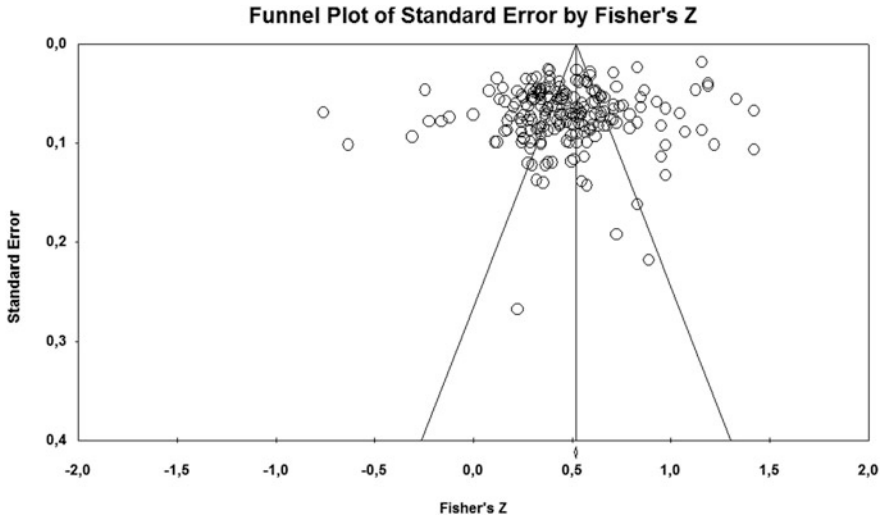

Fig. 1 Effect size funnel for publication bias

Table 2 Duval and Tweedie's trim and fill test results

	Excluded study	Point estimate	CI (Confidence interval)		Q
			Lower limit	Upper limit	
Observed values		0.44	0.41	0.47	5,800.3
Adjusted values	0	0.44	0.41	0.47	5,800.3

3 Findings

Table 3 shows the results of the meta-analysis of leadership and organizational commitment. The findings supported H_1, which argued that there would be a positive relationship between leadership and organizational commitment. The effect size of leadership on organizational commitment was calculated to be 0.44. This value shows that leadership has a *medium-level effect* (*see* Cohen, 1988) on organizational commitment.

The results of the moderator analysis showed that H_2, regarding the moderating role of sample group/sector on the effect size of leadership on organizational commitment, was not supported. The moderator analysis did not find a statistically significant difference in the effect size between the sample groups ($Q_b = 18.87$, $p > 0.05$). Despite this finding, a medium-level effect of perceived leadership on organizational leadership was found for teachers [$r = 0.49$], students [$r = 0.49$], academicians [$r = 0.54$], researchers [$r = 0.47$], soldiers [$r = 0.48$], banking sector employees [$r = 0.42$], civil servants [$r = 0.36$], laborers [$r = 0.45$], firemen [$r = 0.40$], engineers and architects [$r = 0.41$], health sector employees [$r = 0.34$], private sector company employees [$r = 0.44$], managers [$r = 0.58$] and a mixed group [$r = 0.47$], whereas the perceived effect of leadership on organizational commitment by principals and employees in the information services industry was found to be statistically significant ($p > 0.05$).

The findings supported H_3 hypothesis, which predicted that the type of publication would play a moderating role on the effect of leadership on organizational commitment. The moderator analysis showed a statistically significant difference in the effect size between the sample groups ($Q_b = 3.84$, $p < 0.05$), and the effect size of research studies [$r = 0.47$] and dissertations [$r = 0.40$] on the perception that leadership has an effect on organizational commitment was found to be of a medium level.

The research did not support H_4, which hypothesized that the year of publication would play a moderating role in the effect of leadership on organizational commitment. Although the moderator analysis of the effect size of publication year did not find a statistically significant difference ($Q_b = 2.69$, $p > 0.05$), the effect size for research conducted before 1990 [$r = 0.62$] and from 1990 to 1999 [$r = 0.51$] on the effect of leadership on organizational commitment was found to be high, and for those from 2000 to 2009 [$r = 0.42$] and after 2010 [$r = 0.46$], the effect of leadership on organizational commitment had a medium effect size.

Findings did not support H_5, which held that leadership styles/approaches would play a moderating role in the effect of leadership on organizational commitment. According to the findings of the moderator analysis, the difference between the effect size of leadership styles was not statistically significant ($Q_b = 10.36$, $p > 0.05$). Despite this finding, the effect size for paternalistic leadership [$r = 0.49$], supportive leadership [$r = 0.48$], transformational leadership [$r = 0.41$], ethical leadership [$r = 0.46$], servant leadership [$r = 0.53$], charismatic leadership [$r = 0.46$], participatory leadership [$r = 0.55$], authentic leadership

Table 3 Findings of the correlations between leadership and organizational commitment: Results of a meta-analysis

Variable		k	N	r	CI (Confidence interval)		Q	Q_b
					Lower limit	Upper limit		
Organizational commitment		202	63,753	0.44*	0.41	0.47	5,800.35*	
Moderator [Type of publication]								3.8*
Article		118	42,516	0.47*	0.43	0.51		
Dissertation		84	21,237	0.40*	0.34	0.45		
Moderator [Year of publication]								2.69
Before 1990		1	162	0.62*	0.11	0.87		
1990–1999		11	3,888	0.51*	0.36	0.63		
2000–2009		80	26,451	0.42*	0.36	0.47		
After 2009		110	33,252	0.45*	0.41	0.50		
Moderator [Sample group/sector]								18.87
Mixed		5	1,718	0.47*	0.24	0.64		
Principal		3	482	0.29	−0.03	0.57		
Student		3	486	0.49*	0.20	0.70		
Teacher		25	13,950	0.49*	0.40	0.57		
Academician		19	4,467	0.54*	0.44	0.63		
Researcher		3	823	0.47*	0.17	0.68		
Soldier		6	3,757	0.48*	0.29	0.64		
Bank employee		12	3,532	0.42*	0.27	0.54		
Information services		4	887	0.27	−0.00	0.52		
Public servant		12	2,511	0.36*	0.20	0.50		
Employee		3	2,477	0.45*	0.31	0.57		
Fireman		4	1,772	0.40*	0.13	0.61		
Engineer-architect		3	594	0.41*	0.10	0.65		
Health services		29	9,308	0.34*	0.24	0.43		

Company employee		29	14,160	0.44*	0.38	0.51		
Manager		10	2,372	0.58*	0.44	0.69		
Moderator [Leadership style/approach]								10.36
Paternalistic		2	278	0.49*	0.10	0.75		
Supportive		3	633	0.48*	0.17	0.70		
Other		15	5,905	0.36*	0.21	0.48		
Transformational		107	38,272	0.41*	0.36	0.46		
Ethical		4	1,603	0.46*	0.19	0.66		
Servant		11	3,152	0.53*	0.39	0.65		
Relation-oriented		2	190	0.70*	0.39	0.86		
Charismatic		5	1,301	0.46*	0.21	0.65		
Participatory		2	323	0.55*	0.18	0.78		
Authentic		3	776	0.54*	0.24	0.74		
Initiating structure		2	543	0.30	−0.11	0.63		
Moderator [Type of commitment]								0.59
Commitment to change	10	3,220	0.43*	0.27	0.57			
Affective	20	4,992	0.42*	0.30	0.52			
Relationship	2	546	0.40	0.00	0.69			
Organizational	166	54,396	0.44*	0.40	0.48			
Team	4	599	0.51*	0.25	0.71			

*$p < 0.01$

[$r = 0.54$] and 'other' groups [$r = 0.36$] was found to be of a medium level for commitment and relationship-oriented leadership [$r = 0.70$] was found to be of a large level. The effect of initiating structure on organizational commitment was found to be statistically significant ($p > 0.05$).

The findings did not support H_6, which predicted that the type of commitment would play a moderating role in the effect of leadership on organizational commitment. The moderator analysis did not find a statistically significant difference in the effect size between the types of commitment ($Q_b = 0.50$, $p > 0.05$). In contrast, the effect size of commitment to change [$r = 0.43$], affective commitment [$r = 0.42$], organizational commitment [$r = 0.44$], and team commitment [$r = 0.51$] was found to be of a medium level, whereas commitment to relationships was statistically significant ($p > 0.05$).

Conclusion

A total of 202 research studies were included in this meta-analysis study to examine the magnitude of the effect of leadership on organizational commitment. Sample group/sector, leadership style/approach, type of publication, year of publication and type of commitment were considered as moderator variables in the study. The results of the meta-analysis found a *medium-level positive effect* of leadership on organizational commitment. This finding is in parallel with the opinion that leadership, like other personal and organizational factors, plays an important role in the creation and sustainment of organizational commitment (Avolio, Zhu, Koh, & Bhatia 2004; Baek, 2012). Furthermore, the finding that there is a significant positive relationship between leadership and organizational commitment is congruent with the findings of many other studies (Bannon, 2000; Betsinger, 1997; Brown, 2003; Buluç, 2009; Cerit, 2010; Composto, 2002; Felfe & Heinitz 2010; Gregory, 2011; Hsieh, 2004; Huang, 2011; Lo, Ramayah, Min, & Songan 2010; Ritz, Shantz, Alfes, & Arshoff 2012).

Statistically significant results were not found by the moderator variable analysis for sample group/sector used in studies in regards to the differences between the effect of different sample group/sectors. However, the highest effect size was with teacher and student groups, and the lowest was for employees in the health sector. Similarly, according to the results of the moderator analysis, the difference in the effect size between leadership styles was not statistically significant. The moderator variable analysis results show that leadership styles/approaches have a positive effect on organizational commitment at a medium level, except for initiating structure.

Another moderator variable considered in the study is the variable type of commitment. The analysis results of this variable are in parallel with other analysis results. According to the findings, the differences in the effects of commitment types are not statistically significant. However, the greatest

(continued)

effect size is for commitment to change. The main economic and technological developments necessitate organizational change. On this point, leaders have great responsibilities to create the appropriate atmosphere to trigger and manage change. Keeping in mind the role leaders have in organizational change, the effect of leadership style/approach on commitment to change may be explained.

Year of publication was not found to be a significant moderator in the effect of leadership on organizational commitment. When the year of publication categories were evaluated, the effect of leadership on organizational commitment was found to be significant for one category of years. The moderator analysis conducted according to the type of publication showed that there was a medium-level positive effect size of leadership on organizational commitment. This finding did not change whether the publication was a dissertation or an article; both had a medium-level effect on the effect of leadership on organizational commitment.

A general evaluation of the findings concerning the effect of leadership on organizational commitment is summarized below:

- Leadership has a medium-level positive effect on organizational commitment [$r = 0.44$].
- Although the moderator variables sample group/sector, leadership style/approach, year of publication and type of commitment do not have a moderating role in the effect leadership on organizational commitment, it was found that type of publication plays a moderating role in the effect size.

The effect of leadership style/approach on the organizational commitment of employees was found to be of a medium level in this study. This finding is important because it shows that leadership behaviors affect organizational commitment, which is thought to have a critical role for organizations in reaching their organizational objectives and sustaining their existence in the long term (Cerit, 2010). Furthermore, the relationship between leadership behaviors and organizational commitment should be supported by qualitative research findings.

References[1]

AbuShmais, E. I. (2013). *A quantitative examination of self-leadership impact on organizational commitment of IT employees in US companies*. (Order No. 3594642, Capella University).*

Acar, A. Z. (2012). Organizational culture, leadership styles and organizational commitment in Turkish logistics industry. *Procedia – Social and Behavioral Sciences*, *58*, 217–226. doi:10.1016/j.sbspro.2012.09.995.*

[1] References marked with an asterisk indicate studies included in the meta-analysis. The in-text citations to studies selected for meta-analysis are not followed by asterisks.

Adadevoh, E. K. (2003). *The relationship between transformational and transactional leadership behaviors of nursing managers and job satisfaction and organizational commitment among hospital nursing staff*. (Order No. 3185860, Nova Southeastern University).*

Adebayo, O. O. (2010). *Obstetric nurses' perceptions of manager's leadership style on job satisfaction and organizational commitment*. (Order No. 3468112, University of Phoenix).*

Ahmadi, S. A. A., Ahmadi, F., & Zohrabi, M. (2012). Effect of the leadership styles on the organizational commitment given the staff personality traits (the case study: Iran's state retirement organization). *Interdisciplinary Journal of Contemporary Research in Business, 4* (1), 247–264.*

Aina, O. A. (2013). *Effect of leadership style on employee job satisfaction and organizational commitment in the communications industry*. (Order No. 3576344, University of Phoenix).*

Akbar, S. & Zaman, S. (2011). Impact of strategic leadership on organizational commitment in telecommunication sector of Pakistan. *Journal of Business Strategies, 5*(1), 1–10.*

Akbolat, M., Işık, O. & Yılmaz, A. (2013). Dönüşümcü liderlik davranışının motivasyon ve duygusal bağlılığa etkisi. *International Journal of Economic and Administrative Studies*, *6* (11), 35–50.*

Akroyd, D., Legg, J., Jackowski, M. B., & Adams, R. D. (2009). The impact of selected organizational variables and managerial leadership on radiation therapists' organizational commitment. *Radiography, 15*(2), 113–120. doi:10.1016/j.radi.2008.05.004.*

Al-Ammaj, F. (2000). *An investigation of leadership style and organizational commitment among Saudi public employees*. (Order No. 9970342, Mississippi State University).*

Albrecht, S. L. & Andreetta, M. (2011). The influence of empowering leadership, empowerment and engagement on affective commitment and turnover intentions in community health service workers: Test of a model. *Leadership in Health Services, 24*(3), 228–237. doi:10.1108/17511871111151126.*

Ali, N., Babar, M. A. A., & Bangash, S. A. (2011). Relationship between leadership styles and organizational commitment amongst medical representatives of national and multinational pharmaceuticals companies, Pakistan (an empirical study). *Interdisciplinary Journal of Contemporary Research in Business, 2*(10), 524–529.*

Alyn, K. (2010). *The relationship between perceived leadership style and firefighter organizational commitment*. (Order No. 3409311, Capella University).*

Amoroso, P. F. (2002). *The impact of principals' transformational leadership behaviors on teacher commitment and teacher job satisfaction*. (Order No. 3066129, Seton Hall University, College of Education and Human Services).*

Antonelli, F. X. (2001). *A study of the perceptions of the principal's leadership and commitment as related to the degree of implementation of a full-service school model*. (Order No. 3020417, The Pennsylvania State University).*

Arnold, K. A., Barling, J., & Kelloway, E. K. (2001). Transformational leadership or the iron cage: Which predicts trust, commitment and team efficacy? *Leadership and Organization Development Journal, 22*(7), 315–320.*

Avolio, B. J., Zhu, W., Koh, W. & Bhatia, P. (2004). Transformational leadership and organizational commitment: mediating role of psychological empowerment and moderating role of structural distance. *Journal of Organizational Behavior*, *25*(8), 951–968. doi:10.1002/job.283.*

Baek, J. H. (2012). *The impact of transactional and transformational leadership on organizational commitment in major league baseball*. (Order No. 3519103, St. Thomas University).*

Bannon, K. C. (2000). *Principals' and teachers' perceptions of the extent to which principals exercise transformational leadership in schools and the relationship of these leadership perceptions to teachers' perceptions of the extent of shared school goals and teacher commitment in these schools*. (Order No. 9968759, St. John's University (New York), School of Education and Human Services).*

Barnes, L. L. (2011). *Job satisfaction and organizational commitment: An empirical investigation of the effects of servant leadership in distance education programs*. (Order No. 3465555, Capella University).*

Bell-Roundtree, C. (2004). *Does manager behavior influence knowledge worker job satisfaction and organizational commitment attitudes? A validation of Kouzes and Posner's transformational leadership theory*. (Order No. 3119012, The University of Alabama in Huntsville).*

Berck, C. J. (2010). *The relationship between perceived leadership practices and employee commitment in one Michigan public school district*. (Order No. 3436854, Northcentral University).*

Berry, J. R. (2008). *The relationships among leadership practices, organizational climate, and organizational commitment within church ministry settings*. (Order No. 3325529, Regent University).*

Betsinger, A. M. (1997). *Influences of culture, leadership and role stress on expatriate satisfaction and commitment*. (Order No. 9803751, Saint Louis University).*

Blankenship, S. L. (2010). *The consequences of transformational leadership and/or transactional leadership in relationship to job satisfaction and organizational commitment for active duty women serving in the air force medical service*. (Order No. 3398823, Nova Southeastern University).*

Bo, Y. (2013). The influence study of transformational leadership in university on teachers' organizational commitment: The construction and verification of a theoretical model. *Canadian Social Science, 9*(4), 126–137.*

Borenstein, M., Hedges, L. V., Higgins, J. P. T., & Rothstein, H. R. (2009). *Introduction to meta-analysis*. Chichester: Wiley.

Brown, B. B. (2003). *Employees' organizational commitment and their perception of supervisors' relations-oriented and task-oriented leadership behaviors*. (Order No. 3082584, Virginia Polytechnic Institute and State University).*

Buciuniene, I., & Skudiene, V. (2008). Impact of leadership styles on employees organizational commitment in Lithuanian manufacturing companies. *Journal of Economics and Business*, *3* (2), 57–65.*

Buluç, B. (2009). Sınıf öğretmenlerinin algılarına göre okul müdürlerinin liderlik stilleri ile örgütsel bağlılık arasındaki ilişki. *Kuram ve Uygulamada Eğitim Yönetimi, 15*(57), 5–34.*

Bushra, F., Ahmad, U., & Naveed, A. (2011). Effect of transformational leadership on employees' job satisfaction and organizational commitment in banking sector of Lahore (Pakistan). *International Journal of Business and Social Science, 2*(18), 261–267.*

Byrne, C. S. (1998). *An investigation into the relationship between organizational commitment and the employees' perceptions regarding leadership practices and successor competence in family-owned businesses*. (Order No. 9830341, The Claremont Graduate University).*

Byrne, D. M. (2011). *The relationship of leadership style of the department head to nursing faculty professional satisfaction and organizational commitment*. (Order No. 3515889, University of Missouri – Columbia).*

Çakinberk, A. & Demirel, E. T. (2010). Leadership as a determinant of organizational commitment: A case of health care personnel. *Selçuk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi,* (24), 103–119.*

Carder, J. C. (2012). *The relationship between servant leadership and affective organizational commitment*. (Order No. 3602281, Indiana Wesleyan University).*

Carvalho, M., Martins, L., & Portela, S. L. (2013). Leadership and commitment on Portuguese Rugby National Team. *International Journal of Academic Research, 5*(2), 187–191. doi:10.7813/2075-4124.2013/5-2/b.28.*

Catano, V. M., Pond, M., & Kelloway, E. K. (2001). Exploring commitment and leadership in volunteer organizations. *Leadership and Organization Development Journal, 22*(5), 256–263.*

Cerit, Y. (2010). The effects of servant leadership on teachers' organizational commitment in primary schools in Turkey. *International Journal of Leadership in Education*, *13*(3), 301–317. doi:10.1080/13603124.2010.496933.*

Cha, S. E. (2004). *Walking the talk: Leadership, ambiguity, and perceived commitment to organizational values*. (Order No. 3131803, Harvard University).*

Chami-Malaeb, R., & Garavan, T. (2013). Talent and leadership development practices as drivers of intention to stay in Lebanese organisations: The mediating role of affective commitment. *The International Journal of Human Resource Management, 24*(21), 4046–4062. doi:10.1080/09585192.2013.789445.*

Chen, N. (2008). *Causal relationship analysis between leadership behavior, organizational commitment, job satisfaction, and turnover intentions for employees of college athletic departments in Taiwan*. (Order No. 3306413, United States Sports Academy).*

Chen, C. (2011). *The mediating effect of employees' experience of inclusion and the moderating effect of individual work values on the relationship of authentic leadership style and organizational commitment*. (Order No. 3451863, Alliant International University, San Diego).*

Chen, T., Hwang, S., & Liu, Y. (2009). Employee trust, commitment and satisfaction as moderators of the effects of idealized and consideration leadership on voluntary performance: A structural equation investigation. *International Journal of Management, 26*(1), 127–141.*

Chênevert, D., Vandenberghe, C., Doucet, O., & Ben Ayed, A. K. (2013). Passive leadership, role stressors, and affective organizational commitment: A time-lagged study among health care employees. *Revue Européenne de Psychologie Appliquée/European Review of Applied Psychology, 63*(5), 277–286. doi:10.1016/j.erap.2013.07.002.*

Cheng, K. (2003). *A structural equation modeling analysis of leadership behavior, organizational commitment and job satisfaction of employees in Taiwanese health clubs*. (Order No. 3091748, United States Sports Academy).*

Chia Hui, H. (2012). A study on the effects of leadership style on organizational commitment in catering industry. *Pakistan Journal of Statistics*, *28*(5), 597–606.*

Chien, C. S. (2003). *Leadership style and employees' organizational commitment: An exploration study of managers and employees of hsin-zhu Science Park*. (Order No. 3086694, University of the Incarnate Word).*

Clinebell, S., Skudiene, V., Trijonyte, R., & Reardon, J. (2013). Impact of leadership styles on employee organizational commitment. *Journal of Service Science (Online), 6*(1), 139.*

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Hillside, NJ: Lawrence Erlbaum Associates.

Cole, M. S., & Bedeian, A. G. (2007). Leadership consensus as a cross-level contextual moderator of the emotional exhaustion-work commitment relationship. *The Leadership Quarterly, 18*(5), 447–462. doi:10.1016/j.leaqua.2007.07.002.*

Composto, P. A. (2002). *Collegial leadership and teacher commitment to the school*. (Order No. 3049705, St. John's University (New York), School of Education and Human Services).*

Dale, K. & Fox, M. L. (2008). Leadership style and organizational commitment: Mediating effect of role stress. *Journal of Managerial Issues*, *20*(1), 109–130.*

Darvish, H. & Rezaei, F. (2011). The impact of authentic leadership on job satisfaction and team commitment. *Management and Marketing, 6*(3), 421–436.*

Dixon, T. B. (2013). *The relationship of organizational commitment and transformational leadership use in project managers*. (Order No. 3551087, Capella University). *ProQuest Dissertations and Theses,* 118.*

Drury, S. (2004). *Employee perceptions of servant leadership: Comparisons by level and with job satisfaction and organizational commitment*. (Order No. 3146724, Regent University).*

Dunn, M. W. (1999). *The impact of leadership on employees' commitment to the organization: An international perspective*. (Order No. 9950751, Nova Southeastern University).*

Dunn, M. W., Dastoor, B., & Sims, R. L. (2012). Transformational leadership and organizational commitment: A cross-cultural perspective. *Journal of Multidisciplinary Research* (1947–2900), *4*(1), 45–60.*

Dwahan, V. & Mulla, Z. R. (2012). The role of pay and leadership in developing organizational commitment. *South Asian Journal of Management*, *18*(2), 60–75.*

Eginli, I. (2009). *Principal leadership and teacher commitment to the profession: The mediating role of collective efficacy and teacher efficacy*. (Order No. 3367063, George Mason University).*

Ekeland, T. P. (2005). *The relationships among affective organizational commitment, transformational leadership style, and unit organizational effectiveness within the corps of cadets at Texas A&M University*. (Order No. 3202306, Texas A&M University).*

Emery, C. R. & Barker, K. J. (2007). The effect of transactional and transformational leadership styles on the organizational commitment and job satisfaction of customer contact personnel. *Journal of Organizational Culture, Communications and Conflict*, *11*(1), 77–90.*

Erben, G. S. & Güneşer, A. B. (2007). The relationship between paternalistic leadership and organizational commitment: Investigating the role of climate regarding ethics. *Journal of Business Ethics*, *82*(4), 955–968. doi:10.1007/s10551-007-9605-z.*

Fasola, O. S., Adeyemi, M. A., Olowe, F. T. (2013). Exploring the relationship between transformational, transactional leadership style and organizational commitment among Nigerian banks employees. *International Journal of Academic Research in Economics and Management Sciences, 2*(6). doi:10.6007/IJAREMS/v2-i6/445.*

Felfe, J. & Heinitz, K. (2010). The impact of consensus and agreement of leadership perceptions on commitment, organizational citizenship behaviour, and customer satisfaction. *European Journal of Work and Organizational Psychology*, *19*(3), 279–303. doi:10.1080/13594320802708070.*

Felix, D. L. (1997). *Superintendents' visionary leadership and principals' commitment to their school districts*. (Order No. 9802628, The Pennsylvania State University).*

Fields, D. (2002). Taking the measure of work: A guide to validated measures for organizational research and diagnosis. Thousand Oaks, CA: Sage.*

Fjelstad, N. L. (1990). *Superintendent leadership behavior and its relationship to trust and commitment of Wisconsin principals*. (Order No. 9106673, The University of Wisconsin, Madison).*

Freeborough, R. E. (2012). *Exploring the affect of transformational leadership on nonprofit leader engagement and commitment*. (Order No. 3498733, Capella University).*

Froelich, S. D. (1995). *The impact of transformational leadership behaviors on nurses' job satisfaction and organizational commitment*. (Order No. 1375281, Madonna University).*

Gakovic, A. (2002). *Social exchange, transformational leadership, and employee behavior: The role of organizational identification and career commitment*. (Order No. 3064097, University of Houston).*

Gallato, C., Rashid, S., Suryasaputra, R., Warokka, A., Reamillo, K., & bin Abdullah, H. (2012). Fostering niches among SMEs in Malaysia through organizational commitment, leadership, organizational culture and job satisfaction. *Journal of Innovation Management in Small and Medium Enterprises*, 1–12. doi:10.5171/2012.511352.*

Garg, A. K., & Ramjee, D. (2013). The relationship between leadership styles and employee commitment at A parastatal company in South Africa. *The International Business and Economics Research Journal (Online), 12*(11), 1411-n/a.*

Gentry, D. A. (2005). *Transformational leadership and its impact on employee commitment in a downsizing government agency*. (Order No. 3164828, Nova Southeastern University).*

Geter, L. T. (2010). *A quantitative study on the relationship between transformational leadership, organizational commitment, and perception of effectiveness*. (Order No. 3452327, University of Phoenix). *ProQuest Dissertations and Theses,* 190-n/a.*

Gillaspie, S. M. (2009). *The impact of dark leadership on organizational commitment and turnover*. (Order No. 1468722, Emporia State University).*

Goh, S. K. & Low, B. Z. J. (2013). The influence of servant leadership towards and organizational commitment: The mediating role of trust in leaders. *International Journal of Business and Management, 9*(1). doi:10.5539/ijbm.v9n1p17.*

Gozu, C. (2012). *Influence tactics and leadership effectiveness in turkey and USA: Mediating role of subordinate commitment*. (Order No. 3527219, State University of New York at Albany).*

Gregory, A. (2011). *Transformational leadership, job satisfaction, organizational commitment, and non-supervisory nurses' intention to leave*. (Order No. 3458589, Lynn University).*

Gumusluoglu, L., Karakitapoğlu-Aygün, Z., & Hirst, G. (2013). Transformational leadership and R&D workers' multiple commitments: Do justice and span of control matter? *Journal of Business Research, 66*(11), 2269–2278. doi:10.1016/j.jbusres.2012.02.039.*

Gunter, D. M. (1997). *Leadership practices and organizational commitment*. (Order No. 9720776, Nova Southeastern University).*

Hamdi, S. & Rajablu, M. (2012). Effect of supervisor-subordinate communication and leadership style on organizational commitment of nurses in health care setting. *International Journal of Business and Management, 7*(23), 7–18. doi:10.5539/ijbm.v7n23p7.*

Harwiki, W. (2013). The influence of servant leadership on organization culture, organizational commitment, organizational citizenship behavior and employees' performance (study of outstanding cooperatives in east java province, Indonesia). *Journal of Economics and Behavioral Studies, 5*(12), 876–885.*

Hashim, R. A. & Mahmood, R. (2012). How do our Malaysian academic staff perceive their leader's leadership styles in relation to their commitment to service quality? *International Journal of Arts and Sciences, 5*(3), 231–242.*

Hedges, L. V., & Olkin, I. (1985). *Statistical method for meta-analysis*. United Kingdom: Academic.

Horn-Turpin, F. (2009). *A study examining the effects of transformational leadership behaviors on the factors of teaching efficacy, job satisfaction and organizational commitment as perceived by special education teachers*. (Order No. DP19027, Virginia Polytechnic Institute and State University).*

Hoveida, R., Salari, S., & Asemi, A. (2011). A study on the relationship among servant leadership (SL) and the organizational commitment (OC): A case study. *Interdisciplinary Journal of Contemporary Research in Business, 3*(3), 499–509.*

Hsieh, W. (2004). *Organizational commitment in Taiwan and its relationship to transformational leadership*. (Order No. 3158668, Nova Southeastern University).*

Huang, L. (2000). *The perceived leadership behavior and organizational commitment at CPA firms*. (Order No. 9954968, Nova Southeastern University). *ProQuest Dissertations and Theses*, 133–133.*

Huang, T. M. (2011). The relationship between headmasters' leadership behaviour and teachers commitment in primary schools in the district of Sarikei, Sarawak. *Procedia – Social and Behavioral Sciences, 29*, 1725–1732. doi:10.1016/j.sbspro.2011.11.418.*

Huang, X., Shi, K., Zhang, Z., & Cheung, Y. L. (2006). The impact of participative leadership behavior on psychological empowerment and organizational commitment in Chinese state-owned enterprises: the moderating role of organizational tenure. *Asia Pacific Journal of Management, 23*(3), 345–367. doi:10.1007/s10490-006-9006-3.*

Hulpia, H., Devos, G., Rosseel, Y., & Vlerick, P. (2012). Dimensions of distributed leadership and the impact on teachers' organizational commitment: A study in secondary education. *Journal of Applied Social Psychology, 42*(7), 1745–1784. doi:10.1111/j.1559-1816.2012.00917.x.*

Hulpia, H., Devos, G., & Rosseel, Y. (2009). The relationship between the perception of distributed leadership in secondary schools and teachers' and teacher leaders' job satisfaction and organizational commitment. *School Effectiveness and School Improvement, 20*(3), 291–317. doi:10.1080/09243450902909840.*

Hult, G. T. M., Ferrell, O. C., Hurley, R. F., & Giunipero, L. C. (2000). Leadership and relationship commitment: A focus on the supplier-buyer-user linkage. *Industrial Marketing Management*, *29*(2), 111–119.*

Innes, P. B. (2004). *The influence of leadership on perceptions of organizational politics, job involvement, and organizational commitment*. (Order No. 3138653, Regent University).*

Ismail, A., Mohamed, H. A., Sulaiman, A. Z., Mohamad, M. H., & Yusuf, M. H. (2011). An empirical study of the relationship between transformational leadership, empowerment and organizational commitment. *Business and Economics Research Journal*, *2*(1), 89–106.*

Ismail, A., Zainuddin, N. A., & Ibrahim, Z. (2010). Linking participative and consultative leadership styles to organizational commitment as an antecedent of job satisfaction. *UNITAR E-Journal*, *6*(1), 11–26.*

Jaskyte, K. (2004). Assessing changes in employees' perceptions of leadership behavior, job design, and organizational arrangements and their job satisfaction and commitment. *Administration in Social Work, 27*(4), 25–39. doi:10.1300/J147v27n04_03.*

John, A. K. (2006). *The effects of five specific leadership behaviors on productivity, job satisfaction and organizational commitment at a private for-profit college*. (Order No. 3238573, Capella University).*

Johnson, W. B. (2012). *How do police and firefighters' perceived leadership practices relate to organizational commitment?* (Order No. 3499130, Nova Southeastern University).*

Kennedy, T. E. (1999). *The relationship of nurse manager's organizational commitment and nurse administrator's caring and leadership behaviors*. (Order No. 9934808, George Mason University).*

Khan, Z., Khan, S., & Shahzad, S. (2013). Moderating role of procedural justice and empowerment in transformational leadership with its impact on organizational commitment. *International Review of Management and Business Research, 2*(3), 847–852.*

Kim, W. G. & Brymer, R. A. (2011). The effects of ethical leadership on manager job satisfaction, commitment, behavioral outcomes, and firm performance. *International Journal of Hospitality Management*, *30*(4), 1020–1026. doi:10.1016/j.ijhm.2011.03.008.*

Kindel, D. (2011). *Teacher commitment to the implementation of ninth grade academies and their perceptions of school leadership*. (Order No. 3449690, University of South Florida).*

Klinsontorn, S. (2007). *The influence of leadership styles on organizational commitment and employee performances*. (Order No. 3255207, Nova Southeastern University).*

Kool, M. & Dierendonck, D. V. (2012). Servant leadership and commitment to change, the mediating role of justice and optimism. *Journal of Organizational Change Management, 25*(3), 422–433. doi:10.1108/09534811211228139.*

Koppenhoefer, C. (2013). *The impact of leadership style on organizational commitment in medical health insurance call centers*. (Order No. 3592422, Indiana Wesleyan University).*

Korek, S., Felfe, J., & Zaepernick-Rothe, U. (2010). Transformational leadership and commitment: A multilevel analysis of group-level influences and mediating processes. *European Journal of Work and Organizational Psychology, 19*(3), 364–387. doi:10.1080/13594320902996336.*

Kulinskaya, E., Morgenthaler, S., & Staudte, R. G. (2008). *Meta analysis: A guide to calibrating and combining statistical evidence*. London: Wiley.

Leach, L. S. (2000). *Nurse executive leadership and the relationship to organizational commitment among nurses*. (Order No. 3041487, University of Southern California).*

Lee, J. (2005). Effects of leadership and leader-member exchange on commitment. *Leadership and Organization Development Journal, 26*(7), 655–672.*

Lee, Y. Y. (2005). *Teachers' perceptions of principals' transformational leadership and teachers' job satisfaction and school commitment*. (Order No. 3178858, Fordham University).*

Lee, I. (2013). The influences of school supervisors' leadership styles upon organizational effectiveness: Using organizational commitment and organizational change as mediators. *The Journal of Human Resource and Adult Learning, 9*(2), 105–123.*

Leigh, D. (2001). *The relationship of several leadership styles, generative concern, values prioritization, and individual differences with goal-directed motivation and commitment*. (Order No. 3014352, The Florida State University).*

Leroy, H., Palanski, M. E., & Simons, T. (2011). Authentic leadership and behavioral integrity as drivers of follower commitment and performance. *Journal of Business Ethics, 107*(3), 255–264. doi:10.1007/s10551-011-1036-1.*

Li, Y. C. (2004). Examining the effect of organization culture and leadership behaviors on organizational commitment, job satisfaction, and job performance at small and middle-sized firms of Taiwan. *Journal of American Academy of Business, Cambridge, 5*(1), 432–438.*

Limsila, K. & Ogunlana, S. O. (2008). Performance and leadership outcome correlates of leadership styles and subordinate commitment. *Engineering, Construction and Architectural Management, 15*(2), 164–184. doi:10.1108/09699980810852682.*

Liu, C. (2006). *The effects of transformational leadership on organizational commitment and job satisfaction in Taiwan's information technology industry*. (Order No. 3222256, Nova Southeastern University).*

Lo, M.-C., Ramayah, T., Min, H. W., & Songan, P. (2010). The relationship between leadership styles and organizational commitment in Malaysia: Role of leader-member exchange. *Asia Pacific Business Review, 16*(1–2), 79–103. doi:10.1080/13602380903355676.*

Lo, M.-C., Ramayah, T., & Run, E. C. D. (2010). Does transformational leadership style foster commitment to change? The case of higher education in Malaysia. *Procedia – Social and Behavioral Sciences*, *2*(2), 5384–5388. doi:10.1016/j.sbspro.2010.03.877.*

Lok, P. (1997). *The influence of organisational culture, subculture, leadership style and job satisfaction on organisational commitment*. (Order No. 9904801, University of Sydney (Australia)).*

Lok, P. & Crawford, J. (2004). The effect of organisational culture and leadership style on job satisfaction and organisational commitment: A cross-national comparison. *The Journal of Management Development, 23*(3), 321–338.*

Loke, J. (2001). Leadership behaviours: Effects on job satisfaction, productivity and organizational commitment. *Journal of Nursing Management*, *9*(4), 191–204. doi:10.1046/j.1365-2834.2001.00231.x.*

Lowe, W. A. (2000). *An examination of the relationship between leadership practices and organizational commitment in the fire service*. (Order No. 9971372, Nova Southeastern University).*

Lowhorn, G. L. (2009). *The effect of supportive organizational leadership, organizational socialization, and satisfaction with supervision on turnover as mediated by organizational commitment and job satisfaction in faculty*. (Order No. 3377768, Regent University).*

Luthans, F. (2002). Positive organizational behavior: Developing and managing psychological strengths. *Academy of Management Executive, 16*, 57–72.

Luton, B. (2010). *Transformational leadership and organizational commitment: A study of UNC system business school department chairs*. (Order No. 3407997, Capella University).*

Mack, T. F. (2011). *Incremental effects of instructor leadership behaviors on student commitment and intent to continue in course studies: A comparative study*. (Order No. 3480379, Regent University).*

Madanipour, M. (2013). *The influence of attachment style on the relationship between leadership, organizational commitment, and organizational citizenship behavior*. (Order No. 3567589, Alliant International University).*

Mahembe, B. & Engelbrecht, A. S. (2013). The relationship between servant leadership, affective team commitment and team effectiveness. *SA Journal of Human Resource Management, 11*(1). doi:10.4102/sajhrm.v11i1.495.*

Mancini, B. A. (2008). *The relationship of transformational and transactional leadership to job satisfaction and organizational commitment within for-profit organizations on long island, New York*. (Order No. 3312894, Dowling College).*

Marchiori, D., & Henkin, A. (2003). Empowerment of chiropractic faculty: A profile in context. *The Journal of Manipulative and Physiological Therapeutics, 26*(1), 17–24.

Mathews, B. P., & Shepherd, J. L. (2002). Dimensionality of Cook and Wall's (1980) British organizational commitment scale. *Journal of Occupational and Organizational Psychology, 75*, 369–375.

Mattison, O. Y. (2010). *The relationship of leadership styles and organizational commitment among substance abuse counselors*. (Order No. 3467480, University of Phoenix).*

McCroskey, S. D. (2007). *The relationship between leadership practices and the three-component model of organizational commitment: An empirical analysis*. (Order No. 3262852, Capella University).*

McMurray, A. J., Pirola-Merlo, A., Sarros, J. C., & Islam, M. M. (2010). Leadership, climate, psychological capital, commitment, and wellbeing in a non-profit organization. *Leadership and Organization Development Journal, 31*(5), 436–457. doi:10.1108/01437731011056452.*

McNeese-Smith, D. (1991). *The impact of leadership behaviors upon job satisfaction, productivity, and organizational commitment of followers*. (Order No. 9129739, Seattle University).*

Mert, İ. S., Keskin, N., & Baş, T. (2010). Leadership style and organizational commitment: Test of a theory in Turkish banking sector. *Journal of Academic Research in Economics*, *2*(1), 1–19.*

Metscher, D. S. (2005). *An examination of the perceived leadership practices and organizational commitment of active-duty air force personnel and government civil service employees*. (Order No. 3180660, Nova Southeastern University).*

Metscher, D. S., Lowe, W. A., Barnes, F. B., & Lai, L. (2011). Using leadership to increase commitment for civil servants and air force personnel in times of conflict. *Air Force Journal of Logistics*, *35*(1/2), 125–133.*

Meyer, J. P., & Allen, N. J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review, 1*(1), 61–89.

Meyer, J. P., & Allen, N. J. (1997). *Commitment in the workplace: Theory, research, and application*. Thousand Oaks, CA: Sage.

Meyer, J. P., Allen, N. J., & Smith, C. A. (1993). Commitment to organizations and occupations: Extension and test of a three-component conceptualization. *Journal of Applied Psychology, 78*, 538–551.

Michaelis, B., Stegmaier, R., & Sonntag, K. (2009). Affective commitment to change and innovation implementation behavior: The role of charismatic leadership and employees' trust in top management. *Journal of Change Management, 9*(4), 399–417. doi:10.1080/14697010903360608.*

Mohammed, K. A., Othman, J., & D'Silva, J. L. (2012). The influence of leadership styles on organizational commitment: A study of public university lecturers in Nigeria. *International Journal of Academic Research, 4*(4), 56–61. doi:10.7813/2075-4124.2012/4-4/b.8.*

Moneke, N. I. (2012). *Critical-care nurses' perceived leadership practices, organizational commitment, and job satisfaction in a non-profit healthcare organization*. (Order No. 3510596, University of Phoenix).*

Mowday, R., Porter, L., & Steers, R. (1982). *Employee-organization linkages: The psychology of commitment, absenteeism, and turnover*. New York: Academic.

Nguni, S., Sleegers, P., & Denessen, E. (2007). Transformational and transactional leadership effects on teachers' job satisfaction, organizational commitment, and organizational citizenship behavior in primary schools: The Tanzanian case. *School Effectiveness and School Improvement, 17*(2), 145–177. doi:10.1080/09243450600565746.*

Nicholson, W. M. (2009). *Leadership practices, organizational commitment, and turnover intentions: A correlational study in a call center*. (Order No. 3350859, University of Phoenix).*

Nordin, N. (2011). The influence of emotional intelligence, leadership behaviour and organizational commitment on organizational readiness for change in higher learning institution. *Procedia – Social and Behavioral Sciences, 29*, 129–138. doi:10.1016/j.sbspro.2011.11.217.*

Nordin, N. (2012). Assessing emotional intelligence, leadership behaviour and organizational commitment in a higher learning institution. *Procedia – Social and Behavioral Sciences, 56*, 643–651. doi:10.1016/j.sbspro.2012.09.699.*

Olanrewaju, J. A. (2009). *The influence of leadership on employees' commitment to the Nigerian public service: Implications for organizational effectiveness*. (Order No. 3379676, Capella University).*

Organ, D. W., & Ryan, K. (1995). A meta-analytic review of attitudinal and dispositional predictors of organizational citizenship behavior. *Personnel Psychology, 48*, 775–802.

Othman, J., Mohammed, K. A., & Dsilva, J. L. (2012). Does a transformational and transactional leadership style predict organizational commitment among public university lecturers in Nigeria? *Asian Social Science, 9*(1). doi:10.5539/ass.v9n1p165.*

Othman, N., Mujir, S. J. M., & Ibrahim, M. S. (2010). Multi-dimensional leadership orientation of academic department heads and lecturer commitment in Malaysian polytechnics. *Procedia – Social and Behavioral Sciences, 9*, 1607–1611. doi:10.1016/j.sbspro.2010.12.373.*

Özşahin, M., Zehir, C., Acar, A. Z., & Sudak, M. K. (2013). The effects of leadership and market orientation on organizational commitment. *Procedia – Social and Behavioral Sciences, 99*, 363–372. doi:10.1016/j.sbspro.2013.10.504.*

Parrish, D. A. (2001). *The impact of leadership behavior on organizational commitment and job autonomy of information services librarians.* (Order No. 3001669, The Florida State University).*

Philipp, B. L. U. (2012). *Psychological contracts in the workplace: Relationships among organizational commitment, organizational citizenship behaviors, and ethical leadership.* (Order No. 3523554, Alliant International University).*

Pierro, A., Raven, B. H., Amato, C., & Belanger, J. J. (2013). Bases of social power, leadership styles, and organizational commitment. *International Journal of Psychology, 48*(6), 1122–1134. doi:10.1080/00207594.2012.733398.*

Pillai, R. & Williams, E. A. (2004). Transformational leadership, self-efficacy, group cohesiveness, commitment, and performance. *Journal of Organizational Change Management*, *17*(2), 144–159.*

Poddar, P. P., Manjrekar, P. M., & Gopal, R. R. (2012). Relationship between leadership styles and employee commitment: An empirical study of B-Schools of Navi Mumbai area. *Indian Journal of Higher Education*, *3*(1), 59–73.*

Polito, J. A. (2010). *A study of the relationship between commitment to the supervisor and followers' perception of leadership.* (Order No. 3398338, Capella University).*

Porter, L. W., Steers, R. M., Mowday, R. T., & Boulian, P. V. (1974). Organizational commitment, job satisfaction, and turnover among psychiatric technicians. *Journal of Applied Psychology, 59*(5), 603–609.

Riaz, T., Muhammad, U. A., & Ijaz, H. (2011). Impact of transformational leadership style on affective employees' commitment: An empirical study of banking sector in Islamabad (Pakistan). *The Journal of Commerce, 3*(1), 43.*

Ritz, A., Shantz, A., Alfes, K., & Arshoff, A. S. (2012). Who needs leaders the most? The interactive effect of leadership and core self-evaluations on commitment to change in the public sector. *International Public Management Journal*, *15*(2), 160–185. doi:10.1080/10967494.2012.702588.*

Ross, J. A. & Gray, P. (2007). Transformational leadership and teacher commitment to organizational values: The mediating effects of collective teacher efficacy. *School Effectiveness and School Improvement, 17*(2), 179–199. doi:10.1080/09243450600565795.*

Rubino, M. J. (2012). *Descriptions of organizational servant leadership practices, job satisfaction, and organizational commitment at faith-based higher education institutions.* (Order No. 3528063, Dowling College).*

Rupert, J., Jehn, K. A., van Engen, M. L., & de Reuver, R. S. (2010). Commitment of cultural minorities in organizations: Effects of leadership and pressure to conform. *Journal of Business and Psychology, 25*(1), 25–37. doi:10.1007/s10869-009-9131-3.*

Saher, N., Naz, S., Tasleem, I., Naz, R. & Kausar, S. (2013). Does paternalistic leadership lead to commitment? Trust in leader as moderator in Pakistani context. *Interdisciplinary Journal of Contemporary Research in Busiess*, *5*(1), 443–455.*

Sahertian, P. & Frisdiantara, C. (2012). Collective efficacy as a mediator: The effect of relationship oriented leadership and employee commitment toward organizational values. *Journal of American Academy of Business, Cambridge, 18*(1), 300–309.*

Santa Maria, V. (2007). *Leadership styles of nurse-managers: Influences on commitment.* (Order No. 3269215, Stevens Institute of Technology).*

Santhidran, S., Chandran, V. G. R., & Borromeo, J. (2013). Enabling organizational change—leadership, commitment to change and the mediating role of change readiness. *Journal of Business Economics and Management, 14*(2), 348–363. doi:10.3846/16111699.2011.642083.*

Sarwat, N., Hayat, K., Qureshi, J. A., & Ali, M. (2011). Impact of strategic leadership on organizational performance, in the context of job satisfaction and organizational commitment,

evidence form educational institutions of Pakistan. *Interdisciplinary Journal of Contemporary Research in Business, 3*(4), 658–675.*

Schweizer, L. & Patzelt, H. (2012). Employee commitment in the post-acquisition integration process: The effect of integration speed and leadership. *Scandinavian Journal of Management, 28*(4), 298–310. doi:10.1016/j.scaman.2012.02.003.*

Selamat, N., Nordin, N., & Adnan, A. A. (2013). Rekindle teacher's organizational commitment: The effect of transformational leadership behavior. *Procedia - Social and Behavioral Sciences, 90*, 566–574. doi:10.1016/j.sbspro.2013.07.127.*

Serin, K. M. & Buluç, B. (2012). İlköğretim okul müdürlerinin öğretim liderliği davranışları ile öğretmenlerin örgütsel bağlılıkları arasındaki ilişki. *Educational Administration: Theory and Practice*, 18(3), 435–459.*

Shams-Ur-Rehman, Shareef, A., Mahmood, A., & Ishaque, A. (2012). Perceived leadership styles and organizational commitment. *Interdisciplinary Journal of Contemporary Research in Business, 4*(1), 616–626.*

Sharif, S., Dullah, J. J., Osman, K., & Sulaiman, S. (2010). Headmaster's leadership style and teachers' commitment in Malaysian Rural primary schools. *International Journal of Learning*, *16*(12), 229–244.*

Shaw, J. D., Delery, J. E., & Abdulla, M. H. A. (2003). Organizational commitment and performance among guest workers and citizens of an Arab country. *Journal of Business Research, 56*, 1021–1030.

Shin, Y. (2013). *The relationship between leadership styles, organizational commitment, and organizational outcome in Oklahoma's volunteer fire departments*. (Order No. 1542236, Oklahoma State University).*

Simosi, M. & Xenikou, A. (2010). The role of organizational culture in the relationship between leadership and organizational commitment: An empirical study in a Greek organization. *The International Journal of Human Resource Management, 21*(10), 1598–1616. doi:10.1080/09585192.2010.500485.*

Skeese, M. E. (2003). *An assessment of Florida public school district superintendents' leadership styles and the organizational commitment of district principals*. (Order No. 3083924, Nova Southeastern University).*

Smothers, A. E. (2008). *Perceived leadership style of a mayor and its impact on organizational commitment of municipal employees*. (Order No. 3310721, Capella University).*

So, E. (2009). *The effects of leadership on organizational commitment in china: The moderating role of collectivism*. (Order No. MR56781, University of Guelph (Canada)).*

Sofiah, K. K. & Mohd Zabid, A. R. (2012). The mediating effect of organizational commitment in the organizational culture, leadership and organizational justice relationship with organizational citizenship behavior: A study of academicians in private higher learning institutions in Malaysia. *International Journal of Business and Social Science, 3*(8), 83–91.*

Sokoll, S. M. (2013). *Servant leadership: A quantitative exploration of the relationship between servant leadership and employee commitment to a supervisor*. (Order No. 3570906, Regent University).*

Solomon, C. B. (2007). *The relationships among middle level leadership, teacher commitment, teacher collective efficacy, and student achievement*. (Order No. 3322742, University of Missouri, Columbia).*

Srithongrung, A. (2011). The causal relationships among transformational leadership, organizational commitment, and employee effectiveness. *International Journal of Public Administration, 34*(6), 376–388. doi:10.1080/01900692.2011.569917.*

Steyrer, J., Schiffinger, M., & Lang, R. (2008). Organizational commitment—A missing link between leadership behavior and organizational performance? *Scandinavian Journal of Management, 24*(4), 364–374. doi:10.1016/j.scaman.2008.04.002.*

Stonestreet, S. P. (2002). *Perceived leadership practices and organizational commitment in the North American automobile industry*. (Order No. 3036288, Nova Southeastern University).*

Strauss, K., Griffin, M. A., & Rafferty, A. E. (2009). Proactivity directed toward the team and organization: the role of leadership, commitment and role-breadth self-efficacy. *British Journal of Management, 20*(3), 279–291. doi:10.1111/j.1467-8551.2008.00590.x.*

Sušanj, Z. & Jakopec, A. (2012). Fairness perceptions and job satisfaction as mediators of the relationship between leadership style and organizational commitment. Psihologijske Teme/ Psychological Topics, 21(3), 509–526.*

Sutherland, M. A. (2010). *An examination of ethical leadership and organizational commitment*. (Order No. 3396731, Nova Southeastern University).*

Swailes, S. (2002). Organizational commitment: A critique of the construct and measures. *International Journal of Management Reviews, 4*(2), 155–178.

Tabbodi, M. L. (2009). Effects of leadership behaviour on the faculty commitment of humanities departments in the University of Mysore, India: regarding factors of age group, educational qualifications and gender. *Educational Studies, 35*(1), 21–26. doi:10.1080/03055690802288510.*

Tarcan, G. Y., Hikmet, N., Tarcan, M., & Top, M. (2013). Transformational leadership, job satisfaction, organizational commitment, organizational trust in Turkish public hospitals: Public servants versus private employees. *Proceedings for the Northeast Region Decision Sciences Institute (NEDSI),* 1030–1045.*

Tatlah, I. A., Ali, Z., & Saeed, M. (2011). Leadership behavior and organizational commitment: An empirical study of educational professionals. *International Journal of Academic Research*, *3*(2), 1293–1298.*

Top, M., Tarcan, M., Tekingunduz, S., & Hikmet, N. (2013). An analysis of relationships among transformational leadership, job satisfaction, organizational commitment and organizational trust in two Turkish hospitals. *International Journal of Health Planning and Management, 28* (3), 217–241. doi:10.1002/hpm.2154.*

Tremblay, M. A. (2010). Fairness perceptions and trust as mediators on the relationship between leadership style, unit commitment, and turnover intentions of Canadian Forces personnel. *Military Psychology, 22*(4), 510–523. doi:10.1080/08995605.2010.513271.*

Tuna, M., Ghazzawi, I., Tuna, A. A., & Çatir, O. (2011). Transformational leadership and organizational commitment: The case of Turkey's hospitality industry. *SAM Advanced Management Journal (07497075), 76*(3), 10–25.*

Uğurlu, C. T. & Üstüner, M. (2011). Öğretmenlerin örgütsel bağlılık düzeylerine yöneticilerinin etik liderlik ve örgütsel adalet davranışlarının etkisi. *Hacettepe Eğitim Fakültesi Dergisi*, *41*, 434–448.*

Valentino, K. E. M. (1995). *The effects of leadership style and behavior on perceived organizational support and organizational commitment*. (Order No. 1377465, California State University, Long Beach).*

Wallace, E., de Chernatony, L., & Buil, I. (2011). How leadership and commitment influence bank employees' adoption of their bank's values. *Journal of Business Ethics, 101*(3), 397–414. doi:10.1007/s10551-010-0728-2.*

Walumbwa, F. O., Orwa, B., Wang, P., & Lawler, J. J. (2005). Transformational leadership, organizational commitment, and job satisfaction: A comparative study of Kenyan and U.S. financial firms. *Human Resource Development Quarterly*, *16*(2), 235–256.*

Wan Ismail, W. K., Mohamad, N. B., Hussain, G., Rashid, S. A., & Rashid, M. A. (2011). Organizational commitment as mediator of charismatic leadership to model subordinates' performance and satisfaction. *International Journal of Academic Research*, *3*(6), 379–385.*

Wang, X., Ma, L., & Zhang, M. (2014). Transformational leadership and agency workers' organizational commitment: The mediating effect of organizational justice and job characteristics. *Social Behavior and Personality, 42*(1), 25–36. doi:10.2224/sbp.2014.42.1.25.*

Wang, P. & Walumbwa, F. O. (2007). Family-friendly programs, organizational commitment, and work withdrawal: The moderating role of transformational leadership. *Personnel Psychology*, *60*, 397–427.*

Yang, Y. F. (2011). Leadership and change commitment in the life insurance service context in Taiwan: the mediating-moderating role of job satisfaction. *Percept Mot Skills, 112*(3), 889–914. doi: 10.2466/01.07.PMS.112.3.889-914 *

Yang, Y. F. (2011). Leadership and satisfaction in change commitment. *Psychological Reports, 108*(3), 717–736. doi:10.2466/01.28.PR0.108.3.717-736.*

Yang, M.-L. (2012a). Transformational leadership and Taiwanese public relations practitioners' job satisfaction and organizational commitment. *Social Behavior and Personality, 40*(1), 31–46. doi:10.2224/sbp.2012.40.1.31.*

Yang, Y. F. (2012b). Studies of transformational leadership in the consumer service workgroup: Cooperative conflict resolution and the mediating roles of job satisfaction and change commitment. *Psychological Reports, 111*(2), 545–564. doi:10.2466/01.21.PR0.111.5.545-564.*

Yang, Y. F. (2013). Studies of transformational leadership in consumer service: market orientation behavior and alternative roles for the mediators and moderators of change commitment. *Psychological Reports, 113*(3), 767–785. doi:10.2466/01.21.PR0.113x27z8.*

Yasar Sahin, M., Cengiz, R., & Abakay, U. (2013). The investigation of the ethical leadership roles of school administrators and organizational commitment of physical education teachers. *International Journal of Academic Research, 5*(4), 153–160. doi:10.7813/2075-4124.2013/5-4/b.23.*

Zehir, C., Sehitoglu, Y., & Erdogan, E. (2012). The effect of leadership and supervisory commitment to organizational performance. *Procedia – Social and Behavioral Sciences, 58*, 207–216. doi:10.1016/j.sbspro.2012.09.994.*

The Effect of Leadership on Organizational Trust

Fatma Uslu and Erdem Oklay

Abstract The effect of leadership on organizational trust was examined in this meta-analysis study. A total of 218 research studies were collected as a result of the review activity, out of which 70 were included in the meta-analysis. The 70 research studies were compiled to obtain a sample size of 24,059 subjects. The analysis results of the random effect model showed that leadership has a *strong positive effect* on organizational trust. The sample group, leadership style/approach, publication type and year of publication were found to be moderator variables in the study.

1 Introduction

Today's organizations are making great efforts to restructure to ensure high quality and effectiveness to cope with rapid economic changes, demands of clients and increasing competition. Restructuring processes to ensure sustainable success and a competitive edge are only possible by developing organizational trust among employees (Bartram & Casimir, 2006). Organizational trust is the employees' belief in the competencies of employees and managers; decisions are made in the organization based on principles of justice, tolerance, ethics and faith in the processes of implementation (Gillespie & Mann, 2004; Yang, 2012). In this context, organizational trust is bidirectional. The first component is the trust in the competencies of managers and other employees to conduct tasks; the second is the trust felt by managers and employees in their statements, honesty, justice, sincerity and good will.

Organizational trust is a social phenomenon that facilitates tasks within the organization. In recent years, when uncertainties and complexities have continued

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to increase, hierarchical structures are becoming flatter; where a participatory management style is preferred and an increase in professionalism is seen, organizational trust is an appropriate mechanism for improving the productivity of the organization (Bai, Ping Li, & Xi, 2012; Dally, 2009). With the emergence of organizational trust as a factor to increase the organizational commitment in employees, which led to organizations maximizing the gain from their employees, the topic of organizational trust has become of interest. In this light, various models for organizational trust were developed, and these models were used to explain the emergence of organizational trust. The models of organizational trust include the *Mishra Trust Model* (Mishra, 1996), the *Bromiley and Cummings Trust Model* (Bromiley & Cummings, 1995) and the *Zalabak and Winograd Trust Model* (Shockley-Zalabak, Ellis, & Winograd, 2000).

1. *Mishra Trust Model:* Mishra presents an organizational trust model comprised of four dimensions for organizations: competence, openness, reliability and concern. Competence concerns not only the productivity of the leader and employees but also the entire organization to combat competition, and openness and reliability concern the sincere and appropriate communication of information within the organization. According to this model, one of the most important responsibilities of a leader is the establishment of the perception of openness within organization. Lastly, the dimension of concern is comprised of employees' feelings of benevolence and empathy when working.
2. *Bromiley and Cummings Trust Model:* This model has two dimensions: individual and organizational. Individual trust is the expression of expectations of personal behaviors, and organizational trust is the trust felt toward the organization.
3. *Zalabak and Winograd Trust Model:* According to this model, the organizational trust perceived by employees is affected by five behaviors, including consistency and wholeness in behaviors, sharing and dissemination of control, correct and open communication and showing of interest and attention.

The common ground of the models mentioned above is that the cognitive and emotive trust of employees has a positive effect on the outputs of the organization and that collaboration within the organization contributes to the productivity of the organization. Research studies on organizational trust are generally concentrated on three main areas: trust between individuals (Malhotre & Murnighan, 2002; McAllister, 1995), trust in the leader (Bai et al., 2012; Bartram & Casimir, 2006; Joseph & Winston, 2005) and trust in senior management (McCauley & Kuhnert, 1992). Just as trust between individuals leads to the development of commitment and consistency, it also supports the development of new ideas and creative thinking. Trusting relationships between employees and the leader help employees focus on the tasks at hand and ensure a large level participation in organizational responsibilities (Stoner & Hartman, 2000). In this light, it can be stated that the interaction between the leaders and the employee is an important factor for the organization and that the employee generalizes the trust s/he feels in the leader to represent the entire organization (Erdem, 2003). Therefore, it can be suggested that trust in the leader and trust in the organization is a relationship that leads in the same

direction. Thus, the first step towards creating a trusting relationship in the context of the organization is leadership behavior. In other words, it is the responsibility of the leader to start the process.

A review studies on the relationship between leadership and organizational trust showed that the variables researched in the scope of leadership and organizational trust were levels of organizational commitment (Bird, Wang, Watson, & Murray, 2009), job satisfaction (Braun, Peus, Weisweiler, & Frey, 2013), team performance (Casimir, Waldman, Bartram, & Yang, 2006), conflict management (Yang, 2012), organizational loyalty and human resource management (Laka-Mathebula, 2004), values shared within the organization (Gillespie & Mann, 2004), attitude towards work (Liangding, Jiwen, Chaoping, Rongjun, & Yongxia, 2007) and the levels of employees' psychological well-being (Kelloway, Trner, Barling, & Loughlin, 2012). It was seen that leadership styles/approaches and organizational trust were the focus of studies on leadership and organizational trust rather than general leadership traits. Studies investigating leadership styles/approaches focused on the following styles: transformational (Bartram & Casimir, 2006; Braun et al., 2013; Kelloway et al., 2012; Ogens, 2008; Williamson, 2007), authentic (Erkutlu & Chafra, 2013; Norman, 2006; Smith, Vogelgesang, & Avey, 2009) and servant (Goh & Low, 2013; Senjaya & Pekerti, 2010; Trivers, 2009).

In this context, this study examined the effect of leadership on organizational trust. Furthermore, the moderators (which were expected to have a medium-level effect) were identified as: (1) the sample group/sector on which the research was conducted, (2) leadership style/approach, (3) the type of publication and (4) the year of publication. All such variables, along with previous research results, were used to test the following hypotheses of this study:

H_1 Leadership has a positive effect on organizational trust.
H_2 The sample group/sector is a moderator of the positive effect of leadership on organizational trust.
H_3 Leadership style/approach is a moderator of the positive effect of leadership on organizational trust.
H_4 Type of publication is a moderator of the positive effect of leadership on organizational trust.
H_5 Year of publication is a moderator of the positive effect of leadership on organizational trust.

2 Method

2.1 Study Design

In this study, the effect of leadership on organizational trust was tested with a meta-analysis design.

2.2 Review Strategy and Criteria for Inclusion/Exclusion

To determine the research studies to include in the meta-analysis, the Science-Direct, Proquest and Ebsco academic databases were used to conduct a literature review. For this process, the terms *leadership* and *organizational trust* included in the titles of the studies were used to screen the research studies. The end date for the research studies included in the research was identified as March 2014. Doctoral dissertations and peer-reviewed journals were included in the study.

Many strategies were used to identify the research studies that were appropriate for the meta-analysis. First, a research study pool (218 research studies) was established including all studies with leadership and organizational trust in their titles. The abstracts of these studies were reviewed, and all were found to be appropriate to include in the study. In the second stage, all research studies in the pool were examined in detail. The result of the examination found that 70 of the research studies in the pool were appropriate, and 148 were not found to be suitable. The descriptive statistics of the 70 research studies included in the analysis are presented in Table 1.

The criteria for inclusion of the research studies in the analysis were as follows:

- To have the statistical information necessary for a correlational meta-analysis (n and r, or R^2 values)
- To be a study measuring the correlation between leadership and organizational trust

Reasons for not including a research study in the meta-analysis:

- Having no quantitative data (qualitative research)
- Not having a correlation coefficient
- Not focusing on organizational trust
- Not focusing on leadership

Table 1 Characteristics of the studies included in the meta-analysis

Variables		1	2	3	4	Total
Year of publication of study		1990–1999	2000–2009	2010–2014		–
	n	5	31	34		70
	%	7.10	44.20	48.50		100
Type of publication of study		Dissertation	Research study			–
	n	24	46			70
	%	34.20	65.70			100
Sample group/ sector		Employees	Managers	Students	Teachers	
	n	38	2	9	21	70
	%	54.20	2.80	12.85	30.00	100

2.3 Coding Process

The coding process was essentially a data sorting process used to ascertain which data were clear and suitable for the study. In this scope, a coding form was developed before the statistical analysis was conducted, and the coding was conducted according to the form. The main aim was to develop a specific coding system that allowed the study to see the entirety of the research studies in general and that would not miss any characteristics of each individual research study. The coding form developed in the study was comprised of:

- References for the research
- Sample information
- Sample group/sector
- Leadership style/approach
- Data collection tool(s)
- Quantitative values

2.4 Statistical Processes

The effect size acquired in meta-analysis is a standard measure value used in the determination of the strength and direction of the relationships in the study (Bird et al., 2009). Pearson's correlation coefficient (r) was determined to be the effect size in this study. Because the correlation coefficient has a value between $+1$ and -1, the r value calculated was evaluated by converting this value into the value as it appears in the z table (Hedges & Olkin, 1985). Provided that more than one correlation value is given between the same structure categories in correlational meta-analysis studies, two different approaches are used in the determination of the one to be used in the meta-analysis (Borenstein, Hedges, Higgins, & Rothstein, 2009; Kulinskaya, Morgenthaler, & Staudte, 2008). For this study: (1) first, if the correlations were independent, all the related correlations were included in the analysis and were considered to be independent studies, and (2) if there were dependent correlations, then the *conservative estimation value* was accepted. A *random effect model* was used for the meta-analysis processes in this study. The *Comprehensive Meta-Analysis* program was used in the meta-analysis process.

2.5 Moderator Variables

To determine the statistical significance of the difference between the moderators of the study, only the Q_b values were used. Four moderator variables that were expected to have a role in the average effect size were identified in the study. The first of these considered *leadership style/approach* to be a moderator in regards to

the relationship between organizational trust and leadership styles/approaches. The second was *sample group/sector,* which was expected to have an effect on the average effect of leadership perceptions and organizational trust. The third moderator variable was the study's *year of publication,* and the fourth was the *type of research*.

2.6 Publication Bias

A funnel plot for the research studies included in the meta-analysis of the study can be seen in Fig. 1. Evidence that an effect due to publication bias for the research studies included in the meta-analysis can be seen in Fig. 1. A serious asymmetry would be expected in the funnel plot when there is a publication bias. The concentration of plots for the research studies occurring to one side under the line of average impact size, especially at the bottom section of the funnel suggest the probability of a publication bias. In this study, no evidence of partiality of the publications was observed in any of the 70 data subjected to meta-analysis.

Even though no partiality in publications was observed in funnel plot, the results of Duval and Tweedie's trim and fill test, which is applied to determine the effect size related to partiality in publications, acquired with the meta-analysis using the random effect model, are given in Table 2. As it can be seen in Table 2, there is no difference between the impact observed and artificial effect size created to fix the impact resulting from the partiality of publications. The research on each side of the centerline is symmetrical, and this is the indicator of non-difference. As there is no evidence indicating lost data at any side of the centerline, the difference between the fixed effect size and observed effect size is zero.

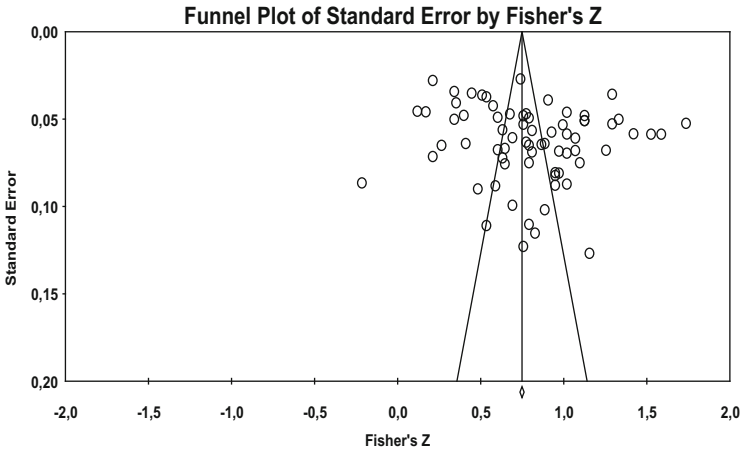

Fig. 1 Effect size funnel for publication bias

Table 2 Duval Tweedie trim-fill test results

	Excluded study	Point estimation	CI (confidence interval)		Q
			Lower limit	Upper limit	
Observed values		0.66	0.61	0.71	3,350.6
Adjusted value	0	0.66	0.61	0.71	3,350.6

3 Findings

Table 3 shows the results of meta-analysis between leadership and organizational trust. The findings supported H_1, which argued that there would be a positive relationship between leadership and organizational trust. The effect size of leadership on organizational trust was calculated to be 0.66. This result shows that leadership has a *large effect* (*see* Cohen, 1988) on organizational trust.

The results of the moderator analysis showed that H_2, regarding the role of the sample group/sector of the research on the effect size between leadership and organizational trust, was supported. It was found that a large effect was found for managers [$r = 0.76$], teachers [$r = 0.74$], students [$r = 0.61$] and employees [$r = 0.61$] in the studies included in the meta-analysis. The strongest effect size was found for managers. The results of the moderator analysis were statistically significant between the sample groups/sectors and the effect size on organizational trust ($Q_b = 6.99$, $p < 0.05$).

The findings supported H_3, which predicted that leadership style/approach played a moderating role in the effect of leadership on organizational trust. The moderator analysis found a statistically significant difference between the effect size of leadership styles ($Q_b = 34.18$, $p < 0.05$). In this scope, it was found that the following were found to have a strong effect on organizational trust in terms of the effect of leadership style/approach: adaptive leadership [$r = 0.91$], supportive leadership [$r = 0.88$], ethical leadership [$r = 0.77$], authentic leadership [$r = 0.69$], leadership behaviors [$r = 0.69$], participatory leadership [$r = 0.66$], transformational leadership [$r = 0.64$], servant leadership [$r = 0.63$] and other [$r = 0.57$] (relations, teaching, management, distributive, operant). A paternalistic leadership style/approach [$r = 0.19$] was found to have a small effect size.

The findings provided support for H_4, which held that the type of publication of a research study would play a moderating role in the effect of leadership on organizational trust. A statistically significant difference between the effect sizes of the types of publication was found ($Q_b = 2.52$, $p < 0.05$). A medium-level effect of leadership on organizational trust for research studies [$r = 0.71$] and dissertations [$r = 0.63$] was found.

The research findings supported H_5, which hypothesized that the year of publication would play a moderating role in leadership's effect on organizational trust. A statistically significant difference between the effect size of the years of publication was found ($Q_b = 2.20$, $p < 0.05$) as a result of the moderator analysis. The effect

Table 3 Correlation findings between leadership and organizational trust: meta-analysis results

Variable	k	N	r	CI (confidence interval)		Q	Q_b
				Lower limit	Upper limit		
Organizational trust	70	24,059	0.66*	0.61	0.71	3,350.66*	
Moderator (sample/sector)							6.99*
Employee	38	11,672	0.61*	0.53	0.68		
Manager	3	895	0.76*	0.52	0.89		
Student	9	2,078	0.61*	0.43	0.74		
Teacher	20	9,414	0.74*	0.66	0.80		
Moderator (leadership style/approach)							34.18*
Adaptive	2	584	0.91*	0.80	0.96		
Authentic	7	2,672	0.69*	0.54	0.80		
Ethical	3	1,710	0.77*	0.57	0.88		
Lead. behaviour	6	1,858	0.69*	0.53	0.81		
Participatory	3	766	0.66*	0.40	0.82		
Paternalistic	4	1,373	0.19*	−0.13	0.47		
Servant	5	1,346	0.63*	0.43	0.78		
Supportive	2	635	0.88*	0.73	0.95		
Transformational	32	9,143	0.64*	0.57	0.71		
Others	6	3,972	0.57*	0.37	0.72		
Moderator (type of publication of study)							2.52*
Research study	46	15,396	0.63*	0.56	0.69		
Dissertation	24	8,663	0.71*	0.63	0.78		
Moderator (year of publication of study)							2.20*
1990–1999	5	1,264	0.77*	0.61	0.88		
2000–2009	31	8,929	0.65*	0.56	0.72		
2010–2014	34	13,866	0.65*	0.57	0.72		

*$p<0.01$

size for research conducted from 1990 to 1999 [$r = 0.77$], from 2000 to 2009 [$r = 0.65$] and from 2010 to 2014 [$r = 0.65$] included in the meta-analysis was found to be high.

Conclusion

Seventy studies were included in this meta-analysis aimed at investigating the magnitude of the effect of leadership on organizational trust. The moderator variables of the study were determined to be sample group/sector, leadership style/approach, publication type and year of publication. The results of the analysis showed that leadership has a strong positive effect on organizational trust. The analysis of moderator variables found that the effect of leadership on

(continued)

organizational trust was strong in regards to the moderator variables of sample group/sector, leadership style/approach, and publication type and year.

Research studies with various sample groups/sectors showed a significant relationship between leadership and organizational trust, and it is suggested that as intra-organizational leadership behavior increases, the level of organizational trust also increases (Azodi, 2006; Yang, 2012; Woods, 2004). According to the analysis results, the employee, manager, student and teacher sample groups strongly influence the effect of leadership on organizational trust; this finding is aligned with the findings in the literature. Studies with employees as the sample group/sector have shown that leadership behaviors are effective in organizational trust, level of commitment and work performance (Smith et al., 2009; Trivers, 2009; Zhu, Newman, Miao, & Hooke, 2013). Other studies conducted on managers have suggested that organizational leadership has a mediatory effect on leadership, and the organizational behavior of employees is shaped according to this effect (Carson, 2011; Goodwin, Whittington, Murray, & Nichols, 2011). Research conducted with teacher and student sample groups has shown that when leaders display leadership behaviors and establish an environment of trust, it contributes to the feeling of responsibility for work within the organization (Otken & Cenkci, 2012); it also ensures organizational efficiency (Azodi, 2006) and increases in academic achievement and teachers' performance (Bozman, 2011).

As the person heading the organization, the leader's behavior in the organizational environment is related to many variables (Cemaloğlu, 2007). Gillespie and Mann (2004) argue that undesirable behaviors within the organization are due to leaders' lack of leadership skills and emphasize the importance of leader behavior in the creation of organizational trust because leader behaviors can affect organizational culture. As a result of the analysis conducted on the effect of leadership styles/approaches on organizational trust, it was seen that, except for the paternalistic leadership style/approach, all other leadership styles/approaches have a strong effect on organizational trust. Paternalistic leadership is thought to be a leadership style/approach that is constructed based on values such as personal loyalty to the leader and unquestioned subordination (Chen, Eberly, Chiang, Farh, & Cheng, 2011). For this reason, paternalistic leadership is seen by Western cultures as being far from professional and is equivalent to authoritarianism. The finding of this study that the paternalistic leadership style/approach has a weaker effect on organizational trust than other leadership styles/approaches can be explained by the negative perception of a paternalistic leadership style. A review of the literature has shown that research studies on leadership and organizational trust have most often examined transformational leadership styles/approaches. The underlying assumption of transformational leadership is

(continued)

that it creates a working environment based on the main values of organizational trust and respect (Bass, 1997), sensitivity to the expectations and needs of employees (Currie & Lockett, 2007) and the motivation of employees to share a common vision (Harms & Crede, 2010). It can be suggested that these leadership behaviors contribute to the development of organizational trust. It can be stated that results of the study show that transformational leadership has a strong effect on organizational culture in terms of the effects of leadership styles/approaches.

According to the moderator variable of the study's type of publication, regardless of whether it is a research study or dissertation, leadership has a strong effect on organizational trust. The moderator analysis conducted for the year of publication found a strong effect of leadership on organizational trust. The results of the study showed that the effect size reduced gradually throughout the years. In this light, it is possible to state that a professional management understanding of organizational management has come to the forefront in recent years, more so than leadership. In this age of the prevalence of the market economy, organizations are no longer family businesses (Taş & Çavuş, 2010). Large-level professionalism has become a rational management behavior necessitated by the modern understanding of management (Khurana, 2001; Ocasio & Kim, 1999). Therefore, organizations today provide opportunities for professional managers who can find solutions in the triangle of change, conflict and uncertainty, can manage crises, can recognize opportunities and can create change.

References[1]

Avcı, U., & Turunç, Ö. (2012). Dönüşümcü liderlik ve örgüte güvenin kariyer memnuniyetine etkisi: Lider-üye etkileşiminin aracılık rolü. *Uluslararası Alanya İşletme Fakültesi Dergisi, 4* (2), 45–55.*

Azodi, D. S. (2006). *Principal leadership, trust, and teacher efficacy*. Unpublished doctoral dissertation. Available from ProQuest Dissertations and Theses database (UMI No. 3250639).*

Bai, Y., Ping Li, P., & Xi, Y. (2012). The distinctive effects of dual-level leadership behaviors on employees' trust in leadership: An empirical study from China. *Asia Pacific Journal of Management, 29*, 213–237.*

Bartram, T., & Casimir, G. (2006). The relationship between leadership and follower in-role performance and satisfaction with the leader: The mediating effects of empowerment and trust in the leader. *Leadership & Organization Development Journal, 28*(1), 4–19.*

Bass, B. M. (1997). Does the transactional-transformational leadership paradigm transcend organizational and national boundaries? *American Psychologist, 52*, 130–139.

[1] References marked with an asterisk indicate studies included in the meta-analysis. The in-text citations to studies selected for meta-analysis are not followed by asterisks.

Beycioglu, K., Özer, N., & Uğurlu, C. T. (2012). Distributed leadership and organizational trust: The case of elementary schools. *Procedia Social and Behavioral Sciences, 46*, 3316–3319.*

Bird, J. J., Wang, C., Watson, J. R., & Murray, L. (2009). Relationships among principal authentic leadership and teacher trust and engagement levels. *Journal of School Leadership, 19*(2), 153–171.*

Blömeke, S., & Klein, P. (2012). When is a school environment perceived as supportive by beginning mathematics teachers? Effects of leadership, trust, autonomy and appraisal on teaching quality. *International Journal of Science and Mathematics Education, 11*, 1029–1048.*

Borenstein, M., Hedges, L. V., Higgins, J. P., & Rothstein, H. (2009). *Introduction to meta-analysis*. Chichester: Wiley.

Bozman, C. E. (2011). *The effects of principals' leadership styles, teacher efficacy, and teachers' trust in their principals on student achievement*. Unpublished doctoral dissertation. Available from *ProQuest Dissertations and Theses database* (UMI No. 3468683).*

Braun, S., Peus, C., Weisweiler, S., & Frey, D. (2013). Transformational leadership, job satisfaction, and team performance: A multilevel mediation model of trust. *The Leadership Quarterly, 24*, 270–283.*

Bresnahan, C. G. (2008). *Attachment style as a predictor of group conflict, post-conflict relationship repair, trust and leadership style*. Unpublished doctoral dissertation. Available from ProQuest Dissertations and Theses database (UMI No. 3325094).*

Bromiley, P., & Cummings, L. L. (1995). Transaction costs in organizations with trust. In R. Bies, R. Lewicki, & B. Sheppard (Eds.), *Research on negotiations in organizations* (pp. 219–247). Greenwich: JAI Press.

Butler, J. K., Cantrell, R. S., & Flick, R. J. (1999). Transformation leadership behaviors, upward trust, and satisfaction in self-managed work teams. *Organization Development Journal, 17*(1), 13–27.*

Carson, M. A. (2011). *Antecedents of effective leadership: The relationships between social skills, transformational leadership, leader effectiveness, and trust in the leader*. Unpublished doctoral dissertation. Available from ProQuest Dissertations and Theses database (UMI No. 3457870).*

Casimir, G., Waldman, D. A., Bartram, T., & Yang, S. (2006). Trust and the relationship between leadership and follower performance: Opening the black box in Australia and China. *Journal of Leadership & Organizational Studies, 12*(3), 68–84.*

Cemaloğlu, N. (2007). The relationship between school administrators' leadership styles and bullying. *Hacettepe University Journal of Education, 33*, 77–87.

Cemaloğlu, N., & Kılınç, A. Ç. (2012). İlköğretim okulu yöneticilerinin etik liderlik davranışları ile öğretmenlerin algıladıkları örgütsel güven ve yıldırma arasındaki ilişki. *Eğitim ve Bilim, 37* (165), 137–151.*

Chatbury, A., Beaty, D., & Kriek, H. S. (2011). Servant leadership, trust and implications for the "Base-of-the-Pyramid" segment in South Africa. *South African Journal of Business Management, 42*(4), 57–61.*

Chen, X., Eberly, M. B., Chiang, T., Farh, J., & Cheng, B. (2011). Performance affective trust in Chinese leaders: Linking paternalistic leadership to employee. *Journal of Management, 20* (10), 1–24.*

Childers, W. H. (2009). *Transformational leadership and its relationship to trust and behavioral integrity* (Doctoral dissertation). Available from ProQuest Dissertations and Theses database (UMI No. 3402113).*

Clapp-Smith, R., Vogelgesang, G. R., & Avey, J. B. (2009). Authentic leadership and positive psychological capital. The mediating role of trust at the group level of analysis. *Journal of Leadership & Organizational Studies, 15*(3), 227–240.*

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale: Lawrence Erlbaum.

Currie, G., & Lockett, A. (2007). A critique of transformational leadership: Moral, professional and contingent dimensions of leadership within public services organizations. *Human Relations, 60*(2), 341–370.

Dally, A. J. (2004). A question of trust: Predictive conditions for adaptive and technical leadership in educational contexts. Unpublished doctoral dissertation. Available from ProQuest Dissertations and Theses database (UMI No. 3143793).*

Dally, A. J. (2009). Rigid response in an age of accountability. The potential of leadership and trust. *Educational Administration Quarterly, 45*(2), 168–216.*

Dean, S. D. (2011). *Collegial leadership, teacher professionalism, faculty trust: Predicting teacher academic optimism in elementary schools*. (Doctoral dissertation). Available from ProQuest Dissertations and Theses database (UMI No. 3461037).*

Deluga, R. J. (1994). Supervisor trust building, leader-member exchange and organizational citizenship behaviour. *Journal of Occupational and Organizational Psychology, 67*, 315–326.*

Dirks, K. T., & Ferrin, D. L. (2002). Trust in leadership: Meta-analytic findings and implications for research and practice. *Journal of Applied Psychology, 87*(4), 611–628.*

Erdem, F. (2003). *Sosyal bilimlerde güven*. (Edit: Ferda Erdem). Ankara: Vadi Yayınları.

Erkutlu, H., & Chafra, J. (2013). Effects of trust and psychological contract violation on authentic leadership and organizational deviance. *Management Research Review, 36*(9), 828–848.*

Eyemaro, B. (2001). *A convergent/discriminant study of relational leadership and its impact on teacher perceptions of trust*. Unpublished doctoral dissertation. Available from ProQuest Dissertations and Theses database (UMI No. 3022128).*

Farrell, J. B., Flood, P. C., Mac Curtain, S., Hannigan, A., Dawson, J., & West, M. (2005). CEO leadership, top team trust and the combination and exchange of information. *Irish Journal of Management, 26*(1), 22–40.*

Fjelstad, N. L. (1990).*Superintendent leadership behavior and its relationship to trust and commitment of Wisconsin principals*. Unpublished doctoral dissertation. Available from ProQuest Dissertations and Theses database (UMI No. 9106673).*

Fox, J. T. (2011). *The impact of personal and organızational identification on the process of teacher trust development within the context of principal authentic leadership* (Doctoral dissertation). Available from ProQuest Dissertations and Theses database (UMI No. 3492699).*

Gillespie, N. A., & Mann, L. (2004). Transformational leadership and shared values: The building blocks of trust. *Journal of Managerial Psychology, 19*(6), 588–607.*

Goh, S., & Low, B. Z. (2013). The influence of servant leadership towards organizational commitment: The mediating role of trust in leaders. *International Journal of Business and Management, 9*(1), 17–25.*

Goodwin, V. L., Whittington, J. L., Murray, B., & Nichols, T. (2011). Moderator or mediator? Examining the role of trust in the transformational leadership paradigm. *Journal of Managerial Issues, 23*(4), 409–425.*

Harms, P. D., & Crede, M. (2010). Remaining issues in emotional intelligence research: Construct overlap, method artifacts, and lack of incremental validity. *Industrial and Organizational Psychology, 3*, 154–158.

Hedges, L. V., & Olkin, I. (1985). *Statistical methods for meta-analysis*. New York, NY: Academic.

Hsu, S. (2006). *Team transformational leadership, trust, empowerment, satisfaction, and commitment: Testing a structural equation model in software development teams*. Unpublished doctoral dissertation. Available from ProQuest Dissertations and Theses database (UMI No. 3207474).*

Huang, X., Iun, J., Liu, A., & Gong, Y. (2010). Does participative leadership enhance work performance by inducing empowerment or trust? The differential effects on managerial and non-managerial subordinates. *Journal of Organizational Behavior, 31*, 122–143.*

Jia, L., Song, J., Li, C., Cui, R., & Chen, Y. (2007). Leadership styles and employees' job-related attitudes: An empirical study on the mediating effects of reciprocity and trust. *Frontiers of Business Research in China, 1*(4), 574–605.*

Joseph, E., & Winston, B. (2005). A correlation of servant leadership, leader trust, and organizational trust. *Leadership & Organization Development Journal, 26*(1), 6–22.*

Jung, D. I., & Avolio, B. J. (2000). Opening the black box: An experimental investigation of the mediating effects of trust and value congruence on transformational and transactional leadership. *Journal of Organizational Behavior, 21*(8), 949–964.*

Kelloway, E. K., Trner, N., Barling, J., & Loughlin, C. (2012). Transformational leadership and employee psychological well-being: The mediating role of employee trust in leadership. *Work & Stress, 26*(1), 39–55.*

Khurana, R. (2001). Finding the right CEO: Why boards often make poor choices. *MIT Sloan Management Review, 43*(1), 91–95.

Kovac, J., & Jesenko, M. (2010). The connection between trust and leadership styles in Slovene organizations. *Journal for East European Management Studies, 1*, 9–33.*

Kulinskaya, E., Morgenthaler, S., & Staudte, R. G. (2008). *Meta analysis: A guide to calibrating and combining statistical evidence*. West Sussex: Wiley.

Laka-mathebula, M. R. (2004). *Modelling the relationship between organisational commitment, leadership style, human resources management practices and organisational trust*. Unpublished doctoral dissertation, University of Pretoria, Pretoria, South Africa.

Lawlor, M. L. (1998). *Trust, collegiality and teacher efficacy: The influence of supportive leadership*. Unpublished doctoral dissertation. Available from ProQuest Dissertations and Theses database (UMI NO. 9820003).*

Liangding, J., Jiwen, S., Chaoping, L., Rongjun, C., & Yongxia, C. (2007). Leadership styles and employees' job-related attitudes: An empirical study on the mediating effects of reciprocity and trust. *Frontiers of Business Research in China, 1*, 574–605. doi:10.1007/s11782-007-0033-9.

Lin, H. (2003). *Transformational leadership and trust profiles of department chairs and faculty in central Taiwanese technology colleges*. Unpublished doctoral dissertation. Available from ProQuest Dissertations and Theses database (UMI NO. 3085434).*

Malhotre, D., & Murnighan, J. K. (2002). The effects of contracts on interpersonal trust. *Administrative Science Quarterly, 47*, 534–559.

Mannion, P. T. (1999). *The relationship of principal transformational leadership characteristics to principal trust characteristics, colleague trust characteristics, and organization trust characteristics*. Unpublished doctoral dissertation. Available from ProQuest Dissertations and Theses database (UMI No. 9929712).*

Marshall, J. A. (2012). *Ethical leadership, prototypicality, integrity, trust, and leader effectiveness*. Unpublished doctoral dissertation. Available from ProQuest Dissertations and Theses database (UMI No. 3515409).*

Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *Academy of Management Review, 20*, 709–734.*

McAllister, D. J. (1995). Affect-and cognition-based trust as foundations for interpersonal cooperation in organisations. *Academy of Management Journal, 38*, 24–59.*

McCauley, D. P., & Kuhnert, K. W. (1992). A theoretical review and empirical investigation of employee trust in management. *Public Administration Quarterly, Summer*, 265–284.

Michaelis, B., Stegmaier, R., & Sonntag, K. (2009). Affective commitment to change and innovation implementation behavior: The role of charismatic leadership and employees' trust in top management. *Journal of Change Management, 9*(4), 399–417.*

Mishra, A. K. (1996). Organizational responses to crisis: The centrality of trust in oganizations: Frontiers of theory and research. In R. M. Kramer & T. R. Tyler (Eds.), *Trust in organizations* (pp. 261–288). Newbury Park, CA: Sage.

Norman, S. M. (2006). *The role of trust: Implications for psychological capital and authentic leadership*. Unpublished doctoral dissertation. Available from ProQuest Dissertations and Theses database (UMI No. 3208085).*

Ocasio, W., & Kim, H. (1999). The circulation of corporate control: Selection of functional backgrounds of new CEOs in large U.S. manufacturing firms, 1981-1992. *Administrative Science Quarterly, 44*, 532–562.

Ogens, E. (2008).*The perceived trust of elementary and middle school principals and leadership attributes in an Abbott district in New Jersey*. Unpublished doctoral dissertation. Available from ProQuest Dissertations and Theses database (UMI No. 3431777).*

Otken, A. B., & Cenkci, T. (2012). The impact of paternalistic leadership on ethical climate: The moderating role of trust in leader. *Journal of Business Ethics, 108*, 525–536.

Pfeifer, S. L. (2001). *In the college community: An exploration of trust and its correlation with transformational leadership.* Unpublished doctoral dissertation. Available from ProQuest Dissertations and Theses database (UMI No. 3018331).*

Pillai, R., Kohles, J. C., Bligh, M. C., Carsten, M. K., & Brodowsky, G. (2011). Leadership in "Confucian Asia": A three-country study of justice, trust, and transformational leadership. *Organization Management Journal, 8*(4), 242–259.*

Pillai, R., Schriesheim, C. A., & Williams, E. S. (1999). Fairness perceptions and trust as mediators for transformational and transactional leadership: A two-sample study. *Journal of Management, 25*(6), 897–933.*

Pillai, R., Williams, E. A., Lowe, K. B., & Jung, D. I. (2003). Personality, transformational leadership, trust and the 2000 U.S. presidential vote. *The Leadership Quarterly, 14*, 161–192.*

Rubin, R. S., Bommer, W. H., & Bachrach, D. G. (2010). Operant leadership and employee citizenship: A question of trust? *The Leadership Quarterly, 21*, 400–408.*

Saher, N., Naz, S., Tasleem, I., Naz, R., & Kausar, S. (2013). Does paternalistic leadership lead to commitment? Trust in leader as moderator in Pakistani context. *Interdisciplinary Journal of Contemporary Research in Business, 5*(1), 443–455.*

Senjaya, S., & Pekerti, A. (2010). Servant leadership as antecedent of trust in organizations. *Leadership & Organization Development Journal, 31*(7), 643–663.*

Shen, M., & Chen, M. (2007). The relationship of leadership, team trust and team performance: A comparison of the service and manufacturing industries. *Social Behavior and Personality, 35* (5), 643–658.*

Shockley-Zalabak, P., Ellis, K., & Winograd, G. (2000). Organisational trust: What it is, why it matters. *Organisation Development Journal, 18*(4), 35–48.

Smith, R. C., Vogelgesang, G., & Avey, J. (2009). Authentic leadership and positive psychological capital: The mediating role of trust at the group level of analysis. *Organizational Studies, 15*, 227–240. doi:10.1177/1548051808326596.

Stoner, C. R., & Hartman, R. I. (2000). Team building: Answering the tough questions. *Research Technology Management, 34*, 12–18.

Taş, A., & Çavuş, M. F. (2010). Türkiye'deki profesyonel yöneticiler1 üzerine bir inceleme: Nasıl seçiliyorlar? Hangi özellikleri ön plana çıkıyor? Hangi yetkilerle donatılıyorlar? *Ç.Ü. Sosyal Bilimler Enstitüsü Dergisi, 19*, 185–201.

Teyfur, M., Beytekin, O. F., & Yalçınkaya, M. (2013). İlköğretim okul yöneticilerinin etik liderlik özellikleri ile okullardaki örgütsel güven düzeyinin incelenmesi (İzmir il örneği). *Dicle Üniversitesi Ziya Gökalp Eğitim Fakültesi Dergisi, 21*, 84–106.*

Top, M., Tarcan, M., Tekingündüz, S., & Hikmet, N. (2013). An analysis of relationships among transformational leadership, job satisfaction, organizational commitment and organizational trust in two Turkish hospitals. *The International Journal of Health Planning and Management, 28*, 217–241.*

Trivers, G. A. (2009). *Servant leadership's effects on trust and organizational citizenship behaviors*. Unpublished doctoral dissertation. Available from ProQuest Dissertations and Theses database (UMI No. 3444127).*

Tschannen-Moran, M. (2009). Fostering teacher professionalism in schools. The role of leadership orientation and trust. *Educational Administration Quarterly, 45*(2), 217–247.*

Wang, D., & Hsieh, C. (2013). The effect of authentic leadership on employee trust and employee engagement. *Social Behavior and Personality, 41*(4), 613–624.*

Williamson, H. (2007). *The link between transformational leadership and intent to leave: The mediating role of trust*. Unpublished doctoral dissertation. Available from ProQuest Dissertations and Theses database (UMI No. 3279445).*

Wong, C. A., & Cummings, G. G. (2009). The influence of authentic leadership behaviors on trust and work outcomes of health care staff. *Journal of Leadership Studies, 3*(2), 6–23.*

Woods, R. S. (2004). *The effects of self-efficacy, transformational leadership and trust on leadership effectiveness of senior student affairs officers*. Unpublished doctoral dissertation. Available from ProQuest Dissertations and Theses database (UMI No. 3158538).*

Wu, M., Huang, X., Li, C., & Li, W. (2011). Perceived interactional justice and trust-in-supervisor as mediators for paternalistic leadership. *Management and Organization Review, 8*(1), 97–121.*

Yang, Y. C. (2012). High-involvement human resource practices, affective commitment, and organizational citizenship behaviors. *The Service Industries Journal, 32*, 1209–1227.

Yılmaz, K., & Altınkurt, Y. (2012). Relationship between the leadership behaviors, organizational justice and organizational trust. *Çukurova University Faculty of Education Journal, 41*(1), 12–24.*

Zeinabadi, H., & Rastegarpour, H. (2010). Factors affecting teacher trust in principal: Testing the effect of transformational leadership and procedural justice. *Procedia Social and Behavioral Sciences, 5*, 1004–1008.*

Zhu, W., Newman, A., Miao, Q., & Hooke, A. (2013). Revisiting the mediating role of trust in transformation: Do different types of trust make a difference? *The Leadership Quarterly, 24*, 94–105.*

The Effect of Leadership on Organizational Citizenship

Cemal Öztürk and Yusuf Ay

Abstract The effect of leadership on organizational citizenship was examined in this meta-analysis study. A total of 74 research studies were collected as a result of a literature review, out of which 55 were included in the meta-analysis. The 55 research studies were compiled to obtain a sample size of 140,395 subjects. The analysis results of the random effect model showed that leadership has a *medium-level positive effect* on organizational citizenship. In the study of the sample group/sector, year of publication, and leadership style/approach moderators, only year of publication was found to be a moderator variable.

1 Introduction

The concept of *organizational citizenship behavior* (OCB) was first used in reference to the 'employees of an organization display[ing] volunteer behaviors that were more than their expected responsibilities, which led to the further benefit of the organization' (Bateman & Organ, 1983). The concept of organizational citizenship is seen to be closely related to the attitude toward a fair cognitive appraisal of employees of an organization. This perspective is related to equity theory (Adams, 1965). Equity theory explains the employee's contributions to the organization—that is, the conscious comparison of outputs they gain from the organization (Eren, 2001).

In early studies on organizational citizenship (Smith, Organ, & Near, 1983), altruism and adaptation were the two main headings examined; however, in the studies that followed (Organ, 1988), the concept was understood according to five dimensions:

1. *Altruism*: to volunteer their help to fellow colleagues and to make efforts to reduce their workload.

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2. *Conscientiousness*: for the employee to surpass the minimum qualities required by the job description and to contribute more to the organization, e.g., by using time more efficiently or producing on a higher level, and for leaders to delegate authority to their followers (Boerner, Eisenbeiss, & Griesser, 2007).
3. *Sportsmanship*: according to Organ (1988), behaviors that contribute to the efficiency and effectiveness of the organization as a result of an increase of resistance in employees toward emerging negative situations and the ability to combat problems without creating tension or providing constructive opinions. By displaying high performance, the excessive waste of energy and time can be prevented.
4. *Courtesy*: behaviors that include gestures such as informing persons who will be affected by a particular task or behavior before it takes place (Podsakoff et al., 2000).
5. *Civic Virtue*: explains the behavior that supports the professional and social functions of an organization by considering the highest interests of the organization, willingly joining the organization and taking an interest in the organization (Allison, Voss, & Dryer, 2001).

Despite Organ's five-dimensional approach, there is no consensus on OCB dimensions in the literature (Oğuz, 2011). In their study, Podsakoff, MacKenzie, Paine, and Bachrach (2000) identified 30 different OCB dimensions. There are also studies that investigate the concept of OCB in two dimensions such as OCB for the benefit of individuals and organizations (Ilies, Nahrgang, & Morgeson, 2007). Studies that examine the various dimensions of OCB are considered variations of the five dimensions established by Organ (1988).

In the initial studies of OCB, the dimensions and assumptions of OCB were examined. In studies that followed, the organizational outputs of OCB were considered (Köse, Kartal, & Kayalı, 2003; Gürbüz, 2006). In addition to the OCB studies conducted, the concept was also discussed in terms of education by DiPaola and Tschannen-Moran (2001), who adapted Organ's OCB concept (Organ, 1988; Organ & Ryan, 1995) to state schools (DiPaola & Hoy, 2005).

It has been stated that OCB is an effective and important determining factor of leadership behaviors and that OCB positively affects organizational performance in various dimensions (Podsakoff et al., 2000).

Investigations of the relationship between leadership and OCB may provide effective approaches for organizations with a desire to gain further success. The research findings in this field and their effective application will make it possible to ensure employees gain OCB in multi-cultural and multi-national organizations of the future.

In recent studies conducted on leadership, the relationship between the various leadership approaches/styles and OCB was examined. A review of the findings showed that there was a medium-level relationship between OCB and transformational leadership (Dominguez, Enache, Sallan, & Simo, 2013; Felfe & Heinitz, 2010; Gilmore, Hu, Wei, Tetrick, & Zaccaro, 2013; Humphrey, 2012; Jiao, Richards, & Zhang, 2011; Kent & Chelladurai, 2001; Khan & Rashid, 2012; Li,

Chiaburu, Kirkman, & Xie, 2013; Lian & Tui, 2012; Nguni, Sleegers, & Denessen, 2007; Oğuz, 2011; Omar, Zainal, Omar, & Khairudin, 2009; Park, Song, Yoon, & Kim, 2013; Podsakoff, MacKenzie, & Bornmer, 1996; Purvarova, Bono, & Dzieweczynski, 2006; Salam, Cox, & Sims, 1996; Schlechter & Engelbrecht, 2006; Subrahmanian, 2013; Tai, Chang, Hong, & Chen 2012; Twigg, 2008; Twigg, Fuller, & Hester, 2008; Vigoda-Gadot & Beeri, 2011; Wang, Law, Hackett, Wang, & Chen, 2005), transactional leadership (Lian & Tui, 2012; Morçin & Morçin, 2013; Walumbwa, Wu, & Orwa, 2008), spiritual leadership (Chin & Chin, 2012), Shared Leadership (Bostancı, 2013), servant leadership (Ehrhart, 2004; Zehir, Akyüz, Eren, & Turhan, 2013), Paternalistic leadership (Çalışkan, 2010; Ersoy, Born, Derous, & Molen, 2012; Hongyu, Mingjian, Qiang, & Liqun, 2012), general leadership (Alabi, 2012; Al-sharafi & Rajiani, 2013; Britt, McKibben, Greene-Shortridge, Odle-Dusseau, & Herleman, 2012; Dijke, Cremer, Mayer, & Quaquebeke, 2012; Euwema, Wendt, & Emmerik, 2007; Moideenkutty & Schmidt, 2011; Pearce & Herbik, 2004; Rubin, Bommer, & Bachrach, 2010; Shing-Ko, Hsiao-Chi, & Sung-Yi, 2007; Zhang & Chen, 2013), ethical leadership (Ruiz-Palomino, Ruiz-Amaya, & Knörr, 2011; Shin, 2012; Zhang, Walumbwa, Aryee, & Chen, 2013), charismatic leadership (Aoyagi, Cox, & McGuire, 2008; Aslan, 2009; Babcock-Roberson & Strickland, 2010; Boerner, Dütschke, & Wied, 2008; Cho & Dansereau, 2010), and authentic leadership (Tonkin, 2013; Valsania, Leon, Alonso, & Cantisano, 2012).

This study investigated the effect of leadership on organizational citizenship behavior. Further, the (1) sample group of studies, (2) their year of publication and (3) leadership styles were determined as moderators thought to affect the effect size of leadership. In light of previous studies and these variables, the following hypotheses were tested:

H_1 Leadership has a positive effect on organizational citizenship.
H_2 The sample group/sector is a moderator of the positive effect of leadership on organizational citizenship behavior.
H_3 The year of publication is a moderator of the positive effect of leadership on organizational citizenship behavior.
H_4 Leadership style is a moderator of the positive effect of leadership on organizational citizenship behavior.

2 Method

2.1 Study Design

In this study, the effect of leadership on organizational citizenship was tested with the meta-analysis design.

2.2 Review Strategy and Criteria for Inclusion/Exclusion

To determine the research studies to include in the meta-analysis, the Science-Direct, Proquest and Ebsco academic databases were used to conduct a literature review. For this process, the terms *leadership* and *organizational citizenship* included in the titles of the studies were used to screen the research studies. The end date for the research studies included in the research was identified as March 2014. Doctoral dissertations and peer-reviewed journals were included in the study.

Many strategies were used to identify the research studies that were appropriate for the meta-analysis of the study. First, a research study pool (74 research studies) was established of all studies with leadership and job satisfaction in their titles. The abstracts of these studies were reviewed, and all were found to be appropriate to include in the study. In the second stage, all research studies in the pool were examined in detail. Fifty-five of the research studies in the pool were appropriate, and 19 were not found to be suitable. The descriptive statistics of the 55 research studies included in the analysis are presented in Table 1.

The criteria for inclusion of the research studies in the analysis study were identified as follows:

- To have the statistical information necessary for correlational meta-analysis (n and r, or R^2 values)
- To be a study measuring the correlation between leadership and organizational citizenship

Reasons for not including a research study in the meta-analysis:

- Having no quantitative data (qualitative research)
- Not having a correlation coefficient
- Not focusing on organizational citizenship
- Not focusing on leadership

Table 1 Characteristics of the studies included in the meta-analysis

Variables		1	2	3	4	Total
Year of the research		Before 1990	1990–1999	2000–2009	After 2010	–
	n	0	2	16	37	55
	%	0	3.63	29.09	67.27	100
Type of the research		Dissertation	Article	–	–	–
	n	0	55	–	–	55
	%	0	100	–	–	100
Sample group/sector		Manager	Teacher	Student	Employees	–
	n	5	5	5	40	55
	%	9.09	9.09	9.09	72.72	100

2.3 Coding Process

The coding process is essentially a data sorting process used to ascertain which of the complex data in studies are clear and suitable for the study. In this scope, a coding form was developed before the statistical analysis was conducted, and the coding was conducted according to the form. The main aim was to develop a specific coding system that allowed the study to see the entirety of the research studies in general and that would not miss any characteristics of each individual research study. The coding form developed in the study was comprised of:

- References for the research
- Sample information
- Sample group/sector
- Leadership style/approach
- Data collection tool(s)
- Quantitative values

2.4 Statistical Processes

The effect size acquired in a meta-analysis is a standard measure value used in the determination of the strength and direction of the relationship in the study (Borenstein, Hedges, Higgins, & Rothstein, 2009). Pearson's correlation coefficient (r) was determined to be the effect size in this study. Because the correlation coefficient has a value between $+1$ and -1, the r value calculated was evaluated by converting this value into the value as it appears in the z table (Hedges & Olkin, 1985). Provided that more than one correlation value is given between the same structure categories in correlational meta-analysis studies, two different approaches were used in the determination of the one to be used in the meta-analysis (Borenstein et al., 2009; Kulinskaya, Morgenthaler, & Staudte, 2008). For this study, (1) first, if the correlations were independent, all the related correlations were included in the analysis and were considered to be independent studies, and (2) if there were dependent correlations, then the *conservative estimation value* was accepted. A *random effect model* was used for the meta-analysis processes in this study. The *Comprehensive Meta-Analysis* program was used in the meta-analysis process.

2.5 Moderator Variables

To determine the statistical significance of the difference between the moderators of the study, only the Q_b values were used. Three moderator variables that were expected to play a role in the average effect size were identified in the study. The

first of these considered *sample group/sector* as a moderator of the relationship between organizational citizenship and leadership style/approach. The second, *year of the research,* was expected to have an effect on the average effect of leadership perceptions and organizational citizenship. The third moderator variable was *leadership style/approach.*

2.6 Publication Bias

A funnel plot for the research studies included in the meta-analysis of the study can be seen in Fig. 1. Evidence for the effect of publication bias in the research studies included in the meta-analysis can be seen in Fig. 1. A serious asymmetry would be expected in the funnel plot if there were a publication bias. The concentration of plots on one side, under the line of the average effect size and particularly in the bottom section of the funnel, suggests the probability of a publication bias. In this study, no evidence of the partiality of the publications was observed in any of the 55 data subjected to the meta-analysis.

Although no partiality in publications was observed in the funnel plot, the results of Duval and Tweedie's trim and fill test, which was applied to determine the effect of partiality in publications acquired with the meta-analysis using the random effect model, are given in Table 2. As is seen in Table 2, there is no difference between the effect observed and the artificial effect size created to fix the effect of the partiality of publications. The research on each side of the center line is symmetrical, and this is the indicator of non-difference. Because there is no evidence indicating lost data on either side of the center line, the difference between the fixed effect size and observed effect size is zero.

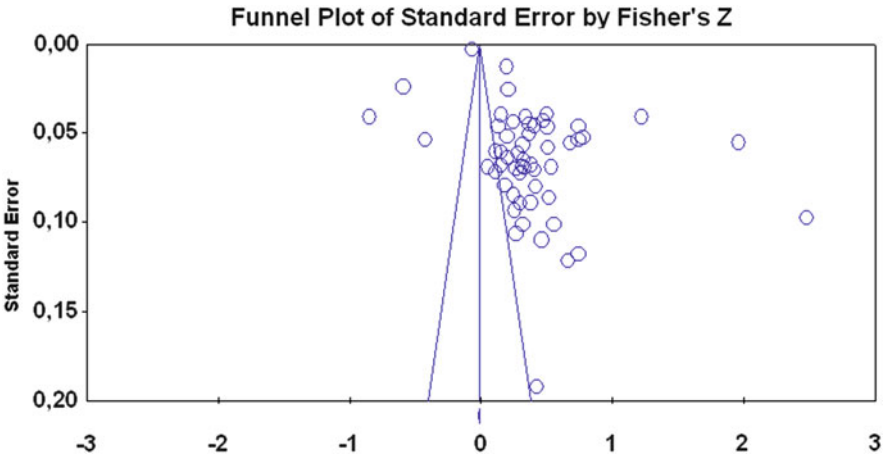

Fig. 1 Effect size funnel for publication bias

Table 2 Duval Tweedie trim-fill test results

	Studies trimmed	Point estimate	CI (confidence interval)		Q
			Lower limit	Upper limit	
Observed values		−0.01431	−0.0195	−0.0090	6,886.18
Adjusted values	0	−0.01431	−0.0195	−0.0090	6,886.18

3 Findings

Table 3 shows the results of the meta-analysis of leadership and organizational citizenship. The findings provided support for $H_{1,}$ which argued that there would be a positive relationship between leadership and the development of organizational citizenship behavior. The effect size of leadership on organizational citizenship was calculated to be 0.36. This result shows that leadership has a *medium-level effect* on organizational citizenship behavior (*see* Cohen, 1988).

The results of the first moderator analysis showed that H_2, which expected that the sample group/sector would moderate the positive effect of leadership on organizational citizenship behavior., was supported. In previous studies, it was found that leadership has a medium-level significant effect on the organizational citizenship behaviors of employees of the banking sector [$r = 0.578$], employees of not-for-profit organizations [$r = 0.32$], teachers [$r = 0.46$] and managers [$r = 0.409$]. With the exception of these four sample groups, the effect of leadership on organizational citizenship behavior was not found to be significant on the other sample group/sectors. The most important finding was that leadership behaviors had the largest effect on employees of the banking sector in regards to organizational citizenship behaviors. Of the effect size on organizational citizenship for various sample groups/sectors, the moderator analysis showed that the difference in the effect size of leadership on organizational citizenship was statistically significant ($Q_b = 6.49$, $p < 0.05$).

The findings of the second moderator analysis supported $H_{3,}$ which hypothesized that the year of publication would be a moderator for the positive effect of leadership on organizational citizenship behavior.. The moderator analysis found a statistically significant difference in the effect size for publication year ($Q_b = 4.83$, $p < 0.05$). Publications from 1990 to 1999 [$r = -0.30$] found that leadership had a negative effect on organizational citizenship behavior, and the findings were statistically significant ($p > 0.05$). However, publications from 2000 to 2009 [$r = 0.35$] and those of 2010 and beyond [$r = 0.40$] found that the effect size of leadership was of a medium-significant level ($p < 0.05$).

The third analysis conducted found that the H_4 hypothesis, which predicted that styles of leadership would not have a significant difference in organizational citizenship behaviors when compared with each other, was not supported. Whereas general leadership [$r = 0.53$], paternalistic leadership [$r = 0.63$] and transformational leadership [$r = 0.26$] were found to have a significant effect on organizational citizenship behavior, the effects of other leadership types were not found to be

Table 3 Findings of the correlations between leadership and organizational citizenship: results of meta-analysis

Variable	k	N	r	CI (confidence interval)		Q	Q_b
				Lower limit	Upper limit		
Organizational citizenship	55	140,395	0.36*	0.26	0.45	6,886.18*	
Moderator (sample group/sector)							6.49**
Academia	3	343	0.45	−0.07	0.78		
Army	2	1,244	−0.17	−0.69	0.46		
Banking sector	7	1,989	0.57**	0.28	0.77		
Employees	24	15,120	0.32**	0.14	0.48		
Communication sector	2	746	0.12	−0.50	0.66		
Medical	2	359	0.19	−0.44	0.70		
Student	5	621	0.37	−0.04	0.67		
Teacher	5	1,807	0.46*	0.07	0.73		
Manager	5	118,167	0.40*	0.00	0.69		
Moderator (leadership style/approach)							6.72**
General	11	119,463	0.53**	0.28	0.71		
Authentic	2	349	0.36	−0.32	0.79		
Charismatic	5	901	0.29	−0.14	0.64		
Ethical	3	7,046	0.18	−0.37	0.64		
Paternalistic	4	805	0.63**	0.23	0.85		
Servant	2	549	0.34	−0.34	0.79		
Shared	1	364	0.65	−0.22	0.94		
Spiritual	1	466	0.46	−0.46	0.90		
Transactional	3	646	0.18	−0.37	0.64		
Transformational	23	9,806	0.26*	0.05	0.44		
Moderator (year of the research)							4.83*
1990–1999	2	2,138	−0.30	−0.74	0.31		
2000–2009	16	121,044	0.35**	0.14	0.53		
After 2010	37	17,213	0.40**	0.26	0.52		

*$p < 0.05$ **$p < 0.01$

statistically significant. In conclusion, it can be stated that leadership types are significantly different in their effects.

Conclusion

The findings supported H_1, which argued that there would be a positive relationship between leadership and organizational citizenship. The results of the moderator analysis showed that H_2, which predicted that the sample

(continued)

group/sector would be a moderator for the positive effect of leadership on organizational citizenship behavior, was supported. The findings provided support for H_3, which predicted that he year of publication would be a moderator for the positive effect of leadership on organizational citizenship behavior. The findings supported H_4, which predicted that leadership style would be a moderator for the positive effect of leadership on organizational citizenship behavior.

It is understandable that displaying leadership behaviors would increase the engagement an organization's employees experience in their jobs and would lead them to take greater ownership in the organization (Aslan, 2009). It was found in this study that employees of different sectors, such as the banking sector and not-for-profit organizations, are affected by leadership behaviors at differing levels. Findings that support this situation show that leaders or managers of organizations who wish to be successful should display leadership behaviors in a style that is congruent with their employees and that applies to them. In this context, knowing the members of the organization well and displaying behaviors or working styles that match the employees are important for success.

Just as the same leadership style applied to different organizations cannot guarantee success, different leadership styles for the same type of organization also do not guarantee success. This brings to mind the relationship between leader and follower congruence in the literature.

The relationship between leadership and organizational citizenship behavior seem to be connected to the relationship between organization leaders and employees (followers). This, in turn, is related to how well the leader knows the organization and to the level to which employees accept, understand and take ownership of the leader (Hogg, 2004, cited from Akkoç, 2012).

Although it was found that the effects of the leader on organizational citizenship behaviors are positive on a medium level, detailed studies must be conducted to for further investigation.

References[1]

Adams, J. S. (1965). Inequity in social exchange. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 2, pp. 267–299). New York, NY: Academic.

Akkoç, İ. (2012). Grup ve hiyerarşik alt kültürlerinin iş performansına etkisi: Lider-üye etkileşiminin aracılık rolü. *Çankırı Karatekin Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 3*(2), 017–044.

[1] References marked with an asterisk indicate studies included in the meta-analysis. The in-text citations to studies selected for meta-analysis are not followed by asterisks.

Alabi, G. (2012). Understanding the relationship among leadership effectiveness, leader-member interactions and organizational citizenship behaviour in higher institutions of learning in Ghana. *Journal of International Education Research, 8*(3), 263–278.*

Allison, B. J., Voss, R. S., & Dryer, S. (2001). Student classroom and career success: The role of organizational citizenship behavior. *Journal of Education for Business, 76*, 282–288.

Al-sharafi, H., & Rajiani, I. (2013). Promoting organizational citizenship behavior among employees-the role of leadership practices. *International Journal of Business and Management, 8*(6), 47–54.*

Aoyagi, M. W., Cox, R. H., & McGuire, R. T. (2008). Organizational citizenship behavior in sport: Relationships with leadership, team cohesion, and athlete satisfaction. *Journal of Applied Sport Psychology, 20*, 25–41.*

Aslan, Ş. (2009). Karizmatik liderlik ve örgütsel vatandaşlık davranışı ilişkisi: "Kurumda çalışma yılı" ve "ücret" değişkenlerinin rolü. *Uluslararası İnsan Bilimleri Dergisi, 6*(1), 256–275.*

Babcock-Roberson, M. E., & Strickland, O. J. (2010). The relationship between charismatic leadership, work engagement, and organizational citizenship behaviours. *The Journal of Psychology, 144*(3), 313–326.*

Bateman, T. S., & Organ, D. W. (1983). Job satisfaction and good soldier: The relationship between affect and employee citizenship. *Academy of Management Journal, 26*(4), 587–595.

Boerner, S., Dütschke, E., & Wied, S. (2008). Charismatic leadership and organizational citizenship behaviour: Examining the role of stressors and strain. *Human Resource Development International, 11*(5), 507–521.*

Boerner, S., Eisenbeiss, S. A., & Griesser, E. (2007). Follower behavior and organizational performance: The impact of transformational leaders. *Journal of Leadership and Organizational Studies, 13*(3), 15–26.

Borenstein, M., Hedges, L. V., Higgins, J. P. T., & Rothstein, H. R. (2009). *Introduction to meta-analysis*. Chichester: Wiley.

Bostancı, A. B. (2013). The prediction level of teachers' organizational citizenship behaviors on the successful practice of shared leadership. *Eurasian Journal of Educational Research, 51*, 177–194.*

Britt, T. W., McKibben, E. S., Greene-Shortridge, T. M., Odle-Dusseau, H. N., & Herleman, H. A. (2012). Self-engagement moderates the mediated relationship between organizational constraints and organizational citizenship behaviors via rated leadership. *Journal of Applied Social Psychology, 42*(8), 1830–1846.*

Çalışkan, S. C. (2010). The interaction between paternalistic leadership style, organizational justice and organizational citizenship behavior: A study from Turkey. *China-USA Business Review, 9*(10), Serial No 88.*

Chin, Y. C., & Chin, F. Y. (2012). The impact of spiritual leadership on organizational citizenship behavior: A multi-sample analysis. *Journal of Business Ethics, 105*, 107–114.*

Cho, J., & Dansereau, F. (2010). Are transformational leaders fair? A multi-level study of transformational leadership, justice perceptions, and organizational citizenship behaviors. *The Leadership Quarterly, 21*, 409–421.*

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Hillside, NJ: Lawrence Erlbaum Associates.

Dijke, M., Cremer, D., Mayer, D. M., & Quaquebeke, N. (2012). When does procedural fairness promote organizational citizenship behavior? Integrating empowering leadership types in relational justice models. *Organizational Behavior and Human Decision Processes, 117*, 235–248.*

DiPaola, M. F., & Hoy, W. K. (2005). School characteristics that foster organizational citizenship behavior. *Journal of School Leadership, 15*(4), 387–406.

DiPaola, M. F., & Tschannen-Moran, M. (2001). Organizational citizenship behaviour in schools and its relationship to school climate. *Journal of School Leadership, 11*, 424–447.

Dominguez, M. L., Enache, M., Sallan, J. M., & Simo, P. (2013). Transformational leadership as an antecedent of change-oriented organizational citizenship behavior. *Journal of Business Research, 66*, 2147–2152.*

Ehrhart, M. G. (2004). Leadership and procedural justice climate as antecedents of unit level organizational citizenship behavior. *Personnel Psychology, 57*, 61–94.*

Eren, E. (2001). *Örgütsel davranış ve yönetim psikolojisi*. İstanbul: Beta Basım Yayınları.

Ersoy, N. C., Born, M. P., Derous, E., & Molen, H. T. (2012). The effect of cultural orientation and leadership style on self-versus other-oriented organizational citizenship behaviour in Turkey and the Netherlands. *Asian Journal of Social Psychology, 15*, 249–260.*

Euwema, M. C., Wendt, H., & Emmerik, H. V. (2007). Leadership styles and group organizational citizenship behavior across culture. *Journal of Organizational Behavior, 28*, 1035–1057.*

Felfe, J., & Heinitz, K. (2010). The impact of consensus and agreement of leadership perceptions on commitment, Organizational citizenship behavior, and customer satisfaction. *European Journal of Work and Organizational Psychology, 19*(3), 279–303.*

Gilmore, P. L., Hu, X., Wei, F., Tetrick, L. E., & Zaccaro, S. J. (2013). Positive affectivity neutralizes transformational leadership's influence on creative performance and organizational citizenship behaviors. *Journal of Organizational Behavior, 34*, 1061–1075.*

Gürbüz, S. (2006). Örgütsel vatandaşlık davranışı ile duygusal bağlılık arasındaki ilişkilerin belirlenmesine yönelik bir araştırma. *Ekonomik ve Sosyal Araştırmalar Dergisi, 3*(1), 48–75.

Hedges, L. V., & Olkin, I. (1985). *Statistical method for meta-analysis*. New York, NY: Academic.

Hogg, M. A. (2004). Leader-member exchange (LMX) theory. In G. R. Goethels, G. J. Sorenson, & J. M. Burns (Eds.), *Encyclopedia of Leadership* (pp. 835–840). Thousand Oaks, CA: Sage.

Hongyu, N., Mingjian, Z., Qiang, L., & Liqun, W. (2012). Exploring relationship between authority leadership and organizational citizenship behavior in China. *Chinese Management Studies, 6*(2), 231–244.*

Humphrey, A. (2012). Transformational leadership and organizational citizenship behaviors: The role of organizational identification. *The Psychologist Manager Journal, 15*, 247–268.*

Ilies, R., Nahrgang, J. D., & Morgeson, F. P. (2007). Leader-member exchange and citizenship behaviors: A meta-analysis. *Journal of Applied Psychology, 92*, 269–277.

Jiao, C., Richards, D. A., & Zhang, K. (2011). Leadership and organizational citizenship behavior: OCB-specific meanings as mediators. *Journal of Business and Psychology, 26*, 11–25.*

Kent, A., & Chelladurai, P. (2001). Perceived transformational leadership, organizational commitment, and citizenship behavior: A case study in intercollegiate athletics. *Journal of Sport Management, 15*, 135–159.*

Khan, S. K., & Rashid, M. Z. A. (2012). The mediating effect of organizational commitment in the organizational culture, leadership and organizational justice relationship with organizational citizenship behavior: A study of academicians in private higher learning institutions in Malaysia. *International Journal of Business and Social Science, 3*(8), 83–91.*

Köse, S., Kartal, B., & Kayalı, N. (2003). A study on the factors about the relationship between organizational citizenship behaviour and attitude. *The Journal of the Faculty of Economics and Administrative Sciences, 20*, 1–19.

Kulinskaya, E., Morgenthaler, S., & Staudte, R. G. (2008). *Meta analysis: A guide to calibrating and combining statistical evidence*. London: Wiley.

Li, N., Chiaburu, D. S., Kirkman, B. L., & Xie, Z. (2013). Spotlight on the followers: An examination of moderators of relationships between transformational leadership and subordinates' citizenship and taking charge. *Personnel Psychology, 66*, 225–260.*

Lian, L. K., & Tui, L. G. (2012). Leadership styles and organizational citizenship behavior: The mediating effect of subordinates' competence and downward influence tactics. *Journal of Applied Business and Economics, 13*(2), 59–96.*

Moideenkutty, U., & Schmidt, S. M. (2011). Leadership tactics: Enabling quality social exchange and organizational citizenship behavior, *Organization Management Journal, 8*(4), 229–241.*

Morçin, S. E., & Morçin, İ. (2013). Etkileşimci liderliğin örgütsel vatandaşlık davranışına etkisi: adana'daki seyahat acenteleri örneği. *The Journal of Visionary, 4*(9), 70–80.*

Nguni, S., Sleegers, P., & Denessen, E. (2007). Transformational and transactional leadership effects on teachers' job satisfaction, organizational commitment, and organizational citizenship behavior in primary schools: The Tanzanian case. *School Effectiveness and School Improvement. An International Journal of Research, Policy and Practice, 17*(2), 145–177.*

Oğuz, E. (2011). Öğretmenlerin örgütsel vatandaşlık davranışları ile yöneticilerin liderlik stilleri arasındaki ilişki. *Educational Administration: Theory and Practice, 17*(3), 377–403.*

Omar, Z., Zainal, A., Omar, F., & Khairudin, R. (2009). The influence of leadership behaviour on organizational citizenship behaviour in self-managed work teams in Malaysia. *SA Journal of Human Resource Management, 7*(1), 196–206.*

Organ, D. W. (1988). *Organizational citizenship behavior: The good soldier syndrome*. Lexington, MA: Lexington Books.

Organ, D. W., & Ryan, K. (1995). A meta-analytic review of attitudinal and dispositional predictors of organizational citizenship behavior. *Personnel Psychology, 48*, 775–802.

Park, C. H., Song, J. H., Yoon, S. W., & Kim, J. (2013). A missing link: Psychological ownership as a mediator between transformational leadership and organizational citizenship behaviour. *Human Resource Development International, 16*(5), 558–574.*

Pearce, C. L., & Herbik, P. A. (2004). Citizenship behavior at the team level of analysis: The effects of team leadership, team commitment, perceived team support, and team size. *The Journal of Social Psychology, 144*(3), 293–310.*

Podsakoff, P. M., MacKenzie, S. B., Paine, J. B., & Bachrach, D. G. (2000). Organizational citizenship behaviors: A critical review of the theoretical and empirical literature and suggestions for future research. *Journal of Management, 26*(3), 513–563.

Podsakoff, P. M., MacKenzie, S. B., & Bornmer, W. H. (1996). Transformational leader behaviors and substitutes for leadership as determinants of employee satisfaction, commitment, trust, and organizational citizenship behaviors. *Journal of Management, 22*(2), 259–298.*

Purvarova, R. K., Bono, J. E., & Dzieweczynski, J. (2006). Transformational leadership, job characteristics, and organizational citizenship performance. *Human Performance, 19*(1), 1–22.*

Rubin, R. S., Bommer, W. H., & Bachrach, D. G. (2010). Operant leadership and employee citizenship: A question of trust? *The Leadership Quarterly, 21*, 400–408.*

Ruiz-Palomino, P., Ruiz-Amaya, C., & Knörr, H. (2011). Employee organizational citizenship behaviour: The direct and indirect impact of ethical leadership. *Canadian Journal of Administrative Sciences, 28*, 244–258.*

Salam, S., Cox, J., & Sims, H. P. (1996). How to make a team work: Mediating effects of job satisfaction between leadership and team citizenship. *Academy of Management Proceedings, 56,* 293–297.*

Schlechter, A. F., & Engelbrecht, A. S. (2006). The relationship between transformational leadership, meaning and organizational citizenship behaviour. *Management Dynamics, 15* (4), 2–16.*

Shin, Y. (2012). CEO ethical leadership, ethical climate, climate strength, and collective organizational citizenship behaviour. *Journal of Business Ethics, 108*, 299–312.*

Shing-Ko, L., Hsiao-Chi, L., & Sung-Yi, H. (2007). The mediating effects of leader-member exchange quality to influence the relationships between paternalistic leadership and organizational citizenship behaviors. *Journal of American Academy of Business, 10*(2), 127–137.*

Smith, C. A., Organ, D. W., & Near, J. P. (1983). Organizational citizenship behavior: Its nature and antecedents. *Journal of Applied Psychology, 68*, 653–663.

Subrahmanian, M. (2013). Leadership and organizational citizenship behaviour of employees in manufacturing industry. *International Journal of Research in Social Sciences, 3*(4), 535–548.*

Tai, C. L., Chang, C. M., Hong, J. Y., & Chen, L. C. (2012). Alternative models for the relationship among leadership, organizational citizenship behavior, and performance: A study of new product development teams in Taiwan. *Procedia Social and Behavioral Sciences, 57*, 511–517.*

Tonkin, T. H. (2013). Authentic versus transformational leadership: Assessing their effectiveness on organizational citizenship behavior of followers. *International Journal of Business and Public Administration, 10*(1), 40–61.*

Twigg, N. W. (2008). Educational leadership: The effects of perceived support, organization-based self-esteem, and citizenship behaviors on students performance. *Journal of School Leadership, 18*, 256–277.*

Twigg, N. W., Fuller, J. B., & Hester, K. (2008). Transformational leadership in labor organizations: The effects on union citizenship behaviors. *Journal of Labor Research, 29*, 27–41.*

Valsania, S. E., Leon, J. A. M., Alonso, F. M., & Cantisano, G. T. (2012). Authentic leadership and its effect on employees' organizational citizenship behaviours. *Psicothema, 24*(4), 561–566.*

Vigoda-Gadot, E., & Beeri, I. (2011). Change-oriented organizational citizenship behavior in public administration: The power of leadership and the cost of organizational politics. *Journal of Public Administration Research and Theory, 22*, 573–596.*

Walumbwa, F. O., Wu, C., & Orwa, B. (2008). Contingent reward transactional leadership, work attitudes, and organizational citizenship behavior: The role of procedural justice climate perceptions and strength. *The Leadership Quarterly, 19*, 251–265.*

Wang, H., Law, K. S., Hackett, R. D., Wang, D., & Chen, Z. X. (2005). Leader-member exchange as a mediator of the relationship between transformational leadership and followers' performance and organizational citizenship behavior. *Academy of Management Journal, 48(3),* 420–432.*

Zehir, C., Akyüz, B., Eren, M., & Turhan, G. (2013). The indirect effects of servant leadership behavior on organizational citizenship behavior and job performance: Organizational justice as a mediator. *International Journal of Research in Business and Social Science, 2*(3), 1–13.*

Zhang, Y., & Chen, C. C. (2013). Developmental leadership and organizational citizenship behavior: Mediating effects of self-determination, supervisor identification, and organizational identification. *The Leadership Quarterly, 24*, 534–543.*

Zhang, X., Walumbwa, F. O., Aryee, S., & Chen, Z. X. (2013). Ethical leadership, employee citizenship and work withdrawal behaviors: Examining mediating and moderating processes. *The Leadership Quarterly, 24*, 284–297.*

The Effect of Leadership on Organizational Culture

Mehmet Koçyiğit

Abstract The effect of leadership on organizational culture was examined in this meta-analysis study. A total of 974 research studies were collected as a result of the review, out of which 48 were included in the meta-analysis. The 48 research studies were compiled to obtain a sample size of 17,092 subjects. The analysis of the random effect model showed that leadership has a *medium-level positive effect* on organizational culture. Of the moderators sample group/sector type, publication type, leadership style/approach and culture type, only leadership style/approach was found to be a moderator variable.

1 Introduction

In a study by Alvesson (1990), in which he believes he is not as skeptical as is expected in science and where he mentions the rapid spreading of research on organizational culture, the researcher suggests three main reasons as to why research on organizational culture has become widely popular. These reasons can be summarized as: (1) economic difficulties, a reduction in production and the inability to compete with Japanese companies and attributing their success on culture; (2) individuals' expectations of their workplace gradually becoming more than their wages, and (3) unsatisfactory knowledge of organizational theory.

The interest in research concerning the effect of organizational culture on organizational performance has begun to grow with research investigating the role of culture on the success of Japanese companies and the decline of North American and European companies. Since the end of the 1970s, many Western countries were facing serious competition of industrial companies and problems concerning productivity; companies faced crises, and these issues led companies to be open to new ideas. Furthermore, modern companies were becoming more globalized, and it became necessary to appeal to other cultures. The success of Japanese companies was partly attributed to cultural characteristics. As a result of

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Table 1 Comparison of various cultural typologies

Quinn & Spreitzer (1991)	Denison & Mishra (1995)	Ogbonna & Harris (2000)	Xenikou & Simosi (2006)	Cameron & Quinn (2011)
Developmental culture	Adaptability	Innovative culture	Adaptive culture	Adhocracy culture
Group culture	Involvement	Community culture	Humanistic culture	Clan culture
Hierarchy culture	Consistency	Bureaucratic culture	Undefined	Hierarchy culture
Rational culture	Mission	Competitive culture	Success culture	Market culture

Adapted from Shao, Feng, & Liu (2012, p. 2403)

these factors, the interest in the culture of organizational activities increased (Alvesson, 1990; Ogbonna & Harris, 2002a).

Organizational culture is an oft-investigated concept; however, there is no consensus on its definition and scope (Ogbonna & Harris, 2000). As more articles are written and studies are conducted, the definition and boundaries of the concept of culture have become more confusing (Harris & Ogbonna, 1998; Ogbonna & Harris, 2002b). Many researchers have suggested many typologies in their studies with the aim of reaching a conceptual clarity for organizational culture, which is multi-dimensional and can mean many things from many perspectives (see Table 1). However, these typologies have made the already complex concept far more complicated, instead of making its understanding easier (Ogbonna & Harris, 2006).

Organizations establish localized cultures that are unique to them and that are important for their functions. To better understand organizations, the structural constructs that may be likened to a machine or system should not be the only point of focus; the symbols and cultural systems should also be examined. Studies on organizational culture should examine the characteristics of an organization, such as shared norms, values, beliefs, and ideologies, and consider the actions that have symbolic meanings for the members of a particular organization (Alvesson, 1990).

When organizational culture is mentioned, the underlying meanings of the values, beliefs, assumptions, actions and practices of an organization come to mind (Sarros, Cooper, & Santora 2011).

Ogbonna and Harris (2000) suggest that although concepts of leadership and organizational culture are frequently topics of research and that these two concepts are considered to be directly or indirectly related to each other, there is a need for more empirical research about the nature of this relationship.

This study examined the effect of leadership on organizational culture. Furthermore, the moderators (which were expected to affect the medium-level effect found in the study) were identified as: (1) the sample group/sector on which the research was conducted, (2) the year of publication of the research, (3) the leadership style/approach and (4) the culture type. All such variables, along with the results of previous research results, were used to test the following hypotheses of this study:

H_1 Leadership has a positive effect on organizational culture.
H_2 The sample group/sector is a moderator of the positive effect of leadership on organizational culture.
H_3 Publication type is a moderator of the positive effect of leadership on organizational culture.
H_4 Leadership style/approach is a moderator of the positive effect of leadership on organizational culture.
H_5 Culture type is a moderator of the positive effect of leadership on organizational culture.

2 Method

2.1 Study Design

In this study, the effect of leadership on organizational culture was tested with a meta-analysis design.

2.2 Review Strategy and Criteria for Inclusion/Exclusion

To determine the research studies to include in the meta-analysis, the Science-Direct, Proquest and Ebsco academic databases were used to conduct a literature review. The review was restricted to studies published from 2000 and 2013. For this process, the terms *leadership* and *culture* were searched in the titles to screen the research studies. The end date for the research studies included in the research was identified as March 2014. Doctoral dissertations and peer-reviewed journals were included in the study.

Many strategies were used to identify the research studies that were appropriate for the meta-analysis. First, a research study pool (974 research studies) was established that included all studies with leadership and culture in their titles. The abstracts of these studies were reviewed, and 157 were found to be appropriate to include in the study. In the second stage, all research studies in the pool were examined in detail. Forty-eight of the research studies in the pool were appropriate, and 109 were not found to be suitable. The descriptive statistics of the 48 research studies included in the analysis are presented in Table 2.

The criteria for inclusion of the research studies to the analysis study were identified as follows:

- To have the statistical information necessary for correlational meta-analysis (n and r, or R^2 values)
- To be a study measuring the correlation between leadership and organizational culture

Table 2 Characteristics of the studies included in the meta-analysis

Options		1	2	3	4	5	6	Total
Type of research study		Proceeding	Article					–
	n	3	45					48
	%	6.25	93.75					100
Sample group/sector		Academics	Employees	Nurses	Teachers	Managers	Other	
	n	1	21	3	5	14	4	48
	%	2.08	43.75	6.25	10.42	29.16	8.3	100

Reasons for not including a research study in the meta-analysis:

- Having no quantitative data (qualitative research)
- Not having a correlation coefficient
- Not focusing on organizational culture
- Not focusing on leadership

2.3 Coding Process

The coding process is essentially a data sorting process used to ascertain which of the complex data in studies are clear and suitable for the study. In this scope, a coding form was developed before the statistical analysis was conducted, and the coding was conducted according to the form. The main aim was to develop a specific coding system that allowed the study to see the entirety of the research studies in general and that would not miss any characteristics of each individual research study. The coding form developed in the study was comprised of:

- References for the research
- Sample information
- Sample group/sector
- Leadership style/approach
- Data collection tool(s)
- Quantitative values

2.4 Statistical Processes

The effect size acquired in a meta-analysis is a standard measure value used to determine the strength and direction of the relationship in the study (Borenstein, Hedges, Higgins, & Rothstein 2009). Pearson's correlation coefficient (r) was determined to be the effect size in this study. Because the correlation coefficient has a value between +1 and −1, the *r* value calculated is evaluated by converting this value into the value as it appears in the *z* table (Hedges & Olkin, 1985).

Provided that more than one correlation value is given between the same structure categories in correlational meta-analysis studies, two different approaches are used in the determination of the one to be used in the meta-analysis (Borenstein, Hedges, Higgins, & Rothstein 2009; Kulinskaya, Morgenthaler, & Staudte 2008). For this study, (1) first, if the correlations were independent, all the related correlations were included in the analysis and were considered to be independent studies, and (2) if there were dependent correlations, then the *conservative estimation value* was accepted. A *random effect model* was used for the meta-analysis processes in this study. The *Comprehensive Meta-Analysis* program was used in the meta-analysis process.

2.5 Moderator Variables

To determine the statistical significance of the difference between the moderators of the study, only the Q_b values were used. Four moderator variables that were expected to have a role on the average effect size were identified in the study. The first of these considered *type of research study* as a moderator of the relationship between organizational culture and leadership styles/approaches. The second, *sample group*/*sector*, was expected to have a role on the average effect of leadership on organizational culture. The third and the fourth moderator variables were the *leadership style*/*approach* and the *type of organizational culture*.

2.6 Publication Bias

A funnel plot for the research studies included in the meta-analysis of the study can be seen in Fig. 1. Evidence for the effect of publication bias in the research studies included in the meta-analysis can be seen in Fig. 1. A serious asymmetry would be expected in the funnel plot if there were a publication bias. The concentration of plots on one side, under the line of the average effect size and particularly in the bottom section of the funnel, suggests the probability of a publication bias. In this study, no evidence of the partiality of the publications was observed in any of the 48 data subjected to the meta-analysis.

Although no partiality in publications was observed in the funnel plot, the results of Duval and Tweedie's trim and fill test, which was applied to determine the effect of partiality in publications acquired with the meta-analysis using the random effect model, are given in Table 3 As it can be seen in Table 3, there is no difference between the effect observed and the artificial effect size created to fix the effect of the partiality of publications. The research on each side of the center line is symmetrical, and this is the indicator of non-difference. Because there is no evidence that indicates lost data on either side of the center line, the difference between the fixed effect size and observed effect size is zero.

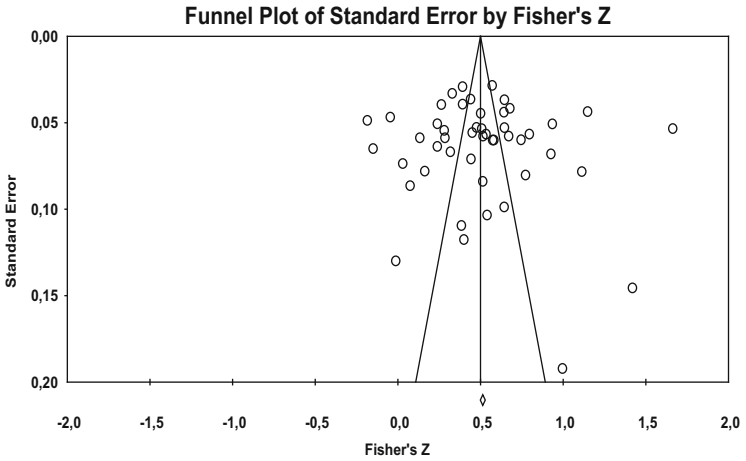

Fig. 1 Effect size funnel for publication bias

Table 3 Duval Tweedie trim and fill test results

	Excluded studies	Point estimate	CI (Confidence interval)		Q
			Lower limit	Upper limit	
Observed values		0.47	0.395	0.541	1,768.35
Corrected values	0	0.47	0.395	0.541	1,768.35

3 Findings

Table 4 shows the results of the meta-analysis of leadership and organizational culture. The findings supported H_1, which argued that there would be a positive relationship between leadership and organizational culture. The effect size of leadership on organizational culture was calculated to be 0.47. This result shows that leadership has a *medium-level effect* (*see* Cohen, 1988) on organizational culture.

The results of the moderator analysis showed that H_2, which predicted that the sample group/sector would be a moderator for the positive effect of leadership on organizational citizenship behavior, was not supported. According to the results of the moderator analysis, the effect size differences among the sample groups/sectors were found to be statistically insignificant. ($Q_b = 2.78$, $p > 0.05$). Despite this finding, the effect of variables were of a medium level for teachers [$r = 0.51$], academics [$r = 0.76$], employees [$r = 0.47$], nurses [$r = 0.48$], managers [$r = 0.40$] and other [$r = 0.53$].

The findings did not provide support for H_3, which expected that the year of publication would be a moderator for the positive effect of leadership on organizational citizenship behavior. Although a statistically significant difference between the effect size of publication type was not found ($Q_b = 0.09$, $p > 0.05$), a medium-

Table 4 Findings of the correlations between leadership and organizational culture: Results of meta-analysis

Variable	k	N	r	CI (Confidence interval)		Q	Q_b
				Lower limit	upper limit		
Organizational culture	48	17,092	0.47*	0.39	0.54	1,768.35*	
Moderator [Type of publication]							0.097
Article	45	15,852	0.46*	0.38	0.54		
Proceeding	3	1,240	0.51*	0.19	0.73		
Moderator [Sample group/sector]							2.780
Academics	1	30	0.76*	0.24	0.94		
Employees	21	8,483	0.47*	0.36	0.58		
Nurses	3	756	0.48*	0.15	0.73		
Teachers	5	1,372	0.51*	0.26	0.70		
Managers	14	5,699	0.40*	0.25	0.54		
Other	4	752	0.53*	0.25	0.73		
Moderator [Leadership style/approach]							37.89*
Individual	1	388	0.73*	0.38	0.90		
Supportive	1	225	0.31	−0.21	0.70		
Transformational	17	5,430	0.54*	0.44	0.63		
Ethical	2	964	0.18	−0.21	0.51		
Servant	1	279	0.63*	0.21	0.86		
Charismatic	2	1,358	0.50*	0.17	0.73		
Leadership behaviour	11	3,490	0.47*	0.33	0.59		
Leadership styles	1	389	0.23	−0.28	0.65		
Leadership practices	1	349	0.47	−0.02	0.78		
Leadership vision	2	1,448	0.33	−0.03	0.61		
Authentic	1	571	0.59*	0.15	0.84		
Autocratic	2	436	0.79*	0.59	0.90		
Educational	1	157	0.65*	0.23	0.87		
Shared	1	420	−0.18	−0.61	0.34		
Spiritual	1	359	0.44	−0.06	0.77		
Directive	3	829	−0.04	−0.34	0.27		
Moderator [Culture type]							0.52
Flexibility oriented	1	571	0.59**	0.01	0.87		
Ethical culture	1	902	0.32	−0.32	0.76		
School culture	1	349	0.47	−0.16	0.83		
Organization culture	45	15,270	0.47*	0.39	0.55		

*$p<0.01$, **$p<0.01$

level effect of leadership perceptions of organizational culture in articles [$r = 0.47$] and proceedings [$r = 0.52$] was found.

Findings supported H_4, which expected that leadership style/approach would play a moderator role on the effect of leadership on organizational culture. The moderator analysis found a statistically significant difference between the effect size of leadership styles ($Q_b = 37.89$, $p < 0.05$). The effect sizes of different types of leadership are as follows: individual leadership [$r = 0.73$], supportive leadership [$r = 0.31$], transformational leadership [$r = 0.54$], ethical leadership [$r = 0.18$], servant leadership [$r = 0.63$], charismatic leadership [$r = 0.50$], leadership behaviors [$r = 0.47$], leadership styles [$r = 0.23$], leadership practices [$r = 0.47$], leadership vision [$r = 0.33$], authentic leadership [$r = 0.59$], autocratic leadership [$r = 0.79$], educational leadership [$r = 0.65$], shared leadership [$r = -0.18$], spiritual leadership [$r = 0.44$] and directive leadership [$r = -0.04$]. Of these, the effect sizes for supportive, ethical, shared, spiritual, and directive leadership styles and leadership vision, leadership styles and leadership practices were not statistically significant ($p > 0.05$).

The findings did not provide support for H_5, which predicted that culture type would moderate on the effect of leadership on culture. The moderator analysis did not find any statistically significant differences between the effect size of types of culture studied ($Q_b = 0.52$, $p > 0.05$). Although this was the case, the effect size of flexibility oriented culture [$r = 0.59$] ($p < 0.01$) and organization culture [$r = 0.47$] ($p < 0.05$) were statistically significant.

Conclusion

Forty-eight studies were included in this meta-analysis aiming to define the effect size of leadership on organizational culture. The moderator variables of the study were determined to be sample group/sector, leadership style/approach, publication type and culture type. The results of the meta-analysis showed that leadership has a medium-level positive effect on organizational culture. This result shows that leadership styles/approaches can be a factor that affects organizational culture, as do the other symbols and meanings that underlie it. In addition, that only leadership style/approach was found to be statistically significant in terms of the effect size in the moderator analysis suggests that regardless of which sample type or organizational culture is apparent, leadership style has an effect on the emergence of the particular situation observed. Sample group/sector, or in other words, the characteristics of the organization, is not a moderator of the establishment of the culture of the organization.

When findings are evaluated as a whole, the results concerning the effect of leadership on organizational culture can be summarized as such:

- Leadership has a medium-level positive effect on organizational culture [$r = 0.47$].

(continued)

- Whereas sample group/sector, type of publication and culture type do not have a moderator role on the effect of leadership on organizational culture, leadership style/approach has a moderator role on the effect of leadership on organizational culture.
- H1 and H4 were validated, but the others were not.

The finding that leadership has a medium-level positive effect on organizational culture and that there is a positive relationship between leadership and organizational culture is in parallel with the findings of many other studies (Aydoğdu & Aşıkgil 2011; Bakan, 2009; Biswas, 2009; Casida & Pinto-Zipp, 2008; Chen, 2004; Gül & Aykanat, 2012; Khan & Rashid, 2012; Liu, 2013; Ngang, 2011; Ogbonna & Harris, 2000; Parry & Proctor-Thomson, 2003; Shiva & Suar, 2012; Simosi & Xenikou, 2010; Tsai, 2011; Wilderom, Van den Berg, & Wiersma, 2012; Xenikou & Simosi, 2006).

References[1]

Alvesson, M. (1990). On the popularity of organizational culture. *Acta Sociologica, 33*(1), 31–49.

Aydoğdu, S. & Aşıkgil, B. (2011). The effect of transformational leadership behavior on organizational culture: An application in pharmaceutical industry. *International Review of Management and Marketing, 1*(4), 65–73.*

Azanza, G., Moriano, J. A., & Molero, F. (2013). Authentic leadership and organizational culture as drivers of employees' job satisfaction. *Journal of Work and Organizational Psychology, 29*, 45–50.*

Bakan, İ. (2009). Liderlik tarzları ile örgüt kültürü türleri arasındaki ilişkiler: bir alan çalışması, *TİSK Akademi Dergisi*, *4*(7), 139–172.*

Biswas, S. (2009). Organizational culture and transformational leadership as predictors of employee performance. *The Indian Journal of Industrial Relations, 44*(4), 611–627.*

Borenstein, M., Hedges, L. V., Higgins, J. P. T., & Rothstein, H. R. (2009). *Introduction to meta-analysis*. Chichester: Wiley.

Buble, M. (2012). Interdependence of organizational culture and leadership styles in large firms. *Management: Journal of Contemporary Management Issues, 17*(2), 85–97.*

Buble, M., & Pavic, I. (2007). Interdependence between organisational culture and leadership styles: The croatian case. *The Business Review, Cambridge, 7*(1), 143–150.*

Casida, J. M., Crane, P. C., Walker, T. L., & Wargo, L. M. (2012). Elaboration of leadership and culture in high-performing nursing units of hospitals as perceived by staff nurses. *Research and Theory for Nursing Practice, 26*(4), 241–261.*

Casida, J., Pinto-Zipp, G. (2008). Leadership-organizational culture relationship in nursing units of acute care hospitals. *Nursing Economics, 26*(1), 7–15.*

Chen, L. Y. (2004). Examining the effect of organizational culture on leadership, organizational commitment and job satisfaction at small and middle-sized firms in Taiwan. *Journal of American Academy of Business, Cambridge, 5*(1/2), 432–438.*

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Hillside, NJ: Lawrence Erlbaum Associates.

[1] References marked with an asterisk indicate studies included in the meta-analysis. The in-text citations to studies selected for meta-analysis are not followed by asterisks.

Densten, I. L. & Sarro, J. C. (2012). The impact of organizational culture and social desirability on Australian CEO leadership. *Leadership and Organization Development Journal, 33*(4), 342–368.*

El-Nahas, T., Abd-El-Salam, E. M., & Shawky, A. Y. (2013). The impact of leadership behaviour and organisational culture on job satisfaction and its relationship among organisational commitment and turnover intentions. A case study on an Egyptian company. *Journal of Business and Retail Management Research*, *7*(2), 13–43.*

Erkutlu, H. (2012). The impact of organizational culture on the relationship between shared leadership and team proactivity. *Team Performance Management, 18*(1), 102–119.*

Gül, H. & Aykanat, Z. (2012). Karizmatik liderlik ve örgüt kültürü ilişkisi üzerine bir araştırma. *Atatürk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 16*(1), 17–36.*

Harris, L. C., & Ogbonna, E. (1998). A three-perspective approach to understanding culture in retail organizations. *Personnel Review, 27*(2), 104–123.

Harwiki, W. (2013). The influence of servant leadership on organization culture, organizational commitment, organizational citizenship behavior and employees' performance (study of outstanding cooperatives in east java province, Indonesia). *Journal of Economics and Behavioral Studies, 5*(12), 876–885.*

Hedges, L. V., & Olkin, I. (1985). *Statistical method for meta-analysis*. London: Academic Press.

Huhtala, M., Kangas, M., Laemsae, A., & Feldt, T. (2013). Ethical managers in ethical organisations? the leadership-culture connection among Finnish managers. *Leadership and Organization Development Journal, 34*(3), 250–270.*

Jackson, T. A., Meyer, J. P., & Wang, X. (2013). Leadership, commitment, and culture: A meta-analysis. *Journal of Leadership and Organizational Studies, 20*(1), 84–106.*

Jaskyte, K. (2004). Transformational leadership, organizational culture and innovativeness in nonprofit organizations. *Nonprofit Management and Leadership, 15*(2), 153–168.*

Jung, Y., & Takeuchi, N. (2010). Performance implications for the relationships among top management leadership, organizational culture, and appraisal practice: testing two theory-based models of organizational learning theory in Japan. *The International Journal of Human Resource Management, 21*(11), 1931–1950.*

Karadağ, E. (2009). Spiritual leadership and organizational culture: A study of structural equation model. *Educational Sciences: Theory and Practice, 9*(3), 1391–1405.*

Khan, S. J. K., & Rashid, M. Z. A. (2012). The mediating effect of organizational commitment in the organizational culture, leadership and organizational justice relationship with organizational citizenship behaviour: A study of academicians in private higher learning institution in Malaysia. *International Journal of Business and Social Sciences, 3* (8), 83–91.*

Kulinskaya, E., Morgenthaler, S., & Staudte, R. G. (2008). *Meta analysis: A guide to calibrating and combining statistical evidence*. London: Wiley.

Liu, Y. (2013). Organizational culture, leadership behaviors, and employee attitude in Chinese SMEs: Empirical evidence. *China – USA Business Review, 12*(11), 1085–1095.*

Lok, P., & Crawford, J. (2004). The effect of organisational culture and leadership style on job satisfaction and organisational commitment: A cross-national comparison. *The Journal of Management Development, 23*(3), 321–338.*

Mahalinga Shiva, M. S. A., & Suar, D. (2012). Transformational leadership, organizational culture, organizational effectiveness, and programme outcomes in non-governmental organizations. *Voluntas, 23*(3), 684–710.*

Ngang, T. K. (2011). The effect of transformational leadership on school culture in male' primary schools Maldives. *Procedia-Social and Behavioral Sciences, 30*, 2575–2580.*

Nwibere, B. M. (2013). The influence of corporate culture on managerial leadership style: The Nigerian experience. *International Journal of Business and Public Administration, 10*(2), 166–187.*

Ogbonna, E. & Harris, L. (2000). Leadership style, organizational culture and performance: Empirical evidence from UK companies. *International Journal of Human Resources Management, 11*(4), 766–788.*

Ogbonna, E., & Harris, L. (2002a). Organizational culture: a ten year, two-phase study of change in the UK food retailing sector. *Journal of Management Studies, 39*(5), 673–706.

Ogbonna, E., & Harris, L. (2002b). Managing organisational culture: Insights from the hospitality industry. *Human Resource Management Journal, 12*(1), 33–53.

Ogbonna, E., & Harris, L. (2006). Organisational culture in the age of Internet: An exploratory study. *New Technology, Work and Employment, 21*(2), 162–175.

Parry, K. W., & Proctor-Thomson, S. B. (2003). Leadership, culture and performance: The case of the New Zealand public sector. *Journal of Change Management, 3*(4), 376–399.*

Raus, A., & Haita, M. (2011). Leadership style, organizational culture and work motivation in a school within ministry of interior. *Managerial Challenges of the Contemporary Society, 2*, 256–260.*

Şahin, S. (2011). Öğretimsel Liderlik ve Okul kültürü Arasındaki İlişki (İzmir İli Örneği). *Kuram ve Uygulamada Eğitim Bilimleri, 11*(4), 1909–1928.*

Sarros, J. C., Cooper, B. K., & Santora, J. C. (2011). Leadership vision, organizational culture, and support for innovation in not-for-profit and for-profit organizations. *Leadership and Organization Development Journal, 32*(3), 291–309.*

Shao, Z., Feng, Y., & Liu, L. (2012). The mediating effect of organizational culture and knowledge sharing on transformational leadership and Enterprise Resource Planning systems success: An empirical study in China. *Computers in Human Behavior, 28*(6), 2400–2413.*

Shiva, M. M., & Suar, D. (2012). Transformational leadership, organizational culture, organizational effectiveness, and programme outcomes in non-governmental organizations. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations*, *23*(3), 684–710.*

Shivers-Blackwell, S. (2006). The influence of perceptions of organizational structure and culture on leadership role requirements: The moderating impact of locus of control and self-monitoring. *Journal of Leadership and Organizational Studies, 12*(4), 27–49.*

Simosi, M., & Xenikou, A. (2010). The role of organizational culture in the relationship between leadership and organizational commitment: an empirical study in a Greek organization. *The International Journal of Human Resource Management, 21*(10), 1598–1616.*

Subroto, A. (2011). Organizational culture and leadership role for improving organizational performance: Automotive components industry in Indonesia. *International Journal of Innovation, Management and Technology, 2*(5), 383.*

Taormina, R. J. (2008). Interrelating leadership behaviors, organizational socialization, and organizational culture. *Leadership and Organization Development Journal, 29*(1), 85–102.*

Tipu, S. A. A., Ryan, J. C., & Fantazy, K. A. (2012). Transformational leadership in Pakistan: An examination of the relationship of transformational leadership to organizational culture and innovation propensity. *Journal of Management and Organization, 18*(4), 461–480.*

Toor, S. U. R. & Ofori, G. (2009). Ethical leadership: examining the relationships with full range leadership model, employee outcomes, and organizational culture. *Journal of Business Ethics, 90*(4), 533–547.*

Tsai, Y. (2011). Relationship between organizational culture, leadership behavior and job satisfaction. *BMC Health Services Research, 11*, 98.*

Turan, S. & Bektas, F. (2013). The relationship between school culture and leadership practices. *Egitim Arastirmalari-Eurasian Journal of Educational Research, 52*, 155–168.*

Tütüncü, Ö. & Akgündüz, Y. (2012). Seyahat acentelerinde örgüt kültürü ve liderlik arasındaki ilişki: kuşadası bölgesinde bir araştırma. *Anatolia: Turizm Araştırmaları Dergisi, 23*(1), 59–72.*

Wilderom, C. P., van den Berg, P. T., & Wiersma, U. J. (2012). A longitudinal study of the effects of charismatic leadership and organizational culture on objective and perceived corporate performance. *The Leadership Quarterly, 23*(5), 835–848.*

Wu, C., Wang, P., & Tsai, L. (2010). The effect of organizational culture on team interaction and team effectiveness: Team leadership as a medium. *Journal of International Management Studies, 5*(2), 190–198.*

Xenikou, A., & Simosi, M. (2006). Organizational culture and transformational leadership as predictors of business unit performance. *Journal of Managerial Psychology, 21*(6), 566–579.*

Yiing, L. H., & Ahmad, K. B. (2009). The moderating effects of organizational culture on the relationships between leadership behaviour and organizational commitment and between organizational commitment and job satisfaction and performance. *Leadership and Organization Development Journal, 30*(1), 53–86.*

Yuan, C.-K.,Lee, C.-Y. (2011), Exploration of a construct model linking leadership types, organization culture, employees performance and leadership performance. International Conference on Asia Pacific Business Innovation & Technology Management *Procedia-Social and Behavioral Sciences, 25*, 123–136.*

Yücel, C., Karataş, E., Aydın, Y. (2013). The relationship between the level of principals' leadership roles and organizational culture. 3rd World Conference on Learning, Teaching and Educational Leadership, *Procedia-Social and Behavioral Sciences, 93*, 415–419.*

Zahari, I. B., & Shurbagi, A. M. A. (2012). The effect of organizational culture and the relationship between transformational leadership and job satisfaction in petroleum sector of Libya. *International Business Research, 5*(9), 89–97.*

The Effect of Leadership on Organizational Climate

Sabiha İşçi, Esra Çakmak, and Engin Karadağ

Abstract The effect of leadership on organizational climate was examined in this meta-analysis study. A total of 270 research studies were collected as a result of the review, out of which 99 were included in the meta-analysis. The 99 research studies were compiled to obtain a sample size of 43,698 subjects. The analysis results of the random effect model showed that leadership has a *large positive effect* on organizational climate. Of the moderators identified, such as leadership style/approach, climate type, publication type, year of publication and sample group/sector, it was found that only leadership style/approach was a moderator variable.

1 Introduction

Climate is one of the foremost parameters that affect an organization's productivity, efficiency and ability to reach its objectives. Thus, it is one of the main concepts to be addressed when investigating organizations (Sığınır, 2013). Organizational climate, which was of significant interest in the 1960s and 1970s and is central to the studies conducted on human relations and organizational behavior (Şişman, 2011a), has been perceived for the first time as a general concept that reflects the sustainability of the quality of organizational life (Hoy & Miskel, 2011). Many definitions have been proposed for organizational climate to date, indicating that there is no consensus on the definition. The first and most renowned conceptualization concerning organizational climate was by Halpin and Croft (1962). Halpin and Croft (1962) explain organizational climate as characteristics that vary between the open and closed ends of the scale. Six different types of climate are emphasized within the process: open, autonomous, controlled, familiar, paternal and closed.

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1. *Open climate* is an expression of energetic and living organizations that attempt to reach their objectives and ensure the satisfaction of their group members.
2. *Autonomous climate* is the type of climate where the leader is completely separate from the group and has very little control over its group members.
3. *Controlled climate* is a climate type that is not personal and focuses on the task. The behaviors of the group are primarily oriented towards completing the task, and a low level of importance is given to meeting social needs.
4. *Familiar climate* is considerably personal and offers no control. The organization satisfies the social needs of its members; however, a low level of importance is placed on social control for the completion of tasks.
5. *Paternal climate* is the type of climate in which the manager does not allow a leader to emerge from the group and where the manager takes on all responsibilities.
6. *Closed climate* is the type of climate where the dimensions of resolution, prevention and close monitoring are of a higher level than with the open climate type and has very low levels of dimensions such as morale, sincerity, commitment and understanding (Emeksiz, 2003).

Similarly, Hoy and Miskel (2011) define organizational climate as the related characteristics of the environment of an organization that differentiate it from another and that affect the behavior of its members. In its widest meaning, it can be possible to explain organizational climate as displaying varying behaviors of groups or individuals when faced with a situation or problem in relation to the environmental conditions and situations of the organization (Tagiuri, 1968; *cited in* Şentürk, C & Sağnak, 2012). Based on these conceptualizations, it is possible to say that organizational climate is the personality of the organization (Aydın, 1986; Çelik, 2012; Halpin & Croft, 1962; Hoy & Miskel, 2011). Different from these definitions, Şişman (2011a) emphasizes that organizational climate can be expressed as the subjective perceptions of the employees of an organization in relation to its objective environment, practices and conditions. In other words, organizational climate is the first interaction of an individual with the organization; the way they feel once they have entered the organization, the way they perceive the organization (Ballard, 2008) and the internal atmosphere of the organization (Norton, 1984) are apparent as organizational climate indicators.

If organizations are considered living organisms, it is important to create and maintain an organizational climate that is positive in terms of the relationships in the organization and the efficiency of the organization. The examination of studies on this topic shows that climate is related to such concepts as organizational performance (Litwin & Stringer, 1968), morale (Alsop, 1984), job satisfaction (Beckley, 2012; Brown, 1989; Frederick, 2007; Williams, 2009), commitment (Gamble, 2013), motivation and problem solving skills (Kim, 2000). In addition, various climate types, such as a safety climate (Adamshick, 2007; Al-Ahmadi, 2011), ethical climate (Barnes, 2013; Sağnak, 2010; Van Aswegen & Engelbrecht, 2009), school climate (Ballard, 2008; Halpin & Croft, 1962) and effective leadership climate (Batchelor, 2011), can be seen in studies on climate types.

Research studies on organizational climate suggest that leadership behaviors are the most important factor determining organizational climate (Şentürk & Sağnak, 2012). Leader behaviors have an important place in shaping the organizational climate and creation of a positive environment (Hoy & Miskel, 2011; Şişman, 2011b). Thus, it is of importance to investigate the effect of leadership behavior on an organization's climate and employees. It can be seen that studies about leadership are directed to investigating the relationship between these two concepts. A review of the relevant literature shows that leadership types such as safety (Wu, Chang, Shu, Chen, & Wang, 2011), paternalistic (Erben and Güneşer, 2008), authentic (Cottril, 2011; Du & Choi, 2013; Isaksen & Akkermans, 2011), participative (Edwards, 1984; Isome, 1983), servant (Black, 2007; Ehrhart, 2004; Lambert, 2004; Wuch, 2013), transformational (Ballard, 2008; Barnes, 2013; Cantu, 2012; Clabough, 2006; Eshbach & Henderson, 2010; Groom, 2006; Heinen, 2009; Kapp, 2012; Lee, 2010; Martin & Bush, 2006; Merrill, 2011; Phillips, 2012; Van Aswegen & Engelbrecht, 2009; Wright, 2007), ethical (Borchert, 2011; Einstein, 2013; Mayer, Kuenzi, & Greenbaum, 2011; Shin, 2012) and general (Lewin, Lippit, & White, 1939; Litwin & Stringer, 1968) leadership styles have a positive relationship with organizational climate, whereas limiting (Pulleyn, 2012), authoritative (Du & Choi, 2013) and bureaucratic (Bolman & Deal, 2008) leadership have been found to have a negative relationship with it.

This study examined the effect of leadership on organizational climate. Furthermore, the moderators that were expected to have a medium-level effect in this study were identified as: (1) leadership style/approach, (2) climate type, (3) the study's publication type, (4) the study's publication year and (5) the sample group/sector of the research studies. All such variables, along with the previous research results, were used to test the following hypotheses:

H_1 Leadership has a positive effect on organizational climate.
H_2 Leadership style/approach is a moderator of the positive effect of leadership on organizational climate.
H_3 Climate type is a moderator of the positive effect of leadership on organizational climate.
H_4 The study's year of publication is a moderator of the positive effect of leadership on organizational climate.
H_5 The study's publication type is a moderator of the positive effect of leadership on organizational climate.
H_6 The sample group/sector is a moderator of the positive effect of leadership on organizational climate.

2 Method

2.1 Study Design

In this study, the effect of leadership on organizational climate was tested with a meta-analysis design.

2.2 Review Strategy and Criteria for Inclusion/Exclusion

To determine the research studies to include in the meta-analysis, the Science-Direct, Proquest and Ebsco academic databases were used to conduct a literature review. For this process, the terms *leadership* and *climate, school climate and organizational climate* included in the titles of the studies were used to screen the research studies. The end date for the research studies included in the research was identified as March 2014. Doctoral dissertations and peer-reviewed journals were included in the study.

Many strategies were used to identify the research studies that were appropriate for the meta-analysis. First, a research study pool (270 research studies) was established that included all studies with leadership and organizational climate in their titles. The abstracts of these studies were reviewed, and all were found to be appropriate to include in the study. In the second stage, all research studies in the pool were examined in detail; 102 of the research studies in the pool were appropriate, and 168 were not found suitable. Additionally, 3 studies were excluded because they were inappropriate. The descriptive statistics of the 99 research studies included in the analysis are presented in Table 1.

The criteria for the inclusion of the research studies in the analysis study were identified as follows:

- To have the statistical information necessary for correlational meta-analysis (n and r, or R^2 values)
- To be a study measuring the correlation between leadership and organizational climate

Reasons for not including a research study in the meta-analysis:

- Having no quantitative data (qualitative research)
- Not having a correlation coefficient
- Not focusing on organizational climate
- Not focusing on leadership

2.3 Coding Process

The coding process is essentially a data sorting process used to ascertain which of the complex data in studies are clear and suitable for the study. In this scope, a coding form was developed before the statistical analysis was conducted, and the coding was conducted according to the form. The main aim was to develop a specific coding system that allowed the study to see the entirety of the research studies in general and that would not miss any characteristics of each individual research study. The coding form developed in the study was comprised of:

Table 1 Characteristics of the studies included in the meta-analysis

Options		1	2	3	4	5	6	Total
Year of publication	n %	Before 1990	1990–1999	2000–2009	After 2010			
		12	16	41	30			99
		12.1	16.2	41.4	30.3			100
Publication type	n %	Thesis	Article					–
		79	20					99
		79.8	20.2					100
Sample group/sector	n %	Mixed	Teacher	Employee	College employee	Administrator	Others	
		28	28	18	10	5	10	99
		28.3	28.3	18.2	10.1	5.1	10.0	100

- References for the research
- Sample information
- Sample group/sector
- The study's publication type and year
- Leadership style/approach
- Data collection tool(s)
- Quantitative values

2.4 Statistical Processes

The effect size acquired in a meta-analysis is a standard measure value used in the determination of the strength and direction of the relationship in the study (Borenstein, Hedges, Higgins, & Rothstein, 2009). Pearson's correlation coefficient (r) was determined to be the effect size in this study. Because the correlation coefficient has a value between +1 and −1, the *r* value calculated was evaluated by converting this value into the value as it appears in the *z* table (Hedges & Olkin, 1985). Provided that more than one correlation value is given between the same structure categories in correlational meta-analysis studies, two different approaches are used in the determination of the one to be used in the meta-analysis (Borenstein et al., 2009; Kulinskaya, Morgenthaler, & Staudte, 2008). For this study, (1) first, if the correlations were independent, all the related correlations were included in the analysis and were considered to be independent studies, and (2) if there were dependent correlations, then the *conservative estimation value* was accepted. A *random effect model* was used for the meta-analysis processes in this study. The *Comprehensive Meta-Analysis* program was used in the meta-analysis process.

2.5 Moderator Variables

To determine the statistical significance of the difference between the moderators of the study, only the Q_b values were used. Five moderator variables that were expected to have an average effect size were identified in the study. The first of these considered *leadership style/approach* as a moderator of the relationship between organizational climate and leadership styles/approaches. *Climate type* was determined as second variable to understand whether the relationship between leadership and organizational climate changed according to climate type. The third one was the *research's year of publication*, and the fourth variable was determined as the *type of publication*. Lastly, considering which groups the studies evaluated, *sample group/sector* was thought to be a moderator variable.

2.6 Publication Bias

A funnel plot for the research studies included in the meta-analysis of the study can be seen in Fig. 1. Evidence for the effect of publication bias in the research studies included in the meta-analysis can be seen in Fig. 1. A serious asymmetry would be expected in the funnel plot if there were a publication bias. The concentration of plots on one side, under the line of the average effect size and particularly in the bottom section of the funnel, suggests the probability of a publication bias. In this study, no evidence of the partiality of the publications was observed in any of the 99 data subjected to the meta-analysis.

Although no partiality in publications was observed in the funnel plot, the results of Duval and Tweedie's trim and fill test, which was applied to determine the effect size of publication bias acquired with the meta-analysis using the random effect model, are shown in Table 2. As seen in Table 2, there is no difference between the observed effect size and the artificial effect size, which was created to fix the effect of the publication bias. The research on each side of the centerline is symmetrical, and this is an indicator of non-difference. Because there is no evidence indicating lost data on any side of the centerline, the difference between the fixed effect size and the observed effect size is zero.

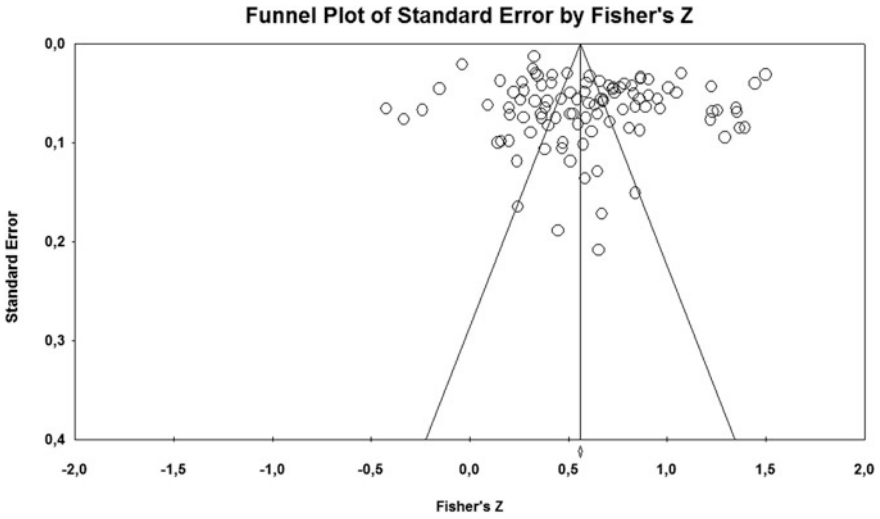

Fig. 1 Effect size funnel for publication bias

Table 2 Duval Tweedie trim and fill test results

	Excluded study	Point estimate	CI (Confidence interval)		Q
			Lower limit	Upper limit	
Observed variables		0.54	0.48	0.59	6,322.3
Fixed variables	0	0.54	0.48	0.59	6,322.3

3 Findings

Table 3 shows the results of meta-analysis between leadership and organizational climate. The findings supported H_1, which argued that there would be a positive relationship between leadership and organizational climate. The effect size of leadership on organizational climate was calculated to be 0.54. This value shows that leadership has a *large effect* (see Cohen, 1988) on organizational climate

The findings supported H_2, which predicted that leadership style/approach is a moderator of the effect leadership has on organizational climate. In addition, it was found that leadership styles/approaches showed that all leadership styles had a positive and significant effect except style approach, ethical leadership, authoritative leadership, campus leadership, leader-member exchange, school leadership, adaptability and directive leadership. The results of the meta-analysis of research studies showed that safety [$r = 0.90$], paternalistic [$r = 0.88$], presidential [$r = 0.86$], participative [$r = 0.82$] and authentic [$r = 0.74$] leadership styles had a large effect on organizational climate, whereas ethical leadership [$r = 0.48$] and instructional leadership [$r = 0.43$] had a medium-level effect on organizational climate. The highest effect level determined belongs to the safety leadership. The moderator analysis conducted according to the random effect model showed that the difference between the effect size difference of leadership styles was statistically significant ($Q_b = 58.57$, $p < 0.05$).

The findings did not support for hypothesis H_3, which predicted that type would moderate the effect size of leadership on organizational climate. Although the moderator analysis did not find a statistically significant difference in the effect size between the climate types ($Q_b = 10.96$, $p > 0.05$), all climate types were found to have a large moderating effect on the effect of leadership on organizational climate. The largest effect was found for safety climate [$r = 0.92$], whereas the open/positive climate [$r = 0.65$] and organizational climate [$r = 0.62$] were small.

The research did not support H_4, which hypothesized that the study's year of publication would be a moderator role of the effect of leadership on organizational climate. The moderator analysis did not find a statistically significant difference in the effect size for the studies' publication year ($Q_b = 1.68$, $p > 0.05$); however, the studies included in the meta-analysis that were published were before 1990 [$r = 0.47$] showed a medium-level moderating effect on the effect of leadership on organizational climate, whereas for publications from 2000 to 2009 [$r = 0.52$] and after 2010 [$r = 0.54$] were found to have a large effect.

The findings did not support H_5, which proposed that the publication type would be a moderator of the effect of leadership on organizational climate. Although the moderator analysis did not find a statistically significant difference between the effect size between the publication types ($Q_b = 0.08$, $p > 0.05$), the effect sizes of the articles [$r = 0.52$] and dissertations [$r = 0.54$] on leadership on organizational climate were found to be large.

The results of the moderator analysis showed that H_6, regarding the moderating role of sample group/sector on the effect of leadership and organizational climate,

Table 3 Findings of the correlations between leadership and organizational climate: Results of meta-analysis

Variables	k	N	r	CI (confidence interval)		Q	Qb
				Lower limit	Upper limit		
Organizational climate	99	43.698	0.54*	0.48	0.59	6,322.3*	
Moderator [Leadership style]							58.575*
Leadership behavior	30	11.015	0.54*	0.46	0.62		
Transformational leadership	28	10.611	0.55*	0.47	0.63		
Ethical leadership	5	6,833	0.48*	0.24	0.66		
Instructional leadership	5	2,540	0.43*	0.18	0.62		
Style approach	4	3,928	0.15	−0.14	0.43		
Servant leadership	4	872	0.62*	0.39	0.77		
Effective leadership	2	1,654	0.37	−0.04	0.68		
Participative leadership	2	1,404	0.82*	0.63	0.92		
Authoritative leadership	2	470	0.26	−0.16	0.60		
Visionary leadership	2	436	0.60*	0.22	0.82		
Affiliative	1	134	0.69*	0.23	0.90		
Leadership for innovation	1	140	0.66*	0.17	0.89		
Entrepreneurial leadership	1	323	0.69*	0.24	0.66		
Safety leadership	1	1,041	0.90*	0.71	0.97		
Campus leadership	1	164	0.61	0.08	0.87		
Restrictive leadership	1	174	−0.32	−0.74	0.2		
Leader-member exchange	1	181	0.35	−0.25	0.75		
School leadership	1	201	0.47	−0.10	0.81		
Authentic leadership	1	325	0.74*	0.32	0.91		
Teacher leadership	1	37	0.58*	−0.02	0.87		
Paternalistic leadership	1	142	0.88*	0.64	0.96		
Presidential leadership	1	115	0.86*	0.57	0.95		
Adaptability	1	149	0.37	−0.22	0.77		
Directive leadership	1	323	0.43	−0.15	0.79		
Moderatör [Climate type]							10.96
School climate	34	5.645	0.46*	0.36	0.55		
Organizational climate	18	6.495	0.62*	0.51	0.72		

(continued)

Table 3 (continued)

Variables	k	N	r	CI (confidence interval)		Q	Qb
				Lower limit	Upper limit		
Other	14	11.446	0.51*	0.35	0.64		
Ethical climate	11	9.233	0.51*	0.33	0.65		
Climate	11	5.750	0.48*	0.29	0.63		
Safety climate	6	3.689	0.72*	0.55	0.83		
Open/positive climate	5	1.440	0.65*	0.43	0.80		
Moderator [Year]							1.68
Before 1990	12	8,417	0.47*	0.27	0.62		
1990–1999	16	5,201	0.60*	0.46	0.71		
2000–2009	41	14,475	0.53*	0.43	0.61		
After 2010	30	15,605	0.54*	0.43	0.63		
Moderator [Type]							0.08
Thesis	79	30.908	0.54*	0.47	0.60		
Article	20	12.790	0.52*	0.38	0.63		
Moderator [Sample/sector]							3.47
Mixed	28	9.772	0.52*	0.40	0.62		
Teacher	28	12.447	0.47*	0.34	0.57		
Employee	18	12.622	0.59*	0.46	0.70		
College employee	10	3.356	0.62*	0.44	0.75		
Other	10	4.891	0.55*	0.34	0.70		
Administrator	5	610	0.57*	0.28	0.77		

*$p < 0.01$

was not supported. The moderator analysis did not find a statistically significant difference in the effect size of sample group/sector ($Q_b = 3.47$, $p > 0.05$). Despite this finding, the leadership perceptions of college employees [$r = 0.62$], employees [$r = 0.59$], administrators [$r = 0.57$], other [$r = 0.55$] and mixed [$r = 0.57$] had a large effect on organizational climate, and the teacher [$r = 0.47$] group had a medium-level effect.

Conclusion

A total of 99 research studies were included in this study to examine the effect size of leadership on organizational climate. Leadership style/approach, climate type, the study's publication type, the study's year of publication and the sample group/sector were considered as moderator variables in the study. The results of the meta-analysis found a *large positive effect* of leadership on organizational climate. This finding suggests that a leader has

(continued)

an important place in the establishment of the organizational climate (Hoy & Miskel, 2011; Şişman, 2011b) and that there is a strong relationship between leadership and organizational climate (Barr, 2006; Buckingham, 2006; Chloé, 2005; Cho, 2003; Contartesi, 2010; Eshbach & Henderson, 2010; Gaa, 2010; Gaines, 2011; Hough & Schmitt; 2011; Kullar, 2011; Lawler, Hall, & Oldham 1974; Lewin, Lippit, & White 1939; Litwin & Stringer, 1968; Mendel, Watson, & MacGregor 2002; Torres, 2009).

Statistically significant results were not found by the moderator variable analysis for sample group/sector used in studies in regards to the differences in the effects of different sample group/sectors. Despite this finding, college employees, employees and administrators had the largest effect, whereas a mixed group of teachers and principals had the smallest effect. Similarly, the effect of climate type included in the moderator analysis was not found to be statistically significant. However, the largest effect was for safety climate and open/positive climate. The large effects of safety climate and leadership behaviors are supported in the literature (Gaa, 2010; Groom, 2006; Merrill, 2011). Similarly, there are many studies that support the relationship between leadership and open/positive climates (Ballard, 2008; Clabough, 2006; Ham, 1999; Lindbeck, 2004; O'Connor, 2002). An open climate refers to energetic and living organizations that attempt to reach their objectives and ensure the satisfaction of their group members (Halpin & Croft, 1962). Organizations with open climates respect their employees, and there is no strict control or directives (Hoy & Miskel, 2011); instead, they are characterized by cooperation, openness (Hoy & Miskel, 2011), and sincerity between employees and leaders. Further, the behaviors of leaders enable employees to carry out their tasks (Çelik, 2012). Thus, the large positive effect found between leadership and open climate is a finding to be expected.

The results of the moderator analysis for studies' publication type and year as moderating the effect of leadership and organizational climate was not found to be statistically significant. However, the type of publication, such as dissertations or articles, did not matter in terms of the effect of leadership on organizational climate; both types were found to have a large effect. The evaluation of publication years showed that the effect of leadership on organizational climate was significant for each year.

According to the results of the moderator variable analysis, leadership styles/approaches were found to moderate the effect of leadership on organizational climate. Studies by Lewin, Lippit, and White (1939) and Litwin and Stringer (1968) on the relationships between leadership styles/approaches and organizational climate also found similar results. An individual consideration of the leadership styles/approaches showed that all leadership styles had a positive and significant effect except style approach, effective leadership, authoritative leadership, campus leadership, restrictive leadership, leader-

(continued)

member exchange, school leadership, adaptability and directive leadership. In addition, it was seen that safety, paternalistic, presidential, participative and authentic leadership styles moderated the effect of leadership on organizational climate, whereas ethical leadership and instructional leadership had a medium-level effect on organizational climate. A review of the relevant literature shows that leadership types, such as safety (Wu, Chang, Shu, Chen, & Wang 2011), paternalistic (Erben, and ve Güneşer 2008), presidential (Hardy, 1999), participative (Edwards, 1984; Isome, 1983), authentic (Cottril, 2011; Du & Choi, 2013; Isaksen & Akkermans, 2011), ethical (Borchert, 2011; Einstein, 2013; Mayer, Kuenzi, & Greenbaum 2011; Shin, 2012) and instructional (Chugbo, 2004; Dzyacky 1988; Mulki, Jaramillo, & Locander 2008; Stillwell, 1998; Whitaker, 1997; Wilson, 2005) leadership have a positive and significant effect on organizational climate.

A general assessment of the findings concerning the effect of leadership on organizational climate can be summarized as below:

- Leadership has a large positive effect on organizational climate [$r = 0.54$].
- Whereas moderator variables of sample group/sector, climate type, publication type and year of publication do not moderate the effect of leadership on organizational climate, leadership style/approach does moderate the effect of leadership on organizational climate.

In light of the findings of the study, it can be stated that climate, which plays a significant role in organizations' productivity, efficiency and achievement of objectives (Sığınır, 2013), is also strongly affected by leadership behaviors. Therefore, leaders have an important role to play in ensuring the productivity and sustainability of an organization and in the establishment of a positive organizational climate. This meta-analysis study is of importance because it shows the need for an in-depth investigation of the relationship between leadership and climate. In the scope of this study, which aimed to examine the effect of leadership on organizational climate, it is recommended that qualitative and comparative meta-analysis be conducted for further investigation.

References[1]

Adamshick, M. H. (2007). *Leadership and safety climate in high-risk military organizations*. Unpublished doctoral dissertation. University of Maryland, College Park.

Al-Ahmadi, S. (2011). *Patient safety climate and leadership in the emergency department*. Unpublished doctoral dissertation. University of Alberta, Canada.*

[1] References marked with an asterisk indicate studies included in the meta-analysis. The in-text citations to studies selected for meta-analysis are not followed by asterisks.

Alsop, W. E. (1984). *The relationships between leadership style, climate, and morale as perceived by the faculty of Wyoming community college*. Unpublished doctoral dissertation. University of Wyoming, Laramie, Wyoming.

Aydın, M. (1986). *Çağdaş eğitim denetimi*. Ankara: İm Eğitim Yayın Danışmanlık.

Ballard, R. L. (2008). *Principals' leadership style and school climate as perceived by teachers in African-American Christian schools in the Baltimore-Washington, D.C. metropolitan area*. Unpublished doctoral dissertation. Capella University, Minneapolis.*

Barnes, J. N. (2013). *Organizational leadership and ethical climate in Utah's certified public accounting profession*. Unpublished doctoral dissertation. University of Phoenix, Arizona.*

Barr, B. A. (2006). *A study of the impact of leadership on secondary school climate*. Unpublished doctoral dissertation. Capella University, Minneapolis.*

Batchelor, J. H. (2011). *Leading with emotional labor and affective leadership climate as antecedents to entrepreneurial effectiveness*. Unpublished doctoral dissertation. Virginia Commonwealth University, Virginia.

Beckley, G. M. (2012). *Catholic school leadership: School climate and culture and the influence on principal satisfaction*. Unpublished doctoral dissertation. Trevecca Nazarene University, Nashville.

Biller, L. W. (1994).*The relationship of visionary leadership and organizational climate between elementary school principals and business managers*. Unpublished doctoral dissertation. East Tennessee State University.*

Bishop, D. J. (2003). *The relationship between faculty perceptions of music unit administrators' leadership behavior and organizational climate*. Unpublished doctoral dissertation. The University of Mississippi.*

Black, G. L. (2007). *A correlational analysis of servant leadership and school climate*. Unpublished doctoral dissertation. University of Phoenix.*

Blatt, D. A. (2002). *A study to determine the relationship between the leadership styles of career technical directors and school climate as perceived by teachers*. Unpublished doctoral dissertation. West Virginia University.*

Bolman, L. G., & Deal, T. E. (2008). *Reframing organizations: Artistry, choice and leadership*. San Francisco, CA: Jossey-Bass.

Booker, J. E. G. (2003). *Teachers' and principals' perceptions of leadership styles and their relation to school climate*. Unpublished doctoral dissertation. The University of Mississippi.*

Borchert, D. M. (2011). *A meta-model of ethical behavior: An empirical examination of ethical leadership, ethical identiy, ethical climate and emotions on unethical work behavior*. Unpublished doctoral dissertation. Saint Louis University.*

Borenstein, M., Hedges, L. V., Higgins, J. P. T., & Rothstein, H. R. (2009). *Introduction to meta-analysis*. Chichester: Wiley.

Brooks, F. K. (1986). *Relationships between school effectiveness and the perceptions of teachers on leadership effectiveness and school climate*. Unpublished doctoral dissertation. Memphis State University.*

Brown, N. J. (1989). *The relative contribution of organizational climate, supervisory leadership, and peer leadership to job satisfaction, performance, and retention*. Unpublished doctoral dissertation. University of Denver.

Buckingham, H. A. (2006). *A study of the relationship between headmasters' leadership behaviors and the organizational climate of independent schools as perceived by teachers*. Unpublished doctoral dissertation. Southern Connecticut State University, ABD.*

Burke, J. S. (1982). *Leadership styles of school principals as predictors of organizational climate and teacher job satisfaction*. Unpublished doctoral dissertation. University of Kansas.*

Cantu, R. (2012). *Exploring the relationship between perceived principal leadership styles and perceived school climate*. Unpublished doctoral dissertation. Our Lady of the Lake University, ABD.*

Carlson, S. C. (2005). *Ethical leadership: Influences of ethical climate, perceived organization support, and perceived leadership integrity*. Unpublished doctoral dissertation. Nova Southeastern University.*

Çelik, V. (2012). *Okul kültürü ve yönetimi*. Ankara: Pegem.

Chen, M. (1990). *Relationships between principals' leadership styles and school climate in senior industrial high schools in Taiwan, The Republic of China*. Unpublished doctoral dissertation. Iowa State University.*

Chi, J. L. (1995). *The relationship of leadership style and organizational climate to job burnout levels among Taiwan public secondary-school teachers*. Unpublished doctoral dissertation. Andrews University.*

Chloé, E. S. (2005). *The effects of principals' leadership practices on school climate and student achievement in title 1 elementary schools*. Unpublished doctoral dissertation. Union University, ABD.*

Cho, Y. H. (2003). *A cross cultural study of the influence of principal leadership and school climate on the transition system in vocational high school*. Unpublished doctoral dissertation. The University of Iowa.*

Chugbo, V. O. (2004). *Teacher and principal perceptions of instructional leadership and the impact of school climate in Los Angeles country court and community schools from the rossier school of education*. Unpublished doctoral dissertation. University of Southern California.*

Chun, G. C. (1994). *Stress (burnout), social climate, and leadership patterns in organizational settings*. Unpublished doctoral dissertation. The University of Hawaii.*

Cicirello, P. K. (1998).*The relationship of community college academic officer leadership style with leadership effectiveness and organizational climate*. Unpublished doctoral dissertation. Arkansas State University.*

Clabough, P. R. (2006). *The relationship between principal leadership style, school climate and violence in middle schools*. Unpublished doctoral dissertation. Aurora University.*

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Hillside, NJ: Lawrence Erlbaum Associates.

Contartesi, R. A. (2010). *School climate: A correlational analysis of superintendent leadership communication and employee performance*. Unpublished doctoral dissertation. University of Phoenix.*

Cottril, K. R. (2011). *Antecedents and outcomes of inclusion: Exploring authentic leadership, organizational climate for ethics, organization-based self-esteem, and organizational citizenship behaviors*. Unpublished doctoral dissertation. Alliant International University, Los Angeles.*

Davis, B. W. (2010). *The relationship of principal leadership style as it affects school climate and student achievement*. Unpublished doctoral dissertation. Union University.*

Du, J. & Choi, J. N. (2013). Leadership effectiveness in China: The moderating role of change climate. *Social Behavior and Personality: An International Journal*, *41*(9), 1571–1584.*

Dzyacky, K. M. (1988). *The relationships of teacher perceptions and administrator time on instructional leadership with school learning climate*. Unpublished doctoral dissertation. Iowa State University.*

Edwards, D. S. (1984). *An analysis of faculty perceptions of deans' leadership behaviors and organizational climate in Baccalaureate schools of nursing*. Unpublished doctoral dissertation. University of Cincinnati.*

Ehrhart, M. G. (2004). Leadership and procedural justice climate as antecedents of unit-level organizational citizenship behavior. *Personnel Psychology*, *57*(1), 61–94.*

Einstein, J. E. (2013). *Ethical leadership and service climate: The relationship with job satisfaction and organizational identification*. Unpublished doctoral dissertation. Nova Southeastern University, ABD.*

Emeksiz, Ö. (2003). İlköğretim okulu öğrencilerinin okul iklimi ve liderlik etkenlerine ilişkin görüşleri (Yayımlanmamış yüksek lisans tezi). Afyon Kocatepe Üniversitesi, Afyon.

Engelbrecht, A. S., Van Aswegen, A. S., & Theron, C. C. (2005). The effect of ethical values on transformational leadership and ethical climate in organizations. *South African Journal of Business Management*, *36*(2), 19–26.*

Erben, S. ve Güneşer, A. B. (2008). The relationship between paternalistic leadership and organizational commitment: Investigating the role of climate regarding ethics. *Journal of Business Ethics*, *82*(4), 955–968.*

Eshbach, E., & Henderson, J. (2010). The symbiotic relationship between new principals and the climate of the schools in which they lead. *E-Journal of Organizational Learning and Leadership, 5*(1), 16–48.

Ferree, S. A. (2013). *A study of the perceived relationships between the leadership style of elementary administrators and school climate*. Unpublished doctoral dissertation. Widener University.*

Fisher, M. W. (2003). *Effects of principal leadership style on school climate and student achievement in select Idaho schools*. Unpublished doctoral dissertation. University of Idaho.*

Frederick, B. W. (2007). *The effects of teachers' perceptions of principals' leadership style, school climate, and job satisfaction level on teacher attrition in Tennessee public schools*. Unpublished doctoral dissertation. Union University, ABD.

Frutiger, R. U. (2002). *Unified leadership and organizational climate within American military services: Eliminating the roadblocks to true jointness*. Unpublished doctoral dissertation. Walden University.*

Gaa, S. M. (2010). *An exploratory analysis of the relationships between leadership, safety climate, and organizational citizenship behavior within high-containment biosafety laboratories*. Unpublished doctoral dissertation. Capella University, Minneapolis.*

Gaines, S. B. (2011). *The relationship between leadership styles and elementary school climate*. Unpublished doctoral dissertation. Lincoln Memorial University, ABD.*

Gamble, A. M. (2013). *Exploring faculty diversity in the South: A case study on campus climate and leadership commitment to the recruitment and retention of African American faculty*. Unpublished doctoral dissertation. Capella University, Minneapolis.

Goodall, S. H. R. (2008). *Perceptions of leadership and school climate through eyes of principals and teachers of Appalachian no child left behind blue ribbon schools, (NCLBBRS)*. Unpublished doctoral dissertation). West Virginia University.*

Groom, J. R. (2006). *Compliance to safety protocols as a function of leadership style, sense of control and perceived safety climate*. Unpublished doctoral dissertation. Pepperdine University, Los Angeles.*

Halpin, A. W., & Croft, D. B. (1962). *The organizational climate of schools*. Chicago: The University of Chicago.

Ham, S. (1999). *A study of the relationship between principal leadership and school climate in Korean secondary school*. Unpublished doctoral dissertation. The University of Iowa.*

Hardy, F. W. (1999). *Presidential and follower assessment of leadership style and its relationship to organizational climate*. Unpublished doctoral dissertation. North Carolina State University.*

Hedges, L. V., & Olkin, I. (1985). *Statistical method for meta-analysis*. London: Academic Press.

Heinen, B. A. (2009). *Leadership's influence on non-work outcomes: the mediating role of work-family climate*. Unpublished doctoral dissertation. George Mason University.*

Hough, D. L. & Schmitt, V. L. (2011). An expost facto examination of relationships among the developmental designs professional development model/classroom management approach, school leadership, climate, student achievement, attendance, and behavior in high poverty middle grades school. *Middle Grades Research Journal*, *6*(3), 163–175.*

Hoy, W. K., & Miskel, C. G. (2011). *Eğitim yönetimi: Teori, araştırma ve uygulama* (Çev. Ed. S. Turan). Ankara: Nobel.

Hsieh, Y. S. (2011). *An exploration of the relationship between leadership style and organizational climate*. Unpublished doctoral dissertation. Benedictine University.*

Hudson, C. E. (1983). *An analysis of the relationship between middle school principals perceived leadership behavior and the organizational climate (job satisfaction, teacher morale*. Unpublished doctoral dissertation. Atlanta University.*

Isaksen, S. G. & Akkermans, H. J. (2011).Creative climate: A leadership lever for innovation. *Journal of Creative Behavior*, *45*(3), 161–187.*

Isome, M. E. (1983). *An analysis of the relationship among the organizational climate of selected high schools, the principals' leadership behavior, and teacher decision involvement*. Unpublished doctoral dissertation. University of Cincinnati.*

Jensen, C. L. (1995). *A study of the relationship between transformational leadership and school climate*. Unpublished doctoral dissertation. Western Michigan University.*

Kapp, E. A. (2012). The influence of supervisor leadership practices and perceived group safety climate on employee safety performance. *Safety Science*, *50*, 1119–1124.*

Kelley, R. C., Thornton, B., & Daugherty, R. (2005). Relationships between measures of leadership and school climate. *Education*, *126*(1), 17–25.*

Kim, J. (2000). *A study of relationships among work motivation, problem-solving style, leadership style, and team climate on creative behavior in the South Korean workplace*. Unpublished doctoral dissertation. University of Missouri, Columbia.

Koopman, M. V. (2006). *Principals' leadership styles and school climate as perceived by elementary teachers in four North Dakota public school districts*. Unpublished doctoral dissertation. The University of North Dakota.*

Kozlowski, S. W. J., & Doherty, M. L. (1989). Integration of climate and leadership: Examination of neglected issue. *Journal of Applied Psychology*, *74*(4), 546.*

Krueger, D. A. (1984). *Secondary school climate relative to building leadership behavior (effectiveness, administration, learning environment*. Unpublished doctoral dissertation. Seattle University.*

Kulinskaya, E., Morgenthaler, S., & Staudte, R. G. (2008). *Meta-analysis: A guide to calibrating and combining statistical evidence*. London: Wiley.

Kullar, P. (2011). *A multi-site case study: the effect of principal leadership on school climate and student in charter schools in Los Angeles, California*. Unpublished doctoral dissertation. Pepperdine University, Los Angeles.*

Lambert, W. E. (2004). *Servant leadership qualities of principals, organizational climate, and student achievement: A correlational study*. Unpublished doctoral dissertation. Nova Southeastern University, ABD.*

Lawler, E. E., Hall, D. T., & Oldham, G. R. (1974). Organizational climate: Relationship to organizational structure, process, and performance. *Organizational Behavior and Human Performance, 11*, 139–155.

Lee, J. (2010). *The effect of perceived transformational leadership and organizational climate on the employees' attitude and intention to follow safe food handling practices: A conceptual model and empirical evidence*. Unpublished doctoral dissertation. Purdue University, ABD.*

Lewin, K., Lippit, R., & White, R. K. (1939). Patterns of aggressive behavior in experimentally created social climates. *Journal of Social Psychology, 10*, 271–301.

Lindbeck, R. (2004). *A study of the relationship between leadership styles and organizational climate and the impact of organizational climate on business results*. Unpublished doctoral dissertation. Pepperdine University, Los Angeles.*

Litwin, G. H., & Stringer, R. A. (1968). *Motivation and organizational climate*. Boston, MA: Harvard University Press.

Martin, C. A. & Bush, A. J. (2006). Psychological climate, empowerment, leadership style, and customer-oriented selling: an analysis of the sales manager-salesperson dyad. *Journal of the Academy of Marketing Science*, *34*(3), 419–438.*

Mayer, D. W. Kuenzi, M., & Greenbaum, R. L. (2011). Examining the link between ethical leadership and employee misconduct: The mediating role of ethical climate. *Journal of Business Ethics*, *95*, 7–16.*

McIntyre, M. D. (2004). *A study to determine the relationship between principal leadership style and school climate as perceived by teachers in middle schools in two military communities*. Unpublished doctoral dissertation. Capella University.*

Mendel, C. M., Watson, R. L, & MacGregor, C. J. (2002, May). *A study of leadership behaviors of elementary principals compared with school climate*. Presented at Southern Regional Council for Educational Administration, Southwest Missouri State University, MS.

Merrill, K. (2011). *The relationship among nurse manager leadership style, span of control, staff nurse practice environment, safety climate, and nurse sensitive patient outcomes*. Unpublished doctoral dissertation. The University of Utah.*

Mooney, M. P. (2003). *A study of the relationship between transformational leadership and organizational climate of elementary schools in western Pennsylvania*. Unpublished doctoral dissertation. Duquesne University.*

Mosser, N. R. (2000). *A study of the relationship between the perceived leadership style of nursing chairpersons and the organizational climate in baccalaureate nursing programs*. Unpublished doctoral dissertation. West Virginia University.*

Mowrer Benda, S. B. (2000).*The effect of leadership styles on the disciplinary climate and culture of elementary schools*. Unpublished doctoral dissertation. Widener University.*

Mulki, J. P., Jaramillo, J. F., & Locander, W. B. (2008). Critical role of leadership on ethical climate and sales person behaviors. *Journal of Business Ethics*, *86*, 125–141.*

Norton, M. S. (1984). What's so important about school climate? *Contemporary Education, 56*(1), 43–45.

Nusz, P. J. (1987). *A comparative study of organizational climate and campus leadership at Bakersfield College, based on the Rouche-Baker community college excellence mode*. Unpublished doctoral dissertation. Nova University.*

O'connor, G. J. (2002). *A study of leadership styles and school climate*. Unpublished doctoral dissertation. The State University of New Jersey.*

Phillips, J. M. (2012). *The entrepreneurial esquire: entrepreneurial climate as a mediator between transformational leadership and transformational leadership and performance in law firms*. Unpublished doctoral dissertation. The George Washington University.*

Pulleyn, J. L. (2012). *The relationships between teachers' perceptions of principal leadership and teachers' perceptions of school climate*. Unpublished doctoral dissertation. University of Nevada, Reno.*

Rhoden, V. (2012). *The examination of the relationships among secondary principals' leadership behaviors, school climate, and student achievement in an urban context satisfaction*. Unpublished doctoral dissertation. Florida International University.*

Sağnak, M. (2010). The relationship between transformational school leadership and ethical climate. *Kuram ve Uygulamada Eğitim Bilimleri/Educational Sciences Theory and Practice, 10*(2), 1135–1152.

Schwede, N. L. (1994). *The relationship between the perception of leadership behavior and organizational climate in a statewide community college system*. Unpublished doctoral dissertation. University of South Dakota.*

Sellars, P. L. (1984). *A comparative study of school climate and the leadership style of school principals*. Unpublished doctoral dissertation. University of Oklahoma.*

Sellgren, S., Ekvall, G., & Tomson, G. (2008). Leadership behavior of nurse managers in relation to job satisfaction and work climate. *Journal of Nursing Management*, *16*(5), 578–587. doi:10.1111/j.1365-2934.2007.00837.x*

Şentürk, C. & Sağnak, M. (2012). İlköğretim okulu müdürlerinin liderlik davranışları ile okul iklimi arasındaki ilişki. *Türk Eğitim Bilimleri Dergisi*, *10*(1), 29–47.*

Shaw, B. C. (2009). *Impact of leadership styles on school climate*. Unpublished doctoral dissertation. Capella University.*

Shih, H., Chiang, Y., & Chen, T. (2012). Transformational leadership, trusting climate, and knowledge-exchange behaviors in Taiwan. *International Journal of Human Resource Management*, *23*(6), 1057–1073. doi:10.1080/09585192.2011.639546*

Shin, Y. (2012). CEO ethical leadership, ethical climate, climate strength, and collective organizational citizenship behavior. *Journal of Business Ethics*, *108*, 299–312.*

Si, S. & Wei, F. (2012). Transformational and transactional leaderships, empowerment climate, and innovation performance: A multilevel analysis in the Chinese context. *European Journal of Work and Organizational Psychology*, *21*(2), 299–320. doi:10.1080/1359432X.2011.570445.*

Sığınır, A. (2013). *Meslek liselerindeki yönetici davranış boyutlarının okul iklimine etkisi* (Yayımlanmamış yüksek lisans tezi). Yeditepe Üniversitesi, İstanbul.

Şişman, M. (2011a). *Örgütler ve kültürler*. Ankara: Pegem.

Şişman, M. (2011b). *Öğretim liderliği*. Ankara: Pegem.

Smith, P. A. (1997). *A study of the relationship between teachers' perceptions of the leadership behaviors of principals and the organizational climate in secondary schools of Alabama*. Unpublished doctoral dissertation. The University of Alabama.*

Stillwell, P. J. (1998). *The relationship between organizational climate and leadership behavior in Texas community colleges*. Unpublished doctoral dissertation. Texas A&M University.*

Tobias, G. (2000). *The leadership of the principal and school climate: Teachers' perceptions*. Unpublished doctoral dissertation. Saint Louis University.*

Torres, G. K. (2009). *Perceptions of Michigan middle school principals regarding leadership styles, communication, and school climate*. Unpublished doctoral dissertation. Wayne State University.*

Van Aswegen, A. S. & Engelbrecht, A. S. (2009). The relationship between transformational leadership, integrity and an ethical climate in organisations. *SA Journal of Human Resource Management/SA Tydskrif vir Menslikehulpbronbestuur*, *7*(1), 221–229.*

Van Eron, A. M. (1991). *Key components of the transformational/transactional leadership model: The relationship between individual differences, leadership disposition, behavior and climate*. Unpublished doctoral dissertation. Columbia University, New York.*

Velasco, I. (2011). *The impact of principal leadership behaviors on school climate*. Unpublished doctoral dissertation. Sam Houston State University.*

Walker, B. J. C. (2012). *Impact of leadership effectiveness and organizational climate on academic achievement in Memphis city schools' alternative high schools*. Unpublished doctoral dissertation. The University of Mississippi.*

Warner, D. S. (1993). *Educational leadership styles of elementary school principals and the effect on school climate and pupil achievement*. Unpublished doctoral dissertation. University of Houston.*

Whitaker M. E. (1997). *Principal Leadership behaviors in school operations and change implementations in elementary schools in relation to climate*. Unpublished doctoral dissertation. Indiana State University.*

Wieland, A. J. (2004). *Business leadership and diversity: The relationships between team diversity climate, leaders' diversity attitudes, and leadership styles*. Unpublished doctoral dissertation. The University of Iowa.*

Willett, L. H. (1983). Student brinkmanship and residence hall leadership and social climate. Unpublished doctoral dissertation. The Ohio State University.*

Williams, M. D. (2009). The relationship of principal leadership behaviors with school climate, teacher job satisfaction, and student achievment. Unpublished doctoral dissertation. The University of Southern Mississippi, Southern Mississippi.

Williamson, J. S. (2007). Defining the relationship between principal's leadership style and school climate as perceived by title I elementary teachers. Unpublished doctoral dissertation. The University of Toledo.*

Wilson, C. L. (2005). Principal leadership, school climate, and the distribution of leadership within the school community. Unpublished doctoral dissertation. The University of Montana.*

Wright, P. J. (2007). Effective leadership: An analysis of the relationship between transformational leadership and organizational climate. Unpublished doctoral dissertation. Capella University, Minneapolis.*

Wu, T., Chang, S., Shu, C., Chen, C., & Wang, C. (2011). Safety leadership and safety performance in petrochemical industries: The mediating role of safety climate. Journal of Loss Prevention in the Process Industries, 24, 716–721.*

Wuch, J. (2013). The impact of elementary principals' leadership styles on school climates and student achievement in an urban setting: A mixed-methods study. Unpublished doctoral dissertation. Missouri Baptist University, ABD.*

The Effect of Leadership on Organizational Performance

Şahin Danişman, Şule Betül Tosuntaş, and Engin Karadağ

Abstract The effect of leadership on organizational performance was examined in this meta-analysis study. A total of 598 research studies were collected as a result of the review, out of which 270 were included in the meta-analysis. The 270 research studies were compiled to obtain a sample group/sector size of 101,232 subjects. The analysis results of the random effect model showed that leadership has a *medium-level effect* on organizational performance. Of the moderators identified, such as leadership style/approach, sample group/sector, publication type and publication year, it was found that leadership style/approach and publication year were moderator variables.

1 Introduction

The concept of performance, which can be considered the degree to which organizations reach success, can be briefly defined as the contributions made to the objectives of the organization (Bass, 1985). Organizational performance is the 'transformation of inputs into outputs by achieving certain outcomes. With regard to its content, performance informs about the relation between minimal and effective cost (economy), between effective cost and realized output (efficiency) and between output and achieved outcome (effectiveness)' (Chen, 2002, *as cited in* Karamat, 2013). Daft and Marcic (2009) define organizational performance as the measure of when and how an organization determines its own objectives. The way an organization performs to reach these objectives is a determinant of the important role of managers in their display of leadership behaviors (Bass, 1985).

Although leadership is generally defined as the 'art of ensuring others have the desire to strive to reach the common aims' (Kouzes & Posner, 1995), leadership cannot be considered successful and is of no importance in the context of the organization if the results obtained are not congruent with the common aims (Koech & Namusonge, 2012). Leadership is the most important driving force to

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increase the performance of the organization (Karamat, 2013). In addition, Furnham (2002) maintains that leadership is the effectiveness attained by means of reaching the organizational outputs and objectives, which are indicators for the quality of the leadership. Ullah, Ullah and Durrani (2011) state that leadership is related to the performance of employees and the participation of employees is important for organizational development.

According to Obiwuru, Okwu, Akpa, and Nwankwere (2011), one of the reasons why there is a relationship between leadership style/approach and organizational performance is that it necessitates innovation-oriented competitiveness within today's concentrated and dynamic market and the creative destruction of reduced profit and competencies (Santora, Seaton, & Sarros, 1999). Studies suggest that, in the face of such challenges, effective leadership can facilitate performance development (McGrath & MacMillan, 2000). In addition, to understand the effects of leadership on performance, it is important that leadership play a key role in developing the performance of the organization (Obiwuru et al., 2011). The improvement of organizational performance requires the development of management, and a sustainable competitive advantage requires leadership (Avolio, 1999; Rowe, 2001). In this light, the holistic review of studies on the effect of leadership on performance is important to be able to show the nature of the relationship between the two variables.

This study examined the effect of leadership on organizational performance. Furthermore, the moderators that were expected to moderate the effect sizes found in this study were identified as: (1) the leadership style/approach considered in the research, (2) the sample group/sector of the research studies, (3) the study's publication type, and (4) the study's publication year. All these variables, along with the results of previous research results, were used to test the following hypotheses:

H_1 Leadership has a positive effect on organizational performance.
H_2 Leadership style/approach is a moderator of the positive effect of leadership on organizational performance.
H_3 The sample group/sector is a moderator of the positive effect of leadership on organizational performance.
H_4 Publication type is a moderator of the positive effect of leadership on organizational performance.
H_5 Publication year is a moderator of the positive effect of leadership on organizational performance.

2 Method

2.1 Study Design

In this study, the effect of leadership on organizational performance was tested with a meta-analysis design.

2.2 Review Strategy and Criteria for Inclusion/Exclusion

To determine the research studies to include in the meta-analysis, the Science-Direct, Proquest and Ebsco academic databases were used to conduct a literature review. For this process, the terms *leadership, performance* and *organizational performance* included in the titles of the studies were used to screen the research studies. The end date for the research studies included in the research was identified as March 2014, and the starting year was 2000. Doctoral dissertations and peer-reviewed journals were included in the study.

Many strategies were used to identify the research studies that were appropriate for the meta-analysis of the study. First, a research study pool (598 research studies) was established including all studies with leadership and performance or organizational performance in their titles. The abstracts of these studies were reviewed, and all were found to be appropriate to include in the study. In the second stage, all research studies in the pool were examined in detail; 270 of the research studies in the pool were appropriate, and 328 were not found to be suitable. The descriptive statistics of the 270 research studies to be included in the analysis are presented in Table 1.

The criteria for inclusion of the research studies to the analysis study were identified as follows:

- To have the statistical information necessary for correlational meta-analysis (n and r, or R^2 values)
- To be a study measuring the correlation between leadership and organizational performance

Reasons for not including a research study in the meta-analysis:

- Having no quantitative data (qualitative research)
- Not having a correlation coefficient
- Not focusing on organizational performance
- Not focusing on leadership

Table 1 Characteristics of the studies included in the meta-analysis

Properties		1	2	3	4	5	Total
Publication year		2000–2009	2010 and beyond				–
	n	124	146				270
	%	45.9	54.1				100
Publication type		Article	Dissertation and thesis	–	–		–
	n	183	87	–	–		270
	%	67.8	32.2	–	–		100
Sample		Service Sector	Administrator	Education Sector	Student	The others	
	n	99	45	22	15	89	270
	%	36.7	16.7	8.1	5.5	33.0	100

2.3 Coding Process

The coding process is essentially a data sorting process used to ascertain which of the complex data in studies are clear and suitable for the study. In this scope, a coding form was developed before the statistical analysis was conducted, and the coding was conducted according to the form. The main aim was to develop a specific coding system that allowed the study to see the entirety of the research studies in general and that would not miss any characteristics of each individual research study. The coding form developed in the study was comprised of:

- References for the research
- Sample information
- Sample group/sector
- Leadership style/approach
- Data collection tool(s)
- Quantitative values

2.4 Statistical Processes

The effect size acquired in a meta-analysis is a standard measure value used in the determination of the strength and direction of the relationship in the study (Borenstein, Hedges, Higgins, & Rothstein, 2009). Pearson's correlation coefficient (r) was determined to be the effect size in this study. Because the correlation coefficient has a value between $+1$ and -1, the r value calculated was evaluated by converting this value into the value as it appears in the z table (Hedges & Olkin, 1985). Provided that more than one correlation value is given between the same structure categories in correlational meta-analysis studies, two different approaches are used in the determination of the one to be used in the meta-analysis (Borenstein

et al., 2009; Kulinskaya, Morgenthaler, & Staudte, 2008). For this study, (1) first, if the correlations were independent, all the related correlations were included in the analysis and were considered to be independent studies, and (2) if there were dependent correlations, then the *conservative estimation value* was accepted. A *random effect model* was used for the meta-analysis processes in this study. The *Comprehensive Meta-Analysis* program was used in the meta-analysis process.

2.5 Moderator Variables

To determine the statistical significance in the difference between the moderators of the study, only the Q_b values were used. Four moderator variables that were expected to have a role in the effect size were identified in the study. The first of these considered a moderator of the relationship between leadership and organizational performance was *leadership style/approach*. The second, *sample group/sector,* was expected to moderate the average effect of leadership and organizational performance. The third moderator variable was the *publication type,* and the fourth was the *publication year*.

2.6 Publication Bias

A funnel plot for the research studies included in the meta-analysis of the study can be seen in Fig. 1. Evidence for the effect of publication bias in the research studies included in the meta-analysis can be seen in Fig. 1. A serious asymmetry would be expected in the funnel plot if there were a publication bias. The concentration of plots on one side, under the line of the average effect size and particularly in the bottom section of the funnel, suggests the probability of a publication bias. In this study, no evidence of the partiality of the publications was observed in any of the 270 data subjected to the meta-analysis.

Although no publication bias was observed in the funnel plot, the results of Duval and Tweedie's trim and fill test, which was applied to determine the effect of publication bias acquired with the meta-analysis using the random effect model, are given in Table 2. As seen in Table 2, there is no difference between the effect observed and the artificial effect size created to fix the effect of the publication bias. The research on each side of the center line is symmetrical, and this is the indicator of non-difference. Because there is no evidence of lost data on either side of the center line, the difference between the fixed effect size and the observed effect size is zero.

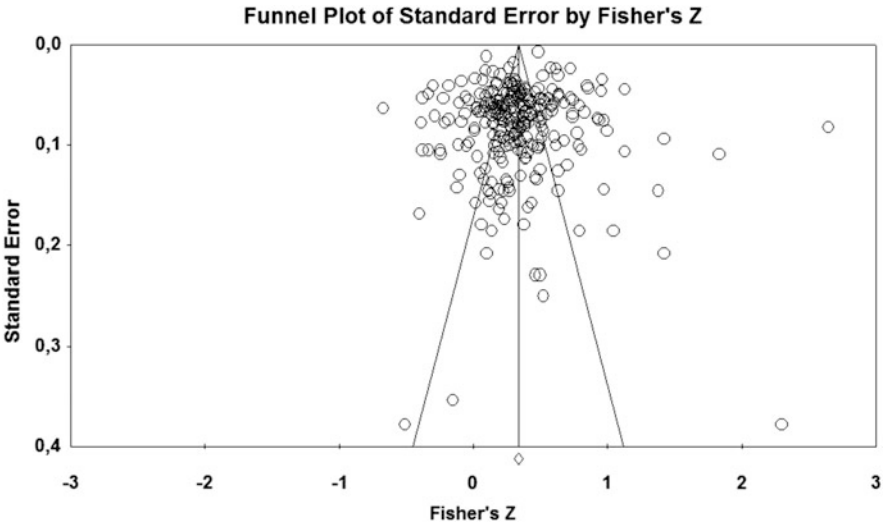

Fig. 1 Effect size funnel for publication bias

Table 2 Duval Tweedie trim and fill test results

	Studies trimmed	Point estimate	CI (confidence of interval)		Q
			Lower limit	Upper limit	
Observed values		0.32	0.29	0.35	7,725.4
Adjusted values	0	0.32	0.29	0.35	7,725.4

3 Findings

Table 3 shows the results of the meta-analysis of leadership and organizational performance. The findings supported H_1, which argued that there would be a positive relationship between leadership and organizational performance. The effect size of leadership on organizational performance was calculated to be 0.32. This value shows that leadership has a *medium-level effect* (*see* Cohen, 1988) on organizational performance.

Findings supported H_2, which predicted that leadership style/approach would moderate the effect of leadership on organizational performance. The moderator analysis showed that the difference between the effect size of leadership styles was statistically significant ($Q_b = 35.398$, $p < 0.05$). In this scope, it was found in studies that safety [$r = 0.72$], ethical [$r = 0.70$] and shared [$r = 0.51$] leadership styles/approaches had a strong effect on organizational performance, whereas distributed [$r = 0.38$], other [$r = 0.35$], transactional [$r = 0.34$], spiritual [$r = 0.34$], leadership behaviors [$r = 0.33$], benevolent [$r = 0.31$], transformational [$r = 0.31$] and charismatic [$r = 0.31$] leadership styles/approaches had a medium-level effect, and visionary [$r = 0.29$], supportive [$r = 0.28$], servant [$r = 0.27$] and

Table 3 Findings of the correlations between leadership and organizational performance: results of meta-analysis

Variable	k	N	r	CI (confidence interval)		Q	Q_b
				Lower limit	Upper limit		
Organizational performance	270	81,233	0.32*	0.29	0.35	7,725.39*	
Moderator (leadership style)							34.30*
Authentic	5	744	0.26**	0.02	0.47		
Benevolent	3	858	0.31**	0.01	0.56		
Charismatic	13	4,835	0.31*	0.16	0.44		
Democratic	4	267	0.22	−0.09	0.50		
Other	18	10,596	0.35*	0.23	0.46		
Distributed	2	238	0.38	−0.01	0.68		
Empowering	7	2,244	0.04	−0.16	0.24		
Ethical	4	1,145	0.70*	0.52	0.81		
Leadership behaviors	48	17,342	0.33*	0.26	0.40		
Participative	2	527	0.23	−0.16	0.55		
Safety	2	985	0.72*	0.48	0.86		
Servant	4	972	0.27**	0.00	0.50		
Shared	4	1,703	0.51*	0.26	0.69		
Spiritual	3	2,137	0.34**	0.04	0.59		
Supportive	4	698	0.28**	0.01	0.51		
Transactional	4	1,256	0.34**	0.05	0.57		
Transformational	140	53,067	0.31*	0.27	0.35		
Visionary	3	1,618	0.29	−0.04	0.56		
Moderator (sample)							14.29
Academic	12	3,704	0.34*	0.18	0.48		
Soldier	9	2,053	0.22**	0.04	0.40		
Banking sector	11	2,384	0.36*	0.19	0.50		
CEO	12	2,571	0.38*	0.22	0.51		
Other	14	2,786	0.45*	0.31	0.56		
Education sector	22	7,580	0.29*	0.17	0.40		
Service sector	99	60,017	0.36*	0.31	0.41		
Mixed (Yönetici + çalışan)	18	4,923	0.28*	0.15	0.40		
Student	15	4,224	0.29*	0.15	0.42		
Health sector	8	961	0.33*	0.13	0.51		
Athlete	5	1,281	0.39*	0.15	0.58		
Administrator	45	8,748	0.22*	0.14	0.30		
Moderator (publication type)							1.02
Article	183	80,108	0.33*	0.30	0.37		
Dissertation and thesis	87	21,124	0.30*	0.24	0.36		

(continued)

Table 3 (continued)

Variable	k	N	r	CI (confidence interval)		Q	Q_b
				Lower limit	Upper limit		
Moderator (publication year)							10.53*
2000–2009	124	31,332–	0.27*	0.22	0.31		
2010–. . .	146	69,900	0.37*	0.33	0.41		

*$p < 0.01$, **$p < 0.05$

authentic [$r = 0.26$] leadership styles/approaches had a small effect. The leadership style/approach with the strongest effect was found to be safety and ethical leadership. In contrast, the effect of the moderator role of participative, democratic and empowering leadership styles on organizational performance was not statistically significant ($p > 0.05$).

The results of the moderator analysis showed that H_3, which predicted that the sample group/sector would moderate the positive effect of leadership on organizational performance, was not supported. However, sample groups/sectors included in the meta-analysis, such as other [$r = 0.45$], athletes [$r = 0.39$], CEO [$r = 0.38$], service sector employees [$r = 0.36$], banking sector employees [$r = 0.36$], academic sector employees [$r = 0.34$] and health sector employees [$r = 0.33$] have a medium effect on leadership affecting organizational performance, whereas sample groups such as students [$r = 0.29$], education employees [$r = 0.29$], mixed [$r = 0.28$], soldiers [$r = 0.22$] and administrators [$r = 0.22$] were found to have a significant small effect. The strongest effect within sample group/sector was found to be other, comprised of samples that could not be grouped. Although the effect size on performance for different sample groups/sectors differed, the effect size of sample groups/sectors used to measure the performance was not found to be significant ($Q_b = 41.286$, $p > 0.05$) in the moderator analysis examined through the random effects model.

The findings did not provide support for H_4, which predicted that the publication type would moderate the effect that leadership has on organizational performance. Although the moderator analysis did not find a statistically significant difference in the effect size between the publication types ($Q_b = 1.016$, $p > 0.05$), effect size of leadership on organizational performance is statistically significant for research studies [$r = 0.33$] and dissertations [$r = 0.30$], and these effects were found to be of a medium level.

The research found support for H_5, where it was hypothesized that publication year would moderate the effect of leadership on organizational performance. The moderator analysis found a statistically significant difference in the effect size for the studies' publication year ($Q_b = 10.529$, $p < 0.05$). In this scope, it was found that leadership has a medium effect on organizational performance in regard to publications dated 2010 and beyond [$r = 0.37$] and a small effect for publications from 2000 to 2009 [$r = 0.27$] for the studies included in the meta-analysis.

Conclusion

A total of 270 research studies, with 101,232 participants, were included in this study to examine the magnitude of the effect size of leadership on organizational performance. Leadership style/approach, sample group/sector, publication type and publication year were considered moderator variables in the study. The results of the meta-analysis found a *medium positive effect* of leadership on organizational performance. This finding is congruent with many other studies that found a positive relationship between leadership and organizational performance (Harrison, 2000; Jung & Avolio, 2000; Russ, McNeilly, & Comer, 1996; Sosik, 1997; Ullah, Ullah, & Durrani, 2011).

According to the results of the moderator variable analysis for leadership style/approach, leadership styles/approaches moderate the effect of leadership on organizational performance. Studies suggest that many factors of an organization affect organizational performance, including the preferred leadership style/approach (Bycio, Hackett, & Allen, 1995; Dutschke, 2003; Howell & Avolio, 1993; Yukl, 1998). When leadership styles were undertaken separately, the moderator variables that had the strongest effect were safety and ethical leadership styles/approaches. The finding that the safety leadership style/approach (Clarke, 2000; Wu, Chang, Shu, Chen & Wang, 2011; Clarke & Ward, 2006; Wu, Chen, & Li, 2008) and the ethical leadership style/approach (Becker & Huselid, 1998; Brown & Trevino, 2006; Piccolo, Greenbaum, Den Hartog, & Folger, 2010; Walumbwa et al., 2011) have an effect on organizational performance is in parallel with previous studies in the literature. Many studies predicted that organizational performance would be have the strongest relationship with transformational leadership, which is one of the leadership styles most researched in regard to its relationship with organizational performance (Barling, Weber, & Kelloway, 1996; Jung & Avolio, 2000; Tsaia, Chen, & Cheng, 2009). Other leadership styles also undertaken as a moderator variables in the study, such as shared (Olinger, 2010), distributed (Davis, 2009), transactional (Zhu, Chew, & Spangler, 2005), spiritual (Jeon, 2011), leadership behaviors (Hankinson, 2012), benevolent (Wu, 2012), transformational (Defee, Stank, & Esper, 2010), charismatic (Fleener, 2009), visionary (Wintering, 2008), supportive (Jung & Takeuchi, 2010), servant (Tourigny, 2001) and authentic (Leroy, Palanski, & Simons, 2012) leadership styles, were also supported by the literature in terms of their effect on organizational performance. Popa (2012) suggests that each leadership style/approach affects organizational performance in a different way: Whereas some increase the capacity of organizations and lead them to success, others hinder their development and create unhappiness and decrease motivation.

(continued)

Statistically significant results were not found by the moderator variable analysis for sample group/sector used in studies in regard to the differences in the effects of different sample group/sectors. However, the largest effect among the sample groups/sectors was not under a particular sample group/sector but found for the 'Other' sample group. In addition to this group, the second largest effect sample groups/sectors were athletes, the service sector and the banking sector, whereas the smallest effect sample group/sectors were the soldier and administrator groups.

The moderator analysis conducted in regard to publication type showed that the effect size of leadership on organizational performance was not statistically significant for the types of publications. However, the examination of effect size according to the studies or dissertations' publication type did not reveal a difference in the effect of organizational performance by means of leadership; both types of publications were found to have a medium-level statistical significant in regard to effect size.

Another variable that was considered as a moderator variable in the study was the studies' publication year. According to findings, the publication year was a significant moderator in the effect of leadership on organizational performance. Whereas the results of the study showed a medium effect of leadership on organizational performance in the publications of 2010, in the publications between 2000 and 2009, it was a small effect. As the world becomes globalized, it is necessary for leaders to continue their internal focus, to make sure the organization can adapt to the current changes and to ensure the organization can cope with the continuously changing environmental conditions (Alimo-Metcalfe, 1998; Koech & Namusonge, 2012). Thus, to ensure the development of organizational performance, as the indicator for the success of organizations, it is necessary to place adequate importance on leadership skills in light of the importance of the effect of leadership on organizational performance founded by recent studies conducted in this field. A general assessment of the findings concerning the effect of leadership on organizational performance is summarized below:

- Leadership has a medium positive effect on organizational performance [$r = 0.32$].
- Whereas moderator variables of the sample group/sector and publication type do not moderate the effect of leadership on organizational performance, leadership style/approach and publication year do.

The effect size of leadership style/approach on employees' performance of employees was found to be medium in the study. In light of the study's findings, it can be stated that leadership behaviors have a large effect on organizational performance, which is thought to play a critical role in

(continued)

sustaining the existence of the organization and for the organization to reach its long-term targets (Murphy, Dalenberg, & Daley, 1990).

Thus, leaders have an important responsibility to develop organizational performance, which, in turn, plays a critical role in ensuring the efficiency and sustainability of the organization. This meta-analysis is significant in that it reveals the need for in-depth investigations in research studies examining the relationship between leadership and organizational performance. It is recommended by this study to conduct comparative meta-analyses and qualitative research with the aim of investigating the effect of leadership on organizational performance.

References[1]

Aboyassin, N. A., & Abood, N. (2013). The effect of ineffective leadership on individual and organizational performance in Jordanian institutions. *Competitiveness Review, 23*(1), 68–84.*

Adler, R. W., & Reid, J. (2008). The effects of leadership styles and budget participation on job satisfaction and job performance. *Asia-Pacific Management Accounting Journal, 3*(1), 21–46.*

Ahearne, M. J. (2000). *An examination of the effects of leadership empowerment behaviors and organizational citizenship behaviors on sales team performance*. Unpublished doctoral dissertation, Indiana University, Bloomington, IN.*

Akkoç, İ., & Erdoğan, B. Z. (2011). Organizasyon yapısı ve liderliğin iş performansına etkisi. *Çağ Üniversitesi Sosyal Bilimler Dergisi, 8*(1), 79–108.*

Al-Abrrow, H. A. W. (2013). Transformational leadership and organizational performance in the public healthcare sector: The role of organizational learning and intellectual capital. *Irish Journal of Management, 33*(1), 27–48.*

Albacete-Sáez, C. A., Fuentes-Fuentes, M. M., & Bojica, A. M. (2011). Quality management, strategic priorities and performance: The role of quality leadership. *Industrial Management & Data Systems, 111*(8), 1173–1193.*

Alimo-Metcalfe, B. (1998). 360 degree feedback and leadership development. *International Journal of Selection & Assessment, 6*(1), 35–44.

Alizor, J. O. (2012). *Study of the relationship between self-reported leadership styles of charter school principals and their performance*. Unpublished doctoral dissertation, Capella University, Minneapolis, MN.*

Al-Mailam, F. F. (2001). *The effects of leadership on hospital performance in public and private hospitals in Kuwait*. Unpublished doctoral dissertation, University of La Verne, La Verne, CA.*

Alves, J. C. (2008). *A multilevel analysis of the association among individual capabilities, team leadership behaviors, and performance in China*. Unpublished doctoral dissertation, Isenberg School of Management, Amherst, MA.*

Ammeter, A. P., & Dukerich, J. M. (2002). Leadership, team building, and team member characteristics in high performance project teams. *Engineering Management Journal, 14*(4), 3–10.*

Andrews, R., & Boyne, G. A. (2010). Capacity, leadership, and organizational performance: Testing the black box model of public management. *Public Administration Review, 70*(3), 443–454.*

[1] References marked with an asterisk indicate studies included in the meta-analysis. The in-text citations to studies selected for meta-analysis are not followed by asterisks.

Aryee, S., Walumbwa, F. O., Zhou, Q., & Hartnell, C. A. (2012). Transformational leadership, innovative behavior, and task performance: Test of mediation and moderation processes. *Human Performance, 25*(1), 1–25.*

Avolio, B. J. (1999). *Full leadership development: Building the vital forces in organizations*. Thousand Oaks, CA: Sage.

Barling, J., Weber, T., & Kelloway, E. K. (1996). Effects of transformational leadership training on attitudinal and financial outcomes: A field experiment. *Journal of Applied Psychology, 81* (6), 827–832.

Bartram, T., & Casimir, G. (2007). The relationship between leadership and follower in-role performance and satisfaction with the leader: The mediating effects of empowerment and trust in the leader. *Leadership & Organization Development Journal, 28*(1), 4–19.*

Bass, B. M. (1985). *Leadership and performance beyond expectations*. New York, NY: Free Press.

Bass, B. M., Avolio, B. J., Jung, D. I., & Berson, Y. (2003). Predicting unit performance by assessing transformational and transactional leadership. *Journal of Applied Psychology, 88*(2), 207–218.*

Becker, B. E., & Huselid, M. A. (1998). High performance work system and firm performance: A synthesis of research and managerial implications. *Research in Personnel and Human Resources Journal, 16*, 53–101.

Birasnav, M. (2014). Knowledge management and organizational performance in the service industry: The role of transformational leadership beyond the effects of transactional leadership. *Journal of Business Research, 67*(8), 1622–1629.*

Borenstein, M., Hedges, L. V., Higgins, J. P. T., & Rothstein, H. R. (2009). *Introduction to meta-analysis*. Chichester, UK: Wiley.

Boyce, L. A., Zaccaro, S. J., & Wisecarver, M. Z. (2010). Propensity for self-development of leadership attributes: Understanding, predicting, and supporting performance of leader self-development. *The Leadership Quarterly, 21*(1), 159–178.*

Braun, S., Peus, C., Weisweiler, S., & Frey, D. (2013). Transformational leadership, job satisfaction, and team performance: A multilevel mediation model of trust. *The Leadership Quarterly, 24*(1), 270–283.*

Brown, M. E., & Trevino, L. K. (2006). Ethical leadership: A review and future directions. *The Leadership Quarterly, 17*, 595–616.

Bycio, P., Hackett, R. D., & Allen, J. S. (1995). Further assessments of Bass's (1985). Conceptualization of transactional and transformational leadership. *Journal of Applied Psychology, 80* (4), 468–478.

Byrd, J. K. (2001). *Effective superintendent leadership strategies and management techniques for improving student performance as perceived by superintendents in selected school districts in Texas*. Unpublished doctoral dissertation, Tarleton State University, Stephenville, TX.*

Carmeli, A., Gelbard, R., & Gefen, D. (2010). The importance of innovation leadership in cultivating strategic fit and enhancing firm performance. *The Leadership Quarterly, 21*(3), 339–349.*

Carmeli, A., Schaubroeck, J., & Tishler, A. (2011). How CEO empowering leadership shapes top management team processes: Implications for firm performance. *The Leadership Quarterly, 22* (2), 399–411.*

Carmeli, A., & Waldman, D. A. (2010). Leadership, behavioral context, and the performance of work groups in a knowledge-intensive setting. *Journal of Technology Transfer, 35*(4), 384–400.*

Carson, J. B., Tesluk, P. E., & Marrone, J. A. (2007). Shared leadership in teams: An investigation of antecedent conditions and performance. *Academy of Management Journal, 50*(5), 1217–1234.*

Cavazotte, F. S., Duarte, C. J. P., & Gobbo, A. M. C. (2013). Authentic leader, safe work: The influence of leadership on safety performance. *Brazilian Business Review, 10*(2), 95–119.*

Cavazotte, F., Moreno, V., & Hickmann, M. (2012). Effects of leader intelligence, personality and emotional intelligence on transformational leadership and managerial performance. *The Leadership Quarterly, 23*(3), 443–455.*

Chan, C. H. S. (2008). *Paternalistic leadership styles and follower performance: Examining mediating variables in a multi-level model*. Unpublished doctoral dissertation, The Hong Kong Polytechnic University, Hong Kong.*

Chan, S. C. H., & Mak, W. M. (2011). Benevolent leadership and follower performance: The mediating role of leader-member exchange (LMX). *Asia Pacific Journal of Management, 29* (2), 285–301.*

Chen, Y. S., & Chang, C. H. (2012). The determinants of green product development performance: Green dynamic capabilities, green transformational leadership, and green creativity. *Journal of Business Ethics, 116*(1), 107–119.*

Chen, T. Y., Hwang, S. N., & Liu, Y. (2009). Employee trust, commitment and satisfaction as moderators of the effects of idealized and consideration leadership on voluntary performance: A structural equation investigation. *International Journal of Management, 26*(1), 127–141.*

Chen, C. C., Wu, J., Ma, M., & Knight, M. B. (2011). Enhancing virtual learning team performance: A leadership perspective. *Human Systems Management, 30*, 215–228.*

Cheng, J. N. (2013). The effect of kindergarten principals' leadership behaviors on teacher work performance. *Social Behavior and Personality: An International Journal, 41*(2), 251–262.*

Cherian, J., & Farouq, S. (2013). Does effective leadership style drive financial performance of banks? Analysis in the context of UAE banking sector. *International Journal of Economics and Finance, 5*(7).*

Chi, N. W., & Pan, S.-Y. (2011). A multilevel investigation of missing links between transformational leadership and task performance: The mediating roles of perceived person-job fit and person-organization fit. *Journal of Business and Psychology, 27*(1), 43–56.*

Chiu, K. H., & Chen, T. (2011). Leadership as situational factor on personality-performance relationship: An empirical study of the Taiwan's office machinery sales force. *International Journal of Business and Management Science, 5*(1), 11–31.*

Chu, L. C., & Lai, C. C. (2011). A research on the influence of leadership style and job characteristics on job performance among accountants of county and city government in Taiwan. *Public Personnel Management, 40*(2), 101–118.*

Chung, H. M., & Chan, S. T. (2012). Ownership structure, family leadership, and performance of affiliate firms in large family business groups. *Asia Pacific Journal of Management, 29*(2), 303–329.*

Chung, C. N., & Luo, X. R. (2013). Leadership succession and firm performance in an emerging economy: Successor origin, relational embeddedness, and legitimacy. *Strategic Management Journal, 34*(3), 338–357.*

Clarke, S. G. (2000). Safety culture: Underspecified and overrated? *International Journal of Management Reviews, 2*(1), 65–90.

Clarke, S., & Ward, K. (2006). The role of leader influence tactics and safety climate in engaging employees' safety participation. *Risk Analysis, 26*(5), 1175–1187.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Hillsdale, NJ: Lawrence Earlbaum.

Cole, M. S., Bedeian, A. G., & Bruch, H. (2011). Linking leader behavior and leadership consensus to team performance: Integrating direct consensus and dispersion models of group composition. *The Leadership Quarterly, 22*(2), 383–398.*

Comez, P. (2013). How ambidexterity and leadership behaviors affect firm performance: The role of market turbulence. *The Journal of American Academy of Business, 18*(2), 350–358.*

Contartesi, R. A. (2010). *School climate: A correlational analysis of superintendent leadership communication and employee performance*. Unpublished doctoral dissertation, University of Phoenix, Phoenix, AZ.*

Daft, R. L., & Marcic, D. (2009). *Understanding management*. Mason, OH: Thomson Higher Education.

Dalakoura, A. (2010). Examining the effects of leadership development on firm performance. *Journal of Leadership Studies, 4*(1), 59–70.*

Davis, D. D. (2008). *The influence of salesperson leadership as a customer interaction behavior on sales performance*. Unpublished doctoral dissertation, Nova Southeastern University, Fort Lauderdale, FL.*

Davis, M. W. (2009). *Distributed leadership and school performance*. Unpublished doctoral dissertation, The George Washington University, Washington, DC.*

Davis, J. K. (2012). *Virtual teams: Examining leadership intervention and the perception of virtual team performance*. Unpublished doctoral dissertation, Capella University, Minneapolis, MN.*

de Oliveira, M. A., Possamai, O., Dalla Valentina, L. V. O., & Flesch, C. A. (2012). Applying Bayesian networks to performance forecast of innovation projects: A case study of transformational leadership influence in organizations oriented by projects. *Expert Systems with Applications, 39*(5), 5061–5070.*

Deconinck, J., & Beth, M. (2013). The relationship among transformational leadership, supervisory trust, performance and turnover intentions. *GSTF International Journal on Business Review, 2*(3), 205–211.*

Defee, C. C., Stank, T. P., & Esper, T. (2010). Performance implications of transformational supply chain leadership and followership. *International Journal of Physical Distribution & Logistics Management, 40*(10), 763–791.*

deJong, S. B., & Bruch, H. (2013). The importance of a homogeneous transformational leadership climate for organizational performance. *International Journal of Leadership Studies, 8*(1), 1–18.*

deLuque, M. S., Washburn, N. T., Waldman, D. A., & House, R. J. (2008). Unrequited profit: How stakeholder and economic values relate to subordinates' perceptions of leadership and firm performance. *Administrative Science Quarterly, 53*, 626–654.*

Dirks, K. T. (2000). Trust in leadership and team performance: Evidence from NCAA basketball. *Journal of Applied Psychology, 85*(6), 1004–1012.*

Dulewicz, C., Young, M., & Dulewicz, V. (2005). The relevance of emotional intelligence for leadership performance. *Journal of General Management, 30*(3), 71–86.*

Dutschke, J. (2003). *Chief enrollment manager leadership style and enrollment performance: A correlation study*. Unpublished doctoral dissertation, Regent University, Virginia Beach, VA.*

Elenkov, D. S. (2002). Effects of leadership on organizational performance in Russian companies. *Journal of Business Research, 55*, 467–480.*

Ensley, M. D., Hmieleski, K. M., & Pearce, C. L. (2006). The importance of vertical and shared leadership within new venture top management teams: Implications for the performance of startups. *The Leadership Quarterly, 17*(3), 217–231.*

Ensley, M. D., Pearce, C. L., & Hmieleski, K. M. (2006). The moderating effect of environmental dynamism on the relationship between entrepreneur leadership behavior and new venture performance. *Journal of Business Venturing, 21*(2), 243–263.*

Ezzeddine, A. M. (2006). *Lean indicators in hospital/healthcare settings and the role of leadership in the diffusion of performance improvement strategies*. Unpublished doctoral dissertation, Wayne State University, Detroit, MI.*

Fazlani, T. A., Ansari, N. H., Nasar, A., Hashmi, P., & Mustafa, M. (2012). Influence of emotional intelligence and leadership performance on organizational development in the prospect of Pakistan's corporate culture. *Interdisciplinary Journal of Contemporary Research in Business, 3*(9), 1289–1311.*

Felício, J. A., Martins Gonçalves, H., & da Conceição Gonçalves, V. (2013). Social value and organizational performance in non-profit social organizations: Social entrepreneurship, leadership, and socioeconomic context effects. *Journal of Business Research, 66*(10), 2139–2146.*

Fernandez, S., Cho, Y. J., & Perry, J. L. (2010). Exploring the link between integrated leadership and public sector performance. *The Leadership Quarterly, 21*(2), 308–323.*

Fleener, B. A. (2009). *A multi-level, multi-score, predictive study of charismatic leadership and performance: The role of gender*. Unpublished doctoral dissertation, Illinois Institute of Technology, Chicago, IL.*

Floyd, A. (2011). *The relationship between staff perceptions of principal leadership and school performance*. Unpublished doctoral dissertation, Florida International University, Miami, FL.*

Fritch, E. J. (2013). *An examination of transformational leadership style and supply chain management performance*. Unpublished doctoral dissertation, Northcentral University, Prescott Valley, AZ.*

Fry, L. W., Hannah, S. T., Noel, M., & Walumbwa, F. O. (2011). Impact of spiritual leadership on unit performance. *The Leadership Quarterly, 22*(2), 259–270.*

Furnham, A. (2002). Managers as change agents. *Journal of Change Management, 3*(1), 21–29.

Gabbert, C. C. (2005). *The relationship between chief executive transformational leadership and hospital high performance*. Unpublished doctoral dissertation, Capella University, Minneapolis, MN.*

García-Morales, V. J., Jiménez-Barrionuevo, M. M., & Gutiérrez-Gutiérrez, L. (2012). Transformational leadership influence on organizational performance through organizational learning and innovation. *Journal of Business Research, 65*(7), 1040–1050.*

García-Morales, V. J., Lloréns-Montes, F. J., & Verdú-Jover, A. J. (2008). The effects of transformational leadership on organizational performance through knowledge and innovation. *British Journal of Management, 19*(4), 299–319.*

García-Morales, V. J., Matías-Reche, F., & Hurtado-Torres, N. (2008). Influence of transformational leadership on organizational innovation and performance depending on the level of organizational learning in the pharmaceutical sector. *Journal of Organizational Change Management, 21*(2), 188–212.*

Gil, F., Rico, R., Alcover, C. M., & Barrasa, A. (2005). Change-oriented leadership, satisfaction and performance in work groups: Effects of team climate and group potency. *Journal of Managerial Psychology, 20*(3/4), 312–328.*

Gingras, C. (2006). *Effects of managers' leadership styles and decision-making styles on appraisal of employees' critical thinking performance*. Unpublished doctoral dissertation, Touro University International, Vallejo, CA.*

Grant, A. M. (2012). Leading with meaning: Beneficiary contact, prosocial impact, and the performance effects of transformational leadership. *Academy of Management Journal, 55*(2), 458–476.*

Griffin, J. D. (2012). Leadership recognition of organizational citizenship behaviors in performance evaluations in Washington state healthcare organizations. Unpublished doctoral dissertation, University of Phoenix, Phoenix, AZ.*

Griffith, J. (2004). Relation of principal transformational leadership to school staff job satisfaction, staff turnover, and school performance. *Journal of Educational Administration, 42*(3), 333–356.*

Guardia, A. B. (2007). *Leadership, group effectiveness, and group performance: An assessment of a theoretical systems model and an observed structural equation*. Unpublished doctoral dissertation, Our Lady of the Lake University, San Antonio, TX.*

Gupta, V. K., Huang, R., & Yayla, A. A. (2011). Social capital, collective transformational leadership, and performance: A resource-based view of self-managed teams. *Journal of Managerial Issues, 23*(1), 31–45.*

Hall, M. D. (2008). *An examination of the transformational leadership behaviors of female head coaches and satisfaction with team performance in division I intercollegiate women's soccer teams: The mediating role of cohesion*. Unpublished doctoral dissertation, University of Denver, Denver, CO.*

Halldórsson, F. (2008). *Leadership style, employee job performance and organizational outcomes*. Unpublished doctoral dissertation, The University of Minnesota, Minneapolis, MN.*

Halverson, S. K. (2002). *Content and delivery in charismatic leadership: Effects on follower satisfaction, performance, and attributions of charisma*. Unpublished master's thesis, Rice University, Houston, TX.*

Hammons, L. R. (2013). *Relationships among non-academic employee perceptions of manager leadership behaviors, meaningful work, and selected performance drivers*. Unpublished doctoral dissertation, Texas A&M University, College Station, TX.*

Hankinson, G. (2012). The measurement of brand orientation, its performance impact, and the role of leadership in the context of destination branding: An exploratory study. *Journal of Marketing Management, 28*(7–8), 974–999.*

Hannah, S. T. (2006). *Agentic leadership efficacy: Test of a new construct and model for development and performance*. Unpublished doctoral dissertation, University of Nebraska, Lincoln, NE.*

Harrison, D. T. (2000). Transformational leadership and community college effectiveness. *Dissertation Abstracts International, 61*(02), 438.

Hartmann, F., Naranjo-Gil, D., & Perego, P. (2010). The effects of leadership styles and use of performance measures on managerial work-related attitudes. *European Accounting Review, 19* (2), 275–310.*

Hauschildt, K., & Konradt, U. (2012). Self-leadership and team members' work role performance. *Journal of Managerial Psychology, 27*(5), 497–517.*

Hawkins, J., & Dulewicz, V. (2009). Relationships between leadership style, the degree of change experienced, performance and follower commitment in policing. *Journal of Change Management, 9*(3), 251–270.*

Hedges, L. V., & Olkin, I. (1985). *Statistical methods for meta-analysis*. Orlando, FL: Academic.

Hmieleski, K. M., & Ensley, M. D. (2007). A contextual examination of new venture performance: Entrepreneur leadership behavior, top management team heterogeneity, and environmental dynamism. *Journal of Organizational Behavior, 28*(7), 865–889.*

Hofmann, D. A., & Jones, L. M. (2005). Leadership, collective personality, and performance. *Journal of Applied Psychology, 90*(3), 509–522.*

Hoggard-Williams, C. L. (2012). *A survey study to investigate educators' perceptions of superintendents' leadership practices and school district performance*. Unpublished doctoral dissertation, Regent University, Virginia Beach, VA.*

Howell, J. M., & Avolio, B. J. (1993). Transformational leadership, transactional leadership, locus of control and support for innovation: Key predictors of consolidated-business-unit performance. *Journal of Applied Psychology, 78*, 891–902.

Howell, J. M., Neufeld, D. J., & Avolio, B. J. (2005). Examining the relationship of leadership and physical distance with business unit performance. *The Leadership Quarterly, 16*(2), 273–285.*

Huang, J. (2003a). *The effects of perceived coach leadership behavior upon team cohesion and performance for Taiwanese college basketball teams*. Unpublished doctoral dissertation, United States Sport Academy, Daphne, AL.*

Huang, J. (2003b). *The effects of perceived coach leadership behavior upon team cohesion and performance for Taiwanese college basketball teams* (Unpublished doctoral dissertation). United States Sport Academy, Daphne, AL.*

Huang, Y. (2007). L*eadership style, leader-member exchange, and performance for a family-run Taiwanese multinational enterprise*. Unpublished doctoral dissertation, Lynn University, Boca Raton, FL.*

Huang, C. M., Hsu, P. Y., & Chiau, W. L. (2011). Perceptions of the impact of chief executive leadership style on organizational performance through successful enterprise resource planning. *Social Behavior and Personality: An International Journal, 39*(7), 865–878.*

Huang, X., Iun, J., Liu, A., & Gong, Y. (2009). Does participative leadership enhance work performance by inducing empowerment or trust? The differential effects on managerial and non-managerial subordinates. *Journal of Organizational Behavior, 31*(1), 122–143.*

Hult, G. T. M., Ketchen, D. J., & Chabowski, B. R. (2007). Leadership, the buying center, and supply chain performance: A study of linked users, buyers, and suppliers. *Industrial Marketing Management, 36*(3), 393–403.*

Imran, R., Zahoor, F., & Zaheer, A. (2012). Leadership and performance relationship: Culture matters. *International Journal of Innovation, Management and Technology, 3*(6), 713–717.*

Indartono, S., Chiou, H., & Chen, C. H. V. (2010). The joint moderating impact of personal job fit and servant leadership on the relationship between the task characteristics of job design and performance. *Interdisciplinary Journal of Contemporary Research in Business, 2*(8), 42–61.*

Ishikawa, J. (2012a). Leadership and performance in Japanese R&D teams. *Asia Pacific Business Review, 18*(2), 241–258.*

Ishikawa, J. (2012b). Transformational leadership and gatekeeping leadership: The roles of norm for maintaining consensus and shared leadership in team performance. *Asia Pacific Journal of Management, 29*(2), 265–283.*

Islam, T., Aamir, M., Ahmed, I., & Muhammad, S. K. (2012). The impact of transformational and transactional leadership styles on the motivation and academic performance of students at university level. *Journal of Educational and Social Research, 2*(2), 237–244.*

Ismail, W. K. W., Mohamad, N. A. B., Hussain, G., Rashid, S. Z. A., & Rashid, M. A. (2011). Organizational commitment as mediator of charismatic leadership to model subordinates' performance and satisfaction. *International Journal of Academic Research, 3*(6), 379–385.*

Jackson, J. C. (2013). *Principal and teacher beliefs about leadership implications for student performance*. Unpublished doctoral dissertation, University of Memphis, Memphis, TN.*

Jeon, K. S. (2011). *The relationship of perception of organization performance and spiritual leadership, workplace spirituality, and learning organization culture in the Korean context*. Unpublished doctoral dissertation, The Pennsylvania State University, State College, PA.*

Jewell, M. A. (2009). *A study of leadership cohesiveness and school performance: An analysis on No Child Left Behind*. Unpublished doctoral dissertation, Our Lady of the Lake University, San Antonio, TX.*

Jimoh, Y. A., Olayide, R., & Saheed, O. (2012). Influence of leadership styles and emotional intelligence on job performance of local government workers in Osun state, Nigeria. *Journal of Alternative Perspectives in the Social Sciences, 3*(4), 973–996.*

Joffrion, A. M. (2011). *Principal leadership behaviors and school performance scores in southeastern Louisina elementary/middle schools*. Unpublished doctoral dissertation, Southeastern Louisiana University, Hammond, LA.*

Jones, R. (2013). *Examining leadership styles and financial performance within rural electric cooperatives*. Unpublished doctoral dissertation, Walden University, Minneapolis, MN.*

Judge, T. A., LePine, J. A., & Rich, B. L. (2006). Loving yourself abundantly: Relationship of the narcissistic personality to self- and other perceptions of workplace deviance, leadership, and task and contextual performance. *Journal of Applied Psychology, 91*(4), 762–776.*

Jung, D. J., & Avolio, B. J. (2000). Opening the black box: An experimental investigation of the mediating effects of trust and value congruence on transformational and transactional leadership. *Journal of Organizational Behavior, 21*, 949–964.

Jung, Y., & Takeuchi, N. (2010). Performance implications for the relationships among top management leadership, organizational culture, and appraisal practice: Testing two theory-based models of organizational learning theory in Japan. *The International Journal of Human Resource Management, 21*(11), 1931–1950.*

Karamat, A. U. (2013). *Impact of leadership on organizational performance*. Unpublished doctoral dissertation, University of Applied Sciences, Finland.

Keller, R. T. (2006). Transformational leadership, initiating structure, and substitutes for leadership: A longitudinal study of research and development project team performance. *Journal of Applied Psychology, 91*(1), 202–210.*

Kellett, J. B., Humhrey, R. H., & Sleeth, R. G. (2002). Empathy and complex task performance: Two routes to leadership. *The Leadership Quarterly, 13*, 523–544.*

Khalid, A., Murtaza, G., Zafar, A., Zafar, M. A., Saqib, L., & Mushtaq, R. (2012). Role of supportive leadership as a moderator between job stress and job performance. *Information Management and Business Review, 4*(9), 487–495.*

Kieu, H. Q. (2010). *Leadership styles and organizational performance: A predictive analysis.* Unpublished doctoral dissertation, University of Phoenix, Phoenix, AZ.*

Kissi, J., Dainty, A., & Tuuli, M. (2013). Examining the role of transformational leadership of portfolio managers in project performance. *International Journal of Project Management, 31* (4), 485–497.*

Klinsontorn, S. (2007). *The influence of leadership styles on organizational commitment and employee performances*. Unpublished doctoral dissertation, Nova Southeastern University, Fort Lauderdale, FL.*

Koech, P. M., & Namusonge, G. S. (2012). The effect of leadership styles on organizational performance at state corporations in Kenya. *International Journal of Business and Commerce, 2*(1), 1–12.*

Koene, B. A. S., Vogelaar, A. L. W., & Soeters, J. L. (2002). Leadership effects on organizational climate and financial performance: Local leadership effect in chain organizations. *The Leadership Quarterly, 13*, 193–215.*

Koommoo-Welch, P. (2008). *Implicit leadership theories: Perceptions of charisma, people, and performance*. Unpublished doctoral dissertation, North Carolina State University, Raleigh, NC.*

Korkmaz, M. (2005). Duyguların ve liderlik stillerinin öğretmenlerin performansı üzerinde etkisi. *Kuram ve Uygulamada Eğitim Yönetimi, 43*, 401–422.*

Kouzes, J. M., & Posner, B. Z. (1995). *The leadership challenge*. San Francisco, CA: Jossey-Bass.

Kulinskaya, E., Morgenthaler, S., & Staudte, R. G. (2008). *Meta analysis: A guide to calibrating and combining statistical evidence*. Chichester: Wiley.

Lee, P. K. C., Cheng, T. C. E., Yeung, A. C. L., & Lai, K.-H. (2011). An empirical study of transformational leadership, team performance and service quality in retail banks. *Omega, 39* (6), 690–701.*

Lee, Y. K., Kim, Y. S., Son, M. H., & Lee, D. J. (2011). Do emotions play a mediating role in the relationship between owner leadership styles and manager customer orientation, and performance in service environment? *International Journal of Hospitality Management, 30*(4), 942–952.*

Leroy, H., Palanski, M. E., & Simons, T. (2012). Authentic leadership and behavioral integrity as drivers of follower commitment and performance. *Journal of Business Ethics, 107*(3), 255–264.*

Li, C., & Hung, C. (2009). The influence of transformational leadership on workplace relationships and job performance. *Social Behavior and Personality, 37*(8), 1129–1142.*

Liang, S.-G., & Steve Chi, S. C. (2012). Transformational leadership and follower task performance: The role of susceptibility to positive emotions and follower positive emotions. *Journal of Business and Psychology, 28*(1), 17–29.*

Liaw, Y.-J., Chi, N.-W., & Chuang, A. (2009). Examining the mechanisms linking transformational leadership, employee customer orientation, and service performance: The mediating roles of perceived supervisor and coworker support. *Journal of Business and Psychology, 25* (3), 477–492.*

Lievens, I., & Vlerick, P. (2014). Transformational leadership and safety performance among nurses: The mediating role of knowledge-related job characteristics. *Journal of Advanced Nursing, 70*(3), 651–661.*

Lim, B. C., & Ployhart, R. E. (2004). Transformational leadership: Relations to the five-factor model and team performance in typical and maximum contexts. *Journal of Applied Psychology, 89*(4), 610–621.*

Limsila, K., & Ogunlana, S. O. (2007). Performance and leadership outcome correlates of leadership styles and subordinate commitment. *Engineering, Constructing and Architectural Management, 15*(2), 164–184.*

Liu, K. L. (2005). *The relationship of business school performance to deans' self-perceived leadership styles in Taiwan*. Unpublished doctoral dissertation, The University of Montana, Missoula, MT.*

Liu, Y. (2012). *Linking authentic leadership to positive employee health, behavioral engagement, and job performance*. Unpublished doctoral dissertation, Louisiana Tech University, Ruston, LA.*

Liu, J., Kwan, H. K., Fu, P. P., & Mao, Y. (2013). Ethical leadership and job performance in China: The roles of workplace friendships and traditionality. *Journal of Occupational and Organizational Psychology, 86*(4), 564–584.*

Lloréns Montes, F. J., Ruiz Moreno, A., & García Morales, V. (2005). Influence of support leadership and teamwork cohesion on organizational learning, innovation and performance: An empirical examination. *Technovation, 25*(10), 1159–1172.*

Lorinkuva, N. M., Pearsall, M. J., & Sims, H. P. (2013). Examining the differential longitudinal performance of directive versus empowering leadership in teams. *Academy of Management Journal, 56*(2), 573–596.*

Loshali, S., & Krishnan, V. R. (2013). Strategic human resource management and firm performance: Mediating role of transformational leadership. *Journal of Strategic Human Resource Management, 2*(1), 9–19.*

Lyon, J. S. (2003). *Does distant leadership make a difference? Exploring the effects of leadership and substitutes for leadership on virtual worker performance and satisfaction*. Unpublished master's thesis, University of Maryland, College Park, MD.*

Marshall, G. W., Brown, T. J., Mowen, J. C., & Flaherty, K. E. (2008). Leadership propensity and sales performance among sales personnel and managers in a specialty retail store setting. *Journal of Personal Selling and Sales Management, 29*(1), 43–59.*

Martínez-Córcoles, M., Gracia, F. J., Tomás, I., Peiró, J. M., & Schöbel, M. (2013). Empowering team leadership and safety performance in nuclear power plants: A multilevel approach. *Safety Science, 51*(1), 293–301.*

Matzler, K., Schwarz, E., Deutinger, N., & Harms, R. (2008). The relationship between transformational leadership, product innovation and performance in SMEs. *Journal of Small Business and Entrepreneurship, 21*(2), 139–152.*

McClelland, J. R. (2008). *Leading a volunteer organization: Impact of leadership styles on the performance of boy scout councils*. Unpublished doctoral dissertation, University of Phoenix, Phoenix, AZ.*

McColl-Kennedy, J. R., & Anderson, R. D. (2002). Impact of leadership style and emotions on subordinate performance. *The Leadership Quarterly, 13*, 545–559.*

McGrath, G. R., & MacMillan, I. C. (2000). *Entrepreneurial mindset: Strategies for continuously creating opportunity in an age of uncertainty*. Boston, MA: Harvard Business School Press.

McMurray, A. J., Islam, M. M., Sarros, J. C., & Pirola-Merlo, A. (2012). The impact of leadership on workgroup climate and performance in a non-profit organization. *Leadership & Organization Development Journal, 33*(6), 522–549.*

Mehra, A., Smith, B. R., Dixon, A. L., & Robertson, B. (2006). Distributed leadership in teams: The network of leadership perceptions and team performance. *The Leadership Quarterly, 17*(3), 232–245.*

Mekraz, A. (2011). *Impacting retail store performance: A correlational study of the relationship between transformational and transactional leadership style and bottom line performance indicators*. Unpublished doctoral dissertation, Capella University, Minneapolis, MN.*

Menges, J. I., Walter, F., Vogel, B., & Bruch, H. (2011). Transformational leadership climate: Performance linkages, mechanisms, and boundary conditions at the organizational level. *The Leadership Quarterly, 22*(5), 893–909.*

Menguc, B., Auh, S., & Shih, E. (2007). Transformational leadership and market orientation: Implications for the implementation of competitive strategies and business unit performance. *Journal of Business Research, 60*(4), 314–321.*

Mohammed, S., & Nadkarni, S. (2011). Temporal diversity and team performance: The moderating role of team temporal leadership. *Academy of Management Journal, 54*(3), 489–508.*

Mora-Whitehurst, R. (2009). *The relationship between elementary principals' visionary leadership and students' reading performance*. Unpublished doctoral dissertation, Barry University, Miami, FL.*

Moreno, R. (2009). *The relationship between the leadership styles of Texas catholic high school and middle school principals and student performance*. Unpublished doctoral dissertation, Our Lady of the Lake University, San Antonio, TX.*

Moynihan, D. P., Pandey, S. K., & Wright, B. E. (2012). Setting the table: How transformational leadership fosters performance information use. *Journal of Public Administration Research and Theory, 22*(1), 143–164.*

Muchiri, M. K., & Cooksey, R. W. (2012). Examining the effects of substitutes for leadership on performance outcomes. *Leadership & Organization Development Journal, 32*(8), 817–836.*

Munley, A. E. (2007). *CEO leadership behaviors, top management teams, and organizational performance: A study of Guatemalan organizations*. Unpublished doctoral dissertation, Regent University, Virginia Beach, VA.*

Murphy, P. R., Dalenberg, D. R., & Daley, J. M. (1990). Improving survey responses with postcards. *Industrial Marketing Management, 19*, 349–355.

Mwendia, K. M. (2006). *Relationship of transformational leadership competencies to financial performance: As applied to the hospitality industry*. Unpublished doctoral dissertation, Capella University, Minneapolis, MN.*

Neufeld, D. J., Wan, Z., & Fang, Y. (2010). Remote leadership, communication effectiveness and leader performance. *Group Decision and Negotiation, 19*(3), 227–246.*

Noruzy, A., Dalfard, V. M., Azhdari, B., Nazari-Shirkouhi, S., & Rezazadeh, A. (2013). Relations between transformational leadership, organizational learning, knowledge management, organizational innovation, and organizational performance: An empirical investigation of manufacturing firms. *The International Journal of Advanced Manufacturing Technology, 64* (5–8), 1073–1085.*

O'Connell, E. L. (2003). *Team potency and transformational leadership: Predicting performance in service-sector teams*. Unpublished doctoral dissertation, Alliant International University of San Diego, San Diego, CA.*

Obiwuru, T. C., Okwu, A. T., Akpa, V. O., & Nwankwere, I. A. (2011). Effects of leadership style on organizational performance: A survey of selected small scale enterprises in Ikosi-Ketu council development area of Lagos State, Nigeria. *Australian Journal of Business and Management Research, 1*(7), 100–111.*

Odusami, K. T., Iyagba, R. R. O., & Omirin, M. M. (2003). The relationship between project leadership, team composition and construction project performance in Nigeria. *International Journal of Project Management, 21*(7), 519–527.*

Ohlson, M. (2009). *A study of school culture, leadership, teacher quality and student outcomes via a performance framework in elementary schools participating in a school reform initiative*. Unpublished doctoral dissertation, University of Florida, Gainesville, FL.*

Olinger, J. L. (2010). *Nursing home leadership styles and performance outcomes: A quantitative study about leader relationships*. Unpublished doctoral dissertation, University of Phoenix, Phoenix, AZ.*

Osborn, R. N., & Marion, R. (2009). Contextual leadership, transformational leadership and the performance of international innovation seeking alliances. *The Leadership Quarterly, 20*(2), 191–206.*

Oshinubi, O. O. (2007). *The influence of project managers' leadership styles on project team performance in construction industry*. Unpublished doctoral dissertation, University of Phoenix, Phoenix, AZ.*

Ozcelik, H., Langton, N., & Aldrich, H. (2008). Doing well and doing good: The relationship between leadership practices that facilitate a positive emotional climate and organizational performance. *Journal of Managerial Psychology, 23*(2), 186–203.*

Panagopoulos, N. G., & Avlonitis, G. J. (2010). Performance implications of sales strategy: The moderating effects of leadership and environment. *International Journal of Research in Marketing, 27*(1), 46–57.*

Patiar, A., & Mia, L. (2009). Transformational leadership style, market competition and departmental performance: Evidence from luxury hotels in Australia. *International Journal of Hospitality Management, 28*(2), 254–262.*

Peterson, S. J., Galvin, B. M., & Lange, D. (2012). CEO servant leadership: Exploring executive characteristics and firm performance. *Personnel Psychology, 65*(3), 565–596.*

Peterson, S. J., Walumbwa, F. O., Avolio, B. J., & Hannah, S. T. (2012). The relationship between authentic leadership and follower job performance: The mediating role of follower positivity in extreme contexts. *The Leadership Quarterly, 23*(3), 502–516.*

Phillips, J. M. (2012). *The enterpreneurial esquire: Enterpreneurial climate as a mediator between transformational leadership and performance in law firms*. Unpublished doctoral dissertation, Johns Hopkins University, Baltimore, MD.*

Phillips, D. R. (2013). *Distributed leadership and the academic performance of international baccalaureate (IB) world schools*. Unpublished doctoral dissertation, Keiser University, Fort Lauderdale, FL.*

Piccolo, R. F., Greenbaum, R., Den Hartog, D. N., & Folger, R. (2010). The relationship between ethical leadership and core job characteristics. *Journal of Organizational Behavior, 31*, 259–278.

Pillai, R., & Willaims, E. A. (2004). Transformational leadership, self-efficacy, group cohesiveness, commitment, and performance. *Journal of Organizational Change Management, 17*(2), 144–159.*

Pomfret, D. T. (2008). *Leadership in the project environment: A correlational study of leadership practices and project performance*. Unpublished doctoral dissertation, University of Phoenix, Phoenix, AZ.*

Popa, B. M. (2012). The relationship between leadership effectiveness and organizational performance. *Journal of Defense Resources Management, 3*(1/4), 123–127.

Pratt, Z. L. (2004). *An investigation of the relationship between external environment, mission and strategy, leadership, organizational culture, and performance*. Unpublished doctoral dissertation, Michigan State University, East Lansing, MI.*

Pritzker, M. A. (2001). *The relationship among CEO dispositional attributes, transformational leadership behaviors and performance effectiveness*. Unpublished doctoral dissertation, Illinois Institute of Technology, Chicago, IL.*

Puni, A., Ofei, S. B., & Okoe, A. (2014). The effect of leadership styles on firm performance in Ghana. *International Journal of Marketing Studies, 6*(1), 177–185.*

Quigley, N. R. (2003). *The relationship between leader core self-evaluations, team feedback, leader efficacy, transformational leadership, team efficacy, team goals, team action and transition processes, and team performance*. Unpublished doctoral dissertation, University of Maryland, College Park, MD.*

Rank, J., Carsten, J. M., Unger, J. M., & Spector, P. E. (2007). Proactive customer service performance: Relationships with individual, task, and leadership variables. *Human Performance, 20*(4), 363–390.*

Rank, J., Nelson, N. E., Allen, T. D., & Xu, X. (2009). Leadership predictors of innovation and task performance: Subordinates' self-esteem and self-presentation as moderators. *Journal of Occupational Psychology, 82*, 465–489.*

Rich, P. B. (2014). *The impact of the relationship between ethical leader behavior, transformational leadership, and organizational performance moderated by organizational hierarchy*. Unpublished doctoral dissertation, Capella University, Minneapolis, MN.*

Rios, L. A. (2010). *The relationship between emerging leadership behavior in children and their academic performance*. Unpublished doctoral dissertation, Our Lady of the Lake University, San Antonio, TX.*

Rogers, T. A. (2000). *The role of transformational leadership in salesperson's motivation and performance*. Unpublished doctoral dissertation, Illinois Institute of Technology, Chicago, IL.*

Roi, R. C. (2006). *Leadership, corporate culture and financial performance*. Unpublished doctoral dissertation, The University of San Francisco, San Francisco, CA.*

Rowe, W. G. (2001). Creating wealth in organizations: The role of strategic leadership. *Academy of Management Executive, 15*, 81–94.

Rowold, J. (2011). Relationship between leadership behaviors and performance: The moderating role of a work team's level of age, gender, and cultural heterogeneity. *Leadership & Organization Development Journal, 32*(6), 628–647.*

Rowold, J., & Rohmann, A. (2009). Transformational and transactional leadership styles, followers' positive and negative emotions, and performance in German nonprofit orchestras. *Nonprofit Management and Leadership, 20*(1), 41–59.*

Rus, D., van Knippenberg, D., & Wisse, B. (2010). Leader power and leader self-serving behavior: The role of effective leadership beliefs and performance information. *Journal of Experimental Social Psychology, 46*(6), 922–933.*

Russ, F. A., McNeilly, K. M., & Comer, J. M. (1996). Leadership, decision making and performance of sales managers: A multi-level approach. *Journal of Personal Selling and Management, 16*(3), 1–15.

Sabir, M. S., Iqbal, J. J., Rehman, K. U., Shah, K. A., & Yameen, M. (2012). Impact of corporate ethical values on ethical leadership and employee performance. *International Journal of Business and Social Science, 3*(2), 163–171.*

Salanova, M., Lorente, L., Chambel, M. J., & Martínez, I. M. (2011). Linking transformational leadership to nurses'extra-role performance: The mediating role of self-efficacy and work engagement. *Journal of Advanced Nursing, 67*(10), 2256–2266.*

Salman, Z., Riaz, A., Saifullah, M., & Rashid, M. (2011). Leadership styles and employee performance (A case study of Shakarganj Mills Limited Jhang Pakistan). *Interdisciplinary Journal of Contemporary Research in Business, 3*(6), 257–267.*

Sam, M., Fazli, M., Tahir, M. N. H., & Abu Bakar, K. (2012). Owner-managers of SMEs in it sector: Leadership and company performance. *International Journal of Business and Social Science, 3*(14), 195–205.*

Samad, S. (2012). The influence of innovation and transformational leadership on organizational performance. *Procedia Social and Behavioral Sciences, 57*, 486–493.*

Sandell, K. (2012). *Transformational leadership, engagement, and performance: A new perspective*. Unpublished master's thesis, Colorado State University, Fort Collins, CO.*

Sani, A., & Maharani, V. (2012). The impacts of transformational leadership and organizational commitment on job performance with the among lecturers of faculty in the Islamic Maulana Malik Ibrahim Malang University: The mediating effects of organizational citizenship behavior. *International Journal of Academic Research, 4*(4), 102–106.*

Santora, J. C., Seaton, W., & Sarros, J. C. (1999). Changing times: Entrepreneurial leadership in a community-based nonprofit organization. *Journal of Leadership Studies, 6*(3/4), 101–109.

Sarwat, N., Hayat, K., Qureshi, J. A., & Ali, M. (2011). Impact of strategic leadership on organizational performance, in the context of job satisfaction and organizational commitment, evidence form educational institutions of Pakistan. *Interdisciplinary Journal of Contemporary Research in Business, 3*(4), 658–675.*

Sawati, M. J., Anwar, S., & Majoka, M. I. (2011). Principals' leadership styles and their impact on schools' academic performance at secondary level in Khyber Pakhtoonkhwa, Pakistan. *Interdisciplinary Journal of Contemporary Research in Business, 3*(1), 1038–1048.*

Schyns, B., & Schilling, J. (2013). How bad are the effects of bad leaders? A meta-analysis of destructive leadership and its outcomes. *The Leadership Quarterly, 24*(1), 138–158.

Shahhosseini, M., Silong, A. D., & Ismaill, I. A. (2013). Relationship between transactional, transformational leadership styles, emotional intelligence and job performance. *Journal of Arts, Science & Commerce, 4*(1/1), 15–22.*

Shannahan, K. L. (2006). *The relationship of salesperson coachability, trait competitiveness, and leadership style on salesperson performance: An interactionist perspective*. Unpublished doctoral dissertation, The University of Memphis, Memphis, TN.*

Shannahan, K. L. J., Bush, A. J., & Shannahan, R. J. (2012). Are your salespeople coachable? How salesperson coachability, trait competitiveness, and transformational leadership enhance sales performance. *Journal of the Academy of Marketing Science, 41*(1), 40–54.*

Sheppard, L. S. (2007). *The relationship between student performance and leadership practices as perceived by principals and selected site-based decision making (SBDM) committee members of middle schools in Region 5 Education Service Center (ESC), Texas: A cohort study*. Unpublished doctoral dissertation, Texas A&M University, College Station, TX.*

Shriberg, M. P. (2002). Sustainability in U.S. higher education: Organizational factors influencing campus environmental performance and leadership. Unpublished doctoral dissertation, University of Michigan, Ann Arbor, MI.*

Silver, S. R. (2000). *Perceptions of empowerment in engineer workgroups: The linkage to transformational leadership and performance*. Unpublished doctoral dissertation, George Washington University, Washington, DC.*

Simon, M. R. (2008). *An investigation of Bass' leadership theory on organizational performance of small and medium enterprises in Trinidad and Tobago*. Unpublished doctoral dissertation, Nova Southeastern University, Fort Lauderdale, FL.*

Sivasubramaniam, N., Murry, W. D., Avolio, B. J., & Jung, D. I. (2002). A longitudinal model of the effects of team leadership and group potency on group performance. *Group & Organization Management, 27*(1), 66–96.*

Soileau, C. B. (2007). *High school principals'perceived leadership practices and their relationship to student performance on the Texas Assessment of Knowledge and Skills (TAKS): A cohort study*. Unpublished doctoral dissertation, Texas A&M University, College Station, TX.*

Sosik, J. J. (1997). Effect of transformational leadership and anonymity on idea generation in computer-mediated groups. *Group & Organization Management, 22*(4), 460–487.

Sosik, J. J. (2001). Self-other agreement on charismatic leadership: Relationships with work attitudes and managerial performance. *Group & Organization Management, 26*(4), 484–511.*

Sosik, J. J., Juzbasich, J., & Chun, J. U. (2011). Effects of moral reasoning and management level on ratings of charismatic leadership, in-role and extra-role performance of managers: A multisource examination. *The Leadership Quarterly, 22*(2), 434–450.*

Sosik, J. J., Potosky, D., & Jung, D. I. (2002). Adaptive self-regulation: Meeting others' expectations of leadership and performance. *The Journal of Social Psychology, 142*(2), 211–232.*

Spalding, S. M. (2010). *Exploring the effect of athlete leadership on the cohesion-performance relationship*. Unpublished master's thesis, University of Windsor, Windsor, ON.*

Srivastava, A., Bartol, K. M., & Locke, E. A. (2006). Empowering leadership in management teams: Effects on knowledge sharing, efficacy, and performance. *Academy of Management Journal, 49*(6), 1239–1251.*

Staheli, N. (2013). *Return & report: The role of leadership and performance measurement systems in employee engagement*. Unpublished doctoral dissertation, University of Hawaii at Manoa, Honolulu, HI.*

Stanley, C. L. (2001). *Examination of group supervision: Cohesiveness and supervisor leadership as predictors of intern performance*. Unpublished doctoral dissertation, Seattle Pacific University, Seattle, WA.*

Stark, E., & Poppler, P. (2009). Leadership, performance evaluations, and all the usual suspects. *Personnel Review, 38*(3), 320–338.*

Steyrer, J., Schiffinger, M., & Lang, R. (2008). Organizational commitment-A missing link between leadership behavior and organizational performance? *Scandinavian Journal of Management, 24*(4), 364–374.*

Stigall, D. J. (2005). *A vision for a theory of competent leader communication: The impact of perceived leader communication behaviors on emergent leadership and relational and*

performance outcomes in collaborative groups. Unpublished doctoral dissertation, University of Kentucky, Lexington, KY.*

Strøm, R., D'Espallier, B., & Mersland, R. (2014). Female leadership, performance, and governance in microfinance institutions. *Journal of Banking & Finance, 42*, 60–75.*

Suwannapirom, S. (2005). *Transformational and transactional leadership and performance outcomes of Japanese and U.S. managers in Thailand*. Unpublished doctoral dissertation, Burapha University, Thailand.*

Tai, C. C. L., Chang, C. M., Hong, J. Y., & Chen, L. C. (2012). Alternative models for the relationship among leadership, organizational citizenship behavior, and performance: A study of new product development teams in Taiwan. *Procedia Social and Behavioral Sciences, 57*, 511–517.*

Taylor, T. R. (2010). *The degree to which leaders' cultural intelligence, leadership skills, and NPO performance correlate*. Unpublished doctoral dissertation, University of Phoenix, Phoenix, AZ.*

Thomas, D. J. (2007). *A new lense: The relationship between teacher leadership style and performance evaluation*. Unpublished doctoral dissertation, Fordham University, Bronx, NY.*

Thompson, K. J. (2000). *Charismatic leadership and its effects on team cognitions, behaviors, and performance*. Unpublished doctoral dissertation, State University of New York at Buffalo.*

Tourigny, L. (2001). *Relationship among servant-leadership, altruism and social performance: A study of American presidents*. Unpublished doctoral dissertation, Concordia University, Montréal, QC.*

Tsaia, W., Chen, H., & Cheng, J. (2009). Employee positive moods as a mediator linking transformational leadership and employee work outcomes. *The International Journal of Human Resource Management, 20*(1), 206–219.

Tse, H. H. M., & Chiu, W. C. K. (2014). Transformational leadership and job performance: A social identity perspective. *Journal of Business Research, 67*(1), 2827–2835.

Tung, H., & Chang, Y. (2011). Effects of empowering leadership on performance in management teams: Mediating effects of knowledge sharing and team cohesion. *Journal of Chinese Human Resource Management, 2*(1), 43–60.*

Tuytens, M., & Devos, G. (2012). Importance of system and leadership in performance appraisal. *Personnel Review, 41*(6), 756–776.*

Ullah, S., Ullah, A., & Durrani, B. (2011). Effect of leadership on employees performance in multinational pharmaceutical companies in Pakistan. *Interdisciplinary Journal of Contemporary Research in Business, 2*(9), 286–299.

Van Woerkom, M., & De Reuver, R. S. (2009). Predicting excellent management performance in an intercultural context: A study of the influence of multicultural personality on transformational leadership and performance. *The International Journal of Human Resource Management, 20*(10), 2013–2029.*

Vasilaki, A. (2011). The relationship between transformational leadership and postacquisition performance. *International Studies of Management and Organization, 41*(3), 42–58.*

Verdigets, F. L. (2008). *Insights into leadership: The role of political skill, social skill, and self-monitoring in mediating the relationship between transformational leadership and job performance*. Unpublished doctoral dissertation, Auburn University, Auburn, AL.*

Vigoda-Gadot, E. (2007). Leadership style, organizational politics, and employees' performance: An empirical examination of two competing models. *Personnel Review, 36*(5), 661–683.*

Wallace, J. M. (2006). *The relationship of leadership behaviors with follower performance: A study of alternative schools*. Unpublished doctoral dissertation, Regent University, Virginia Beach, VA.*

Walrath, D. (2011). *A quantitative correlational study: Nurse leadership and communication effect on psychiatric nurse performance and retention*. Unpublished doctoral dissertation, University of Phoenix, Phoenix, AZ.*

Walumbwa, F. O., Avolio, B. J., & Zhu, W. (2008). How transformational leadership weaves its influence on individual job performance: The role of identification and efficacy beliefs. *Personnel Psychology, 61*(4), 793–825.*

Walumbwa, F. O., & Hartnell, C. A. (2011). Understanding transformational leadership-employee performance links: The role of relational identification and self-efficacy. *Journal of Occupational and Organizational Psychology, 84*(1), 153–172.*

Walumbwa, F. O., Mayer, D. M., Wang, P., Wang, H., Workman, K., & Christensen, A. L. (2011). Linking ethical leadership to employee performance: The roles of leader-member exchange, self-efficacy, and organizational identification. *Organizational Behavior and Human Decision Processes, 115*(2), 204–213.*

Walumbwa, F. O., Morrison, E. W., & Christensen, A. L. (2012). Ethical leadership and group in-role performance: The mediating roles of group conscientiousness and group voice. *The Leadership Quarterly, 23*(5), 953–964.*

Wang, L. (2011). *An alternative explanation for transformational leadership effectiveness: The role of leader proactive feedback-seeking behavior in the relationship between transformational leadership and subordinate performance*. Unpublished doctoral dissertation, The State University of New York, New York, NY.*

Wang, A. C., Chiang, J. T.-J., Tsai, C.-Y., Lin, T.-T., & Cheng, B.-S. (2013). Gender makes the difference: The moderating role of leader gender on the relationship between leadership styles and subordinate performance. *Organizational Behavior and Human Decision Processes, 122*(2), 101–113.*

Wang, H., Law, K. S., Hackett, R. D., Wang, D., & Chen, Z. X. (2005). Leader-member exchange as a mediator of the relationship between transformational leadership and followers' performance and organizational citizenship behavior. *Academy of Management Journal, 48*(3), 420–432.*

Wang, H., Tsui, A. S., & Xin, K. R. (2011). CEO leadership behaviors, organizational performance, and employees' attitudes. *The Leadership Quarterly, 22*(1), 92–105.*

Watson, W. E., Johnson, L., & Zgourides, G. D. (2002). The influence of ethnic diversity on leadership, group process, and performance: An examination of learning teams. *International Journal of Intercultural Relations, 26*, 1–16.*

Wei, F., Yuan, X., & Di, Y. (2010). Effects of transactional leadership, psychological empowerment and empowerment climate on creative performance of subordinates: A cross-level study. *Frontiers of Business Research in China, 4*(1), 29–46.*

Weng, L. C., Su, C. W., & Lai, Y. C. (2011). Superior service performance through transformational leadership: A cross-level study of a large Taiwanese commercial bank. *Asia Pacific Management Review, 16*(2), 181–195.*

Wilderom, C. P. M., van den Berg, P. T., & Wiersma, U. J. (2012). A longitudinal study of the effects of charismatic leadership and organizational culture on objective and perceived corporate performance. *The Leadership Quarterly, 23*(5), 835–848.*

Willey, S. A. (2011). *The relationship between superintendent leadership strategies and management techniques and student performance as perceived by superintendents in Illinois school districts: A replication and an extension of Byrd's 2000 study*. Unpublished doctoral dissertation, Western Illinois University, Macomb, IL.*

Wilson, C. L. (2008). *A relational study of leadership spirituality and organizational performance in home health care agencies*. Unpublished doctoral dissertation, University of Phoenix, Phoenix, AZ.*

Wintering, V. O. (2008). *The relationship between K-12 principal leadership, self- efficacy and academic performance*. Unpublished doctoral dissertation, Capella University, Minneapolis, MN.*

Wu, M. (2012). Moral leadership and work performance: Testing the mediating and interaction effects in China. *Chinese Management Studies, 6*(2), 284–299.*

Wu, T. C., Chang, S. H., Shu, C. M., Chen, C. T., & Wang, C. P. (2011). Safety leadership and safety performance in petrochemical industries: The mediating role of safety climate. *Journal of Loss Prevention in the Process Industries, 24*(6), 716–721.*

Wu, T. C., Chen, C. H., & Li, C. C. (2008). A correlation among safety leadership, safety climate and safety performance. *Journal of Loss Prevention in the Process Industries, 21*(3), 307–318.*

Xenikou, A., & Simosi, M. (2006). Organizational culture and transformational leadership as predictors of business unit performance. *Journal of Managerial Psychology, 21*(6), 566–579.*

Xu, X. D., Zhong, J. A., & Wang, X.-Y. (2013). The impact of substitutes for leadership on job satisfaction and performance. *Social Behavior and Personality: An International Journal, 41* (4), 675–685.*

Yang, C. (2006). *The effect of leadership and entrepreneurial orientation of small and medium enterprises on business performance in Taiwan*. Unpublished doctoral dissertation, University of the Incarnate Word, San Antonio, TX.*

Yang, L. R., Wu, K. S., Wang, F. K., & Chin, P. C. (2010). Relationships among project manager's leadership style, team interaction and project performance in the Taiwanese server industry. *Quality & Quantity, 46*(1), 207–219.*

Yeh, H., & Hong, D. (2012). The mediating effect of organizational commitment on leadership type and job performance. *The Journal of Human Resource and Adult Learning, 8*(2), 50–59.*

Young, M., & Dulewicz, V. (2006). Leadership styles, change context and leader performance in the Royal Navy. *Journal of Change Management, 6*(4), 383–396.*

Yousef, D. A. (2000). Organizational commitment: A mediator of the relationships of leadership behavior with job satisfaction and performance in a non-western country. *Journal of Managerial Psychology, 15*(1), 6–28.*

Yuan, C. K., & Lee, C. Y. (2011). Exploration of a construct model linking leadership types, organization culture, employees performance and leadership performance. *Procedia Social and Behavioral Sciences, 25*, 123–136.*

Yukl, G. A. (1998). *Leadership in organizations*. Englewood Cliffs, NJ: Prentice-Hall.

Zehir, C., Akyuz, B., Eren, M., & Turhan, G. (2013). The indirect effects of servant leadership behavior on organizational citizenship behavior and job performance: Organizational justice as a mediator. *International Journal of Research in Business and Social Science, 2*(3), 1–13.*

Zehir, C., & Erdogan, E. (2011). The association between organizational silence and ethical leadership through employee performance. *Procedia Social and Behavioral Sciences, 24*, 1389–1404.*

Zehir, C., Ertosun, Ö. G., Zehir, S., & Müceldili, B. (2011). The effects of leadership styles and organizational culture over firm performance: Multi-national companies in İstanbul. *Procedia Social and Behavioral Sciences, 24*, 1460–1474.*

Zehir, C., Müceldili, B., Zehir, S., & Ertosun, Ö. G. (2012). The mediating role of firm innovativeness on management leadership and performance relationship. *Procedia Social and Behavioral Sciences, 41*, 29–36.*

Zehir, C., Sehitoglu, Y., & Erdogan, E. (2012). The effect of leadership and supervisory commitment to organizational performance. *Procedia Social and Behavioral Sciences, 58*, 207–216.*

Zhou, W. (2012). *Moderating effects of shared leadership on the relationship between entrepreneurial team diversity and performance*. Unpublished doctoral dissertation, The City University of New York, New York, NY.*

Zhu, W., Chew, I. K. H., & Spangler, W. D. (2005). CEO transformational leadership & organizational outcomes: The mediating role of human-capital-enhancing human resource management. *The Leadership Quarterly, 16*(1), 39–52.

Zohar, D., Huang, Y. H., Lee, J., & Robertson, M. (2014). A mediation model linking dispatcher leadership and work ownership with safety climate as predictors of truck driver safety performance. *Accident Analysis and Prevention, 62*, 17–25.*

The Effect of Leadership on Organizational Stress

Yusuf Ay and Sevil Orhan

Abstract The effect of leadership on organizational stress was examined in this meta-analysis study. A total of 190 research studies were collected as a result of the review, out of which 41 were included in the meta-analysis. The 41 research studies were compiled to obtain a sample group/sector size of 25,650 subjects. The analysis results of the random effect model showed that leadership has a *small negative effect* on organizational justice. Sample group/sector type, leadership style/approach and the leadership scales used in the research studies were moderator variables of the study, and it was found that publication type and publication year were not moderator variables.

1 Introduction

The concept of stress was first defined by Selye (1974) as the 'a non-specific reaction of the body to any external demand', and the word stress encompasses meanings including tension, strain, crisis, violence and force. Conceptually, stress can be expressed as the physical and mental reaction of an individual to perceived external threats (Nahavandi & Malekzadeh, 1998). Others have attempted to define stress as follows: According to Magnuson (1990), stress is the reaction of an individual to the incongruence between the real world and the person's expectations (Gümüştekin & Öztemiz, 2004); Davis (1982) suggested that stress is the state of tension that threatens a person's ability to cope with their environment within physical conditions or the person's thought processes of their emotions; Robins (1996) defined stress as the result of the ambiguous and significant dynamic conditions of opportunities, limitations or desires with which the individual is faced. According to Ekinci and Ekici (2003), stress is the physiological stimulants necessary to regain the inner balance lost to undesired external factors and is the

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sum of relationships that are perceived by the individual as a threat and surpass the individuals' capacity for resilience. Stress has become an inseparable part of our modern lives. Increasingly difficult living conditions, uncertainties borne of the quick rate of change and changes in human relations are factors that affect the increase in levels of stress (Barutçugil, 2004).

Problems that arise in an individual's working life affect their behavior, thoughts, activity, work, interpersonal relationships and communication processes. Individuals experience intensive stress in parallel with work-related problems. In such cases, the level of personal comfort and productivity in the workforce is reduced (Korkmaz & Ceylan, 2012). It can also be stated that employees experience stress particularly when they experience a heavy workload and poor management, are not adequately fulfilling responsibilities, work in non-conducive working environments and have a lack of trust (Albrect, 1988). A stressful working life may cause individuals to show signs of emotional tension, an inability to get along with others and discord. On another level, stress may directly or indirectly lead to the increase in the cost of work capacity and reduce the quality of work life (Korkmaz & Ceylan, 2012). Many research studies show that the characteristics of the leader affect the organization in a variety of different ways. The stress of employees is one of these factors (Kuoppala, Lamminpää, Liira, & Vainio, 2008).

A leader is a person who can provide guidance for communities, motivate people and instill enthusiasm to reach set objectives. The main responsibility of a leader in an organization is to ensure that employees focus. In addition to this main responsibility, the leader has the responsibility to increase the morale and motivation of employees, to provide psychological support and ensure the provision of relaxation and comfort conditions (Cotton, 2006; Öznur, Çelik, & Erdem, 2013). According to Evans (2003), the style of management affects the level of stress of school teachers. It can be stated that tension, fear and anxiety in particular are experienced in environments that favor an authoritarian style of management (cited in Can, 1997).

In recent studies conducted on leadership, the relationship between various leadership approaches/styles and stress was examined. A review of the findings showed that there was a negative relationship between stress and transformational leadership (Gellis, 1999; Sosik & Godshalk, 2000; Stordeur, D'hoore, & Vandenberghe, 2000; Keller, 2005; Gill, Flaschner, & Shachar, 2006; Brooks, 2009; Daenzer, 2009; Howitt, 2009; Poe, 2011; LaFalce, 2012), situational leadership (Pomerantz, 1992; Decoster, Jeroen, Jeroen, & Tripp, 2014), ethical leadership (Dale & Fox, 2008; Elçi, Şener, Aksoy, & Alpkan, 2012), clinical leadership (Meyer, Broome, Kelber, & Lostocco, 2000; Christina & Konstantinos, 2009), production-oriented leadership (Lopez, Green, Carmody-Bubb, & Kodatt, 2011), inter-personal leadership (Gardiner & Tiggemann, 1999), relations-oriented leadership (Lane, 2000), constructive leadership (Napier, 1996) and general leadership (Dalmau, 1988; Charles, 1989; Craig, 1994; Remy, 1999; Arincorayan, 2000; Romano & Wahlstrom, 2000; Kagan, 2001; Ryska, 2002; Wood, 2004; Meredith & T, 2007; Reynolds & Odwyer, 2008; Norton, 2010; Safaria, Othman, & Nubli Abdul Wahab, 2011; Sherman et al., 2012).

This study examined the effect of leadership on organizational stress. Furthermore, the moderator variables, which were expected to have medium effects, are

identified as: (1) sample group/sector type, (2) leadership style/approach, (3) publication type, (4) publication year, (5) the leadership scale used in research studies. All these variables, along with the results of previous studies, were used to test the following hypotheses of this study:

H_1 Leadership has a negative effect on organizational stress.
H_2 The sample group/sector type is a moderator for the negative effect of leadership on organizational stress.
H_3 Leadership style/approach is a moderator of the negative effect of leadership on organizational stress.
H_4 The studies' publication type is a moderator of the negative effect of leadership on organizational stress.
H_5 The studies' publication year is a moderator of the negative effect of leadership on organizational stress.
H_6 The leadership scale used in research studies is a moderator of the negative effect of leadership on organizational stress.

2 Method

2.1 Study Design

In this study, the effect of leadership on organizational stress was tested with a meta-analysis design.

2.2 Review Strategy and Criteria for Inclusion/Exclusion

To determine the research studies to include in the meta-analysis, the Science-Direct, Proquest and Ebsco academic databases were used to conduct a literature review. For this process, the terms *leadership* and stress included in the titles of the studies were used to screen the research studies. The end date for the research studies to be included was identified as March 2014. Doctoral dissertations and peer-reviewed journals were included in the study.

Many strategies were used to identify the research studies that were appropriate for the meta-analysis of the study. First, a research study pool (190 research studies) was established including all studies with leadership and stress in their titles. The abstracts of these studies were reviewed, and all were found to be appropriate to include in the study. In the second stage, all research studies in the pool were examined in detail; 41 of the research studies in the pool were appropriate, and 149 were not found suitable. The descriptive statistics of the 41 research studies to be included in the analysis are presented in Table 1.

Table 1 Characteristics of the studies included in the meta-analysis

Variables		1	2	3	4	5	6	Total
Year of the research		Before 1990	1990–1999	2000–2009	After 2010	–	–	
	n	2	6	22	11	–	–	41
	%	4.8	14.6	53.7	26.9	–	–	100
Type of the research		Dissertation	Article	–	–	–	–	
	n	21	20	–	–	–	–	41
	%	51.3	48.7	–	–	–	–	100
Sample group/sector		Religion	Sports	Army	Health	Education	Service	
	n	1	1	2	5	14	18	41
	%	2.4	2.4	4.8	12.2	34.2	44.0	100

The criteria for inclusion of the research studies to the analysis study were:

- To have the statistical information necessary for correlational meta-analysis (n and r, or R^2 values)
- To be a study measuring the correlation between leadership and stress

Reasons for not including a research study in the meta-analysis:

- Having no quantitative data (qualitative research)
- Not having a correlation coefficient
- Not focusing on stress
- Not focusing on leadership

2.3 Coding Process

The coding process is essentially a data sorting process used to ascertain which of the complex data in studies are clear and suitable for the study. In this scope, a coding form was developed before the statistical analysis was conducted, and the coding was conducted according to the form. The main aim was to develop a specific coding system that allowed the study to see the entirety of the research studies in general and that would not miss any characteristics of each individual research study. The coding form developed in the study was comprised of:

- References for the research
- Sample information
- Sample group/sector
- Leadership style/approach
- Data collection tool(s)
- Quantitative values

2.4 Statistical Processes

The effect size acquired in a meta-analysis is a standard measure value used in the determination of the strength and direction of the relationship in the study (Borenstein, Hedges, Higgins, & Rothstein, 2009). Pearson's correlation coefficient (r) was determined to be the impact quantity in this study. Because the correlation coefficient has a value between $+1$ and -1, the r value calculated was evaluated by converting this value into the value as it appears in the z table (Hedges & Olkin, 1985). Provided that more than one correlation value is given between the same structure categories in correlational meta-analysis studies, two different approaches were used in the determination of the one to be used in the meta-analysis (Borenstein et al., 2009; Kulinskaya, Morgenthaler, & Staudte, 2008). For this study, (1) first, if the correlations were independent, all the related correlations

were included in the analysis and were considered to be independent studies, and (2) if there were dependent correlations, then the conservative estimation value was accepted. A *random effect model* was used for the meta-analysis processes in this study. The *Comprehensive Meta-Analysis* program was used in the meta-analysis process.

2.5 Moderator Variables

To determine the statistical significance of the difference between the moderators of the study, only the Q_b values were used. Five moderator variables that were thought to play a role in average effect size were identified in the study. The first, *sample group/sector,* was expected to be a moderator of the relationship between stress and leadership. The second, *leadership style/approach,* was expected to moderate the average effect of leadership perceptions on stress. The studies' *publication type* and *publication year* were additional moderators of the relationship between stress and leadership, along with *leadership scale*.

2.6 Publication Bias

A funnel plot for the research studies included in the meta-analysis of the study can be seen in Fig. 1. Evidence for the effect of publication bias in the research studies included in the meta-analysis can be seen in Fig. 1. A serious asymmetry would be expected in the funnel plot if there were a publication bias. The concentration of plots on one side, under the line of the average effect size and particularly in the bottom section of the funnel, suggests the probability of a publication bias. In this study, no evidence of the partiality of the publications was observed in any of the 41 data subjected to the meta-analysis.

Although no partiality in publications was observed in funnel plot, the results of Duval and Tweedie's trim and fill test, which was applied to determine the effect size related to partiality in publications acquired with the meta-analysis using the random effect model, are shown in Table 2. As seen in Table 2, there is no difference between the effect observed and the artificial effect size created to fix the effect of the partiality of publications. The research on each side of the center line is symmetrical, and this is the indicator of non-difference. Because there is no evidence of lost data on either side of the centerline, the difference between the fixed effect size and the observed effect size is zero.

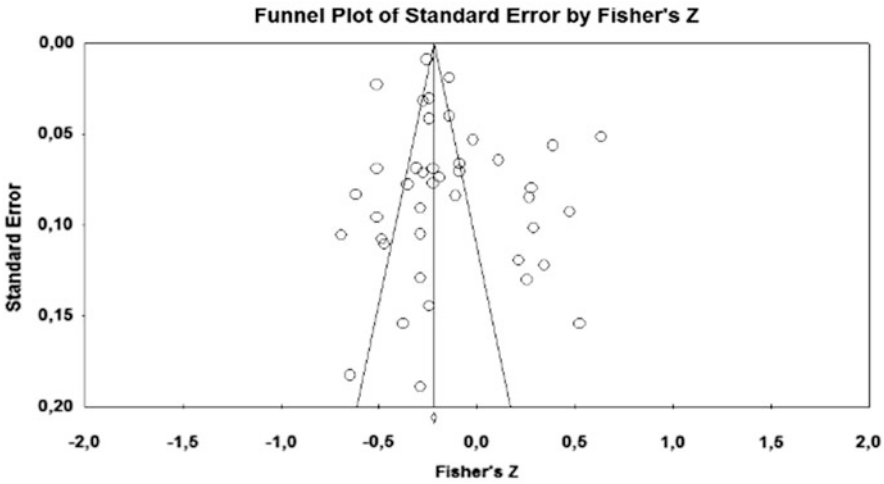

Fig. 1 Effect size funnel for publication bias

Table 2 Duval and Tweedie's trim and fill test results

			CI (confidence interval)		Q
	Studies trimmed	Point estimate	Lower limit	Upper limit	
Observed values		−0.13	−0.20	−0.06	963.5
Adjusted values	0	−0.13	−0.20	−0.06	963.5

3 Findings

Table 3 shows the results of meta-analysis of leadership and organizational stress. The findings provided support for H_1, which predicted a negative relationship between leadership and organizational stress. The effect size of leadership on organizational stress was calculated as −0.13. This result shows that leadership has a *small negative effect* on organizational stress (*see* Cohen, 1988).

The results of the moderator analysis showed that H_2, which predicted that sample group/sector type would be a moderator for the negative effect of leadership on organizational stress, was supported. The moderator analysis found a statistically significant difference in the effect of various sample groups/sectors ($Q_b = 21.05$, $p < 0.05$). In this scope, the results of the meta-analysis included in the studies found that a small negative effect on stress was the case for the religious group [$r = -0.27$], military group [$r = -0.20$] and the service sector group. In contrast, the effect of leadership on stress on the education sector, health sector and athlete group was not found to be statistically significant ($p > 0.05$).

Findings supported H_3, which predicted that leadership style/approach would be a moderator of the negative effect of leadership on organizational stress. The moderator analysis showed that the difference between the effect size of leadership

Table 3 Findings of the correlations between leadership and organizational stress: results of the meta-analysis

Variable	k	N	r	CI (confidence interval)		Q	Q_b
				Lower limit	Upper limit		
Stress	41	25,650	−0.13**	−0.20	−0.06	963.5**	
Moderator (sample group/sector)							21.05**
Religion	1	200	−0.27**	−0.39	−0.13		
Sports	1	245	0.11	−0.01	0.23		
Army	2	3,772	−0.20**	−0.32	−0.07		
Health	5	3,011	−0.20	−0.44	0.06		
Education	14	2,749	−0.05	−0.21	0.10		
Service	18	15,673	−0.17*	−0.30	−0.03		
Moderator (leadership style/approach)							270.89**
Supportive	1	169	−0.34**	−0.46	−0.19		
Transformational	14	4,794	−0.20**	−0.28	−0.11		
Situational	1	106	−0.20	−0.78	0.56		
Ethical	2	1,240	−0.40**	−0.65	−0.05		
General	14	3,775	−0.04	−0.23	0.15		
Relational	1	358	−0.02	−0.12	−0.08		
Inter-personal	1	120	0.44**	0.28	0.57		
Clinic	2	2,038	−0.46**	−0.50	−0.43		
Autocratic	1	142	0.26**	0.10	0.40		
Production-oriented	1	214	−0.22**	−0.34	−0.08		
Constructive	1	62	0.25	0.00	0.47		
Managerial	1	12,632	−0.25**	−0.26	−0.23		
Moderator (type of research study)							1.07
Article	20	16,847	−0.17**	−0.26	−0.09		
Dissertation	21	8,803	−0.09	−0.22	0.04		

Moderator (year of the research)							4.72
Before 1990	2	370	0.08	−0.48	0.60		
1990–1999	6	1,366	0.05	−0.32	0.42		
2000–2009	22	8,937	−0.23**	−0.31	−0.13		
After 2010	11	14,977	−0.11*	−0.21	−0.00		
Moderatör (leadership scale)							572.32**
Attentive managerial leadership	1	12,632	−0.25**	−0.26	−0.23		
Ethical leadership scales	1	1,093	−0.24*	−0.29	−0.18		
Researcher	4	1,387	−0.08	−0.37	0.21		
Leadership assessment scale	1	379	0.56**	0.48	0.62		
Leadership behavior description questionnaire	8	1,982	−0.03	−0.27	0.20		
Leadership scale	3	299	−0.34	−0.49	0.17		
Leadership practices inventory	2	236	−0.37**	−0.54	−0.17		
Leadership role ambiguity measurement	1	161	0.27**	0.12	0.40		
Life style inventory	1	62	0.25	0.00	0.47		
Multifactor leadership questionnaire	11	4,488	−0.16**	−0.25	−0.07		
Nursing leadership board	1	1,953	−0.47**	−0.50	−0.43		
Principal's leadership style questionnaire	1	142	0.26**	0.10	0.40		
Shared leadership perception survey	1	200	−0.27**	−0.39	−0.13		
Styles of leadership survey	1	245	0.11	−0.01	0.23		
Teacher follow-up survey	2	134	−0.42**	−0.55	−0.26		
Transformational leadership qualities	1	172	−0.22**	−0.35	−0.07		
Ward leadership scale	1	85	−0.44**	−0.59	−0.25		

*$p < 0.01$, **$p < 0.05$

styles was statistically significant ($Q_b = 270.8$, $p < 0.05$). In this scope, the results of the meta-analysis of the studies included showed that there was a medium negative effect on clinical leadership [$r = -0.46$] and ethical leadership [$r = -0.40$] but a small positive effect on supportive leadership [$r = -0.34$], transformational leadership [$r = -0.20$], production-oriented leadership [$r = -0.22$] and managerial leadership. Furthermore, a medium positive effect was seen on interpersonal leadership styles/approaches [$r = 0.44$], whereas a small positive effect was found for autocratic leadership [$r = 0.26$]. However, a statistically significant difference was not found for the effect of situational leadership, relations-oriented leadership, constructive leadership and a general leadership style/approach ($p > 0.05$).

The findings did not provide support for H_4, which predicted that the publication type of the research studies would be a moderator of the negative effect of leadership on organizational stress. Although the moderator analysis did not show a statistically significant difference in the effect sizes of the sample group/sectors ($Q_b = 1.07$, $p > 0.05$), the effect sizes of research studies [$r = -0.17$] on leadership on organizational stress is low and negative.

The research did not support $H_{5,}$ which hypothesized that the year of publication would play a moderator role in the effect of leadership on organizational stress. The moderator analysis did not find a statistically significant difference in the effect size for studies' publication year ($Q_b = 4.72$, $p > 0.05$). In this scope, it was found that leadership has a small negative effect on organizational stress in regards to publications from 2000 to 20009 [$r = -0.23$] and for publications dated 2010 and beyond [$r = -0.11$]. In contrast, no statistically significant effect was found for leadership on organizational stress in regards to publications in the other year categories ($p > 0.05$).

Findings showed that studies included in the meta-analysis that used leadership scales moderated the effect of leadership on organizational stress, supporting H_6. The moderator analysis found that the effect of leadership scales used in research studies was statistically significant ($Q_b = 572.32$, $p < 0.05$). In this scope, it can be stated that the NLB [$r = -0.47$], WLS [$r = -0.44$], TFS [$r = -0.42$], LPI [$r = -0.37$], LES [$r = -0.34$], AMLW [$r = -0.25$], ELS [$r = -0.24$], SLPS [$r = -0.27$], TLQ [$r = -0.22$] and MLQ [$r = -0.16$] scales used in research studies have a small negative effect, whereas the LAS [$r = 0.56$], LRAM [$r = 0.27$] and PLSQ [$r = -0.26$] scales have a small positive effect. In addition to these, the effect of the LBDQ, LSI, SLS scales and the scale developed by the researchers were found to be statistically significant ($p > 0.05$).

In this scope, the results of the meta-analysis on the studies included showed that there was a medium negative effect on clinical leadership [$r = -0.46$] and ethical leadership [$r = -0.40$] but a small positive effect on supportive leadership [$r = -0.34$], transformational leadership [$r = -0.20$], production-oriented leadership [$r = -0.22$] and managerial leadership. Furthermore, a medium positive effect was seen for inter-personal leadership styles/approaches [$r = 0.44$], whereas a small positive effect was the case for autocratic leadership [$r = 0.26$]. However, a statistically significant difference was not found for the effect of situational leadership, relations-oriented leadership, constructive leadership or general leadership style/approach ($p > 0.05$).

Conclusion

A total of 41 research studies were included in this study to examine the magnitude of the effect of leadership on stress. A sample group/sector group size of 25,650 subjects was reached in the scope of the study. Sample group/sector type, leadership style/approach and leadership scales were considered to be moderator variables in the study. The results of the meta-analysis found a *small negative effect* of leadership on stress. These results show that leadership has a reducing effect on stress, which is an organizational factor.

The result of the moderator variable analysis conducted on the sample group/sector of research studies found a statistically significant difference in the effect size between sample groups/sectors. In this context, it was seen that leadership had a small negative effect on the stress of religious groups, military groups and the service sector group. In comparison, the effect of leadership on stress for the education sector, health sector and athletes was not found to be statistically significant. According to Ashmore, Del Boca, and Wohlers (1986), there are differences to be observed in relation to the outputs of organizations and the management level of leaders. Literature shows that the effect of leadership shows variance in this context (Bartol & Martin, 1986). Eagly and Johnson (1990) suggest that in organizations that are comprised of more women, the democratic leadership style/approach is preferred. Similarly, findings of the moderator analysis also showed that the effects of leadership styles/approaches are also statistically significant. In this scope, it was seen that the research studies included in the meta-analysis found that clinical leadership and ethical leadership have small negative effects, whereas supportive leadership, transformational leadership, production-oriented leadership and managerial leadership had a small negative effect on the stress levels of groups. Furthermore, a medium positive effect was seen for the interpersonal leadership style/approach, and a small positive effect was found for autocratic leadership. However, the effects of situational leadership, relations-oriented leadership, constructive leadership and general leadership styles were not found to be statistically significant. Kuoppala et al. (2008) suggest that leadership styles/approaches have an effect on a variety of factors in an organization in addition to stress. Kwag and Kim (2009) found that transformational leadership reduced the level of stress. The study by Omolayo (2007) suggested that democratic leadership was more effective in reducing stress in than was autocratic leadership. It is thus possible to state that leadership styles have been found to reduce organizational stress in some research studies, but more often, studies have found leadership styles to have a negative effect on employees' stress levels.

In the study, it was found that leadership scales used in studies included in the meta-analysis were a moderator for the effect of leadership on stress. The NLB, WLS, TFS, LPI, LES, AMLW, ELS, SLPS, TLQ and MLQ scales used

(continued)

in research studies were found to have a small negative effect, and the LAS, LRAM and PLSQ scales had a small positive effect. Furthermore, it was found that the LBDQ, LSI, LES, SLS scales and scales developed by the researchers were statistically significant. The fact that the scales developed by the researchers, which were used instead of the tried scales from other research studies, were found not to have an effect could be because they were developed uniquely for the sample group/sector of this particular study. It was seen in the study that the publication year and type were not moderator variables. The results obtained from research articles and dissertations were similar in their findings regarding the effect of leadership on stress. This shows that the results are in parallel to publication non-bias. Furthermore, although it is assumed that the structure of the organization changes, the effect of the status of the leaders on stress shows similarities over the years. Thus, publication year was not found to be a moderator variable.

References[1]

Albrect, K. (1988). *Gerilim ve yönetici,* Çev: K. Tosun & diğerleri, İ.Ü. İşletme Fakültesi Yayın No: 197, İstanbul.

Arincorayan, D. F. K. (2000). *Leadership, group cohesion, and coping in relationship to soldiers' stress levels*. Unpublished doctoral dissertation, The Catholic University of America, Washington, DC.*

Ashmore, R. D., Del Boca, F. K., & Wohlers, A. J. (1986). Gender stereotypes. In R. D. Ashmore & F. K. Del Boca (Eds.), *The social psychology of female-male relations: A critical analysis of central concepts* (pp. 69–119). Orlando, FL: Academic.

Bartol, K. M., & Martin, D. C. (1986). Women and men in task groups. In R. D. Ashmore & F. K. Del Boca (Eds.), *The social psychology of female-male relations: A critical analysis of central concepts* (pp. 259–310). Orlando, FL: Academic.

Barutçugil, İ. (2004). *Stratejik insan kaynakları yönetimi*. Kariyer Yayınları.

Borenstein, M., Hedges, L. V., Higgins, J. P. T., & Rothstein, H. R. (2009). *Introduction to meta-analysis*. Chichester: Wiley.

Brooks, J. E. (2009). *Midshipman character strengths and virtues in relation to leadership and daily stress and coping*. Unpublished doctoral dissertation, Faculty of the Graduate School, Howard University, Washington, DC.*

Can, H. (1997). *Organizasyon ve Yönetim*, 4.basım, Siyasal Kitabevi, Ankara.

Charles, B. N. (1989). *An investigation of the relationship among leadership styles, occupational stress, and type a behavior of principals*. Unpublished doctoral dissertation, The University of North Carolina, Greensboro, NC.*

Christina, O., & Konstantinos, N. (2009). An exploratory study of the relationships between interprofessional working, clinical leadership, stress and job satisfaction in Greek registered mental health and assistant nurses. *Health Science Journal, 3*(3), 175–186.*

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Hillside, NJ: Lawrence Erlbaum Associates.

[1] References marked with an asterisk indicate studies included in the meta-analysis. The in-text citations to studies selected for meta-analysis are not followed by asterisks.

Cotton, A. J. (2006). Technical evaluator report for NATO RTO HFM-134 Symposium, *Human dimensions of operations: Military leaders' strategies for addressing stress and psychological support,* Brussels, Belgium.

Craig, C. G. (1994). *Stress (Burnout), social climate, and leadership patterns in organizational settings*. Unpublished doctoral dissertation, University of Hawaii, Honolulu, HI.*

Daenzer, B. E. (2009). *Quantitative correlation of leadership styles and job stress in a Midwest United States auto company*. Unpublished doctoral dissertation, University of Phoenix, Phoenix, AZ.*

Dale, K., & Fox, M. L. (2008). Leadership style and organizational commitment: Mediating effect of role stress. *Journal of Managerial Issues, 20*(1), 109–130.*

Dalmau, M. E. (1988). *A study of causal models of teacher perception of principal leadership behavior and its impact on teacher stress, satisfaction and performance*. Unpublished Doctoral Dissertation, University of Houston, Houston, TX.*

Davis, K. (1982). *İşletmelerde insan davranışı,* Çev. K. Tosun et al., İstanbul Üniversitesi İşletme Fakültesi Yayınları, No.199, İstanbul.

Decoster, S., Jeroen, S., Jeroen, C., & Tripp, T. M. (2014). The role of employees' OCB and leaders' hindrance stress in the emergence of self-serving leadership. *The Leadership Quarterly, 25*(4), 647–659.*

Eagly, A. H., & Johnson, B. T. (1990). Gender and leadership style: A meta analysis. *Psychological Bulletin, 108*(2), 233.

Ekinci, H., & Ekici, S. (2003). Yöneticiler üzerindeki etkileri açisindan stres kaynaklari ve bir uygulama, *Uludağ Üniversitesi İ.İ.B.F. Dergisi, 22*(2), 93–111.

Elçi, M., Şener, İ., Aksoy, S., & Alpkan, L. (2012). The impact of ethical leadership and leadership effectiveness on employees' turnover intension: The mediating role of work related stress, 8th international strategic management conference. *Procedia Social and Behavioral Sciences, 58*, 289–297.*

Gardiner, M., & Tiggemann, M. (1999). Gender differences in leadership style, job stress and mental health in male- and female-dominated industries. *Journal of Occupational and Organizational Psychology, 72*, 301–315.*

Gellis, Z. D. (1999). *The relationship between leadership style and coping style on job stress and job satisfaction among social workers in health care*. Unpublished doctoral dissertation, University of Toronto, Toronto, ON.*

Gill, A. S., Flaschner, A. B., & Shachar, M. (2006). Mitigating stress and burnout by implementing transformational-leadership. *International Journal of Contemporary Hospitality Management, 18*(6), 469–481.*

Gümüştekin, G. E., & Öztemiz, A. B. (2004). Örgütsel Stres Yönetimi ve Uçucu Personel Üzerinde Bir Uygulama, *Erciyes Üniversitesi İ.İ.B.F. Dergisi, 23*, 61–85.

Hedges, L. V., & Olkin, I. (1985). *Statistical method for meta-analysis*. London: Academic.

Howitt, C. (2009). *A comparative study of leadership behavior styles for stress reduction in contemporary educational leaders: Considerations for succession planning in the 21st century*, Unpublished doctoral dissertation, University of Windsor, Windsor, ON.*

Kagan, D. M. (2001). Inquiry mode, occupational stress, and preferred leadership style among American elementary school teachers. *The Journal of Social Psychology, 129*(3), 297–305.*

Keller, N. (2005). *The moderating effects of leadership, cohesion, and social support on the relationship between stress ın combat, and the psychological well-being of solders participating in combat operations in Iraq*. Unpublished doctoral dissertation, The University of Texas at Arlington, Arlington, TX.*

Khalid, A., Murtaza, G., Zafar, A., Zafar, M. A., Saqib, L., & Mushtaq, R. (2012). Role of supportive leadership as a moderator between job stress and job performance. *Information Management and Business Review, 4*(9), 485–499.*

Korkmaz, M., & Ceylan, B. (2012). Örgütsel stres yönetimi ve stresin İstanbul büyükşehir belediyesi çalişanlarinin iş performansi üzerine etkisinin uygulamali olarak incelenmesi, *Adıyaman Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 5*(10), 313–344.

Kulinskaya, E., Morgenthaler, S., & Staudte, R. G. (2008). *Meta analysis: A guide to calibrating and combining statistical evidence*. London: Wiley.

Kuoppala, J., Lamminpää, A., Liira, J., & Vainio, H. (2008). Leadership, job well-being, and health effects-A systematic review and a meta-analysis. *Journal of Occupational and Environmental Medicine, 50*(8), 904–915.

Kwag, S. H., & Kim, M. H. (2009). The study on the effects of organizational members' job burnout Korea. *Journal of Business & Economics Research, 7*(7), 63–78.

LaFalce, S. (2012). *The relationships among stress, leadership, and job satisfaction of information technology professionals*. Unpublished Doctoral Dissertation, Binghamton University, Binghamton, NY.*

Lane, N. S. (2000). *Stress type and leadership style in the principalship*. Unpublished Doctoral Dissertation, The Graduate School of the University of Oregon, Eugene, OR.*

Lopez, D., Green, M., Carmody-Bubb, M., & Kodatt, S. (2011). The relationship between leadership style and employee stress: An empirical study. *The International Journal of Interdisciplinary Social Sciences, 6*(3), 170–181.*

Meredith, N. T. (2007). *Analysis of physician satisfaction, stress, and leadership role ambiguity relative to turnover intent and cognition*. Unpublished doctoral dissertation, University of Phoenix, Phoenix, AZ.*

Meyer, M. B., Broome, B., Kelber, S., & Lostocco, L. (2000). Influence of stress and nursing leadership on job satisfaction of pediatric intensive care unit nurses. *American Journal of Critical Care, 9*(5), 307–317.*

Nahavandi, A., & Malekzadeh, A. R. (1998). *Organizational behavior*. Upper Saddle River, NJ: Prentice-Hall.

Napier, A. N. (1996). *The relationship among leadership styles administrative stress, and gender for special education directory in Illinois*. Unpublished Doctoral Dissertation, Southern Illinois University, Carbonale, IL.*

Norton, S. (2010). *The effects of leadership-efficacy and personality on reactions to stress*. Unpublished Doctoral Dissertation, California State University, Los Angeles, CA, USA.*

Omolayo, B. (2007). Effect of leadership style on job-related tension and psychological sense of community in work organizations: A case study of four organizations in Lagos State, Nigeria. Bangladesh. *e-Journal of Sociology, 4*(2), 2.

Öznur, T., Çelik, C., & Erdem, M. (2013). Stresle baş etmede liderin rolü. *Anatolian Journal of Clinical Investigation, 7*(1), 75–79.

Poe, S. R. (2011). *Elementary principal leadership styles and stress*. Unpublished Doctoral Dissertation, Lincoln Memorial University Carter and Moyers School of Education, Harrogate, TN.*

Pomerantz, S. D. (1992). *Comparison of the effect of microcounseling and situational leadership training on the manager-worker interaction, worker performance and stress: developing a comprehensive leader-follower model*. Unpublished doctoral dissertation, University of San Francisco, San Francisco, CA.*

Remy, M. N. (1999). *The relationship of principal leadership styles and school-site conditions to stress levels of elementary school teachers*. Unpublished Doctoral Dissertation, University of San Diego, San Diego, CA.*

Reynolds, H. C., & Odwyer, L. M. (2008). Examining the relationships among emotional intelligence, coping mechanisms for stress, and leadership effectiveness for middle school principals. *Journal of School Leadership, 18*, 472–500.*

Robins, S. P. (1996). *Organizational behavior*. Upper Saddle River, NJ: Prentice Hall.

Romano, J. L., & Wahlstrom, K. (2000). Professional stress and well-being of K-12 teachers in alternative educational settings: A leadership agenda. *International Journal of Leadership in Education: Theory and Practice, 3*(2), 121–135.*

Ryska, T. A. (2002). Leadership styles and occupational stress among college athletic directors. The moderating effect og program goals. *The Journal of Psychology, 136*(1), 195–213.*

Safaria, T., Othman, A., & Nubli Abdul Wahab, M. (2011). The role of leadership practices on job stress among Malay academic staff: A structural equation modeling analysis. *International Education Studies, 4*(1), 90–100.*

Selye, H. (1974). *Stress without distress* (pp. 26–39). New York, NY: J. B. Lippencott Comp.

Sherman, G. D., Lee, J. J., Cuddy, A. J., Renshon, J., Oveis, C., Gross, J. J., & Lerner, J. S. (2012). Leadership is associated with lower levels of stress. *PNAS, 109*(44), 17903–17907.*

Sosik, J. J., & Godshalk, V. M. (2000). Leadership styles, mentoring functions received, and job-related stress: A conceptual model and preliminary study. *Journal of Organizational Behavior, 21*(4), 365–390.*

Stordeur, S., D'hoore, W., & Vandenberghe, C. (2000). Leadership, organizational stress, and emotional exhaustion among hospital nursing staff. *Journal of Advanced Nursing, 35*(4), 533–542.*

Tahseen, N. (2010). The relationship between principal's leadership style and teacher occupational stress. *Journal of Research and Reflections in Education, 4*(2), 107–125.*

Westerlund, H., Nyberg, A., Bernin, A., Hyde, M., Oxenstierna, G., Jäppinen, P., et al. (2010). Managerial leadership is associated with employee stress, health, and sickness absence independently of the demand control support model. *Work, 37*, 71–79.*

Wood, M. S. (2004). *The effects of shared leadership on the stress and satisfaction outcomes of church management team members*. Unpublished doctoral dissertation, Regent University, Virginia Beach, VA.*

The Effect of Leadership on Organizational Burnout

Erdem Oklay and Fatma Uslu

Abstract The effect of leadership on organizational burnout (OB) was examined in this meta-analysis study. A total of 97 research studies were collected as a result of the review activity, out of which 37 were included in the meta-analysis. The 37 research studies were compiled to obtain a sample size of 17,368 subjects. The analysis results of the *random effect model* showed that leadership has a *small negative effect* on OB. Of the moderators identified for the study, such as sample group/sector, leadership style/approach, publication type, publication year, and the leadership and burnout scales used in the research studies, only the leadership scale was found to be a moderator variable.

1 Introduction

Although the changing conditions of our age have led to increasingly more opportunities for communication and collaboration, it has become necessary for employees to spend more time with others. This situation has resulted in more concentrated human relations and an increase in work tempo (Eren & Durna, 2006). Along with developing technology and an increase in competition, it has made burnout become a serious problem in professional life (Ardıç & Polatcı, 2009) and has also led to a heightened pressure and stress on demands on employees for the provision of quality services. As a result, the psychological health of employees is negatively affected, and the quality of services has suffered with the decrease in organizational productivity (Çalgan, Yeğenoğlu, & Aslan, 2009). In this scope, it can be stated that burnout is widespread among employees working in sectors centered on human relations, such as health, education and similar service sectors.

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Burnout is resulting in an economic loss to society as qualified employees withdraw from the workforce to change jobs, resign or retire early (Çokluk, 2003).

The term 'burnout' was first used by Freudenberger, who defined burnout as 'a state of burnout caused by the exhaustion of inner resources of an individual as a result of being unsuccessful, being worn out, a reduction in energy or strength or a non-satisfaction of demands' (*as cited in* Ardıç & Polatcı, 2009, p. 22). Maslach and Jackson (1981) offer a similar definition, stating that burnout is the syndrome that presents in the wearing out, exhaustion and desperation of individuals who are continuously working face-to-face with other persons.

The effect of leadership on OB has been shown in many research studies conducted in various fields (Altahayneh, 2013; Başer & Çobanoğlu, 2011; Bolat, 2011; Greco, Laschinger, & Wong, 2006; Güzel & Akgündüz, 2011; Telli, Ünsar, & Oğuzhan, 2012; Uğurluoğlu, Şantaş, & Demirgil, 2013). Because humans are social beings and have a desire to act in a group, leadership behaviors are affected by the attitude of the members of the group. In some groups, an autocratic leadership style may be preferred more often, whereas in some groups, it is necessary to be a democratic leader (Karasu, 2009). Considering the effect of burnout on group members, it is beneficial for the group for the leader of the group to correctly identify the level of burnout of members and to behave accordingly. In conclusion, each group is unique, and it is the responsibility of the leader to ensure the individual development of members of the group while also ensuring that the group performs successfully (Adair, 2009).

This study examined the effect of leadership on OB. Furthermore, the moderator variables, which were expected to have medium effects in this study, are identified as: (1) sample group/sector, (2) leadership style/approach, (3) research publication type, (4) research publication year, (5) the leadership scale and (6) the burnout scale used in research studies. All these variables, along with the results of previous research, were used to test the following hypotheses of this study:

H_1 Leadership has a negative effect on OB.
H_2 The sample group/sector is a moderator of the negative effect of leadership on OB.
H_3 Leadership style/approach is a moderator of the negative effect of leadership on OB.
H_4 The studies' publication type is a moderator of the negative effect of leadership on OB.
H_5 The studies' publication year is a moderator of the negative effect of leadership on OB.
H_6 The leadership scale used in research studies is a moderator of the negative effect of leadership on OB.
H_7 The burnout scale used in research studies is a moderator of the negative effect of leadership on OB.

2 Method

2.1 Study Design

In this study, the effect of leadership on OB was tested with a meta-analysis design.

2.2 Review Strategy and Criteria for Inclusion/Exclusion

To determine the research studies to include in the meta-analysis, the Science-Direct, Proquest and Ebsco academic databases were used to conduct a literature review. For this process, the terms *leadership* and *burnout* included in the titles of the studies were used to screen the research studies. The end date for the research studies included in the research was identified as March 2014. Doctoral dissertations and peer-reviewed journals were included in the study.

Many strategies were used to identify the research studies that were appropriate for the meta-analysis of the study. First, a research study pool (97 research studies) was established including all studies with leadership and burnout in their titles. The abstracts of these studies were reviewed, and all were found appropriate to include in the study. In the second stage, all research studies in the pool were examined in detail; 64 of the research studies in the pool were found appropriate, and 27 were not found suitable. The descriptive statistics of the 37 research studies to be included in the analysis are presented in Table 1.

The criteria for inclusion of the research studies to the analysis study were:

- To have the statistical information necessary for correlational meta-analysis (n and r, or R^2 values)
- To be a study measuring the correlation between leadership and OB

Reasons for not including a research study in the meta-analysis:

- Having no quantitative data (qualitative research)
- Not having a correlation coefficient
- Not focusing on OB
- Not focusing on leadership

2.3 Coding Process

The coding process is essentially a data sorting process used to ascertain which of the complex data in studies are clear and suitable for the study. In this scope, a coding form was developed before the statistical analysis was conducted, and the coding was conducted according to the form. The main aim was to develop a

Table 1 Characteristics of the studies included in the meta-analysis

Characteristics		1	2	3	4	Total
Year of Publication		Before 1990	1990–1999	2000–2009	2010 and beyond	–
	n	5	3	10	19	37
	%	13.5	8.2	27.0	51.3	100
Publication Type		Thesis	Article	–	–	–
	n	20	17	–	–	37
	%	54.0	46.0	–	–	100
Sample Group/Sector		Health	Education	Sport	Service	
	n	15	9	2	11	37
	%	40.6	24.3	5.4	29.7	100

specific coding system that allowed the study to see the entirety of the research studies in general and that would not miss any characteristics of each individual research study. The coding form developed in the study was comprised of:

- References for the research
- Sample information
- Sample group/sector
- Leadership style/approach
- Data collection tool(s)
- Quantitative values

2.4 Statistical Processes

The impact quantity, as determined through meta-analysis, is a uniformly measured value used to determine the strength and direction of the relationship in the study (Borenstein, Hedges, Higgins, & Rothstein, 2009). Pearson's correlation coefficient (r) was determined to be the impact quantity in this study. Because the correlation coefficient has a value between $+1$ and -1, the calculated r value was evaluated by converting this value into the value as it appears in the z table (Hedges & Olkin, 1985). Provided that more than one correlation value is given between the same structure categories in correlational meta-analysis studies, two different approaches are used in to determine which should be adopted for the meta-analysis (Borenstein et al., 2009; Kulinskaya, Morgenthaler, & Staudte, 2008). For this study, (1) if the correlations were independent, all of the related correlations were included in the analysis and were considered as independent studies; and (2) if there were dependent correlations, then the *conservation estimation* was accepted. A *random effects model* was used for the meta-analysis processes in this study. The *Comprehensive Meta-Analysis* program was used in the meta-analytic process.

2.5 Moderator Variables

To determine the statistical significances among the different moderators of the study, only the Q_b values were used. Six moderator variables that were thought to have a role in average impact size were identified in the study. The first of these considered the *sample group/sector* as a moderator with regard to the relationship between OB and leadership. The second was the *leadership style/approach* because it was thought to have an impact on the average effect of leadership perceptions and OB. The other moderator variables were the *type of research study, year of the research, leadership scale* and *organizational burnout scale*.

2.6 Publication Bias

A funnel plot for the research studies included in the meta-analysis of the study can be seen in Fig. 1. Evidence of an effect due to publication bias for the research studies included in the meta-analysis would be seen in Fig. 1. A serious asymmetry would be expected in the funnel plot were there a publication bias. The concentration of plots for the research studies occurring to one side under the line of average impact size, especially at the bottom of the funnel, would be indicative of likely publication bias. In this study, no evidence of partiality of the publications was observed in any of the 37 data subjected to meta-analysis.

Even though no partiality in publications was observed in the funnel plot, the results of Duval and Tweedie's trim and fill test, which was applied to determine the impact quantity related to partiality in publications and was acquired through the meta-analysis using the random effects model, are given in Table 2. As can be seen in Table 2, there is no difference between the impact observed and the artificial impact quantity created to fix the impact resulting from the partiality of publications. The research on either side of the centerline is symmetrical, and this is the indicator for no existing difference. Because there is no evidence indicating lost data one either side of the centerline, the difference between the fixed impact quantity and the observed impact quantity is zero.

Fig. 1 Effect size funnel for publication bias

Table 2 Duval and Tweedie's trim and fill test results

	Studies trimmed	Point estimate	CI (Confidence interval)		Q
			Lower limit	Upper limit	
Observed values		−0.17	−0.30	−0.03	2664.1
Adjusted values	0	−0.17	−0.30	−0.03	2664.1

3 Findings

Table 3 shows the results of meta-analysis of leadership and OB. The findings provided support for H_1, which argued for a negative relationship between leadership and OB. The effect size of leadership on OB was calculated as −0.17. This result shows that leadership has a *small negative effect* on OB (*see* Cohen, 1988).

The results of the moderator analysis showed that H_2, which predicted that the sample group/sector would be a moderator of the negative effect of leadership on OB, was not supported. However, it was seen in the studies included in the meta-analysis that leadership has a small effect on the education sector [$r = -0.27$] and a medium effect on athletes [$r = -0.52$]. In comparison, it was not found that leadership has an effect on the OB of employees of the service and health sectors. The strongest effect was seen for athletes. Although the effect sizes of leadership on OB differed, the moderator analysis conducted according to the random effect model found no statistically significant difference between the various sample groups ($Q_b = 3.43$, $p > 0.05$).

The findings did not support H_3, which predicted that leadership style/approach would moderate the effect of leadership on OB. The moderator analysis showed that the difference between the effect size of leadership styles is not statistically significant ($Q_b = 2.64$, $p > 0.05$). Furthermore, it was found that no leadership style/approach had significantly moderated the effect of leadership on OB.

The findings did not provide support for H_4, which predicted that the studies' publication year is a moderator of the effect of leadership on OB. Although the moderator analysis did not show a statistically significant difference in the effect sizes of the sample groups ($Q_b = 0.88$, $p > 0.05$), the effect size of research studies [$r = -0.23$] on leadership on OB is low.

The research did not support H_5, which predicted that the studies' publication year would be a moderator of the effect of leadership on OB. The moderator analysis did not find a statistically significant difference in the effect size of the studies' publication year ($Q_b = 1.54$, $p > 0.05$). A small effect was found for publications dated 2010 and beyond as a result of the meta-analysis [$r = -0.25$] concerning the effect of leadership on OB. In contrast, no statistically significant effect was found for leadership on OB in regards to publications in the other year categories ($p > 0.05$).

The findings showed that studies included in the meta-analysis that used leadership scales moderated the effect of leadership on OB, supporting H_6. The moderator analysis found that the effect sizes of leadership scales used in the research studies were statistically significant ($Q_b = 111.06$, $p < 0.05$). In this scope, the ALQ [$r = -0.22$], ELQ [$r = -0.40$], HDS [$r = -0.42$] and SOF [$r = -0.44$] used in the meta-analysis were found to have a small effect, whereas the NMAS [$r = 0.75$] and Rafferty and Griffin [$r = -0.56$] had a medium effect, and SLS [$r = -0.83$] had a large effect. The frequently used MLQ scale in leadership studies was found to have a small effect [$r = -0.11$].

Table 3 Findings of the correlations between leadership and OB: Results of meta-analysis

Variable	k	N	r	CI (Confidence interval)		Q	Q_b
				Lower limit	Upper limit		
Organizational burnout (OB)	37	17,368	−0.17**	−0.30	−0.03	2664.10*	
Moderator [Sample group/sector]							3.43
Education	9	1,639	−0.27**	−0.49	−0.01		
Service	11	3,529	−0.13	−0.36	0.09		
Health	15	11,953	−0.08	−0.27	0.12		
Sport	2	247	−0.52**	−0.81	−0.01		
Moderator [Leadership style/approach]							2.64
Authentic	3	957	−0.22	−0.59	0.22		
Dysfunctional	1	150	−0.42	−0.84	0.33		
Empowering	1	273	−0.30	−0.79	0.44		
Transformational	16	11,477	−0.16	−0.35	0.02		
Servant	3	1,181	−0.40	−0.70	0.02		
General Leadership	13	3,330	−0.07	−0.28	0.14		
Moderator [Publication type]							0.88
Article	17	13,038	−0.23**	−0.41	−0.04		
Thesis	20	17,368	−0.11	−0.29	0.07		
Moderator [Year of publication]							1.54
Before 1990	6	1,028	−0.01	−0.37	0.35		
1990–1999	3	645	−0.08	−0.55	0.41		
2000–2009	10	4,742	−0.13	−0.40	0.15		
2010 and beyond	18	10,953	−0.25**	−0.44	−0.04		
Moderator [Leadership scales]							111.06*
ALQ	3	957	−0.22**	−0.40	−0.02		
ELQ	2	358	−0.40*	−0.59	−0.16		

HDS	1	150	−0.42**	−0.67	−0.07		
SLS	1	506	−0.83*	−0.91	−0.68		
Self	1	295	−0.27	−0.55	0.07		
LBDQ	3	549	−0.13	−0.33	0.07		
LEAD	2	277	−0.05	−0.31	0.20		
LEAD-S	1	105	−0.01	−0.37	0.35		
LOQ	1	283	0.29	−0.05	0.57		
LSII	1	46	−0.05	−0.45	0.37		
LSS	1	162	−0.53*	−0.74	−0.22		
MLQ	12	10,340	−0.11**	−0.21	−0.01		
NMAS	1	1,377	0.75*	0.56	0.86		
PM-LAS	1	379	−0.14	−0.45	0.20		
Rafferty&Griff	1	142	−0.56*	−0.76	−0.25		
SBDQ	1	161	−0.11	−0.44	0.25		
SERV*OR	1	530	−0.18	−0.48	0.15		
SLP	1	145	0.10	−0.26	0.43		
SOF	1	550	−0.44*	−0.67	−0.13		
TAQ-II	1	56	−0.21	−0.56	0.21		
Moderator [Burnout scales]							5.30
ABQ	2	247	−0.52	−0.83	0.03		
Clouse-Whitak	1	156	−0.13	−0.75	0.62		
GNBI	1	256	−0.35	−0.84	0.45		
Self	1	100	−0.38	−0.85	0.43		
MBI	29	15,634	−0.12	−0.27	0.03		
MBI&OLBI	1	142	−0.56	−0.90	0.22		
SOF	1	550	−0.44	−0.86	0.36		
Tedium	1	283	0.29	−0.50	0.81		

*$p < 0.01$, **$p < 0.05$

The findings did not support $H_{7,}$ which predicted that the burnout scales used in the research studies would moderate the effect of leadership on OB. The moderator analysis found that the effect size of the burnout scales used in the research studies was not statistically significant ($Q_b = 5.30$, $p > 0.05$). Furthermore, it was found that no burnout scale significantly moderated the effect of leadership on OB.

Conclusion

A total of 37 research studies were included in this study to examine the effect of leadership on OB. A sample size of 17,368 subjects was used in the study. Of the moderators identified for the study, such as sample group/sector, leadership style/approach, publication type, publication year, and the leadership and burnout scales used in the research studies, only the leadership scale was found to be a moderator variable. In addition, it was seen that the findings that leadership had a negative effect on OB were congruent with other research studies (Bolat, 2011; Broome, Knight, Edwards, & Flynn, 2009; Cerit, 2008; Telli et al., 2012; Uğurluoğlu et al., 2013).

In the moderator analysis, it was found that the sample group/sector is not a moderator variable. Within the sample groups, employees of the education and sport (athletes) sectors showed the greatest differences. Because superior-subordinate relations were found in student-teacher and teacher-principal relations in the education sector, and a similar situation was found for athletes (coach-trainer), the interaction between leaders-followers is greater. In addition, education (Karahan & Balat, 2011; Üstüner, Demirtaş, Cömert, & Özer, 2009) and sports (Cengiz, Aytan, & Abakay, 2012) are, by their nature, sectors in which it is important to perform successfully in regards to perceptions of high self-competence. The positive relationship between the perception of high self-competence and the interaction between leader-follower and a negative effect for burnout has been shown (Bolat, 2011). In conclusion, it is thought that high self-competence perception has a relationship with the significant difference found with employees of the education sector and athletes.

Of the leadership styles/approaches considered, no significant differences were found for any. These findings are an indication that neither of the leadership styles/approaches can be accepted as a general approach to be applied to members. As previously stated, leadership behaviors are shaped according to the current conditions, location and time and the general structure of the organization (Karasu, 2009). Hence, according to the situational leadership approach, different situations require a certain leadership style, and a leader is considered successful to the extent that she adapts her approach to the situation. In this approach, the leader displays two main behaviors according to the development level of their subordinates: *supportive* and *directive* (Northouse, 2010). This argument can be used to explain

(continued)

why no leadership styles/approaches have been shown to have a significant effect on OB: because each leadership behavior found to be appropriate for different situations will have a negative effect on OB.

There is no significant difference between the research studies in regards to their year of publication. That is, the year of publication is not a moderator in the negative effect of leadership on OB. However, the publications of 2010 and beyond are significant within this category. The significant difference found can be explained by methodological knowledge, literature knowledge in regards to leadership and OB and the number of researchers in the field throughout the years.

References[1]

Adair, J. (2009). Functional leadership. *NHRD Network Journal, 2*(2), 2–8. URL: http://demo.nationalhrd.org/nhrdn/sites/default/files/products/pdf/journals100520091141568944.PDF#page=8.

Altahayneh, Z. L. (2013). The relationship between perceived coaches' leadership behaviors and athletes' burnout in Jordan. *International Journal of Academic Research*, *5*(1), 60–65.*

Ardıç, K., & Polatcı, S. (2009). Tükenmişlik sendromu ve madalyonun öbür yüzü: İşle bütünleşme. *Erciyes Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi, 32*, 21–46.

Babakus, E., Yavas, U., & Ashill, N. J. (2011). Service worker burnout and turnover intentions: Roles of person-job fit, servant leadership, and customer orientation. *Services Marketing Quarterly*, *32*, 17–31.*

Başer, M. U., & Çobanoğlu, F. (2011). İlköğretim denetmenlerinin tükenmişlik düzeyleri ve nedenleri. *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi, 29*, 125–136.

Bobbio, A., Bellan, M., & Manganelli, A. M. (2012). Empowering leadership, perceived organizational support, trust, and job burnout for nurses: A study in an Italian General Hospital. *Health Care Manage Review, 37*(1), 77–87.*

Bolat, O. İ. (2011). Öz yeterlilik ve tükenmişlik ilişkisi: Lider-üye etkileşiminin aracılık etkisi. *Ege Akademik Bakış, 11*(2), 255–266.

Borenstein, M., Hedges, L. V., Higgins, J. P. T., & Rothstein, H. R. (2009). *Introduction to meta-analysis*. UK: Wiley.

Bowers, L., Nijman, H., Simpson, A., & Jones, J. (2011). The relationship between leadership, teamworking, structure, burnout and attitude to patients on acute psychiatric wards. *Soc Psychiatry Psychiatr Epidemiol*, *46*, 143–148.*

Broome, K. M., Knight, D. K., Edwards, J. R., & Flynn, P. M. (2009). leadership, burnout, and job satisfaction in outpatient drug-free treatment programs. *Journal of Substance Abuse Treatment*, *37*, 160–170.*

Cengiz, R., Aytan, G. K., & Abakay, U. (2012). Taekwondo sporcularının algıladığı liderlik özellikleri ile öz yeterlik düzeyleri arasındaki ilişki. *E-Journal of New World Sciences Academy, Sports Sciences, 7*(4), 68–78. URL: http://www.newwsa.com/download/gecici_makale_dosyalari/NWSA-6770-3005-8.pdf.

[1] References marked with an asterisk indicate studies included in the meta-analysis. The in-text citations to studies selected for meta-analysis are not followed by asterisks.

Cerit, Y. (2008). İlköğretim okulu müdürlerinin hizmet yönelimli liderlik davranışlarının öğretmenlerin tükenmişliklerine etkisi. *Kuram ve Uygulamada Eğitim Yönetimi*, *55*, 547–570.*

Chun, G. C. (1994). *Stress (burnout), social climate, and leadership patterns in organizational settings* (Unpublished doctoral dissertation). University of Hawaii, Honolulu, HI.*

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Hillside, NJ: Lawrence Erlbaum Associates.

Collier, D. A. (2004). *Perceived leadership style and direct-care staff burnout in a community mental health agency* (Unpublished doctoral dissertation). Chicago School of Professional Psychology, Chicago, IL.*

Çalgan, Z., Yeğenoğlu, S., & Aslan, D. (2009). Eczacılarda mesleki bir sağlık sorunu: tükenmişlik. *Hacettepe Üniversitesi Eczacılık Fakültesi Dergisi, 29*(1), 61–74.

Çokluk, Ö. (2003). Örgütlerde tükenmişlik. In C. Elma & K. Demir (Eds.), *Yönetimde çağdaş yaklaşımlar* (pp. 109–135). Ankara: Anı.

Duxbury, M. L., Armstrong, G. D., Drew, D. J., & Henly, S. J. (1984). Head nurse leadership style with staff nurse burnout and job satisfaction in neonatal intensive care units. *Nursing Research*, *33*(2), 97–101.*

Eghdamy, H., Ganjiniya, H., & Akhlagh, E. M. (2013). Relationship between transformational leadership and reduction of burnout among employees of greater Tehran foundation of martyrs and veterans Affair. *Kuwait Chapter of Arabian Journal of Business and Management Review*, *3*(4), 34–40.*

Eren, V., & Durna, U. (2006). Üç boyutlu bir yaklaşım olarak örgütsel tükenme. *Selçuk Üniversitesi Karaman İ. İ. B. F. Dergisi, 10*, 40–51.

Exantus, W. R. (2011). *Pastoral burnout and leadership styles: A mixed-methods study of southern baptist pastors in Central Florida* (Unpublished doctoral dissertation). Capella University, Minneapolis, MN.*

Greco, P., Laschinger, H. K. S., & Wong, C. (2006). Leader empowering behaviours, staff nurse empowerment and work engagement/burnout. *Nursing Research, 19*(4), 41–56.

Grimm, C. (2011). *Leadership, empowerment, and burnout in female team-sport athletes* (Unpublished doctoral dissertation). Chicago School of Professional Psychology, Chicago, IL.*

Gubanich, R. C. (1991). *The relationship between leadership style and burnout among college/university presidents* (Unpublished doctoral dissertation). The University of San Francisco, San Francisco, CA.*

Güzel, T., & Akgündüz, Y. (2011). Liderlik davranışlarının orta düzey yöneticiler üzerindeki etkisi ve yöneticilerin tükenmişlik düzeyleri ile ilişkisi: Kuşadası otel işletmelerinde bir araştırma. *Yönetim Bilimleri Dergisi, 9*(2), 279–297.

Hawks, R. D. (2004). *The effect of dean leadership style on department chair burnout* (Unpublished doctoral dissertation). University of Minnesota, Minneapolis, MN.*

Hedges, L. V., & Olkin, I. (1985). *Statistical method for meta-analysis*. UK: Academic.

Hetland, H., Sandal, G. M., & Johnsen, T. B. (2007). Burnout in the information technology sector: does leadership matter? *European Journal of Work and Organizational Psychology*, *16*(1), 58–75.*

Kanai-Pak, M. (2009). *Leadership behaviors that mitigate burnout and empower Japanese nurses* (Unpublished doctoral dissertation). The University of Arizona, Tucson, AZ.*

Karahan, Ş., & Balat, G. U. (2011). Özel eğitim okullarında çalışan eğitimcilerin öz-yeterlik algılarının ve tükenmişlik düzeylerinin incelenmesi. *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi, 29*, 1–14.

Karasu, S. (2009). *Çalışanların yöneticilerinin liderlik tarzı algılamaları ile tükenmişlikleri arasındaki ilişki üzerine bir araştırma* (Yayımlanmamış yüksek lisans tezi). İstanbul, Turkey: Marmara Üniversitesi/Sosyal Bilimler Enstitüsü.

Killoran, M. A. (1989). *The politics of teaching: personality, burnout, perceptions of leadership style and teacher control, support and ınvolvement in the classroom* (Unpublished master thesis). Wilfrid Laurier University, Waterloo, ON.*

Kulinskaya, E., Morgenthaler, S., & Staudte, R. G. (2008). *Meta analysis: A guide to calibrating and combining statistical evidence*. London: John Wiley & Sons.

Langner, D. E. (2001). *Burnout and leadership styles in residential mental health workers* (Unpublished doctoral dissertation). Chicago School of Professional Psychology, Chicago, IL.*

Laschinger, H. K. S., Wong, C. A., & Grau, A. L. (2012). The ınfluence of authentic leadership on newly graduated nurses' experiences of workplace bullying, burnout and retention outcomes: A cross-sectional study. *International Journal of Nursing Studies*, *49*, 1266–1276.*

Laschinger, H. K. S., Wong, C. A., & Grau, A. L. (2013). Authentic leadership, empowerment and burnout: A comparison in new graduates and experienced nurses. *Journal of Nursing Management*, *21*, 541–552.*

Leary, T. (2010). *The relationship among dysfunctional leadership dispositions employee engagement, burnout, and job satisfaction* (Unpublished doctoral dissertation). Texas A&M University, College Station, TX.*

Lubofsky, D. J. (2002). *Supervisor leadership style and counselors' burnout: A comparative study of high school counselors and rehabilitation counselors* (Unpublished doctoral dissertation). University of San Diego, San Diego, CA.*

Maricle, W. H. (2013). *School administrator self-perceived leadership styles affect on occupational burnout* (Unpublished doctoral dissertation). Lamar University, Beaumont, TX.*

Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Occupational Behavior, 2*, 99–113.

McCain, A. K. (1994). *The relationship between head nurse leadership behavior and staff nurse burnout* (Unpublished doctoral dissertation). University of Bridgeport, Bridgeport, CT.*

Mickschl, D. B. (1984). *A study of critical care nurses: The relationship among needs fulfillment discrepancy, attitudes and feelings of burnout, and unit leadership style* (Unpublished dissertation). Gonzaga University, Spokane, WA.*

Northouse, P. G. (2010). *Leadership theory and practice* (5th ed.). Thousand Oaks, CA: Sage.

Outi, K. (2008). The association between leadership behaviour and burnout among nursing personnel in health care. *Vard I Norden*, *28*(3), 4–8.*

Outi, K., Kyngas, H., & Nikkila, J. (2007). The relationship between multidimensional leadership and burnout among nursing staff. *Journal of Nursing Management*, *15*, 731–739.*

Owens, S. A. (2013). *The relationship between elementary school teachers' perceptions of principals' leadership effectiveness and teacher burnout* (Unpublished doctoral dissertation). The George Washington University, Washington, DC.*

Pierucci, R. P. (1985). *Burnout levels and leadership characteristics of california elementary school principals* (Unpublished doctoral dissertation). Brigham Young University, Provo, UT.*

Rittschof, K. (2013). *The influence of transformational leadership and job burnout on child protective services case managers' commitment and ıntent to quit* (Unpublished doctoral dissertation). Walden University, Minneapolis, MN.*

Rude, W. J. (2004). *The connection between servant leadership and burnout* (Unpublished master thesis). Trinity Western University, Langley, BC.*

Seltzer, J., & Numerof, R. E. (1988). Supervisory leadership and subordinate burnout. *Academy of Management Journal*, *31*(2), 439–446.*

Singer, F. L. (1984). *A study of the relationship between teacher burnout and the leadership style of the principal, as perceived by the teacher* (Unpublished doctoral dissertation). Tennessee State University, Nashville, TN.*

Smith, H. K. (2012). *Testing work characteristics as mediating factors in the relationships among nurse leadership, burnout, and engagement* (Unpublished master thesis). The University of Tennessee at Chattanooga, Chattanooga, TN.*

Stokes, D. M. (2013). *Exploring the relationship between cultural ıntelligence, transformational leadership, and burnout in doctorate of education students* (Unpublished dissertation). Liberty University, Lynchburg, VA.*

Telli, E., Ünsar, A. S., & Oğuzhan, A. (2012). Liderlik davranış tarzlarının çalışanların örgütsel tükenmişlik ve işten ayrılma eğilimleri üzerine etkisi: Konuyla ilgili bir uygulama. *Electronic Journal of Vocational Colleges, 2*, 135–150.

Twigg, N. W. & Kang, B. (2011). The effect of leadership, perceived support, idealism, and self esteem on burnout. *Journal of Behavioral Studies in Business*. URL: http://www.aabri.com/manuscripts/11967.pdf.*

Uğurluoğlu, Ö., Şantaş, F., & Demirgil, B. (2013). Lider-üye etkileşimi ve tükenmişlik ilişkisi: Hastanelerde bir uygulama. *Hacettepe Sağlık İdaresi Dergisi, 16*(1), 1–21.

Üstüner, M., Demirtaş, H., Cömert, M., & Özer, N. (2009). Ortaöğretim öğretmenlerinin öz-yeterlik algıları. *Mehmet Akif Ersoy Üniversitesi Eğitim Fakültesi Dergisi, 17*, 1–16.

Zopiatis, A. & Constanti, P. (2010). Leadership styles and burnout: Is there an association? *International Journal of Contemporary Hospitality Management*, *22*(3), 300–320.*

The Effect of Leadership on Organizational Health

Sevil Orhan and Şule Betül Tosuntaş

Abstract The effect of leadership on organizational health was examined in this meta-analysis study. A total of 67 research studies were collected as a result of the review, out of which 6 were included in the meta-analysis. The six research studies were compiled to obtain a sample size of 3,031 subjects. The analysis results of the random effect model showed that leadership has a *large positive effect* on organizational health. Leadership style, sample group, publication type and publication year were identified as moderator variables for this study, and it was found that leadership style, sample group and year of publication were moderators with a positive effect, whereas the publication type was not found to be moderator.

1 Introduction

The concept of organizational health was first used by Argyris in the 1950s and was explained and developed by Matthew Miles in 1965, who considered it in various dimensions to assess the organizational performance of schools (Recepoğlu & Özdemir, 2013). Miles (1969) used human health as a metaphor for organizational health and defined the concept as such: 'A healthy environment was not only an organization surviving in its environment but also a structure constantly using its abilities to cope with difficulties and surviving in the long run' (p. 378).

In line with the metaphor given by Miles (1969), an organization can be either healthy or ill, just like a human. It is possible to discuss the efficient and organized products and services in terms of the functioning of a healthy organization. Thus, it may be said that the body represents the structure of the organization, its construction, its communications system and its division of labor; the mind represents the vision, aims and policies of the organization, the management of conflict and

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decisions concerning the changes to take place; and the spirit represents the mission of the organization (Ardıç & Polatcı, 2007). Furthermore, a healthy organization aims to grow and develop for the long term and to prevent continued failures. With this objective, organizational health should reflect the social interaction within the social system in which managers, teachers, and students play a role. Additionally, organizational health is important to ensure efficiency in developing certain functions of schools (Korkmaz, 2007). In this context, the concepts of growth and development—not only the activity of an organization—are also important.

In addition to Miles (1969), Hoy and Feldman (1987) have also considered organizational health and emphasized the importance of concepts such as the success of an organization. Both researchers developed dimensions to measure the concept of organizational health. Miles (1969) suggested three dimensions for organizational health: *task needs* (comprising the sub-dimensions of being objective-focused, having the ability to communicate adequately, and establishing the distribution of power), *survival needs* (with the sub-dimensions of effective use of resources, organizational commitment, and morale) and *needs for growth and development* (comprising the sub-dimensions of innovation, autonomy, adaption, competency to solve problems). These dimensions are as follows (Akbaba, 1997; Gül, 2007; Köseoğlu & Karyormuk, 2009; Miles, 1969; Polatcı, Ardıç, & Kaya, 2008):

1. Task Needs
   - Objective-focused: In a healthy organization, the objectives set by the management are realistic, open, concrete and clear.
   - Communication adequacy: Organizational health presumes formal or non-formal knowledge and information flow and necessitates an open and free communication network.
   - Distribution of power: A healthy organization distributes power and authority efficiently and fairly among its managers and employees.
2. Survival Needs
   - Effective use of resources: Healthy organizations use available resources effectively and in the most efficient manner.
   - Organizational commitment: Members of a healthy organization are fond of the organization and prefer to remain there while exerting all efforts for the cohesion and continued membership of the organization.
   - Morale: Job satisfaction and group satisfaction exist in healthy organizations.
3. Growth and Development Needs
   - Innovation: To ensure growth and sustained development, healthy organizations set new principles and new objectives.
   - Autonomy: Healthy organizations are pro-active toward their environment, as different and independent from other organizations.

- Adaptation: A healthy organization is internally flexible, open to change and in harmony with its environment. In this way, it displays growth and development.
- Competency to solve problems: A healthy organization is continually supported and strengthened by using strong and effective problem solving mechanisms while exerting the least amount of energy.

Hoy and Feldman (1987) examined organizational health under seven dimensions. These dimensions are as follows (Akbaba, 1997; Hoy & Feldman, 1987; Polatcı et al., 2008; Yüceler, Doğanalp, & Kaya, 2013):

1. Institutional Integrity: An organization ensures consistency in its programs by means of adapting to its environment.
2. Principal Influence: The managers of an organization can affect the decisions of the upper-level systems to which they are subordinate. Important factors for managers of organizations are having the skills to persuade decision making bodies, being respected and not being hindered by hierarchical barriers.
3. Consideration: The managers of the organization display friendly, supportive, open and sincere behaviors towards employees. This is an important dimension to ensure the increase in employees' performance.
4. Initiating Structure: This includes the behaviors related to the tasks and performance of managers of organizations. The manager of the organization clearly states his expectations from employees, the performance standards and the policies.
5. Resource Support: Supplying adequate machinery and equipment required for the organization and ensuring the supply of additional resources when requested.
6. Morale: Comprises friendship, sincerity, trust and excitement experienced in the implementation of tasks by members of the organization. Employees are tolerant and helpful to each other, have pride in the organization they work for and experience happiness when their tasks are completed.
7. Importance of the work: This dimension represents perfection sought in carrying out the tasks. The work begins with high yet attainable objectives for the employees, and production tasks are carried out seriously and in an orderly manner.

In research studies conducted on organizational health, its relationship to concepts such as efficiency, stress, performance, student performance, innovation, employee characteristics, organizational commitment, organizational environment, participatory management, self-realization, self-awareness and self-management, personal satisfaction, gender-role identity, student attitude, inter-organizational communication and structure and communication strategies were investigated (Akbaba, 1997; Cemaloglu, 2007; Gül, 2007; Ordu & Tanrıöğen, 2013). Based on these studies, creating the structure of a healthy organization is only possible by making changes in the organizational structure and having management support individual development in issues related supporting individual development, giving importance to communication, establishing an organizational culture that is open to

innovation, strengthening the information flow and consulting an expert (Ardıç & Polatcı, 2007). To that end, it is important to define the relationship between a healthy organization and the leadership. In this context, there are various studies that examine the relationship between leadership and organizational health; however, these are of a limited number (Edwards, 2008; Korkmaz, 2007; Recepoğlu & Özdemir, 2013). For this reason, this study investigates the effect of leadership on organizational health. Furthermore, the moderators, which were expected to have a medium effect in this study, were identified as: (1) *leadership style,* (2) *sample group* of the study, (3) *research publication type* and (4) *research publication year*. The following hypotheses were tested in this study in the scope of these variables:

H_1 Leadership has a positive effect on organizational health.
H_2 Leadership style is a moderator of the positive effect of leadership on organizational health.
H_3 The sample group is a moderator of the positive effect of leadership on organizational health.
H_4 The studies' publication type is a moderator of the positive effect of leadership on organizational health.
H_5 The studies' publication year is a moderator of the positive effect of leadership on organizational health.

2 Method

2.1 Study Design

In this study, the effect of leadership on organizational health was tested with a meta-analysis design.

2.2 Review Strategy and Criteria for Inclusion/Exclusion

To determine the research studies to include in the meta-analysis, the Science-Direct, Proquest and Ebsco academic databases were used to conduct a literature review. For this process, the terms *leadership* and *organizational health* included in the titles of the studies were used to screen the research studies. The end date for the research studies included in the research was identified as March 2014. Doctoral dissertations and peer-reviewed journals were included in the study.

Many strategies were used to identify the research studies that were appropriate for the meta-analysis of the study. First, a research study pool (67 research studies) was established including all studies with leadership and organizational health in

their titles. The abstracts of these studies were reviewed, and only eight research were found appropriate to include in the study. In the second stage, these research studies in the pool were examined in detail; six of the research studies in the pool were appropriate, and two were not found suitable. The descriptive statistics of the six research studies to be included in the analysis are presented in Table 1.

The criteria for inclusion of the research studies in the analysis study were:

- To have the statistical information necessary for correlational meta-analysis (n and r, or R^2 values)
- To be a study measuring the correlation between leadership and organizational health

Reasons for not including a research study in the meta-analysis:

- Having no quantitative data (qualitative research)
- Not having a correlation coefficient
- Not focusing on organizational health
- Not focusing on leadership

2.3 Coding Process

The coding process is essentially a data sorting process used to ascertain which of the complex data in studies are clear and suitable for the study. In this scope, a coding form was developed before the statistical analysis was conducted, and the coding was conducted according to the form. The main aim was to develop a specific coding system that allowed the study to see the entirety of the research studies in general and that would not miss any characteristics of each individual research study. The coding form developed in the study was comprised of:

- References for the research
- Sample information
- Sample group/sector
- Leadership style
- Data collection tool(s)
- Quantitative values

2.4 Statistical Processes

The effect size acquired in a meta-analysis is a standard measure value used in the determination of the strength and direction of the relationship in the study (Borenstein, Hedges, Higgins, & Rothstein, 2009). Pearson's correlation coefficient (r) was determined to be the effect size in this study. Because the correlation coefficient has a value between $+1$ and -1, the r value calculated was evaluated

Table 1 Characteristics of the studies included in the meta-analysis

Options		1	2	3	Total
Sample group		Teachers	Principals	Faculty members	
	n	3	2	1	6
	%	50	33.3	16.6	100
Type of the research		Articles	Dissertations		–
	n	5	1		6
	%	83.3	16.6		100
Year of the research		Between 1990 and 1999	Between 2000 and 2009	2010 and beyond	–
	n	1	3	2	6
	%	16.6	50	33.3	100

by converting this value into the value as it appears in the *z* table (Hedges & Olkin, 1985). Provided that more than one correlation value is given between the same structure categories in correlational meta-analysis studies, two different approaches were used in the determination of the one to be used in the meta-analysis (Borenstein et al., 2009; Kulinskaya, Morgenthaler, & Staudte, 2008). For this study, (1) first, if the correlations were independent, all the related correlations were included in the analysis and were considered to be independent studies, and (2) if there were dependent correlations, then the *conservative estimation value* was accepted. A *random effect model* was used for the meta-analysis processes in this study. The *Comprehensive Meta-Analysis* program was used in the meta-analysis process.

2.5 Moderator Variables

To determine the statistical significance of the difference between the moderators of the study, only the Q_b values were used. Four moderator variables that were expected to moderate the average effect size were identified in the study. The first of these, *leadership style,* was expected to be a moderator of the relationship between organizational health and leadership styles. The second, *sample group,* was expected to moderate the average effect of leadership perceptions and organizational health. The studies' *publication year* and *publication type* were the third and fourth moderator variables.

2.6 Publication Bias

A funnel plot for the research studies included in the meta-analysis of the study can be seen in Fig. 1. Evidence for the effect of publication bias in the research studies included in the meta-analysis can be seen in Fig. 1. A serious asymmetry would be expected in the funnel plot if there were a publication bias. The concentration of plots on one side, under the line of the average effect size and particularly in the bottom section of the funnel, suggests the probability of a publication bias. In this study, no evidence of the partiality of the publications was observed in any of the 55 data subjected to the meta-analysis.

Although no partiality in publications was observed in funnel plot, the results of Duval and Tweedie's trim and fill test, which was applied to determine the effect size of partiality in publications acquired with the meta-analysis using the random effect model, are given in Table 2. As seen in Table 2, there is no difference between the effect observed and the artificial effect size created to fix the effect of the partiality of publications. The research on each side of the center line is symmetrical, and this is the indicator of non-difference. Because there is no evidence indicating lost data on either side of the center line, the difference between the fixed effect size and observed effect size is zero.

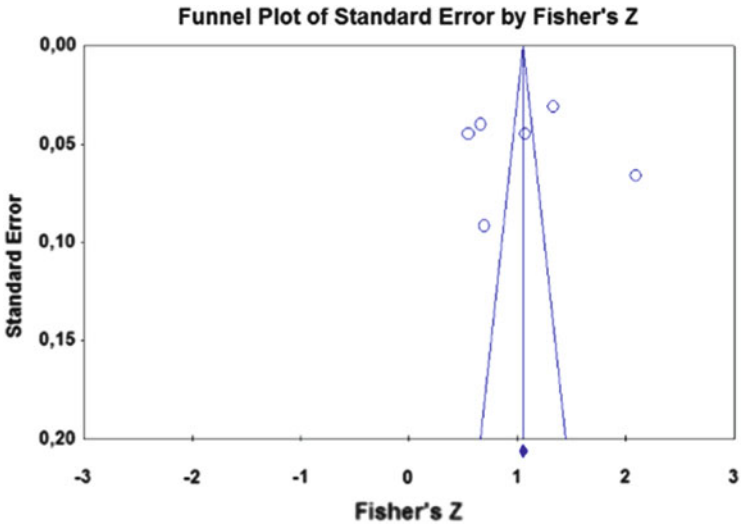

Fig. 1 Effect size funnel for publication bias

Table 2 Duval and Tweedie's trim and fill test results

	Studies trimmed	Point estimate	CI (confidence interval)		Q
			Lower limit	Upper limit	
Observed values		0.78	0.58	0.89	567.548
Adjusted values	0	0.78	0.58	0.89	567.548

3 Findings

Table 3 shows the results of meta-analysis of leadership and organizational health. The findings provided support for $H_{1,}$ which argued that there would be a positive relationship between leadership and organizational health. The effect size of leadership on organizational health was calculated as 0.78. This result shows that leadership has a *large positive effect* on organizational health (*see* Cohen, 1988).

The findings of the moderator analysis showed that H_2, H_3 and H_5 were supported in terms of the effect sizes of the variables leadership style, sample group and year of publication, whereas H_4 was not supported in regards to whether publication type played a moderator role on the effect of leadership on organizational health. In this regard, the effect size of leadership styles ($Q_b = 23.9$, $p < 0.05$), the effect size between sample groups ($Q_b = 12.4$, $p < 0.05$) and the effect size of year of publication ($Q_b = 77.3$, $p < 0.05$) were found to be statistically significant; in comparison, the effect size of types of publication was not found to be statistically significant ($Q_b = 0.64$, $p > 0.05$).

Table 3 Findings of the correlations between leadership and organizational health: results of meta-analysis

Variables	k	N	R	CI (confidence interval)		Q	Q_b
				Lower limit	Upper limit		
Organizational health	6	3,031	0.78*	0.58	0.89	567.548*	
Moderator (leadership style)							23.9*
Transformational leadership	4	1,752	0.63*	0.46	0.75		
Instructional leadership	1	1,046	0.87*	0.69	0.94		
Leadership behavior	1	233	0.97*	0.92	0.98		
Moderator (sample group/sector)							12.4*
Principal	2	622	0.55*	0.14	0.79		
Teacher	3	2,176	0.77*	0.56	0.88		
Faculty member	1	233	0.97*	0.89	0.99		
Moderator (type of publication)							0.64
Dissertation	1	122	0.60	−0.29	0.93		
Article	5	2,909	0.81*	0.60	0.91		
Moderator (years of publication)							77.3*
Between 1990 and 1999	1	233	0.97*	0.94	0.98		
Between 2000 and 2009	3	1,252	0.55*	0.43	0.66		
2010 and beyond	2	1,546	0.83*	0.76	0.88		

*$p < 0.01$, **$p < 0.05$

The moderator analysis results found that the level effect size of leadership styles are large in regards to transformational leadership [$r = 0.63$], instructional leadership [$r = 0.87$] and leadership behavior [$r = 0.97$], whereas a medium effect was found for sample groups such as faculty members [$r = 0.97$], principals [$r = 0.55$] and teachers [$r = 0.77$]. In regards to year of publication, statistically significant results were found at a medium level for publications from 1990 to 1999 [$r = 0.44$] and at a large level for publications from 2000 to 2009 [$r = 0.55$] and for 2010 and beyond [$r = 0.83$]. In contrast, the effect size for types of publication varied: Whereas it was statistically significant at a large level for research articles [$r = 0.55$], no statistical significance was found for dissertations [$r = 0.60$].

Conclusion

Six studies were included in this meta-analysis aimed at investigating the effect size of leadership on organizational health. The moderator variables of the study were determined to be leadership style, sample group, publication type, and publication year. The results of the meta-analysis obtained from the study showed that leadership *has a large positive effect* on organizational health. Although this finding somewhat indirectly suggests a positive relationship between leadership and organizational health, it can be stated that the findings

(continued)

support this relationship (Cemaloglu, 2007; Cengiz, 2008; Korkmaz, 2007; Yıldırım, 2006).

The findings of the leadership style moderator variable analysis show that leadership styles moderate the effect of leadership on organizational health. Other studies on the relationship between leadership styles and organizational health have found similar results, with an emphasis on instructional leadership (Recepoğlu 2011; Recepoğlu & Özdemir, 2013) and transformational leadership (Cemaloglu, 2007). An assessment of leadership styles finds that, of the studies included in the meta-analysis, transformational leadership, instructional leadership and leadership behaviors have a larger effect on organizational health than styles of leadership do.

According to the results, sample group as a moderator variable was found to have a statistically small significance level on the effect of leadership on organizational health and played a moderator role. In light of this finding, the largest effect size was found for the faculty member group and teacher group, whereas the smallest effect size was found to be highly significant for principals. In contrast to these findings, a study by Valente (1999) found that the leadership qualities of school principals had a larger effect on organizational health in comparison with teachers.

The moderator analysis results for studies' publication year and type suggest that there is a significant difference between the effect size of publication year between leadership and organizational health; however publication type was not found to be statistically significant. An assessment of publication years showed that each category of years was significant in moderating the effect of leadership on organizational health. In regards to types of publications, the effect of articles on the effect of leadership on organizational health was large, whereas dissertations had no effect.

The results concerning the effect of leadership on organizational health can be summarized as such:

- Leadership has a large positive effect on organizational health [$r = 0.78$].
- Whereas leadership style, sample group and type of publication moderate the effect of leadership on organizational health, year of publication does not.

The findings as a result of the meta-analysis conducted on leadership and organizational health is limited to the literature of the study in regards to making inferences concerning the findings of previous studies. The importance of more in-depth studies to be carried out further in this meta-analysis is emphasized to examine the effects of leadership on organizational health. Thus, it can be recommended to further investigate the relationship between leadership and organizational health in the context of sample groups and various leadership styles by maintaining its currency. In doing so, it can be ensured to increase the number of comparative meta-analysis studies and ensure the in-depth investigation of the topic at hand.

References[1]

Akbaba, S. (1997). *Organizational health of secondary school*. Unpublished doctoral dissertation, Ankara University, Ankara, Turkey.

Ardıç, K., & Polatcı, S. (2007). Holistic view on employee welfare and organizational effectiveness: Organizational health. *Atatürk University Journal of Economics and Administrative Sciences, 21*(1), 137–154.

Borenstein, M., Hedges, L. V., Higgins, J. P. T., & Rothstein, H. R. (2009). *Introduction to meta-analysis*. Chichester: Wiley.

Cemaloglu, N. (2007). The impact of school administrators' leadership styles on organizational health. *Journal of Turkey Social Research, 2*, 165.*

Cemaloglu, N. (2011). Primary principals' leadership styles, school organizational health and workplace bullying. *Journal of Educational Administration, 49*(5), 495–512.*

Cengiz, R. (2008). *The relation between professional football club's director's transformational leadership styles with organizational health and footballers mobbing living*. Unpublished doctoral dissertation, Gazi University, Ankara, Turkey.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Hillside, NJ: Lawrence Erlbaum Associates.

Dudek-Shriber, L. (1997). Leadership qualities of occupational therapy department program directors and the organizational health of their departments. *The American Journal of Occupational Therapy: Official Publication of the American Occupational Therapy Association, 51* (5), 369–377.*

Edwards, C. B. (2008). *An investigation of the relationship between transformational leadership and organizational health*. Unpublished doctoral dissertation. Retrieved from ProQuest Dissertations and Theses database, (UMI No. 3311413).*

Gül, H. (2007). Relationships among job stress, organizational health and performance: A field study. *KMU Journal of Economics and Administrative Sciences, 13*, 318–332.

Hedges, L. V., & Olkin, I. (1985). *Statistical methods for meta-analysis*. New York, NY: Academic.

Hoy, W. K., & Feldman, J. A. (1987). Organizational health: The concept and its measure. *Journal of Research and Development in Education, 20*(4), 30–37.

Korkmaz, M. (2007). The effects of leadership on organizational health. *Educational Research Quarterly, 30*(3), 22–54.*

Köseoğlu, M. A., & Karyormuk, K. (2009). What is the organizational health: Are there differences among opinions of managers? *Atatürk University Journal of Economics and Administrative Sciences, 23*(2), 175–193.

Kulinskaya, E., Morgenthaler, S., & Staudte, R. G. (2008). *Meta-analysis: A guide to calibrating and combining statistical evidence*. West Sussex: Wiley.

Miles, M. B. (2000). Planned change and organizational health: Figure and ground. In F. D. Carver & T. J. Sergiovanni (Eds.), *Organizations and human behavior* (pp. 375–391). New York, NY: McGraw-Hill.

Ordu, A., & Tanrıöğen, A. (2013). The relationships between organizational structure and organizational health in primary schools. *Pamukkale University Journal of Educational, 33*, 93–106.

Polatcı, S., Ardıç, K., & Kaya, A. (2008). Analysis of organizational health and variables affected it in academic institutions. *Journal of Management and Economics, 15*(2), 145–161.

Recepoğlu, E. (2011). *The relationship between principals' humor styles and both instructional leadership behaviours and organizational health of the school*. Unpublished doctoral dissertation, Gazi University, Ankara, Turkey.

[1] References marked with an asterisk indicate studies included in the meta-analysis. The in-text citations to studies selected for meta-analysis are not followed by asterisks.

Recepoğlu, E., & Özdemir, S. (2013). The relationship between principals' instructional leadership behaviors and organizational health of the school. *Educational Administration: Theory & Practice, 19*(4), 629–664.*

Valente, M. E. (1999). The relationship of organizational health, leadership, and teacher empowerment. *American Educational Research Association Annual Meeting Papers.* Montreal, Canada.

Yıldırım, C. (2006). *Effect of school directors leadership styles on organizational health (case of Ankara).* Unpublished master thesis, Gazi University, Ankara, Turkey.

Yüceler, A., Doğanalp, B., & Kaya, Ş. D. (2013). The relation between organizational health and organizational commitment. *Mediterranean Journal of Social Sciences, 4*(10), 781–788.

The Effect of Leadership on Organizational Learning

Şule Betül Tosuntaş and Şahin Danişman

Abstract The effect of leadership on organizational learning was examined in this meta-analysis study. A total of 170 research studies were collected as a result of a literature review, out of which 31 were included in the meta-analysis. The 31 research studies were compiled to obtain a sample size of 11,944 subjects. The analysis results of the random effect model showed that leadership has a *large effect* on organizational learning. In the study, of the moderators publication type, publication year, sample group/sector, leadership style/approach and leadership scale, only leadership style/approach was found to be a moderator variable.

1 Introduction

When we consider the premise that humans are learners by nature, it would not be wrong to state that learning takes place all the time. From this perspective, learning is a need rather than a preference (Lloréns Montes, Ruiz Moreno, & García Morales, 2005). Particularly in the changing world, learning is seen as a competitive advantage (De Geus, 1988), and, in this sense, organizations perform more successfully when better learning is realized (Abbasi & Zamani-Miandshti, 2013). Successful organizations are organizations where all parties are involved in active learning and understand the importance of adaptation to become organizationally competitive (Kinghorn, Black, & Oliver, 2011). Thus, organizational learning and learning organizations have taken their place in the new organizational paradigms.

Organizational learning is the changing and expansion of knowledge and value systems of organizations, the development of their capacity to solve problems and take action and the changes in the common reference frameworks of employees (Probst & Büchel, 1997; cited in Yazıcı, 2001). Arygris (1996) contends that organizational learning is the process of identifying mistakes and rectifying them and argues that learning is what happens at the end of this process. According to Huber (1991), organizational learning is the processing of information with the aim

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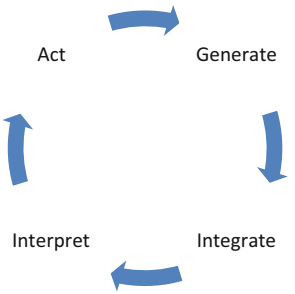

Fig. 1 Organizational learning process

of collating organizational memory and is comprised of four constructs: (i) knowledge acquisition, (ii) information distribution, (iii) information interpretation and (iv) organizational memory. Similarly, organizational learning is expressed as developing and attaining information, sharing and distributing information and putting the information into practice (Garcia-Morales, Lopez-Martin, & Llamas-Sanchez, 2006). Furthermore, the learning process in organizations resembles that of human life. Dixon (1994) summarizes this process as a cycle with four stages: (i) generation of information, (ii) integration of information into the organization, (iii) interpretation of the information and (iv) actions taken based on the interpreted information (Fig. 1).

Senge, Kleiner, Roberts, Ross, and Smith (1994) explain the five disciplines of organizational learning as follows:

(i) *Personal mastery:* to develop personal learning capacity and the creation of an organizational environment to encourage all members of the organization to reach the aims and objectives.
(ii) *Mental models:* the pictures of a person's inner world made up of deep thoughts that can be continuously explained and developed. They are shaped as a result of actions and decisions.
(iii) *Shared vision:* the creation of the feeling of being a group by developing the shared aspects to reach the desired aim for the future and the principles and guidance practices concerning the points aimed to be reached.
(iv) *Team learning:* the transforming of interactive and collective thinking skills. In this way, groups become larger than the total of individual skills of its members and understanding, and skills can be developed in a more dependable way.
(v) *Systems thinking:* a method of language and thinking for understanding and the means of understanding the strengths and interactive relationships that shape the behaviors of systems. This discipline is useful for organizations to be informed of how systems can more efficiently change and how to become harmonious with larger processes in the natural and economic world.

The mental characteristics of organizations have been determined by considering the information produced by organizations, the generation of new information

based on this information, and the fact that members of organizations learn better when acting collectively (Levitt & March, 1988; Yazıcı, 2001). Learning members of the organizations can predict the change and the consequences of the actions taken. The existence of a learning culture in the organization will ensure access to collective learning and the interaction for efforts for change (Korkmaz, 2008).

A review of the research led to the conclusion that organizational learning is related to concepts such as innovation (Aragon-Correa, Garcia-Morales, & Cordon-Pozo, 2007; Bueno, Aragón, Paz Salmador, & Garcia, 2010; Calantone, Cavusgil, & Zhao, 2002; Cohen & Levinthal, 1990; Tushman & Nadler, 1986), organizational culture (Chang & Lee, 2007), organizational performance (Garcia-Morales, Jimenez-Barrionuevo, & Gutierrez-Gutierrez, 2012, Montes, Moreno, & Garcia-Morales, 2005), job satisfaction (Chang & Lee, 2007; Mirkamali, Thani, & Alami, 2011), creativity (Sanchez & Mahoney, 1996; Yli-Renko, Autio, & Sapienza, 2001) and inspiration (Damanpour, 1991; Dishman & Pearson, 2003).

As the organizational world becomes more dynamic, independent and unpredictable, it seems that organizational leadership becomes impossible to solve all problems (Senge, 1990). Leaders of learning environments have importance due to the learning skills and characteristics they establish (Korkmaz, 2008). Transformational leaders in learning environments are catalysts, mentors, facilitators and trainers (Senge et al., 1994). According to Popper and Lipshitz (2000), leadership is a factor that affects organizational learning. Leaders can shape the culture of the organization with various actions and services by establishing an organizational structure. A review of the literature, which can act as a basis for this conclusion, shows that many studies on the effect of leadership on organizational learning suggest there is a strong relationship between leadership and organizational learning (Abbasi & Zamani-Miandshti, 2013; Amitay, Popper, & Lipshitz, 2005; Lam, 2002; Leithwood, Leonard, & Sharratt, 1998; Leithwood & Menzies, 1998; Stasny, 1996; Zagorsek, Dimovski, & Skerlavaj, 2009).

This study examined the effect of leadership on organizational learning. Furthermore, the moderators that were expected to have a medium effect in this study were identified as: (i) type of publication, (ii) year of publication, (iii) sample group/sector, (iv) leadership style/approach and (v) leadership scale. All these variables, along with the results of previous research results, were used to test the following hypotheses of this study:

H_1 Leadership has a positive effect on organizational learning.
H_2 The studies' publication type is a moderator for the positive effect of leadership on organizational learning.
H_3 The studies' publication year is a moderator of the positive effect of leadership on organizational learning.
H_4 The sample group/sector is a moderator of the positive effect of leadership on organizational management.
H_5 Leadership style/approach is a moderator of the positive effect of leadership on organizational learning.

H_6 Leadership scale is a moderator of the positive effect of leadership on organizational learning.

2 Method

2.1 Study Design

In this study, the effect of leadership on organizational learning was tested with a meta-analysis design.

2.2 Review Strategy and Criteria for Inclusion/Exclusion

To determine the research studies to include in the meta-analysis, the Science-Direct, Proquest and Ebsco academic databases were used to conduct a literature review. For this process, the terms *leadership* and *organizational learning* included in the titles of the studies were used to screen the research studies. The end date for the research studies included in the research was identified as March 2014. Doctoral dissertations and peer-reviewed journals were included in the study.

Many strategies were used to identify the research studies that were appropriate for the meta-analysis of the study. First, a research study pool of 170 research studies was established including all studies with leadership and organizational learning in their titles. The abstracts of these studies were reviewed, and all were found appropriate to include in the study. In the second stage, all research studies in the pool were examined in detail; 31 of the research studies in the pool were appropriate, and 139 were not found suitable. The descriptive statistics of the 31 research studies to be included in the analysis are presented in Table 1.

The criteria for inclusion of the research studies to the analysis study were:

- To have the statistical information necessary for correlational meta-analysis (n and r, or R^2 values)
- To be a study measuring the correlation between leadership and organizational learning

Reasons for not including a research study in the meta-analysis:

- Having no quantitative data (qualitative research)
- Not having a correlation coefficient
- Not focusing on organizational learning
- Not focusing on leadership

Table 1 Characteristics of the studies included in the meta-analysis

Variables		1	2	3	4	Total
Publication year		1990–1999	2000–2009	2010 and beyond	–	–
	n	3	12	16	–	31
	%	9.67	38.7	51.61	–	100
Publication type		Dissertation	Article	–	–	–
	n	11	20	–	–	31
	%	35.48	64.51	–	–	100
Sample group/sector		Education	Service	Student	Health	
	n	9	18	1	3	31
	%	29.03	58.06	3.22	9.67	100

2.3 Coding Process

The coding process is essentially a data sorting process used to ascertain which of the complex data in studies are clear and suitable for the study. In this scope, a coding form was developed before the statistical analysis was conducted, and the coding was conducted according to the form. The main aim was to develop a specific coding system that allowed the study to see the entirety of the research studies in general and that would not miss any characteristics of each individual research study. The coding form developed in the study was comprised of:

- References for the research
- Sample information
- Sample group/sector
- Leadership style/approach
- Data collection tool(s)
- Quantitative values

2.4 Statistical Processes

The effect size acquired in a meta-analysis is a standard measure value used in the determination of the strength and direction of the relationship in the study (Borenstein, Hedges, Higgins, & Rothstein, 2009). Pearson's correlation coefficient (r) was determined to be the effect size in this study. Because the correlation coefficient has a value between $+1$ and -1, the r value calculated was evaluated by converting this value into the value as it appears in the z table (Hedges & Olkin, 1985). Provided that more than one correlation value is given between the same structure categories in correlational meta-analysis studies, two different approaches were used in the determination of the one to be used in the meta-analysis (Borenstein et al., 2009; Kulinskaya, Morgenthaler, & Staudte, 2008). For this study, *i*) first, if the correlations were independent, all the related correlations were included in the analysis and were considered to be independent studies, and (*ii*) if there were dependent correlations, then the *conservative estimation value* was accepted. A *random effect model* was used for the meta-analysis processes in this study. The *Comprehensive Meta-Analysis* program was used in the meta-analysis process.

2.5 Moderator Variables

To determine the statistical significance of the difference between moderators of the study, only the Q_b values were used. Five moderator variables that were expected to have an effect were identified in the study. The first of these, *leadership style/*

approach, was expected to be a moderator of the relationship between organizational learning and leadership styles/approaches. The second, *sample group/sector,* was expected to moderate the average effect of leadership perceptions and organizational learning. The third was the studies' *publication year* and *publication type,* and the fourth was the leadership scale.

2.6 Publication Bias

A funnel plot for the research studies included in the meta-analysis of the study can be seen in Fig. 2. Evidence for the effect of publication bias in the research studies included in the meta-analysis can be seen in Fig. 2. A serious asymmetry would be expected in the funnel plot if there were a publication bias. The concentration of plots on one side, under the line of the average effect size and particularly in the bottom section of the funnel, suggests the probability of a publication bias. In this study, no evidence of the partiality of the publications was observed in any of the 55 data subjected to the meta-analysis.

Although no partiality in publications was observed in the funnel plot, the results of Duval and Tweedie's trim and fill test, which was applied to determine the effect size related to partiality in publications acquired with the meta-analysis using the random effect model, are given in Table 2. As seen in Table 2, there is no difference between the effect observed and artificial effect size created to fix the effect of the partiality of publications. The research on each side of the center line is symmetrical, and this is the indicator of non-difference. Because there is no evidence indicating lost data on either side of the center line, the difference between the fixed effect size and the observed effect size is zero.

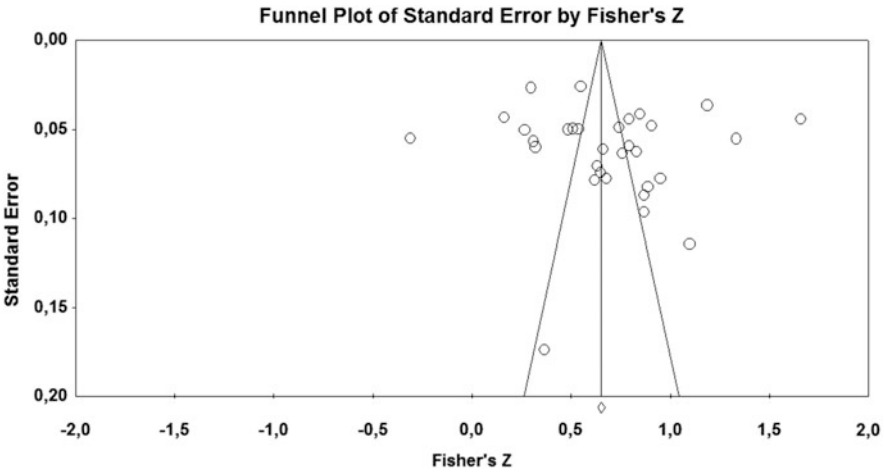

Fig. 2 Effect size funnel for publication bias

Table 2 Duval and Tweedie's trim and fill Test results

	Excluded study	Point estimate	CI (Confidence Interval)		Q
			Lower limit	Upper limit	
Observed values		0.59	0.49	0.67	1,786.64
Adjusted values	0	0.59	0.49	0.67	1,786.64

3 Findings

Table 3 shows the results of meta-analysis of leadership and organizational learning. The findings supported H_1, which argued that there would be a positive relationship between leadership and organizational learning. The effect size of leadership on organizational learning was calculated to be 0.59. This result shows that leadership has a *large effect* on organizational leadership (*see* Cohen, 1988).

The findings did not provide support H_2, which predicted that the type of publication of a research study would play a moderator role. Although a statistically significant difference between effect of publication type was not found ($Q_b = 0.51$, $p > 0.05$), a large effect for research studies [$r = 0.61$] and for dissertations [$r = 0.54$] was found.

Findings did not support H_3, which hypothesized that studies' publication year would play a positive moderator role in leadership's effect on organizational learning. Although the moderator analysis did not find a statistically significant difference in the effect size for studies' for publication year ($Q_b = 1.79$, $p > 0.05$), it was seen that leadership has a large impact on organizational learning in publications from 1990–1999 [$r = 0.63$], 2000–2009 [$r = 0.65$] and for 2010 and beyond [$r = 0.53$].

The results of the moderator analysis showed that H_4, which predicted that the sample group/sector would be a moderator for the positive effect of leadership on organizational management, was not supported. Although the results of the analysis were not found to be statistically significant between the sample groups/sectors ($Q_b = 4.68$, $p > 0.05$), a large effect of leadership on organizational learning was found for the education sector [$r = 0.55$], the service sector [$r = 0.56$], students [$r = 0.83$] and the health sector [$r = 0.63$].

The findings supported H_5, which predicted that leadership style/approach would moderate the effect of leadership on organizational learning. The moderator analysis found a statistically significant difference between the effect size of leadership style/approach ($Q_b = 5.32$, $p < 0.05$). Out of the studies included in the research, it was found that transformational leadership [$r = 0.65$] had a large effect, and other leadership styles/approaches [$r = 0.40$] has a medium effect.

Findings did not support H_6, which hypothesized that leadership scale would play a positive moderator role in leadership's effect on organizational learning. Although the effect size of the leadership scale was not found to be statistically

Table 3 Findings of the correlations between leadership and organizational learning: Results of meta-analysis

Variables	k	N	r	CI (Confidence Interval)		Q	Q_b
				Lower Limit	Upper Limit		
Organizational learning	31	11,944	0.59*	0.49	0.67	1,786.64*	
Moderator [Publication Type]							0.51
Article	20	7,011	0.61*	0.50	0.71		
Dissertation	11	4,933	0.54*	0.36	0.69		
Moderator [Sample Group/Sector]							4.68
Education	9	5,409	0.55*	0.38	0.70		
Service	18	4,922	0.56*	0.43	0.66		
Student	1	753	0.83*	0.46	0.95		
Health	3	860	0.75*	0.52	0.88		
Moderator [Publication Year]							1.79
1990–1999	3	975	0.63*	0.29	0.83		
2000–2009	12	4,084	0.65*	0.51	0.76		
2010 and beyond	16	6,885	0.53*	0.38	0.65		
Moderator [Leadership style/approach]							5.32**
Transformational	22	9,183	0.65*	0.55	0.73		
Other	9	2,761	0.40**	0.17	0.59		
Moderator [Leadership scale]							1.57
MLQ	14	6,675	0.65*	0.51	0.76		
Other	17	5,269	0.53**	0.38	0.66		

*$p < 0.01$, **$p < 0.05$

significant in the results of the analysis ($Q_b = 1.57$, $p > 0.05$), it was found that the MLQ scale [$r = 0.65$] had a large effect on organizational learning and other leadership scales [$r = 0.53$].

Conclusion

Thirty-one studies were included in this meta-analysis aimed at investigating the effect size of leadership on organizational learning. The moderator variables of the study were publication type, sample group/sector, year of publication, leadership style/approach and leadership scale. The results of the meta-analysis obtained from the study showed that leadership *has a large positive effect* on organizational learning. This finding is congruent with findings of many other research studies that show the positive relationship between organizational learning and leadership (Chang & Lee, 2007;

(continued)

Chen, 2004; Garcia-Morales et al., 2012; Jeon, 2011; Korkmaz, 2006; Kurland, Peretz, & Hertz-Lazarowitz, 2010; Singh, 2008; Tebbano, 2002)

The moderator variable analysis of the sample group/sector in research studies did not find a significant difference in effect size in regards to sample groups/sectors. However, it can be stated that the largest impact was found to be the student group, and the smallest was found within the education sector. Many research studies have found that the leadership of school principals supports organizational learning and that transformational leadership is particularly effective in constructing education and schools (Hallinger & Heck, 1998; Leithwood, 1994; Leithwood & Jantzi, 1999; Silins & Mulford, 2004). In this light, the finding of a large effect of leadership on organizational learning is consistent with the literature. However, considering that the smallest effect was seen in employees of the education sector, it can be stated that only students are open to learning in organizations using teaching-learning activities.

The effect of leadership on organizational learning was not statistically significant in regards to publication type and year of publication according to the results of the moderator analysis. It was seen that publication type does not influence the effect size and that articles and dissertations have a large effect. A review of the magnitude of the effect of studies conducted in 1990–1999, 2000–2009 and after 2009 showed that they had a large effect. Although the year of publication was not found to influence the effect size, the emergence of concepts of organizational learning and learning environments shows that leadership is closely related to these concepts.

Leadership scales included in the research studies were not found to be statistically significant in regards to the effect of leadership on organizational learning. In research studies where PPL, MLQ, McColl-Kennedy and Anderson and TLI scales were used, the effect size was found to be large.

The moderator analysis conducted in relation to leadership style/approach found that leadership plays a moderator role in organizational learning. It was found that transformational leadership has a large effect on organizational leadership, whereas other leadership styles/approaches have a medium effect. In learning organizations, leaders shape the learning characteristics of the organization (Korkmaz, 2008). With the emergence of the concept of organizational learning, it is known that transformational leadership is necessary for learning in organizations (Senge et al., 1994). Similar to these findings, it was found that transformational leadership is effective in organizational learning in the results of studies in the literature (Amitay et al., 2005; Aragon-Correa et al., 2007; Cheung, 2012; Korkmaz, 2006; Montes et al., 2005).

References[1]

Abbasi, E., & Zamani-Miandshti, N. (2013). The role of transformational leadership, organizational culture and organizational learning in improving the performance of Iranian agricultural faculties. *Higher Education, 66*, 505–519. doi:10.1007/s10734-013-9618-8.

Amitay, M., Popper, M., & Lipshitz, R. (2005). Leadership styles and organizational learning in community clinics. *The Learning Organization, 12*, 57–70.*

Aragon-Correa, J. A., Garcia-Morales, V. J., & Cordon-Pozo, E. (2007). Leadership and organizational learning's role on innovation and performance: Lessons from Spain. *Industrial Marketing Management, 36*, 349–359.*

Arygris, C. (1996). Prologue: Toward a comprehensive theory of management. In M Bertrand, E. Amy (Ed.), *Organizational learning and competitive advantage* (1–6). London: Sage.

Bhat, A. B., Verma, N., Rangnekar, S., & Barua, M. K. (2012). Leadership style and team processes as predictors of organisational learning. *Team Performance Management, 18*, 347–369.*

Borenstein, M., Hedges, L. V., Higgins, J. P. T., & Rothstein, H. R. (2009). *Introduction to meta-analysis*. UK: Wiley.

Brown, J., & Sheppard, B. (1999). *Leadership, organizational learning, and classroom change*. Montreal, Canada: American Educational Research Association. (Eric Document Reproduction Service No. ED431230).*

Bueno, E., Aragón, J. A., Paz Salmador, M., & Garcia, V. J. (2010). Tangible slack versus intangible resources: the influence of technology slack and tacit knowledge on the capability of organisational learning to generate innovation and performance. *International Journal of Technology Management, 49*(4), 314–337.

Calantone, R. J., Cavusgil, S. T., & Zhao, Y. (2002). Learning orientation, firm innovation capability, and firm performance. *Industrial Marketing Management, 31*(6), 515–524.

Chang, S. C., & Lee, M. (2007). A study on relationship among leadership, organizational culture, the operation of learning organization and employees' job satisfaction. *The Learning Organization, 14*(2), 155–185.*

Chen, C. (2004). *A study of the relationship between the learning organizations and principal leadership styles in Taiwan* (Unpublished doctoral dissertation). MA: University of Massachusetts.*

Cheung, S. Y. C. (2012). *A study on relationship between leadership styles and organisational learning - In teachers' perspective* (Unpublished doctoral dissertation). Hong Kong: The Chinese University of Hong Kong.*

Chmiel, H. M. (2013). *An analysis of the relationship between authentic leadership and the learning organization in the medical device industry* (Unpublished doctoral dissertation). Marion, IN: Indiana Weslayan University.*

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Hillside, NJ: Lawrence Erlbaum Associates.

Cohen, W. M., & Levinthal, D. A. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly, 35*, 128–152.

Damanpour, F. (1991). Organizational innovation: A meta-analysis of effects of determinants and moderators. *Academy of Management Journal, 34*(3), 555–590.

De Geus, A. P. (1988). Planning as learning. *Harvard Business Review, 69*(2), 70–74.

Dishman, P., & Pearson, T. (2003). Assessing intelligence as learning within an industrial marketing group: A pilot study. *Industrial Marketing Management, 32*(7), 615–620.

Dixon, N. M. (1994). *The organizational learning cycle: How we can learn collectively*. New York: McGraw-Hill.

[1] References marked with an asterisk indicate studies included in the meta-analysis. The in-text citations to studies selected for meta-analysis are not followed by asterisks.

Garcia-Morales, V. J., Lopez-Martin, F., & Llamas-Sanchez, R. (2006). Strategic factors and barriers for promoting educational organizational learning. *Teaching and Teacher Education, 22*, 478–502.*

Garcia-Morales, V. J., Jimenez-Barrionuevo, M. M., & Gutierrez-Gutierrez, L. (2012). Transformational leadership influence on organizational performance through organizational learning and innovation. *Journal of Business Research, 65*, 1040–1050.*

Garcia-Morales, V. J., Matias-Reche, F., & Hurtada-Torres, N. (2008). Influence of transformational leadership on organizational innovation and performance depending on the level of organizational learning in the pharmaceutical sector. *Journal of Organizational Change Management, 21*(2), 188–212.*

Hallinger, P., & Heck, R. (1998). Exploring the principal's contribution to school effectiveness: 1980–1995. *School effectiveness and school improvement, 9*, 157–191.

Hedges, L. V., & Olkin, I. (1985). *Statistical method for meta-analysis*. United Kingdom: Academic.

Huber, G. P. (1991). Organizational learning: The contributing processes and the literatures. *Organization Science, 2*(1), 88–115.

Jeon, K. S. (2011). *The relationship of perception of organization performance and spiritual leadership, workplace spirituality, and learning organization culture in the Korean context* (Unpublished doctoral dissertation). State College, PA: The Pennsylvania State University.*

Kim, J. Y. (2011). *The relationship among leadership style, organizational culture and the learning organization: The moderating effects of organizational culture at the middle management level* (Unpublished doctoral dissertation). The Pennsylvania State University, USA.*

Kinghorn, B. H., Black, J. A., & Oliver, R. (2011). The interaction of leadership roles and organizational learning environment: A canonical correlation approach. *Journal of Leadership, Accountability, and Ethics, 8*(4), 42–55.

Korkmaz, M. (2006). Liderlik uygulamalarının içsel okul değişkenleri ile öğrenci çıktı değişkenlerine etkisi. *Kuram ve Uygulamada Eğitim Yönetimi, 48*, 503–529.*

Korkmaz, M. (2008). Okul müdürlerinin liderlik stilleri ile öğrenen örgüt özellikleri arasındaki ilişki üzerine nicel bir araştırma. *Kuram ve Uygulamada Eğitim Yönetimi, 53*, 75–98.

Kulinskaya, E., Morgenthaler, S., & Staudte, R. G. (2008). *Meta analysis: A guide to calibrating and combining statistical evidence*. London: John Wiley & Sons.

Kurland, H., Peretz, H., & Hertz-Lazarowitz, R. (2010). Leadership style and organizational learning: The mediate effect of school vision. *Journal of Educational Administration, 48*(1), 7–30.*

Lakhani, M. A. (2005). *Relational Linakges between visionary leadership and organizational learning across the United States, Malaysia, and India* (Unpublished doctoral dissertation). Phoenix, AZ: University of Phoenix.*

Lam, Y. J. (2002). Defining the effects of transformational leadership on organisational learning: A cross-cultural comparison. *School Leadership & Management, 22*(4), 439–452.

Leithwood, K. (1994). Leadership for school restructuring. *Educational Administration Quarterly, 30*(4), 498–518.

Leithwood, K., & Jantzi, D. (1999). The effects of transformational leadership in organizational conditions and student engagement with school. *Journal of Education Administration, 38*(2), 112–128.

Leithwood, K., & Menzies, T. (1998). A review of research concerning the implementation of site-based management. *School Effectiveness and School Improvement, 9*(3), 233–285.

Leithwood, K., Leonard, L., & Sharratt, L. (1998). Conditions fostering organizational learning in schools. *Educational Administration Quarterly, 34*(2), 243–276.

Levitt, B., & March, J. G. (1988). Organizational learning. *Annual Review of Sociology, 14*, 319–340.

Lloréns Montes, F. J., Ruiz Moreno, A., & García Morales, V. (2005). Influence of support leadership and teamwork cohesion on organizational learning, innovation and performance: An empirical examination. *Technovation, 25*(10), 1159–1172.

Mahseredjian, A., Karkoulian, S., & Messerra, L. (2011). Leadership styles correlate of learning organization in a non-western culture. *The Business Review, 17*(2), 269–277.*

Mirkamali, S. M., Thani, F. N., & Alami, F. (2011). Examining the role of transformational leadership and job satisfaction in the organizational learning of an automotive manufacturing company. *Procedia Social and Behavioral Sciences, 29*, 139–148.*

Montes, F. C. L., Moreno, A. R., & Garcia-Morales, V. (2005). Influence of support leadership and teamwork cohesion on organizational learning, innovation and performance: An empirical examination. *Technovation, 25*, 1159–1172.*

Nafei, W. A., Khanfar, N. M., & Kaifi, B. A. (2012). Leadership styles and organizational learning an empirical study on Saudi banks in Al-Taif Governorate Kingdom of Saudi Arabia. *Journal of Management and Strategy, 3*(1), 2–17.*

Noruzy, A., Dalfard, V., Azhdari, B., Nazari-Shirkouhi, S., & Rezazadeh, A. (2013). Relations between transformational leadership, organizational learning, knowledge management, organizational innovation, and organizational performance: an empirical investigation of manufacturing firms. *International Journal of Advanced Manufacturing Technology, 64*, 1073–1085.*

Popper, M., & Lipshitz, R. (2000). Installing mechanisms and instilling values: the role of leaders in organizational learning. *The Learning Organization, 7*(3), 135–145.

Sahaya, N. (2012). A learning organization as a mediator of leadership style and firms' financial performance. *International Journal of Business and Management, 7*(14), 96–113.*

Sanchez, R., & Mahoney, J. T. (1996). Modularity, flexibility, and knowledge management in product and organization design. *Strategic Management Journal, 17*(2), 63–76.

Senge, P. M. (1990). *The fifth discipline*. New York: Doubleday.

Senge, P., Kleiner, A., Roberts, C., Ross, R., & Smith, B. (1994). *The fifth discipline Fieldbook*. New York: Doubleday.

Silins, H., & Mulford, B. (2004). Schools as learning organisations-effects of teacher leadership and student outcomes. *School Effectiveness and School Improvement, 15*(3–4), 443–466.

Singh, K. (2008). Relationship between learning organization and transformational leadership: Banking organizations in India. *International Journal of Business and Management Science, 1*, 97–111.*

Singh, S. K. (2010). Benchmarking leadership styles for organizational learning in Indian context. *Benchmarking: An International Journal, 17*(1), 97–114.*

Stasny, K. M. (1996). *The effects of dimensions of transformational leadership on the conditions for organizational learning and sources of knowledge utilization in restructuring schools* (Unpublished doctoral dissertation). New Orleans, LA: The University of New Orleans.

Stewart, J. E. (2013). *Leadership style and learning organization: A survey of information technology professionals* (Unpublished doctoral dissertation). Minneapolis, MN: Capella University.*

Tebbano, M. D. (2002). *A study of the relationship between the preferred leadership styles of school district superintendents and the capability of school districts to become professional learning organizations* (Unpublished doctoral dissertation). South Orange, NJ: Seton Hall University.*

Tushman, M. L., & Nadler, D. A. (1986). Organizing for innovation. *California Management Review, 28*(3), 74–92.

Yazıcı, S. (2001). *Öğrenen organizasyonlar*. İstanbul: Alfa Basım Yayın.

Yli-Renko, H., Autio, E., & Sapienza, H. J. (2001). Social capital, knowledge acquisition, and knowledge exploitation in young technology-based firms. *Strategic Management Journal, 22* (6–7), 587–613.

Yoon, H. J. (2012). *Predicting employee voice behavior: An exploration of the roles of empowering leadership, power distance, organizational learning capability, and sense of empowerment in Korean organizations* (Unpublished doctoral dissertation). Minneapolis, MN: The University of Minnesota.*

Zagorsek, H., Dimovski, V., & Skerlavaj, M. (2009). Transactional and transformational leadership impacts on organizational learning. *Journal for East European Management Studies, 14*, 144–165.

The Effect of Leadership on Conflict Management

Evren Erzen and Yasir Armağan

Abstract The effect of leadership on conflict management was examined in this meta-analytic study. A total of 485 research studies were identified as a result of a literature review, out of which 32 were included in the meta-analysis. The 32 research studies were compiled to obtain a sample size of 6,838 subjects. The analytic results of a random effects model showed that leadership has a *small-magnitude, significant effect* on conflict management. In the study, none of a set of variables, including the sample group, leadership style, publication type or year of publication, was found to be a moderator.

1 Introduction

Conflict is a concept that describes disagreement or differences of opinion between individuals and any problems experienced because of these differences. Although the definition of conflict differs across various disciplines (Rahim, 2001, 2002), a common characteristic of conflict is its being a natural consequence of interactions between persons with differing personality traits, values, needs and desires.

The conflict state of an individual can also be based on a person's own internal traits, in addition to those of other persons (Schrumpf, Crawford, & Bodine, 1997). Unforeseen behaviors (Stagner, 1961) or the division of people into groups (Alexander & Levin, 1998) can also be a cause of conflict. An individual may experience a reduction in well-being due to psychological imbalances, and this situation may lead the individual to feel vulnerable (Avşaroğlu, Deniz, & Kahraman, 2005). With regard to organizations, varying opinions are identified as sources of conflict by different researchers. Gibson, Ivancevich, and Donnelly (2000) see the sources of conflict as functional dependency, differences in objectives, differences in

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perceptions and an increase in the demand for experts; Robbins (1991) states that the sources are differentiation, dependency and the sharing of resources. Furthermore, Gutknecht and Miller (1989) see it as dependent on organizational structure, differences in perceptions, the reward system, gaining specialization and change, whereas Newstrom and Davis (1993) suggest the source of conflict to be organizational change, personality clashes, differences in values, threats to a position and differences in perception. Although conflict has the potential to significantly damage individual psychological well-being and the sound functioning of organizations, it may also contribute to interpersonal experiences and social maturation; thus, the knowledge that conflicts exist and the importance of its correct management are indication of how important conflict is (Schrumpf et al., 1997). In other words, conflict can be beneficial, just as it can be harmful.

A leader‘s interactions with an organization’s employees are acts that increase the efficiency of the organization (Graen & Uhl-Bien, 1995). Within the scope of this important communication between the leader and his or her followers (Northouse, 2012), all of the variables pertaining to the leader influence the conflict experienced with the followers (Rahim, 2001). In this context and with the aim of identifying the dynamics of conflict management, researchers have examined the relationships among many different variables, including commitment styles (Morris-Rothschild & Brassard, 2006), organizational communication climate (Nordin, Sivapalan, Bhattacharyya, Ahmad, & Abdullah, 2014), emotional intelligence (Chan, Sit, & Lau, 2013) and relationship quality (Bagwell & Coie, 2004), among others. The relationship between leadership and conflict management is one of the variables frequently investigated (Alonso & Brugha, 2006; Altmäe & Türk, 2008; Arns, 2007; Eigbe, 2014; Hamlin & Jennings, 2007; Hendel, Fish, & Galon, 2005; Huo, Molina, Sawahata, & Deang, 2005; ‘t Hart, 2007; Yang, 2014).

This study examined the effect of leadership on conflict management within organizations. Furthermore, the potential moderators of this study, which were thought to have moderate impact sizes, were the following: (1) the sample of the research study, (2) the leadership style, (3) the type of publication and (4) the year of publication. All of these variables, in concert with previous research results, were used to test the following hypotheses of this study.

H_1 Leadership has a positive effect on conflict management.
H_2 The sample group is a moderator for the positive effect of leadership on conflict management.
H_3 The leadership style is a moderator for the positive effect of leadership on conflict management.
H_4 The publication type is a moderator for the positive effect of leadership on conflict management.
H_5 The year of publication is a moderator for the positive effect of leadership on conflict management.

2 Method

2.1 Study Design

In this study, the effect of leadership on conflict management was tested using a meta-analytic design.

2.2 Review Strategy and Criteria for Inclusion/Exclusion

To identify the research studies to include in the meta-analysis, the ScienceDirect, ProQuest and EBSCO academic databases were used to conduct a literature review. For this process, inclusion of the terms *leadership* and *conflict management* in the titles of studies was used as a screening criterion. The end date for the studies included in the research was identified as March 2014. Doctoral dissertations and peer-reviewed journals were included in the study.

Many strategies were used to identify the research studies that were appropriate for the meta-analytic study. First, a research study pool (485 research studies) was identified, comprised of all studies with 'leadership' and 'conflict management' in their titles. The abstracts of these studies were reviewed, and all were found to be appropriate for inclusion in the study. In the second stage, all research studies in the pool were examined in detail. The results of the examination found that 32 of the research studies in the pool were appropriate, and 435 were found to be unsuitable. Descriptive statistics of the 32 research studies identified for inclusion in the analysis are presented in Table 1.

The criteria for inclusion of a research study in the analysis were identified as follows:

- having the statistical information necessary for correlational meta-analysis (n and r, or R^2 values) and
- measuring the correlation between leadership and conflict management.

Reasons for not including a research study in the meta-analysis included the following:

- having no quantitative data (qualitative research),
- not having a correlation coefficient,
- not focusing on conflict management and
- not focusing on leadership.

Table 1 Characteristics of the studies included in the meta-analysis

Variables		1	2	3	4	5		Toplam
Year of the research		Before 1990	1990–1999	2000–2009	After 2010			–
	n	2	4	13	13	–		32
	%	6.3	12.5	40.6	40.6	–		100
Type of research study		Thesis and dissertations	Article	–	–	–	–	
	n	15	17	–	–	–	–	32
	%	46.9	53.1	–	–	–	–	100
Sample group		Worker	Mixed	Student	Manager	Health worker	Other	
	n	9	4	4	7	6	2	32
	%	28.1	12.5	12.5	21.9	18.8	6.3	100

2.3 Coding Process

The coding process is essentially a data-sorting process that manages data emerging as complex information from studies in a manner that is clear and suitable for investigation. In accordance with this scope, a coding form was developed prior to carrying out the statistical analysis, and the coding occurred according to the form. The main aim was to develop a specific coding system that would allow the study to investigate the entirety of the research studies generally while not missing any characteristic of the individual research studies. The coding form developed in the study was comprised of the following:

- references for the research,
- information on the sample,
- the sample group/sector,
- the leadership style/approach,
- the data collection tool(s) and
- the quantitative values.

2.4 Statistical Processes

The impact quantity, as determined through meta-analysis, is a uniformly measured value used to determine the strength and direction of the relationship in the study (Borenstein, Hedges, Higgins, & Rothstein, 2009). Pearson's correlation coefficient (r) was determined to be the impact quantity in this study. Because the correlation coefficient has a value between $+1$ and -1, the calculated r value was evaluated by converting this value into the value as it appears in the z table (Hedges & Olkin, 1985). Provided that more than one correlation value is given between the same

structure categories in correlational meta-analysis studies, two different approaches are used in to determine which should be adopted for the meta-analysis (Borenstein et al., 2009; Kulinskaya, Morgenthaler, & Staudte, 2008). For this study, (1) if the correlations were independent, all of the related correlations were included in the analysis and were considered as independent studies; and (2) if there were dependent correlations, then the *conservation estimation* was accepted. A *random effects model* was used for the meta-analysis processes in this study. The *Comprehensive Meta-Analysis* program was used in the meta-analytic process.

2.5 Moderator Variables

To determine the statistical significances among the different moderators of the study, only the Q_b values were used. Four moderator variables that were thought to have a role in determining the average impact size were identified in the study. The first of these considered the *leadership style/approach* as a moderator with regard to the relationship between conflict management and leadership styles/approaches. The second was the *sample group/sector* because it was thought to have an impact on the average effect of leadership perceptions and conflict management. The third set of moderators was the publication's *year of the research* and the *type of research study*.

2.6 Publication Bias

A funnel plot for the research studies included in the meta-analysis of the study can be seen in Fig. 1. Evidence of an effect due to publication bias for the research studies included in the meta-analysis would be seen in Fig. 1. A serious asymmetry would be expected in the funnel plot were there a publication bias. The concentration of plots for the research studies occurring to one side under the line of average impact size, especially at the bottom of the funnel, would be indicative of likely publication bias. In this study, no evidence of partiality of the publications was observed for any of the 32 data subjected to meta-analysis.

Even though no partiality in publications was observed in the funnel plot, the results of Duval and Tweedie's trim and fill test, which was applied to determine the impact quantity related to partiality in publications and was acquired through the meta-analysis using the random effects model, are given in Table 2. As can be seen in Table 2, there is no difference between the impact observed and the artificial impact quantity created to fix the impact resulting from the partiality of publications. The research on either side of the centerline is symmetrical, and this is the indicator for no existing difference. Because there is no evidence indicating lost data on either side of the centerline, the difference between the fixed impact quantity and observed impact quantity is zero.

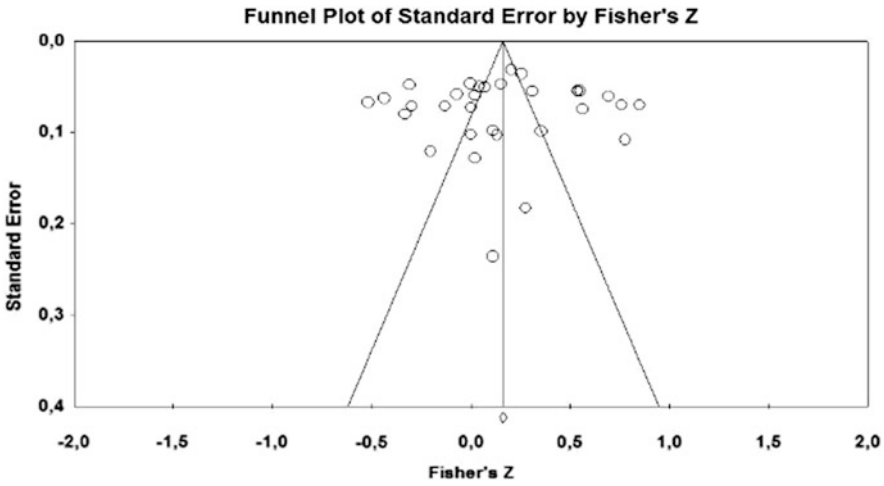

Fig. 1 Effect size funnel for publication bias

Table 2 Duval and Tweedie's trim and fill test results

	Studies trimmed	Point estimate	CI (confidence interval)		Q
			Lower limit	Upper limit	
Observed values		0.16071	0.1404	0.18113	927.52613
Adjusted values	0	0.16071	0.1404	0.18113	927.52613

3 Findings

Table 3 shows the results of the meta-analysis between leadership and conflict management. The findings provide support for H_1, which argued that there is a positive relationship between leadership and conflict management. The impact value of the leadership on conflict management was calculated as 0.15. This result shows that leadership has a *small-magnitude effect* on conflict management (see Cohen, 1988).

The results of the moderator analysis show that the H_2 hypothesis regarding the role of the research sample on the magnitude of impact between leadership and conflict management was not supported. However, research included in the meta-analysis showed that the effects on the conflict management of employees [$r = 0.20$], students [$r = 0.04$] *other* subjects, including pilots and religious instructors [$r = 0.02$] and *mixed* groups of teachers and students [$r = 0.22$] was at a basic level, whereas for health professionals [$r = 0.32$], the effect was not significant and medium in magnitude; for managers [$r = -0.01$], the effect was small but significant. The strongest level of effect was for the sample group, including the health professional. Although the impact values on conflict management for various samples differed, the moderator analysis carried out according to the random effects

Table 3 Findings of the correlations between leadership and conflict management: results of the meta-analysis

Variable	k	N	r	CI (confidence interval)		Q	Q_b
			Lower limit	Upper limit			
Conflict management	32	6,838	0.15*	0.03	0.26	927,526*	
Moderator (sample group)							4.14
Employee	9	2,462	0.20	−0.02	0.41		
Student	4	835	0.04	−0.29	0.37		
Health professionals	6	2,647	0.32	0.55	0.55		
Manager	7	1,172	−0.01*	0.25	0.25		
Mixed	4	1,058	0.22	0.52	0.52		
Other	2	599	0.02	0.47	0.47		
Moderator (leadership style)							2.04
Transformational	15	4,764	0.21*	0.04	0.37		
General	11	2,363	0.03	−0.16	0.23		
Other	6	1,646	0.20	−0.06	0.44		
Moderator (type of the research study)							1.28
Dissertations	17	3,701	0.09*	0.05	0.38		
Research studies	15	5,072	0.22	−0.07	0.25		
Moderator (year of the research)							0.70
Before 1990	2	370	0.34	−0.16	0.71		
1990–1999	4	1,238	0.19	−0.14	0.49		
2000–2009	12	3,335	0.13	−0.05	0.32		
After 2010	13	3,830	0.13	−0.05	0.31		

*$p < 0.01$, **$p < 0.05$

model showed that the effect level for sample types when measuring conflict management was not significant ($Q_b = 4.14$, $p > 0.05$).

The findings did not support the H_3 hypothesis that leadership style plays a moderating role in the effect that leadership has on conflict management. The moderator analysis found the difference between the magnitude of impact of leadership styles not to be significant ($Q_b = 2.04$, $p > 0.05$). Despite this result, general leadership [$r = 0.03$] and the channel, interaction/sustainer, visionary, emergent and servant leader types [$r = 0.20$] were shown to yield small-magnitude effects of leadership on conflict management [$p > 0.05$], whereas the transformational leadership style [$r = 0.21$] was found to be statistically significant in terms of effect of this type of leadership on conflict management [$p > 0.05$].

The findings did not provide support for hypothesis H_4, that the type of publication plays a moderating role on the effects of leadership on conflict management. Although a statistically significant difference between the sample groups was not found ($Q_b = 1.28$, $p > 0.05$) as regards the level of impact, a non-significant, small-magnitude impact of research studies [$r = 0.22$] and a small-magnitude significance for dissertations [$r = 0.09$] was found.

The research did not support H_5, which hypothesized that the year of publication plays a moderating role on leadership's effect on conflict management.

The moderator analysis did not find a statistically significant difference in the magnitude of impact of the studies' publication years ($Q_b = 0.70$, $p < 0.05$). However, the meta-analysis found that studies conducted in 2010 and later [$r = 0.13$], studies conducted between 1990 and 1999 [$r = 0.19$] and studies conducted between 2000 and 2009 [$r = 0.13$] showed *small-magnitude* effects of leadership on conflict management.

Conclusion

A meta-analysis was conducted in this study in order to determine what level of impact leadership has on conflict management. In doing so, its aim was to ascertain a general conclusion from studies and dissertations from the past to the present. Furthermore, determining whether variables such as the sample group, leadership style, year of publication and type of publication play moderating roles in the effect of leadership on conflict management was prioritized in this study.

The results indicate that there is a significant effect of leadership on conflict management. However, the level of identified impact is low. In fact, a significant impact of leadership on conflict management is to be expected because it is probable that leaders undertaking a constructive role ensure that a group of followers joins under a common aim by resolving and preventing conflict or by being the creator of conflict. One leader can be found to intervene in a way that increases conflict, whereas other leaders may choose to resolve problems by means of consensus. Thus, a leader's significant impact on conflict management is an expected outcome when considered in this context. In comparison, the small magnitude of impact reduces the importance of the other factors affecting conflict management. In other words, results show that leadership addresses a small share of factors that affect conflict management. The nature of the factors that are effective may be the reason why this result has emerged. For example, extroverted individuals may display a higher tendency for conflict (Basım, Çetin, & Tabak, 2009). In addition, differences in temperament (Druckman, 1993), psychological and cultural differences (Karip, 1999), differences in objectives (Çağlayan, 2006), differences in the perception of cases (Oğuz, 2007), differences in status (Bumin, 1990), the lack of good communication (Akın, 1998) or the lack of decision-making authority that individuals may have within organizations (Decenzo & Robbins, 1999) can also lead to conflict. To put it a different way, the factors related to an individual's own self can have a greater impact when compared with external factors, such as leadership. Thus, the individual's own self may be a more meaningful factor in conflict management than leader-related factors.

Analyses conducted on moderator variables showed that the variables determined in the context of this study had no impact on the effect of

(continued)

leadership on conflict management. The findings of the analysis related to the sample group showed that the followers of a leader who experience conflict as a result of joining different groups did not have an effect on conflict management. However, a significant negative effect was found in data collected from managers. In other words, managers in the role of the leader create a negative impact on conflict management. This result means that managers have a negative effect on conflict management when considering the fact that conflict management is a positive concept. The reason for this may be due to managers undertaking methods and strategies that lead to negative results.

Similarly, findings suggest that no matter which leadership style is undertaken, there are no differences in the method of conflict management for individuals experiencing conflict. However, research conducted on transformational leadership found that significant differences were experienced at varying levels of conflict. This finding is in line with a study investigating the differences in identification of the conflict styles of transformational leaders and sustainer leaders, which found that transformational leaders have an effect on conflict strategies (Hendel et al., 2005). Transformational leaders are individuals who provide guidance to their employees, ensure intellectual stimulation and raise the energy of their employees (Bass, 1991). When the behaviors, traits and leadership outcomes of transformational leaders are reviewed as a whole (Karip, 1998), it could be stated that transformational leaders provide the opportunity for diversity in conflict among their employees.

The moderator analysis carried out with regard to the type of publication showed that various types of publications did not significantly affect the conflict methods of leaders. However, it was seen that there were significant differences in dissertations and significant differences in the effect of leadership on conflict management. This being the case, it could be stated that dissertation results that do not have a publication bias allow diversity between leadership and conflict management; this can be interpreted to mean that such dissertations observed that leadership has differing impacts on conflict management.

Finally, no significant differences were found regarding the year of publication as a moderator variable or for the direct effects of years of publication. In contrast, it is possible to mention a medium-magnitude moderator effect for publications dating earlier than 1990. However, this could be due to there only having been two publications undertaken during that period, with both having found a high correlation. Thus, one should note that a comparison of only two publications upon which to make inferences might lead to potentially unsound results.

References[1]

Acar, F. P. (2010). Analyzing the effects of diversity perceptions and shared leadership on emotional conflict: A dynamic approach. *The International Journal of Human Resource Management, 21*(10), 1733–1753.*

Akın, M. (1998*). The role and the importance of communication in conflict management for businesses*. Unpublished master thesis, Erciyes University, Kayseri, Turkey.

Alexander, M. G., & Levin, S. (1998). Theoretical, empirical, and practical approaches to intergroup conflict. *Journal of Social Issues, 54*(5), 629–639.

Alonso, A., & Brugha, R. (2006). Rehabilitating the health system after conflict in East Timor: A shift from NGO to government leadership. *Health Policy and Planning, 21*(3), 206–216.

Altmäe, S., & Türk, K. (2008). Conflict management modes and leadership styles used by Estonian managers and specialists. *EBS Review, 25*, 61–73.

Altmäe, S., Türk, K., & Toomet, O. S. (2013). Thomas-Kilmann's conflict management modes and their relationship to Fiedler's leadership styles (basing on Estonian organizations). *Baltic Journal of Management, 8*(1), 45–65.*

Arns, J. (2007). Challenges in governance: The leadership characteristics and behaviors valued by public library trustees in times of conflict and contention. *The Library, 77*(3).

Avşaroğlu, S., Deniz, M. E., & Kahraman, A. (2005). Teknik öğretmenlerde yaşam doyumu iş doyumu ve mesleki tükenmişlik düzeylerinin incelenmesi. *Selçuk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 14*, 115–129.

Bagwell, C. L., & Coie, J. D. (2004). The best friendships of aggressive boys: Relationship quality, conflict management, and rule-breaking behavior. *Journal of Experimental Child Psychology, 88*(1), 5–24.

Basım, H. N., Çetin, F., & Tabak, A. (2009). The relationship between big five personality characteristics and conflict resolution approaches. *Turkish Journal of Psychology, 24*(63), 20–34.

Bass, B. M. (1991). From transactional to transformational leadership: Learning to share the vision. *Organizational Dynamics, 18*(3), 19–31.

Bearden, F. C. (2003). *The consequence of the leadership style of a financial planner's most influential supervisor on the planner's perception of conflict, as influenced by the consanguinity of a potential client*. Unpublished doctoral dissertation, Our Lady of the Lake University, San Antonio, TX.*

Borenstein, M., Hedges, L. V., Higgins, J. P. T., & Rothstein, H. R. (2009). *Introduction to meta-analysis*. Chichester: Wiley.

Bresnahan, C. G. (2008). *Attachment style as a predictor of group conflict, post-conflict relationship repair, trust and leadership style*. Unpublished doctoral dissertation, University of South California, Los Angeles, CA.*

Bumin, B. (1990). *İşletmelerde organizasyon geliştirme ve çatışmanın yönetimi*. Ankara: Gazi Üniversitesi.

Çağlayan, O. A. (2006). *Organizational conflict management and an application*. Unpublished master thesis, Pamukkale University, Denizli, Turkey.

Chamberlin, W. C. (1993). *Gender role conflict as a predictor of problem-solving, leadership style, authoritarian attributes and cockpit management attitudes*. Unpublished doctoral dissertation, Columbia University, New York, NY.*

Chan, J. C., Sit, E. N., & Lau, W. M. (2013). Conflict management styles, emotional intelligence and implicit theories of personality of nursing students: A cross-sectional study. *Nurse Education Today, 34*, 934–939.

[1] References marked with an asterisk indicate studies included in the meta-analysis. The in-text citations to studies selected for meta-analysis are not followed by asterisks.

Çınar, F., & Kaban, A. (2012). Conflict management and visionary leadership: An application in hospital organizations. *Procedia-Social and Behavioral Sciences, 58*, 197–206.*

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Hillside, NJ: Lawrence Erlbaum Associates.

Culbert, G. E. (1999). *A study of leadership styles of elementary school principals and their perceptions of school climate and conflict resolution programs*. Unpublished doctoral dissertation, Wayne State University, Detroit, MI.*

Decenzo, D., & Robbins, S. (1999). *Human resource management*. New York, NY: Wiley.

Doucet, O., Poitras, J., & Chênevert, D. (2009). The impacts of leadership on workplace conflicts. *International Journal of Conflict Management, 20*(4), 340–354.*

Druckman, D. (1993). An analytical research agenda for conflict and conflict resolution. In D. J. Sandole & H. Van der Merwe (Eds.), *Conflict resolution theory and practice: Integration and application*. Manchester: Manchester University Press.

Eigbe, M. (2014). Leadership negotiation skill as correlate of university conflict resolution in Nigeria. *Procedia-Social and Behavioral Sciences, 112*, 1237–1245.

Garcia, A. R. (2004). *A study of the relationship among the constructs of transformational and transactional leadership and conflict management style*. Unpublished doctoral dissertation, Our Lady of the Lake University, San Antonio, TX.*

Gibson, J. L., Ivancevich, J. M., & Donnelly, J. H., Jr. (2000). *Organizations: Behaviour structure processes*. Boston, MA: Irwin McGraw-Hill.

Graen, G. B., & Uhl-Bien, M. (1995). Relationship-based approach to leadership: Development of leader-member exchange (LMX) theory of leadership over 25 years: Applying a multi-level multi-domain perspective. *The Leadership Quarterly, 6*(2), 219–247.

Gutknecht, D. B., & Miller, J. R. (1989). *The organizational and human resources sourcebook*. Lanham: University Press of America.

Hamlin, A., & Jennings, C. (2007). Leadership and conflict. *Journal of Economic Behavior & Organization, 64*(1), 49–68.

Hedges, L. V., & Olkin, I. (1985). *Statistical method for meta-analysis*. London: Academic.

Hendel, T., Fish, M., & Galon, V. (2005). Leadership style and choice of strategy in conflict management among Israeli nurse managers in general hospitals. *Journal of Nursing Management, 13*(2), 137–146.

Hoffman, M. (2007). *Does sense of humor moderate the relationship between leadership style and conflict management style?* Unpublished doctoral dissertation, Nebraska University, Lincoln, NE.*

Huo, Y. J., Molina, L. E., Sawahata, R., & Deang, J. M. (2005). Leadership and the management of conflicts in diverse groups: Why acknowledging versus neglecting subgroup identity matters. *European Journal of Social Psychology, 35*(2), 237–254.

Iao-Man Chu, R. (2011). *Conflict management styles of pastors and organizational servant leadership: A descriptive study*. Unpublished doctoral dissertation, The Southern Baptist Theological Seminary, Louisville, KY.*

Immanuel, M. S. (1988). *The leadership behavior style of executive administrators of the baccalaureate nursing programs in India and its relation to conflict management*. Unpublished doctoral dissertation, Columbia University, New York, NY.*

Javitch, M. W. (1997). *A model of leadership effectiveness in professional service firms: Linking transformational leadership, influence, and role conflict to conflict satisfaction*. Unpublished doctoral dissertation, Columbia University, New York, NY.*

Karip, E. (1998). Dönüşümcü liderlik. *Kuram ve Uygulamada Eğitim Yönetimi Dergisi, 4*(4), 443–465.

Karip, E. (1999). *Çatışma yönetimi*. Ankara: Pegema Yayıncılık.

Kimenchu, L. (2011). *Leadership orientations and conflict management styles of academic deans in masters degree institutions*. Unpublished doctoral dissertation, West Virginia University, Morgantown, WV.*

Kotlyar, I. (2001). *Leadership in decision-making groups: Improving performance by managing conflict*. Unpublished doctoral dissertation, University of Toronto, Toronto, ON.*

Kulinskaya, E., Morgenthaler, S., & Staudte, R. G. (2008). *Meta analysis: A guide to calibrating and combining statistical evidence*. Chichester: Wiley.

Lather, A. S., Jain, V. K., Jain, S., & Vikas, S. (2009). Leadership styles in relation to conflict resolution modes: A Study of Delhi Jal Board (DJB). *Vilakshan: The XIMB Journal of Management, 6*(1), 1733–1753.*

Li, Y., Chun, H., Ashkanasy, N. M., & Ahlstrom, D. (2012). A multi-level study of emergent group leadership: Effects of emotional stability and group conflict. *Asia Pacific Journal of Management, 29*(2), 351–366.*

Menguc, B., & Auh, S. (2008). Conflict, leadership, and market orientation. *International Journal of Research in Marketing, 25*(1), 34–45.*

Morris-Rothschild, B. K., & Brassard, M. R. (2006). Teachers' conflict management styles: The role of attachment styles and classroom management efficacy. *Journal of School Psychology, 44*(2), 105–121.

Munir, F., Nielsen, K., Garde, A. H., Albertsen, K., & Carneiro, I. G. (2012). Mediating the effects of work-life conflict between transformational leadership and health-care workers' job satisfaction and psychological wellbeing. *Journal of nursing management, 20*(4), 512–521.*

Newstrom, J. V., & Davis, K. (1993). *Organizational behavior human behavior at work* (9th ed.). New York, NY: McGraw-Hill.

Nordin, S. M., Sivapalan, S., Bhattacharyya, E., Ahmad, H. H. W. F. W., & Abdullah, A. (2014). Organizational communication climate and conflict management: Communications management in an oil and gas company. *Procedia-Social and Behavioral Sciences*, *109*, 1046–1058.

Northouse, P. G. (2012). *Leadership: Theory and practice*. London: Sage.

Odetunde, O. J. (2013). Influence of transformational and transactional leaderships, and leaders' sex on organizational conflict management behaviour. *Gender & Behaviour, 11*(1), 5323–5335.*

Oğuz, Y. (2007). *The relationships and differences between school administrators' demographic variables and personality traits and their conflict management style preferences*. Unpublished master's thesis, Yıldız Technical University, Turkish Republic.

Pauls, T. S. (2005). *A study of the relationship between transformational and transactional leadership, and conflict management styles in Ohio College Presidents*. Unpublished doctoral dissertation, Regent University, London.*

Rahim, M. A. (2001). *Managing conflict in organization*. London: Quorum Books.

Rahim, M. A. (2002). Toward a theory of managing organizational conflict. *The International Journal of Conflict Management, 13*(3), 206–235.

Reams, L. C. (1991). *The relationship between health administrators' leadership styles and role-conflict indicators*. Unpublished doctoral dissertation, University of Le Verne, La Verne, CA.*

Robbins, S. P. (1991). *Organizational behaviour concepts, controversies and applications*. Upper Saddle River, NJ: Prentice Hall.

Schrumpf, F., Crawford, D. K., & Bodine, R. J. (1997). *Peer mediation: Conflict resolution in schools: Program guide*. Champaign, IL: Research Press.

Schul, P. L., Pride, W. M., & Little, T. L. (1983). The impact of channel leadership behavior on intrachannel conflict. *Journal of Marketing, 47*(3), 21–34.*

Stagner, R. (1961). Personality dynamics and social conflict. *Journal of Social Issues, 17*(3), 28–44.

Stanley, A. D. (2004). *Leadership styles and conflict management styles: An exploratory study*. Unpublished doctoral dissertation, Regent University, London, UK.*

't Hart, P. (2007). How adenauer lost power: Understanding leadership rivalry and succession conflict in political parties. *German Politics*, *16*(2), 273–291.

Wakefield, R. L., Leidner, D. E., & Garrison, G. (2008). Research note-a model of conflict, leadership, and performance in virtual teams. *Information Systems Research, 19*(4), 434–455.*

Wright, P. G. (2008). *Perceptions of leadership effectiveness in the management of intergenerational work-values conflict: An antecedent of organizational citizenship behavior of perioperative registered nurses*. Unpublished doctoral dissertation, Walden University, Minneapolis, MN.*

Xin, K. R., & Pelled, L. H. (2003). Supervisor-subordinate conflict and perceptions of leadership behavior: A field study. *The Leadership Quarterly, 14*, 25–40.*

Yan, J. (2011). An empirical examination of the interactive effects of goal orientation, participative leadership and task conflict on innovation in small business. *Journal of Developmental Entrepreneurship, 16*(3), 393–408.*

Yang, Y. F. (2012a). Studies of transformational leadership in consumer service: Leadership trust and the mediating—Moderating role of cooperative conflict management. *Psychological Reports, 110*(1), 315–337.*

Yang, Y. F. (2012b). Studies of transformational leadership in the consumer service workgroup: Cooperative conflict resolution and the mediating roles of job satisfaction and change commitment. *Psychological Reports: Human Resources & Marketing, 111*(2), 545–564.*

Yang, Y. F. (2014). Transformational leadership in the consumer service workgroup: Competing models of job satisfaction, change commitment, and cooperative conflict resolution. *Psychological Reports, 114*(1), 33–49.

Zhang, X. A., Cao, Q., & Tjosvold, D. (2011). Linking transformational leadership and team performance: A conflict management approach. *Journal of Management Studies, 48*(7), 1586–1611.*

The Effect of Leadership on Organizational Justice

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Abstract The effect of leadership on organizational justice was examined in this meta-analytic study. A total of 141 research studies were compiled as a result of the review activity, out of which 27 were included in the meta-analysis. The 27 research studies were collapsed to obtain a sample size of 16,639 subjects. The analytic results of the random effects model showed that leadership has a *medium-magnitude, positive effect* on organizational justice. Of the moderators identified, such as the publication type, year of publication, sample group/sector, leadership style/approach, leadership scale and organizational justice scale, it was found that the *publication type, leadership style/approach, leadership scale* and *organizational justice scale* were moderating variables.

1 Introduction

Organizational justice is one of the most frequently researched areas in human resources management, organizational psychology and organizational behavior (Cropanzano & Greenberg, 1997). Organizational justice represents the employee's perception of how just a workplace is toward the employee (Cohen-Charash & Spector, 2001; Cropanzano, 1993; Greenberg, 1987). Employees expect just treatment from the organization to which they devote their time and energy. Thus, organizational justice affects the attitudes and behaviors of the organization's employees. Employees have an interest in how decisions are taken and how they are treated. Greenberg (1993) states that organizations that do not treat their employees justly are subject to negative reactions. Experimental studies have shown that organizational justice leads to positive attitudes, such as organizational commitment, satisfaction with outputs, trust in the management and a positive

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evaluation of authority (Cohen-Charash & Spector, 2001; Colquitt, Conlon, Wesson, Porter, & Ng, 2001; Rubin, 2009; Schaubroeck, May, & Brown, 1994).

Justice in organizational environments can be defined based on two subjective perceptions: (1) distribution of the output (product) or fairness in distribution and (2) the justice of processes undertaken for the distribution or sharing of outputs (Colquitt et al., 2001). The first of these two perceptions of justice is distributive justice (Adams, 1965; Leventhal, 1976), and the latter is procedural justice (Leventhal, 1980; Thibaut & Walker, 1975).

1.1 Distributive Justice

Distributive justice is based upon Adams's theory of equity (1965). The foundation of distributive justice is the tradeoff between the employee and the organization (McLean Parks & Kidder, 1994). The distribution of resources within the organization is of interest to the employees. The perception of employees concerning the justness of the distribution is expressed as distributive justice (Greenberg, 1993). Distributive justice leads to increases in satisfaction and performance of employees, a decrease in non-attendance and resignations and development of a participatory organizational culture (Greenberg, 1990; Lawler & Jenkins, 1992).

1.2 Procedural Justice

Procedural justice consists of the perceptions of employees concerning the procedures adopted when making organizational decisions (Williams, 1999). In other words, it is the issue of justice when using methods, tools and processes when determining results (Folger & Cropanzano, 1998). Procedural justice increases the employees' commitment to the organization, trust in management, diversity within the organization and job satisfaction (Martin & Bennett, 1996; Mossholder, Bennett, Kemery, & Wesolowski, 1998). Conversely, a lack of procedural justice leads to higher desire for resignation and a higher level of conflict (Cropanzano & Baron, 1991). Leadership has a significant effect on the procedural justice perceptions of employees (Cobb & Frey, 1996; Ehrhart, 2004; Keller & Dansereau, 1995; Mansour-Cole & Scott, 1998).

1.3 Interactional Justice

Interactional justice was introduced to the organizational justice literature by Bies and Moag (1986) as a third dimension. It points to the importance of the quality of interpersonal behaviors while executing procedures within the organization.

Although some researchers consider interactional justice to be a third dimension (Aquino, 1995; Barling & Phillips, 1993; Bies & Shapiro, 1987; Skarlicki & Folger, 1997; Tata & Bowes-Sperry, 1996), some see it as a sub-dimension of procedural justice (Moorman, 1991; Niehoff & Moorman, 1993). Interactional justice consists of two sub-dimensions (Greenberg, 1990; 1993). The first of these is known as "interpersonal justice" and represents the polite, dignified and respectful behaviors displayed while implementing procedures or identifying the results. The second of these so-called sub-dimensions is known as "informational justice" and consists of the explanations made to persons—that is, the explanations that are made to persons as to why a certain procedure was preferred or why a certain output was distributed the way that it was (Colquitt et al., 2001).

A significant number of studies support the importance of organizational justice and the role of leadership (Avolio & Bass, 1988; Cropanzano, Prehar, & Chen, 2002; Niehoff & Moorman, 1996; Pillai, Scandura, & Williams, 1999; Shamir, 1995). Pillai et al. (1999) also argued for the importance of the role of organizational justice in leadership. Tyler and Caine (1981) have argued that managers who do not consider the perception of justice stand in the way of leadership and that followers will reject such authority.

This study examined the effects of leadership on organizational justice. Furthermore, the moderators, which are thought to influence the medium-magnitude effects found in this study, are identified as follows: (1) the publication type of the research study, (2) the year of publication, (3) the sample group/sector, (4) the leadership style/approach, (5) the leadership scale and (6) an organizational justice scale used in studies. All such variables, together with previous research results, were used to test the following hypotheses of this study.

H_1 Leadership has a positive effect on organizational justice.
H_2 The publication type of the research studies is a moderator for the positive effect of leadership on organizational justice.
H_3 The year of publication of the research studies is a moderator for the positive effect of leadership on organizational justice.
H_4 The sample group/sector is a moderator for the positive effect of leadership on organizational justice.
H_5 The leadership style/approach is a moderator for the positive effect of leadership on organizational justice.
H_6 The leadership scale is a moderator for the positive effect of leadership on organizational justice.
H_7 The organizational justice scale used in research studies is a moderator for the positive effect of leadership on organizational justice.

2 Method

2.1 Study Design

In this study, the effect of leadership on organizational justice was tested with the meta-analytic design.

2.2 Review Strategy and Criteria for Inclusion/Exclusion

To determine the research studies to include in the meta-analysis, the ScienceDirect, ProQuest and EBSCO academic databases were used to conduct a literature review. For this process, the terms *leadership* and *justice* included in the titles of the studies were used to screen the research studies. The end date for the research studies included in the meta-analysis was identified as May 2014. Doctoral dissertations and peer-reviewed journals were included in the study.

Many strategies were used to identify the research studies that were appropriate for the meta-analysis. First, a research study pool (141 research studies) was established composed of all studies with the words "leadership" and "justice" in their titles. The abstracts of these studies were reviewed, and all were found appropriate to include in the study. In the second stage, all research studies in the pool were examined in detail. The results of the examination found that 27 of the research studies in the pool were appropriate and that 114 were unsuitable. The descriptive statistics of the 27 research studies to be included in the analysis are presented in Table 1.

The criteria for including a research study in the analysis study were identified as follows:

- having the statistical information necessary for conducting a correlational meta-analysis (i.e., n and r, or R^2 values) and
- being a study measuring the correlation between leadership and organizational justice.

The reasons for not including a research study in the meta-analysis included the following:

- having no quantitative data (being qualitative research),
- not having a correlation coefficient,
- not focusing on organizational justice and
- not focusing on leadership.

Table 1 Characteristics of the studies included in the meta-analysis

Variables		1	2	3	4	Total
Publication year of research		Before 1990	1990–1999	2000–2009	2010 and beyond	–
	n	0	1	6	20	27
	%	0	3.7	22.2	74.1	100
Type of Research		Dissertation	Article	–	–	–
	n	6	21	–	–	27
	%	22.2	77.8	–	–	100
Database		Ebscohost	Proquest	Science-direct		
	n	5	15	7		27
	%	18.5	55.6	25.9		100

2.3 Coding Process

The coding process is essentially a data-sorting process that manages data emerging as complex information from studies in a manner that is clear and suitable for investigation. In accordance with this scope, a coding form was developed before the statistical analysis was carried out, and the coding occurred according to this form. The main aim was to develop a specific coding system that would allow the study to investigate the entirety of the research studies generally while not missing any characteristic of the individual research studies. The coding form developed in the study was comprised of the following:

- references for the research,
- information on the sample,
- the sample group/sector,
- the leadership style/approach,
- the data collection tool(s) and
- the quantitative values.

2.4 Statistical Processes

The impact quantity, as determined through meta-analysis, is a uniformly measured value used to determine the strength and direction of the relationship in the study (Borenstein, Hedges, Higgins, & Rothstein, 2009). Pearson's correlation coefficient (r) was determined to be the impact quantity in this study. Because the correlation coefficient has a value between $+1$ and -1, the calculated r value was evaluated by converting this value into the value as it appears in the z table (Hedges & Olkin, 1985). Provided that more than one correlation value is given between the same structure categories in correlational meta-analysis studies, two different approaches

are used in to determine which should be adopted for the meta-analysis (Borenstein et al., 2009; Kulinskaya, Morgenthaler, & Staudte, 2008). For this study, (1) if the correlations were independent, all of the related correlations were included in the analysis and were considered as independent studies; and (2) if there were dependent correlations, then the *conservation estimation* was accepted. A *random effects model* was used for the meta-analysis processes in this study. The *Comprehensive Meta-Analysis* program was used in the meta-analytic process.

2.5 Moderator Variables

To determine the statistical significances among the different moderators of the study, only the Q_b values were used. Six moderator variables that were thought to have a role in average impact size were identified in the study. The first of these considered the *type of research study* as a moderator with regard to the relationship between organizational justice and leadership styles/approaches. The second was the *publication year of the research* because it was thought to have an impact on the average effect of leadership perceptions and organizational justice. The other moderator variables were the *sample group/sector, leadership style/approach, leadership scale* and *organizational justice scale*.

2.6 Publication Bias

A funnel plot for the research studies included in the meta-analysis of the study can be seen in Fig. 1. Evidence of an effect due to publication bias for the research studies included in the meta-analysis would be seen in Fig. 1. A serious asymmetry would be expected in the funnel plot were there a publication bias. The concentration of plots for the research studies occurring to one side under the line of average impact size, especially at the bottom of the funnel, would be indicative of likely publication bias. In this study, no evidence of partiality of the publications was observed in any of the 27 data subjected to meta-analysis.

Even though no partiality in publications was observed in the funnel plot, the results of Duval and Tweedie's trim and fill test, which was applied to determine the impact quantity related to partiality in publications and was acquired through the meta-analysis using the random effects model, are given in Table 2. As can be seen in Table 2, there is no difference between the impact observed and the artificial impact quantity created to fix the impact resulting from the partiality of publications. The research on either side of the centerline is symmetrical, and this is the indicator for no existing difference. Because there is no evidence indicating lost

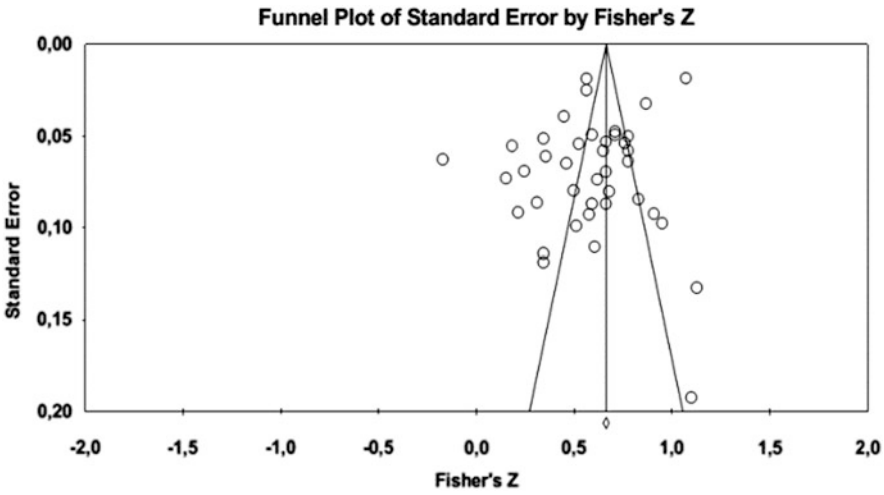

Fig. 1 Effect size funnel for publication bias

Table 2 Duval and Tweedie's trim and fill test results

	Excluding study	Point estimate	CI (confidence interval)		Q
			Lower limit	Upper limit	
Observed values		0.52	0.45	0.58	1,144.9
Adjustment values	6	0.47	0.38	0.55	2,577.2

data one either side of the centerline, the difference between the fixed impact quantity and the observed impact quantity is zero.

3 Findings

Table 3 shows the results of the meta-analysis between leadership and organizational justice. The findings provided support for H_1, which argued that there is a positive relationship between leadership and organizational justice. The impact value of leadership on organizational justice was calculated as 0.52. This result shows that leadership has a *medium-magnitude, positive effect* on organizational justice (*see* Cohen, 1988).

The findings provide support for hypothesis H_2, that the type of publication has a moderating role on leadership's positive effect on organizational justice. The moderator analysis found a statistically significant difference between the magnitudes of impact for the types of publications ($Q_b = 5.06$, $p < 0.05$). The magnitude of the effect of leadership perceptions on organizational justice was *medium in*

Table 3 Findings of the correlations between leadership and organizational justice: results of meta-analysis

Variable	k	N	r	CI (Confidence interval)		Q	Q_b
				Lower limit	Upper limit		
Organizational justice	41	16,639	.52**	.46	.58	1,144.93*	
Moderator [Type of research]							5.06*
Article	32	14,716	.48**	.41	.55		
Dissertation	8	1,923	.65**	.52	.75		
Moderator [Publication year of research]							2.43
1990–1999	5	755	.38**	.16	.57		
2000–2009	7	1,149	.57**	.41	.69		
2010 and beyond	28	14,735	.53**	.45	.60		
Moderator [Sample group/sector]							13.40
Banking	2	331	.38*	.07	.625		
Education	7	5,584	.66**	.54	.73		
Health	1	343	.48*	.07	.75		
Information tech.	2	588	.64**	.41	.79		
Manufacturing	2	738	.46**	.18	.67		
Mix	16	3,387	.44**	.35	.53		
Retail	2	369	.68**	.47	.82		
Service	8	5,299	.50**	.31	.59		
Moderator [Leadership style/approach]							22.72*
Authentic	1	187	.55**	.18	.78		
Autocratic	1	257	–.17	–.53	.24		
Charismatic	1	299	.57**	.22	.79		
Contingent reward	1	135	.53**	.14	.77		
Empowering	1	137	.30	–.13	.63		
Ethical	2	3,324	.61**	.40	.76		
Leadership cons.-str.	4	595	.47**	.29	.62		
Paternalistic	3	1,014	.36**	.13	.55		
Servant	7	5,671	.61**	.50	.70		
Transactional	1	212	.24	–.18	.58		
Transformational	18	4,808	.56**	.48	.63		
Moderator [Leadership scale]							50.91**
Bass and Avolio (1990, 1995, 1997, 2000, 2002, 2004), Avolio, Bass, and Jung (1996), Bass (1985)—MLQ	17	3,602	.53**	.46	.59		
Brown, Treviño, and Harrison (2005)—ELS	1	381	.33*	.02	.58		
Carless, Wearing, and Mann (2000)—GTLS	1	343	.48**	.19	.68		

(continued)

Table 3 (continued)

Variable	k	N	r	CI (Confidence interval)		Q	Q_b
				Lower limit	Upper limit		
Cheng, Chou, and Farh (2000)—PLS	2	600	.26*	.03	.46		
Chung, Chan Su, Kyle, and Petrick (2010)—SLS	2	4,467	.51**	.33	.65		
De Cremer, Van Dijke, and Bos (2004)—ALP	1	257	–.17	–.46	.15		
Ehrhart (2001, 2004)—SLS	3	504	.65**	.52	.75		
Çoğaltay, Karadağ, and Bektaş (2014)—Meta-analysis	3	4,303	72**	.62	.79		
Oner (2008)—SLBS	1	300	.65**	.42	.80		
Pearce and Sims (2002)—VSLBS	1	137	.30	–.03	.57		
Pellegrini and Scandura (2006)—PLS	1	414	.53**	.26	.72		
Podsakoff, MacKenzie, Moorman, and Fetter (1990)—LBS	2	549	.57**	.39	.71		
Stogdill (1963)—LBDQ-XII	4	595	.48**	.33	.60		
Walumbwa, Wu, and Orwa (2008)—ALQ	1	187	.55**	.27	.74		
Moderator [Organizational justice scale]							17.95**
Chung et al. (2010)	2	4,467	.51**	.29	.67		
Colquitt et al. (2001)	19	4,356	.48**	.41	.54		
Çoğaltay et al. (2014) Meta-analysis	3	4,303	.72**	.60	.80		
Mix	4	1,044	.62**	.54	.76		
Moorman (1991)	3	740	.40**	.19	.58		
Niehoff and Moorman (1993)	9	1,729	.48**	.37	.57		

*$p < 0.01$ **$p < 0.05$

magnitude in the research studies [$r = 0.48$] as well as in the doctoral dissertations [$r = 0.65$].

The research did not support H_3, which had hypothesized that the year of publication has a moderating role on leadership through its effect on organizational justice. The moderator analysis did not find a statistically significant difference in

the magnitudes of impact for the publication year of the research studies ($Q_b = 2.43$, $p > 0.05$). However, the meta-analysis found that studies conducted between 1990 and 1999 [$r = 0.38$], studies conducted between 2000 and 2009 [$r = 0.57$] and studies conducted in 2010 and later [$r = 0.53$] showed effects of leadership on organizational justice that were *medium in magnitude* ($p < 0.05$).

The results of the moderator analysis showed that the H_4 hypothesis regarding the role of the sample group/sector on the magnitude of the effect between leadership and organizational justice was not supported. According to the results of the analysis, although there is a difference between the magnitude of impact between organizational justice and the sample group/sector, the difference was not statistically significant ($Q_b = 13.40$, $p > 0.05$). Conversely, all sample groups/sectors had positive and significant effects on the effect of leadership on organizational justice. In the research that was included in the meta-analysis, leadership had a medium-magnitude effect on organizational justice in the banking [$r = 0.38$], education [$r = 0.66$], health [$r = 0.48$], information technologies [$r = 0.64$], manufacturing industry [$r = 0.46$], mixed [$r = 0.44$], retail [$r = 0.68$] and service [$r = 0.50$] sectors.

Findings supported the H_5 hypothesis that leadership style/approach played a moderating role in the effect of leadership on organizational justice. The moderator analysis showed that the difference between the magnitude of impact of leadership styles was found to be statistically significant ($Q_b = 22.72$, $p < 0.05$). It was found that among the leadership styles/approaches, the greatest effect was apparent for ethical leadership [$r = 0.61$] and servant leadership [$r = 0.61$]. The effect of transformational leadership, which is frequently mentioned in the literature, on organizational justice was statistically significant [$r = 0.61$] and *medium in magnitude*.

The findings showed that the studies included in the meta-analysis using leadership scales had a moderating effect on leadership's impact on organizational justice, thereby supporting hypothesis H_6. A moderator analysis found that the magnitudes of the effects of the leadership scales used in the research studies were statistically significant ($Q_b = 50.91$, $p < 0.05$). The Multifactor Leadership Questionnaire (MLQ), which is frequently used in leadership studies, was found to have a statistically significant, *medium-magnitude* effect [$r = 0.53$].

The findings of the meta-analysis showed that the organizational justice scales used in the studies moderated the effect of leadership on organizational justice, thereby supporting hypothesis H_7. The moderator analysis found a statistically significant difference for the magnitude of the effect between the leadership and organizational justice scales ($Q_b = 17.95$, $p < 0.05$). In addition, it was found that the organizational justice scales had a statistically significant and positive effect on the effect of leadership on organizational justice. The organizational justice scale developed by Colquitt et al., 2001 frequently used in the organizational justice literature had a *medium-magnitude effect* [$r = 0.48$] on leadership and organizational justice in terms of impact size.

Conclusion

A total of 27 research studies were included in this study, which aimed to examine the effect of leadership on organizational justice. A sample size of 16,639 subjects was collected over the course of the study. The study found that the *publication type, the leadership style/approach, the leadership scale* and *the organizational justice scale* were the significant moderators out of a pool of variables presumed to have an impact on leadership's effect on organizational justice.

The findings of the study showed that the effect of leadership on organizational justice was *medium in magnitude*. This finding was similar to those of many other studies investigating the importance of leadership and organizational justice (Avolio & Bass, 1988; Cropanzano et al., 2002; Niehoff & Moorman, 1996; Pillai et al., 1999; Shamir, 1995; Tyler & Caine, 1981).

When organizational justice is defined as the justness of the procedures undertaken by leaders for identifying the means of distribution, for sharing outputs or for the combination of the justice of distributing and sharing the outputs (Colquitt et al., 2001), leaders plays an important role in this process. Cropanzano et al. (2002) states that interactional justice develops the quality of the leader-follower relationship. Tyler and Caine (1981) suggest that if managers do not take justice into consideration, followers will reject the leader's authority and will thereby undermine the leader's role. The finding in this study that leadership has an effect on organizational justice supports the organizational justice literature.

The moderator analysis found that the year of publication and the sample group/sector are not moderating variables. According to this result, the effect of leadership on organizational justice is independent of the publication year and sample group/sector. Thus, it is concluded that the effect of leadership on organizational justice is apparent at all times and is important for all organizations, regardless of time or place.

When the results of the effects of leadership on organizational justice are examined as a whole, it can be stated in summary that

- leadership has a *medium-magnitude, positive effect* on organizational justice [$r = 0.52$] and that
- although neither the year of publication nor the sample group/sector has a moderating influence on leadership's effect on organizational justice, the type of publication, the leadership style/approach, the leadership scale and the organizational justice scale all serve moderating roles.

References[1]

Adams, J. S. (1965). Inequity in social exchange. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 2, pp. 267–299). New York, NY: Academic.

Aquino, K. (1995). Relationships among pay inequity, perceptions of procedural justice, and organizational citizenship. *Employee Responsibilities and Rights Journal, 8*, 21–33.

Avolio, B. J., & Bass, B. M. (1988). Transformational leadership, charisma and beyond. In J. G. Hunt, B. R. Balaga, H. P. Bachler, & C. Schriesheim (Eds.), *Emerging leadership vista* (pp. 29–50). Emsford, NY: Pergamon.

Avolio, B. J., Bass, B. M., & Jung, D. I. (1996). Construct validation of the multifactor leadership questionnaire MLQ-Form 5X. *Center for Leadership Studies Report, 96*(1).

Barling, J., & Phillips, M. (1993). Interactional, formal, and distributive justice in the workplace: An exploratory study. *Journal of Psychology, 127*, 649–656.

Bass, B. M. (1985). *Leadership and performance beyond expectations*. New York: Free Press.

Bass, B. M., & Avolio, B. J. (1990). The implications of transactional and transformational leadership for individual, team, and organizational development. *Research in Organizational Change and Development, 4*, 231–272.

Bass, B. M., & Avolio, B. J. (1995). *MLQ multifactor leadership questionnaire*. Redwood City, CA: Mind Garden.

Bass, B. M., & Avolio, B. J. (1997). *Full range leadership development: Manual for the multifactor leadership questionnaire*. Palo Alto, CA: Mind Garden.

Bass, B. M., & Avolio, B. J. (2000). *MLQ multifactor leadership questionnaire* (2nd ed.). Redwood City, CA: Mind Garden.

Bass, B. M., & Avolio, B. J. (2002). *Manual for the multifactor leadership questionnaire*. Redwood City, CA: Mind Garden.

Bass, B. M., & Avolio, B. J. (2004). *Full range leadership development*. Thousand Oaks, CA: Mind Garden.

Bies, R. J., & Moag, J. S. (1986). Interactional justice: Communication criteria for justice. In B. Sheppard (Ed.), *Research on negotiation in organizations* (Vol. 1, pp. 43–55). Greenwich, CT: JAI Press.

Bies, R. J., & Shapiro, D. L. (1987). Interactional fairness judgments: The influence of causal accounts. *Social Justice Research, 1*, 199–218.

Borenstein, M., Hedges, L. V., Higgins, J. P. T., & Rothstein, H. R. (2009). *Introduction to meta-analysis*. Chichester: Wiley. http://dx.doi.org/10.1002/9780470743386

Brown, M. E., Treviño, L. K., & Harrison, D. A. (2005). Ethical leadership: A social learning perspective for construct development and testing. *Organizational Behavior and Human Decision Processes, 97*(2), 117–134.

Çalışkan, S. C. (2010). The interaction between paternalistic leadership style, organizational justice, and organizational citizenship behavior: A study from Turkey. *China-USA Business Review, 9*(10), 67–80.*

Carter, M. Z. (2009). *Transformational-transactional leadership and work outcomes: An organizational justice and cultural perspective*. (Order No. 3394604, Auburn University). *ProQuest Dissertations and Theses,* 139.*

Carless, S. A., Wearing, A. J., & Mann, L. (2000). A short measure of transformational leadership. *Journal of Business and Psychology, 14*(3), 389–405.

Cho, J. W., & Dansereau, F. (2010). Are transformational leaders fair? A multi-level study of transformational leadership, justice perceptions, and organizational citizenship behaviors. *Leadership Quarterly, 21*, 409–421.*

[1] References marked with an asterisk indicate studies included in the meta-analysis. The in-text citations to studies selected for meta-analysis are not followed by asterisks.

Cheng, B. S., Chou, L. F., & Farh, J. L. (2000). A triad model of paternalistic leadership: The constructs and measurement. *Indigenous Psychological Research in Chinese Societies, 14*, 3–64.

Chung, J. Y., Chan Su, J., Kyle, G. T., & Petrick, J. F. (2010). Servant leadership and procedural justice in the U.S. national park service: The antecedents of job satisfaction. *Journal of Park & Recreation Administration, 28*(3), 1–15.*

Cobb, A. T., & Frey, F. M. (1996). The effects of leader fairness and pay outcomes on superior/subordinate relations. *Journal of Applied Social Psychology, 26*, 1401–1426.

Çoğaltay, N., Karadağ, E., & Bektaş, F. (2014). School leadership and organizational justice: A meta-analysis with Turkey representative sample. *International Journal of Education, 6*(1), 49–60.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Hillsdale, NJ: Lawrence Earlbaum Associates.

Cohen-Charash, Y., & Spector, P. (2001). The role of justice in organizations: A meta-analysis. *Organizational Behavior and Human Decision Processes, 86*, 278–321.

Colquitt, J. A., Conlon, D. E., Wesson, W. J., Porter, C. O. L. H., & Ng, K. Y. (2001). Justice at the millennium: A meta-analytic review of 25 years of organizational justice research. *Journal of Applied Psychology, 86*, 425–445.

Cropanzano, R. (1993). *Justice in the workplace: Approaching fairness in human resource management*. Hillsdale, NJ: Erlbaum.

Cropanzano, R., & Baron, R. A. (1991). Injustice and organizational conflict: The moderating effect of power restoration. *International Journal of Conflict Management, 2*, 5–26.

Cropanzano, R., & Greenberg, J. (1997). Progress in organizational justice: Tunneling through the maze. In C. Cooper & I. Robertson (Eds.), *International review o f industrial and organizational psychology* (pp. 317–372). New York, NY: Wiley.

Cropanzano, R., Prehar, C. A., & Chen, P. Y. (2002). Using social exchange theory to distinguish procedural from interactional justice. *Group & Organization Management, 27*(3), 324–351.

De Cremer, D., Van Dijke, M., & Bos, A. (2004). Distributive justice moderating the effects of self-sacrificial leadership. *Leadership & Organization Development Journal, 25*(5), 466–475.*

Ehrhart, M. G. (2001). *Leadership and justice climate as antecedents of unit-level organizational citizenship behavior*. (Order No. 3035772, University of Maryland College Park). *ProQuest Dissertations and Theses,* 111.*

Ehrhart, M. G. (2004). Leadership and procedural justice climate as antecedents of unit-level organizational citizenship behavior. *Personnel Psychology, 57*(1), 61–94.*

Folger, R., & Cropanzano, R. (1998). *Organizational justice and human resource management*. Beverly Hills, CA: Sage.

Gerome, S. C. (2008). *An examination of relationships between transformational leadership behavior and interactive justice perceptions among membership of a local chapter of human resource professionals*. (Order No. 3339016, Capella University). *ProQuest Dissertations and Theses,* 103.*

Gillet, N., Fouquereau, E., Bonnaud-Antignac, A., Mokounkolo, R., & Colombat, P. (2013). The mediating role of organizational justice in the relationship between transformational leadership and nurses' quality of work life: A cross-sectional questionnaire survey. *International Journal of Nursing Studies, 50*, 1359–1367. doi:10.1016/j.ijnurstu.2012.12.012.*

Greenberg, J. (1987). A taxonomy of organizational justice theories. *Academy of Management Review, 12*, 9–22.

Greenberg, J. (1990). Organizational justice: Yesterday, today, and tomorrow. *Journal of Management, 16*, 399–432.

Greenberg, J. (1993). The social side of fairness: Interpersonal and informational classes of organizational justice. In R. Cropanzano (Ed.), *Justice in the workplace: Approaching fairness in human resource management* (pp. 79–103). Hillsdale, NJ: Erlbaum.

Grover, S., & Coppins, A. (2012). The intersection of justice and leadership: Testing a moderation model of contingent reward and interpersonal fairness. *European Management Journal, 30*(6), 490–498.*

Gumusluoglu, L., Karakitapoğlu-Aygün, Z., & Hirst, G. (2013). Transformational leadership and R&D workers' multiple commitments: Do justice and span of control matter? *Journal of Business Research, 66*, 2269–2278.*

Hedges, L. V., & Olkin, I. (1985). *Statistical method for meta-analysis*. London: Academic.

Holtz, B. C., & Harold, C. M. (2013). Effects of leadership consideration and structure on employee perceptions of justice and counterproductive work behavior. *Journal of Organizational Behavior, 34*(4), 492–519. doi:10.1002/job.1825.*

Keller, T., & Dansereau, F. (1995). Leadership and empowerment: A social exchange perspective. *Human Relations, 48*(2), 127–136.

Kiersch, C. E. (2012). *A multi-level examination of authentic leadership and organizational justice in uncertain times.* (Order No. 3523691, Colorado State University). *ProQuest Dissertations and Theses,* 142.*

Kool, M., & Van Dirk, D. (2012). Servant leadership and commitment to change, the mediating role of justice and optimism. *Journal of Organizational Change Management, 25*(3), 422–433. doi:10.1108/09534811211228139.*

Kulinskaya, E., Morgenthaler, S., & Staudte, R. G. (2008). *Meta-analysis: A guide to calibrating and combining statistical evidence*. London: Wiley.

Lawler, E. E., III, & Jenkins, G. D. (1992). Strategic reward systems. In M. D. Dunnette & L. M. Hough (Eds.), *Handbook of industrial and organizational psychology*. Palo Alto, CA: Consulting Psychologist.

Leventhal, G. S. (1976). The distribution of rewards and resources in groups and organizations. In L. Berkowitz & W. Walster (Eds.), *Advances in experimental social psychology* (Vol. 9, pp. 91–131). New York, NY: Academic.

Leventhal, G. S. (1980). What should be done with equity theory? New approaches to the study o f fairness in social relationships. In K. Gergen, M. Greenberg, & R. Willis (Eds.), *Social exchange: Advances in theory and research* (pp. 27–55). New York, NY: Plenum.

Li, J. (2012). *Leadership, supervisor-focused justice, and follower values: A comparison of three leadership approaches in china.* (Order No. 3518177, University of Cincinnati). *ProQuest Dissertations and Theses,* 122.*

Loi, R., Lam, L., & Chan, K. (2012). Coping with job insecurity: The role of procedural justice, ethical leadership and power distance orientation. *Journal of Business Ethics, 108*(3), 361–372. doi:10.1007/s10551-011-1095-3.*

Mansour-Cole, D. M., & Scott, S. G. (1998). Hearing it through the grapevine: The influence of source, leader-relations, and legitimacy on survivors' fairness perceptions. *Personnel Psychology, 51*, 25–54.

Martin, C. L., & Bennett, N. (1996). The role of justice judgments in explaining the relationship between job satisfaction and organization commitment. *Group and Organization Management, 21*, 84–104.

McLean Parks, J., & Kidder, D. L. (1994). "Till death us do part. . ." Changing work relationships in the 1990s. In C. L. Cooper & D. M. Rousseau (Eds.), *Trends in organizational behavior* (pp. 111–136). New York, NY: Wiley.

Moorman, R. H. (1991). Relationship between organizational justice and organizational citizenship behaviors: Do fairness perceptions influence employee citizenship? *Journal of Applied Psychology, 76*, 845–855.

Mossholder, K. W., Bennett, N., Kemery, E. R., & Wesolowski, M. A. (1998). Relationships between bases of power and work reactions: The meditational role of procedural justice. *Journal of Management, 24*, 533–552.

Niehoff, B. P., & Moorman, R. H. (1993). Justice as a mediator of the relationship between methods of monitoring and organizational citizenship behaviors. *Academy of Management Journal, 36*, 527–556.

Niehoff, B. P., & Moorman, R. H. (1996). Exploring the relationships between top management behaviors and employee perceptions of fairness. *International Journal of Public Administration, 19*(6), 941–962.

Oner, Z. H. (2008). *The mediating effect of organizational justice: Moderating roles of sense of coherence and job complexity on the relationship between servant leadership, and work engagement*. Unpublished doctoral thesis, Marmara University, Institute of Social Sciences.

Pearce, C. L., & Sims, H. P. (2002). Vertical versus shared leadership as predictors of the effectiveness of change management teams: An examination of aversive, directive, transactional, transformational, and empowering leader behaviors. *Group Dynamics: Theory, Research, and Practice, 6*, 172–197.

Pellegrini, E. K., & Scandura, T. A. (2006). Leader–member exchange (LMX), paternalism, and delegation in the Turkish business culture: An empirical investigation. *Journal of International Business Studies, 37*(2), 264–279.

Pillai, R., Scandura, T. A., & Williams, E. A. (1999). Leadership and organizational justice: Similarities and differences across cultures. *Journal of International Business Studies, 30*(4), 763–779.*

Podsakoff, P. M., MacKenzie, S. B., Moorman, R. H., & Fetter, R. (1990). Transformational leader behaviors and their effects on followers' trust in leader, satisfaction, and organizational citizenship behaviors. *The Leadership Quarterly, 1*(2), 107–142.

Rubin, E. V. (2009). The role of procedural justice in public personnel management: Empirical results from the Department of Defense. *Journal of Public Administration Research and Theory, 19*, 125–143.

Schaubroeck, J., May, E. R., & Brown, F. W. (1994). Procedural justice explanations and employee reactions to economic hardship: A field experiment. *Journal of Applied Psychology, 79*, 455–460.

Shamir, B. (1995). Social distance and charisma: Theoretical notes and an exploratory study. *Leadership Quarterly, 6*, 19–47.

Skarlicki, D. P., & Folger, R. (1997). Retaliation in the workplace: The role of distributive, procedural, and interactional justice. *Journal of Applied Psychology, 82*, 434–443.

Sofiah, K. K., & Mohd Zabid, A. R. (2012). The mediating effect of organizational commitment in the organizational culture, leadership and organizational justice relationship with organizational citizenship behavior: A study of academicians in private higher learning institutions in Malaysia. *International Journal of Business and Social Science, 3*(8), 83–91.*

Stogdill, R. M. (1963). *Manual for the leader behavior description questionnaire-Form XII: An experimental revision*. Columbus: Bureau of Business Research, College of Commerce and Administration, Ohio State University.

Strom, D. L. (2010). *Workplace engagement: The roles of transformational leadership and interactional justice in producing engaged employees*. (Order No. 1476770, Western Illinois University). ProQuest Dissertations and Theses, 84.*

Tata, J., & Bowes-Sperry, L. (1996). Emphasis on distributive, procedural, and interactional justice: Differential perceptions of men and women. *Psychological Reports, 79*, 1327–1330.

Thibaut, J., & Walker, L. (1975). *Procedural justice: A psychological analysis*. Hillsdale, NJ: Erlbaum.

Tuytens, M., & Devos, G. (2012). The effect of procedural justice in the relationship between charismatic leadership and feedback reactions in performance appraisal. *International Journal of Human Resource Management, 23*(15), 3047–3062. doi:10.1080/09585192.2011.639535.*

Tyler, T. R., & Caine, A. (1981). The influence of outcomes and procedures on satisfaction with formal leaders. *Journal of Personality and Social Psychology, 41*, 642–655.

Van Dijke, M., De Cremer, D., Mayer, D. M., & van Quaquebeke, N. (2012). When does procedural fairness promote organizational citizenship behavior? Integrating empowering leadership types in relational justice models. *Organizational Behavior and Human Decision Processes, 117*, 235–248.*

Walumbwa, F. O., Wu, C., & Orwa, B. (2008). Contingent reward transactional leadership, work attitudes, and organizational citizenship behavior: The role of procedural justice climate perceptions and strength. *Leadership Quarterly, 19*(3), 251–265.*

Wang, X., Ma, L., & Zhang, M. (2014). Transformational leadership and agency workers' organizational commitment: The mediating effect of organizational justice and job characteristics. *Social Behavior and Personality, 42*(1), 25–36.*

Williams, S. (1999). The effects o f distributive and procedural justice on performance. *Journal o f Psychology, 133*, 183–193.

Wu, M., Huang, X., Li, C., & Liu, W. (2012). Perceived interactional justice and trust-in-supervisor as mediators for paternalistic leadership. *Management & Organization Review, 8* (1), 97–121. doi:10.1111/j.1740-8784.2011.00283.x.*

Zehir, C., Akyuz, B., Eren, M. S., & Turhan, G. (2013). The indirect effects of servant leadership behavior on organizational citizenship behavior and job performance: Organizational justice as a mediator. *International Journal of Research in Business and Social Science, 2*(3), 1–13.*

Zeinabadi, H., & Rastegarpour, H. (2010). Factors affecting teacher trust in principal: Testing the effect of transformational leadership and procedural justice. *Procedia Social and Behavioral Sciences, 5*, 1004–1008.*

Discussion, Limitations and Suggestions

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Abstract The correlational values obtained from research studies investigating the relationship between leadership and organizational outputs were quantitatively analyzed in this meta-analytic study. To determine the impact magnitudes of 13 organizational outputs of leadership, a sample group with a total of 600,201 subjects was compiled using 1,250 pieces of correlational data. The findings showed that leadership had a *small-magnitude, positive effect* on conflict management, *medium-magnitude, positive effects* on job satisfaction, organizational commitment, organizational culture, organizational citizenship and performance and *large-magnitude, positive effects* on organizational trust, organizational climate, organizational health, organizational learning and organizational justice. In contrast, a *small-magnitude, negative effect* was found for stress and burnout with regard to the effect of leadership.

1 Discussion

The correlational values obtained from research studies investigating the relationship between leadership and organizational outputs were quantitatively analyzed in this meta-analytic study. A summary of the meta-analytic results between leadership and organizational outputs can be seen in Table 1. To determine the impact magnitudes of 13 organizational outputs of leadership, a sample group with a total of 600,201 subjects was compiled using 1,250 pieces of correlational data. The findings showed that leadership had a *small-magnitude, positive effect* on conflict management, *medium-magnitude, positive effects* on job satisfaction, organizational commitment, organizational culture, organizational citizenship and performance and *large-magnitude, positive effects* on organizational trust, organizational climate, organizational health, organizational learning and organizational justice. In contrast, a *small-magnitude, negative effect* was found for stress and burnout with regard to the effect of leadership. A narrow confidence interval found for the

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Table 1 Findings of the correlations between leadership and organizational outputs: results of the meta-analysis

Organizational outcome	k	N	r	CI		Q
				Lower limit	Upper limit	
Job satisfaction	318	148,501	0.48*	0.44	0.52	30,939.6*
Organizational commitment	202	63,753	0.44*	0.41	0.47	5,800.35*
Organizational trust	70	24,059	0.66*	0.61	0.71	3,350.66*
Organizational citizenship	55	140,395	0.36*	0.26	0.45	6,886.18*
Organizational culture	48	17,092	0.47*	0.39	0.54	1,768.35*
Organizational climate	99	43,698	0.54*	0.48	0.59	6,322.3*
Performance	270	81,233	0.32*	0.29	0.35	7,725.39*
Organizational stress	41	25,650	−0.13**	−0.20	−0.06	963.5**
Organizational burnout	37	17,368	−0.17**	−0.30	−0.03	2,664.10*
Organizational health	6	3,031	0.78*	0.58	0.89	567.54*
Organizational learning	31	11,944	0.59*	0.49	0.67	1,786.64*
Conflict management	32	6,838	0.15*	0.03	0.26	927.526*
Organizational justice	41	16,639	0.52**	0.46	0.58	1,144.93*

*$p<0.01$, **$p<0.05$

meta-analytic research study indicates that the results of the studies included in the research are reliable. This finding can be considered important because it provides the opportunity to make reliable decisions regarding the strength and direction of the relationships found in the meta-analysis.

A summary of the moderator analysis results between leadership and the organizational outputs can be seen in Table 2.

The *publication type* is a moderator of leadership's effect on organizational commitment, trust and justice. Its moderating effects on organizational commitment are found in articles [$r = 0.47$], and those on organizational trust are found in dissertations [$r = 0.71$].

The *year of publication* is a moderator of leadership's effect on organizational trust, citizenship, performance and health. The stated differences are found for organizational trust [$r = 0.77$] and organizational health [$r = 0.97$] for publications in the years 1990–1999 and for performance [$r = 0.37$] and organizational citizenship [$r = 0.40$] for publications from 2010 and later.

The *sample group* is a moderator of leadership's effect on organizational trust, citizenship, stress and health. The stated differences are found for managers in terms of organizational trust [$r = 0.76$], in the banking sector in terms of organizational citizenship behaviors [$r = 0.57$], among religious officers in the case of organizational stress [$r = -0.27$] and among faculty with respect to organizational health [$r = 0.97$].

Table 2 Findings on the correlations between leadership and organizational outputs: results of the moderator analysis

Organizational outcome	Moderators				
	Publication type	Year of publication	Sample group	Leadership style/ approach	Leadership scale
Job satisfaction				+	
Organizational commitment	+				
Organizational trust	+	+	+	+	
Organizational citizenship		+	+	+	
Organizational culture				+	
Organizational climate				+	
Performance		+		+	
Organizational stress			+	+	+
Organizational burnout					+
Organizational health		+	+	+	
Organizational learning				+	
Conflict management					
Organizational justice	+			+	+

The *leadership style/approach* is a moderator of leadership's effect on all variables of organizational trust except organizational commitment and conflict management. The stated differences are found in terms of leadership skills for job satisfaction [$r = 0.81$], adaptive leadership for organizational trust [$r = 0.91$], paternalistic leadership for organizational citizenship [$r = 0.63$], autocratic leadership for organizational culture [$r = 0.79$], reassuring leadership for organizational climate [$r = 0.90$], safety leadership for performance [$r = 0.72$], clinical leadership for stress [$r = -0.46$], transformational leadership for organizational learning [$r = 0.65$] and ethical leadership [$r = 0.61$] and servant leadership [$r = 0.61$] for organizational justice.

The *leadership scale* is a moderator of leadership's effect on stress, burnout and organizational justice. The stated differences are found in terms of NLB for organizational stress [$r = -0.47$], SLS for burnout [$r = -0.83$] and MLQ for organizational justice [$r = 0.53$].

The results of the study with regard to job satisfaction were as expected; it is frequently suggested in the literature that managers' behaviors affect the job satisfaction of employees (Bass & Avolio, 1989; Bogler, 2001; English, 2011;

Griffith, 2004; McDaniel & Wolf, 1992; Zigrang, 2000). For example, the relationship employees have with their managers is one of the hygiene factors in Herzberg's two-factor theory (Herzberg, Mausner, & Snyderman, 1959), which states that the lack of hygiene factors (e.g., remuneration, work safety, working conditions, and behavior of managers) adversely affects job satisfaction (Tosi, Rizzo, & Carroll, 1990). Similarly, Maslow's hierarchy of needs conceptualization states that the attitudes of managers directly affect workers' levels of self-confidence (Spector, 1996). It is expected that the direction of the relationship would change according to the constructive or destructive behaviors of the leader. Job satisfaction should have a positive relationship with constructive leadership behaviors; conversely, they should have a negative relationship with destructive behaviors (Einarsen, Aasland, & Skogstad, 2007; Kellerman, 2004; Schyns & Hansbrough, 2010; Schyns & Schillng, 2013). The findings of this study corroborate these relationships. For example, a meta-analysis carried out on research studies conducted in American and Taiwanese schools found that the leadership behaviors displayed by school principals have high-magnitude, positive effects on job satisfaction (Meng & Chin, 2007). The main reason for the observed positive effect was that all of the studies included in the study tested the relationship between job satisfaction and constructive leadership (such as transformational and cultural leadership). In another meta-analysis testing the relationship between destructive leadership behaviors and job satisfaction, a high-magnitude, negative relationship was found (Schyns & Schillng, 2013), hence giving support to the findings of the current study.

The observed positive relationship can be explained as follows. *First,* the positive attitude of constructive leaders toward their employees (i.e., valuing them, supporting them and efficiently solving problems) leads to the employees' performing more successfully in their tasks and thus ensuring a higher job satisfaction (Avolio, Bass, & Jung, 1999; Erez, 1987). *Second*, constructive leaders become role models for their followers and motivate them. Employees then do not show resistance toward their leader and follow the path paved by their leader without the need for coercion; consequently, the followers become happier (Bass, 2000; Hawkins, 2011; Yukl, 2008).

The positive effect of leadership on organizational commitment found in the study emerges in parallel with opinions that leadership behaviors have an impact on organizational commitment, which relates to how an employee's behaviors are congruent with his or her organization and how the employee perceives himself or herself as a permanent member of the organization (Meyer & Allen, 1991; Mowday, Porter, & Steers, 1982; Wiener, 1982). This positive effect also parallels the findings of many other studies that suggest that leadership has a large-magnitude, positive effect on organizational commitment (Avolio, Zhu, Koh, & Bhatia, 2004; Dunn, Dastoor, & Sims, 2012; Howell & Hall-Merenda, 1999; Hulpia, Devos, & Keer, 2011; Jackson, Meyer, & Wang, 2013; Kirkpatrick & Locke, 1996; Khasawneh, Omari, & Abu-Tineh, 2012; Leithwood & Sun, 2012; Lok & Crawford, 2004; Thamrin, 2012). A further important finding of the study is the direction and strength of the impact of leadership on organizational commitment. Of the individual research studies included in the meta-analysis, some

research studies found only a small-magnitude or a statistically non-significant effect of leadership on commitment, whereas many studies found varying magnitudes of impact. However, when these studies were compiled and an average impact level was calculated, the effect of leadership on organizational commitment was found to be positive, with a high-magnitude impact. This finding is important in that organizational commitment plays a critical and significant role in organizational efficiency (Dee, Henkin, & Singleton, 2006; Leithwood & Sun, 2012) and shows that perceived leadership behaviors have an impact on thoughts about organizational commitment. The study findings are in line with research studies citing the influence of leadership as an organizational factor on organizational commitment (Hoy, Tarter, & Bliss, 1990; Koh, Steers, & Terborg, 1995; Nguni, Sleegers, & Denessen, 2006).

It was found that leadership has a large-magnitude, positive effect on organizational trust. This finding is supported by the suggestion that employees feel trust for all practices and policies of the organization for which they work (Lewicki, McAllister, & Bles, 1998), and support for this notion is found in the literature through the suggestion that managers' leadership behaviors affect trust in an organization, which is related to the assumption that all types of activities of the organization are, to a great extent, sincere and worthy of trust (Joseph & Winston, 2005; Lawal & Oguntuashe, 2012; Lewicki et al., 1998; Podsakoff, MacKenzie, & Bommer, 1996; Top, Tarcan, Tekingündüz, & Hikmet, 2013; Velez & Strom, 2012). Organizational trust is the sum of the trust of an employee towards his or her manager and organization (Nyhan & Marlowe, 1997; Podsakoff et al., 1996; Velez & Strom, 2012). Organizational trust is (1) a factor that deeply affects the relationship between the leader and employee and organizational achievement (Lewicki et al., 1998), (2) an important factor that affects the organization's long-term decisiveness and performance of its members (Cook & Wall, 1980), (3) an important role-player in the successful performance of human resources (Whitney, 1994) and (4) a factor that increases organizational learning and innovation and ensures communication (Dodgson, 1993). When such factors are evaluated as a whole, it can be understood that the impact of trust is of great importance for the actualization of the aims of an organization (Joseph & Winston, 2005; Lawal & Oguntuashe, 2012; Lewicki et al., 1998; Podsakoff et al., 1996; Top et al., 2013; Velez & Strom, 2012). In this context, the findings of the study are important in terms of employees' perceptions of trust being one of the fundamental factors subject to the effects of the leadership behaviors of managers.

The study showed that leadership has a positive impact on the organizational citizenship perceptions of teachers. Although this was not exactly a medium-magnitude impact, this result was to be expected: it was thought that leadership would have a positive impact on the perception of organizational citizenship (Roberson & Strickland, 2010). This finding shows that the organizational citizenship of employees, which is a concept based on behaviors displayed on a volunteer basis by the employee (Bateman & Organ, 1983; Organ, 1988), is shaped by leadership, along with important factors such as the scope of the work, socio-economic opportunities and individual traits (Greenberg & Baron, 2000). It should also be noted that for an employee to consider himself or herself to be a citizen of an

organization, personal and environmental factors are of importance, as are the leadership behaviors displayed by managers. Researchers have long been interested in how a leader's behaviors impact the work and behaviors of employees in the scope of organizational psychology (Roberson & Strickland, 2010). Past research has shown that leadership behaviors affect the meaning employees place on their work (Greenberg & Baron, 2000; Roberson & Strickland, 2010; Strickland et al., 2007). When employees find the work that they do to be meaningful, they develop positive behaviors and a positive attitude toward the organization, leading them to contribute to the success of the organization in all aspects. This positive attitude and behavior, known in the literature as "organizational citizenship," comprise perceptions that contribute to the organization's becoming more efficient and effective (Organ, 1988). In this context, the positive impact of school leadership on the organizational citizenship of teachers found by this study was also previously reported in other studies (Appelbaum et al., 2004; Bateman & Organ, 1983; Organ, 1988; Strickland et al., 2007; Shin, 2012; Walumbva, Wu, & Orwa, 2008).

The results of the study have shown that leadership has a medium-magnitude, positive effect on organizational culture. The findings are supported by the related literature (Hoy & Miskel, 2010; Karadağ, 2009; Klatt & Hiebert, 2001). These findings show that to a great extent, the leadership behaviors of managers have an impact on the concept of organizational culture with respect to the values and beliefs of employees concerning the organization that sets the organization apart from other organizations (Bolman & Deal, 2008; Peters & Waterman, 1995; Schein, 1992). The study findings are congruent with the findings of past studies (Flores, 2004; Giritli, Yazıcı, Oraz, & Acar, 2013; Knutson, Miranda, & Washell, 2005; Tsui, Zhang, Wang, Xin, & Wu, 2006). Organizational culture is one of the critical components that increases the achievement and performance of employees within an organization (Balthazard, Cooke, & Potter, 2006; Frontiera, 2010). Another important component of culture consists of the attitudes and behaviors of managers (Bolman & Deal, 2008; Hoy & Miskel, 2010; Klatt & Hiebert, 2001; Peters & Waterman, 1995; Schein, 1992). Namely, it is the responsibility of managers to ensure that all networks work with consistency in the context of its large and small actions and that all aim to reach shared objectives and to create the impact required to reach these objectives (Karadağ, 2009). In addition, the findings of the study are important in that they can contribute to the discussion in the literature as to whether leaders influence culture or if culture has an impact on the leader.

A large-magnitude, positive effect of leadership was found to impact the organizational climate. This finding seems to parallel opinions that the leadership behaviors of managers have an effect on the organizational climate (Black, 2007; Kelley, Thornton, & Daugherty, 2005; Koene, Vogelaar, & Soeters, 2002; Tajasom & Ahmad, 2011; Varner, 2007; Wang & Rode, 2010), which can be defined as the sum of all factors that affect the behaviors of individuals within the organization and which are related to the general emotions and atmosphere of the organization, setting it apart from other organizations (Hoy, Tarter, & Kottkamp, 1991; Hoy & Miskel, 2010). The positive atmosphere of an organization ensures the increased

performance of its employees, supports morale and improves achievements (Bulach, Malone, & Castleman, 1995; Freiberg, 1998; Hoy et al., 1990). Heck (2000) and Goddard, Hoy, and Hoy (2000) have argued that there is a meaningful relationship between achievement and organizational climate. Consequently, it can be stated that an important factor in the success of an organization is its climate. Without a positive climate, neither an organized and functional organization nor a high degree of success can be established (Hoyle, English, & Steffy, 1985). The findings of the study are important in that they demonstrate the high-magnitude influences of leadership behaviors displayed by managers in the creation of organizational culture, which is of critical importance for the success of organizations.

The finding of the study that leadership has a positive effect on performance is supported in the literature (Friedkin & Slater, 1994; Imran, Zahoor, & Zaheer, 2012; Ishikawa, 2012; Jung, Moon, & Hahm, 2008; Lowe, Kroeck, & Sivasubramaniam, 1996; Rowold, 2011; Wang, Oh, Courtright, & Colbert, 2011). The results of the study concerning performance, a concept defined as the contribution an employee makes to the organization, showed that the leadership behaviors of managers affect performance. The perception of performance is a psychological need at the employee level, whereas it is a motivational need at the organizational level. Performance-related activities point to the current inadequacies of the employee and provide guidance to the employee that reform of his or her behaviors is required to make new progress. To improve the performance of each person separately contributes to an overall increase in the effectiveness of the organization (Bass, 1985). The positive impact of managers' leadership behaviors on each organizational output found in the study also indirectly predicts performance; hence, each organizational output is considered relative to the performance of the employee within the theoretical infrastructure for each (Bass, 1985; Curral & Epstein, 2003; Greenberg, 1987, 1990; Hoy & Miskel, 2010; Meyer & Allen, 1991; Organ, 1988; Spector, 1996). In this manner, the work is an important reference in assessing the performance of an employee in terms of the variables and findings reached.

The meta-analytic results of the study showed that school leadership has a high-magnitude, positive effect on teachers' perceptions of organizational justice. This result, as expressed by Adams (1965), is supported by the opinion that managers' or leaders' attitudes and behaviors affect the perceptions of justice of employees (Eberlin & Tatum, 2008; Cremer, Dijke, & Bos, 2007; Hoy & Tarter, 2004; Kale, 2013; Pillai, Scandura, & Williams, 1999).

To evaluate the findings of the study as a whole, the different data compiled from various sample groups and obtained with various testing tools were collapsed to calculate an average impact magnitude of different organizational outputs undertaken in the literature investigating the effect of leadership on organizational behavior. The meta-analysis study found that leadership had a small-magnitude effect on conflict management, a medium-magnitude effect on job satisfaction, organizational commitment, organizational culture, organizational citizenship and performance and a large-magnitude, positive effect on organizational trust, organizational climate, organizational health, organizational learning and organizational

justice. In contrast, it was found that leadership had a small-magnitude, negative effect on stress and burnout. In the meta-analysis conducted with data obtained from the research studies, the results of the research studies included in the study as a whole were found to be reliable, as evidenced by the narrow confidence intervals, and no finding suggested the existence of a distribution bias.

2 Limitations of the Study

This study was conducted based on current data obtained from original research studies. Possibly the biggest disadvantage of the study was that the data were based only on correlational studies. This feature introduces a potential methodological bias. The opinion that quantitative research methods may be more effective in explaining the nature of leadership and organizational outputs serves as the basis for the argument that the results of this study cannot sufficiently explain the causal effects of the results.

Despite the strategies developed to select the research studies subsequently included in the meta-analysis, it was not possible to access all of the research studies. The reason for this is twofold: (1) the ScienceDirect, ProQuest and EBSCO academic databases solely provide access to the full text of publications written in the English language—therefore, it was not possible to reach research studies written in other languages; and (2) all dissertations used in the study were from American and Canadian universities, thereby introducing the possibility of a cultural bias.

The correlational values from research studies that generally assessed constructive leadership skills and organizational outputs were included in the meta-analysis. The fact that studies of destructive leadership are not yet internationally common and that the number of studies are limited have an effect on this situation. Therefore, the meta-analytic studies were not designed to draw conclusions on destructive leadership and organizational outputs; moreover, destructive leadership on organizational outputs may have a higher degree of explanatory power. Thus, to include both constructive and destructive leadership and organizational outputs in a meta-analysis may provide more detailed information with which to explain concepts.

3 Suggestions

In light of the findings of the analyses carried out over the course of this study, the following suggestions can be made.

- Based on the positive effect of leadership on organizational outputs, necessary measures should be taken to encourage managers to adopt constructive leadership behaviors to reach organizational objectives.
- It was noted that many research studies compiled for this study concerning leadership and organizational outputs did not report the correlation coefficient (*r*). Researchers should report their findings in a way that is conducive to meta-analysis so that their research does not remain limited to their individual studies.
- In the study's moderator analysis of the leadership scales, the construct validity of the scales should be reviewed in a manner that considers the differences in impact among scales measuring the same types of leadership—especially the leadership scales.
- Future studies on the effects of leadership should be qualitative, not quantitative.

References

Adams, J. S. (1965). Inequity in social exchange. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (pp. 267–299). New York, NY: Academic.

Appelbaum, S., Bartolomucci, N., Beaumier, E., Boulanger, J., Corrigan, R., Dore, I., et al. (2004). Organizational citizenship behavior: A case study of culture, leadership and trust. *Management Decision, 42*(2), 13–40.

Avolio, B. J., Bass, B. M., & Jung, D. I. (1999). Re-examining the components of transformational and transactional leadership using the multifactor leadership questionnaire. *Journal of Occupational and Organizational Psychology, 72*, 441–462.

Avolio, B. J., Zhu, W., Koh, W., & Bhatia, P. (2004). Transformational leadership and organizational commitment: Mediating role of psychological empowerment and moderating role of structural distance. *Journal of Organizational Behavior, 25*, 951–968.

Balthazard, P., Cooke, R., & Potter, R. (2006). Dysfunctional culture, dysfunctional organization: Capturing the behavioral norms that form organizational culture and drive performance. *Journal of Managerial Psychology, 21*, 709–732.

Bass, B. M. (1985). *Leadership and performance beyond expectations*. New York, NY: Free Press.

Bass, B. M. (2000). The future of leadership in learning organizations. *The Journal of Leadership Studies, 7*(3), 18–40.

Bass, B. M., & Avolio, B. J. (1989). Potential biases in leadership measures, how prototypes, leniency, and general satisfaction relate to ratings and rankings of transformational and transactional leadership constructs. *Educational and Psychological Measurement, 49*, 509–527.

Bateman, T. S., & Organ, D. W. (1983). Job satisfaction and the good soldier: The relationship between affect and employee citizenship. *Academy of Management Journal, 26*(4), 587–595.

Black, G. L. (2007). *A correlational analysis of servant leadership and school climate*. Unpublished master thesis, University of Phoenix, Phoenix, AZ.

Bogler, R. (2001). The influence of leadership style on teacher job satisfaction. *Educational Administration Quarterly, 37*(5), 662–683.

Bolman, L. G., & Deal, T. E. (2008). *Organizasyonları yeniden yapılandırmak: Yetenek, tercih ve liderlik.* (Çev, A. Aypay; A. Tanrıöğen). Ankara: Seçkin Yayıncılık.

Bulach, C., Malone, B., & Castleman, C. (1995). An investigation of variables related to student achievement. *Mid-Western Educational Researcher, 8*(2), 23–29.

Cook, J., & Wall, T. (1980). New York attitude measures of the trust organizational commitment and personal need non-fulfillment. *Social Forces, 53*, 39–52.

Cremer, D. D., Dijke, M. V., & Bos, A. E. R. (2007). When leaders are seen as transformational: The effects of organizational justice. *Journal of Applied Social Psychology, 37*(8), 1797–1816.
Curral, S. C., & Epstein, M. J. (2003). The fragility of organizational trust: Lessons from the rise and fall of Enron. *Organizational Dynamics, 32*(2), 193–206.
Dee, J. R., Henkin, A. B., & Singleton, C. A. (2006). Organizational commitment of teachers in urban schools: Examining the effects of team structures. *Urban Education, 41*, 603–627.
Dodgson, M. (1993). Learning, trust and technological collaboration. *Human Relation, 46*(1), 77–95.
Dunn, M. W., Dastoor, B., & Sims, R. L. (2012). Transformational leadership and organizational commitment: A cross-cultural perspective. *Journal of Multidisciplinary Research, 4*(1), 45–59.
Eberlin, R. J., & Tatum, B. J. (2008). Making just decisions: Organizational justice, decision making, and leadership. *Management Decision, 46*(2), 310–329.
Einarsen, S., Aasland, M. S., & Skogstad, A. (2007). Destructive leadership behaviour: A definition and conceptual model. *The Leadership Quarterly, 18*, 207–216.
English, E. M. (2011). *Principals' servant leadership and teachers' job satisfaction*. Doctoral dissertation, available from ProQuest Dissertations and Theses database (UMI No. 3492651).
Erez, E. (1987). Rehabilitation in justice: The prisoner's perspective. *Journal of Offender Counseling, Service and Rehabilitation, 11*, 5–19.
Flores, M. A. (2004). The impact of school culture and leadership on new teachers' learning in the workplace. *International Journal of Leadership in Education, 7*(4), 297–318.
Freiberg, H. J. (1998). Measuring school climate: Let me count the ways. *Educational Leadership, 56*(1), 22–26.
Friedkin, N. E., & Slater, M. R. (1994). School leadership and performance: A social network approach. *Sociology of Education, 67*(2), 139.
Frontiera, J. (2010). Leadership and organizational culture transformation in professional sport. *Journal of Leadership & Organizational Studies, 17*(1), 71–86.
Giritli, H., Yazıcı, E. Ö., Oraz, G. T., & Acar, E. (2013). The interplay between leadership and organizational culture in the Turkish construction sector. *International Journal of Project Management, 31*, 228–238.
Goddard, R., Hoy, W., & Hoy, A. (2000). Collective teacher efficacy: Its meaning, measure, and impact on student achievement. *American Educational Research Journal, 37*(2), 479–507.
Greenberg, J. (1987). A taxonomy of organizational justice theories. *Academy of Management Review, 12*, 9–22.
Greenberg, J. (1990). Organizational justice: Yesterday, today, tomorrow. *Journal of Management, 16*(2), 399–432.
Greenberg, J., & Baron, R. A. (2000). *Behavior in organization: Managing the human side work*. Upper Saddle River, NJ: Prentice Hall.
Griffith, J. (2004). Relation of principal transformational leadership to school staff job satisfaction, staff turnover, and school performance. *Journal of Educational Administration, 42*(3), 333–356.
Hawkins, P. (2011). *Leadership team coaching: Developing collective transformational leadership*. London: Kogan Page Limited.
Heck, R. (2000). Examining the impact of school quality on school outcomes and improvement: A value-added approach. *Educational Administration Quarterly, 36*(4), 513–552.
Herzberg, F., Mausner, B., & Snyderman, B. B. (1959). *Motivation to work*. New Brunswick, NJ: Wiley.
Howell, J. M., & Hall-Merenda, K. E. (1999). The ties that bind: The impact of leader-member exchange, transformational and transactional leadership, and distance on predicting follower performance. *Journal of Applied Psychology, 84*, 680–694.
Hoy, W. K., & Miskel, C. G. (2010). *Eğitim yönetimi: Teori, araştırma ve uygulama*. (Çev Edt, Turan, S.). Ankara: Nobel.
Hoy, W. K., & Tarter, C. J. (2004). Organizational justice in schools: No justice without trust. *The International Journal of Educational Management, 18*(4), 250–259.

Hoy, W. K., Tarter, C. J., & Bliss, J. R. (1990). Organizational climate, school health, and effectiveness: A comparative analysis. *Educational Administration Quarterly, 26*, 260–279.
Hoy, W., Tarter, C., & Kottkamp, R. (1991). *Open schools/healthy schools*. London: Sage.
Hoyle, J., English, F., & Steffy, B. (1985). *Skills for successful leaders*. Arlington, VA: American Association of School Administrators.
Hulpia, H., Devos, G., & Keer, H. V. (2011). The relation between school leadership from a distributed perspective and teachers' organizational commitment: Examining the source of the leadership function. *Educational Administration Quarterly, 47*(5), 728–771.
Imran, R., Zahoor, F., & Zaheer, A. (2012). Leadership and performance relationship: Culture matters. *International Journal of Innovation, Management and Technology, 3*(6), 713.
Ishikawa, J. (2012). Leadership and performance in Japanese R&D teams. *Asia Pacific Business Review, 18*(2), 241–258.
Jackson, T. A., Meyer, J. P., & Wang, X. H. (2013). Leadership, commitment, and culture: A meta-analysis. *Journal of Leadership & Organizational Studies, 20*(1), 84–106.
Joseph, E. E., & Winston, B. E. (2005). A correlation of servant leadership, leader trust, and organizational trust. *Leadership & Organization Development Journal, 26*(1), 6–22.
Jung, K., Moon, M. J., & Hahm, S. D. (2008). Exploring the linkage between ministerial leadership and performance in Korea. *Administration & Society, 40*, 667–690.
Kale, M. (2013). Perceptions of college of education students in Turkey towards organizational justice, trust in administrators, and instructors. *High Education, 66*, 521–533.
Karadağ, E. (2009). Spiritual leadership and organizational culture: A study of structural equation model. *Educational Sciences: Theory & Practice, 9*(3), 1357–1405.
Kellerman, B. (2004). *Bad leadership. What it is, how it happens, why it matters*. Boston, MA: Harvard Business School Press.
Kelley, R. C., Thornton, B., & Daugherty, R. (2005). Relationships of between measures of leadership and school climate. *Education, 126*(1), 17–25.
Khasawneh, S., Omari, A., & Abu-Tineh, A. M. (2012). The relationship between transformational leadership and organizational commitment: The case for vocational teachers in Jordan. *Educational Management Administration & Leadership, 40*(4), 494–508.
Kirkpatrick, S. A., & Locke, E. A. (1996). Direct and indirect effects of three core characteristic components on performance and attitudes. *Journal of Applied Psychology, 81*, 36–51.
Klatt, B., & Hiebert, M. (2001). *The Encyclopedia of leadership: A practical guide to classic and contemporary leadership theories and techniques*. New York, NY: McGraw-Hill.
Knutson, K. A., Miranda, A. O., & Washell, C. (2005). The connection between school culture and leadership social interest in learning organizations. *Journal of Individual Psychology, 61*(1), 25–36.
Koene, B. A. S., Vogelaar, A. L. W., & Soeters, J. L. (2002). Leadership effects on organizational climate and financial performance: Local leadership effect in chain organizations. *The Leadership Quarterly, 13*, 193–215.
Koh, W. L., Steers, R. M., & Terborg, J. R. (1995). The effects of transformational leadership on teacher attitudes and student performance in Singapore. *Journal of Organizational Behavior, 16*, 319–333.
Lawal, O., & Oguntuashe, K. (2012). Impacts of organizational leadership and culture on organizational trust: Role of job cadre. *IFE PsychologIA, 20*(1), 394–402.
Leithwood, K., & Sun, J. (2012). The nature and effects of transformational school leadership: A meta-analytic review of unpublished research. *Educational Administration Quarterly, 48*(3), 387–423.
Lewicki, R. J., McAllister, D. J., & Bles, D. J. (1998). Trust and distrust, new relationships and realities. *Academy of Management Review, 23*, 438–458.
Lok, P., & Crawford, C. (2004). The effect of organisational culture and leadership style on job satisfaction and organisational commitment: A cross-national comparison. *Journal of Management Development, 23*(4), 321–338.

Lowe, K. B., Kroeck, K. G., & Sivasubramaniam, N. (1996). Effectiveness correlates of transformational and transactional leadership: A meta-analytic review. *The Leadership Quarterly, 7*, 385–425.

McDaniel, C., & Wolf, G. (1992). Transforming leadership in nursing service. *Journal of Nursing Administration, 22*, 60–65.

Meng, J., & Chin, C. (2007). Meta-analysis of transformational school leadership effects on school outcomes in Taiwan and the USA. *Asia Pacific Education Review, 8*(2), 166–177.

Meyer, J. P., & Allen, N. J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review, 1*(1), 61–89.

Mowday, R. T., Porter, L. W., & Steers, R. M. (1982). *Employee- organization linkages, the psychology of commitment absenteeism and turnover*. New York, NY: Academic.

Nguni, S., Sleegers, P., & Denessen, E. (2006). Transformational and transactional leadership effects on teachers' job satisfaction, organizational commitment, and organizational citizenship behavior in primary schools: The Tanzanian case. *School Effectiveness and School Improvement, 17*(2), 145–177.

Nyhan, R. C., & Marlowe, H. A. (1997). Development and psychometric properties of the organizational trust inventory. *Evaluation Review, 21*(5).

Organ, D. W. (1988). *Organizational citizenship behavior: The good soldier syndrome*. Lexington, MA: Lexington Books.

Peters, J. T., & Waterman, H. R. (1995). *Yönetme ve yükseltme sanatı*. (Çev, Sargut, S.). İstanbul: Altın Kitaplar.

Pillai, R., Scandura, T. A., & Williams, E. A. (1999). Leadership and organizational justice: Similarities and differences across cultures. *Journal of International Business Studies, 30*(4), 763–779.

Podsakoff, P. M., MacKenzie, S. B., & Bommer, W. H. (1996). Transformational leader behaviors and substitutes for leadership as determinants of satisfaction, commitment, trust and organizational citizenship behaviors. *Journal of Management, 22*(2), 259–298.

Roberson, M. E. B., & Strickland, O. J. (2010). The relationship between charismatic leadership, work engagement, and organizational citizenship behaviors. *The Journal of Psychology, 144* (3), 313–326.

Rowold, J. (2011). Relationship between leadership behaviors and performance: The moderating role of a work team's level of age, gender, and cultural heterogeneity. *Leadership & Organization Development Journal, 32*(6), 628–647.

Schein, E. H. (1992). *Organizational culture and leadership*. San Francisco, CA: Jossey-Bass.

Schyns, B., & Hansbrough, T. (2010). *When leadership goes wrong: Destructive leadership, mistakes, and ethical failures*. Greenwich, CT: Information Age Publishing.

Schyns, B., & Schillng, J. (2013). How bad are the effects of bad leaders? A meta-analysis of destructive leadership and its outcomes. *The Leadership Quarterly, 24*, 138–158.

Shin, Y. (2012). CEO ethical leadership, ethical climate, climate strength, and collective organizational citizenship behavior. *Journal Business Ethics, 108*, 299–312.

Spector, P. E. (1996). *Industrial and organizational psychology*. New York, NY: Wiley.

Strickland, O., Babcock, M., Gomes, L., Larson, E., Muh, V., & Secarea, A. (2007). *The relationship between leader charisma, work engagement, and turnover intentions*. Poster session presented at the annual Western Psychological Association, Seattle, Washington, DC.

Tajasom, A., & Ahmad, Z. A. (2011). Principals' leadership style and school climate: Teachers' perspectives from Malaysia. *The International Journal of Leadership in Public Services, 7*(4), 314–333.

Thamrin, H. M. (2012). The influence of transformational leadership and organizational commitment on job satisfaction and employee performance. *International Journal of Innovation, Management and Technology, 3*(5), 566–572.

Top, M., Tarcan, M., Tekingündüz, S., & Hikmet, N. (2013). An analysis of relationships among transformational leadership, job satisfaction, organizational commitment and organizational

trust in two Turkish hospitals. *The International Journal of Health Planning and Management, 28*, 217–241.

Tosi, H. L., Rizzo, J. R., & Carroll, S. J. (1990). *Managing organizational behavior*. New York, NY: Harper & Row.

Tsui, A. S., Zhang, Z., Wang, H., Xin, K. R., & Wu, J. B. (2006). Unpacking the relationship between CEO leadership behaviour and organizational culture. *The Leadership Quarterly, 17*, 113–137.

Varner, K. B. (2007). *An examination of the relationship between leadership behaviors associated with school climate and student achievement in selected Alabama high schools*. Unpublished doctoral dissertation, Alabama State University, Montgomery, AL.

Velez, P., & Strom, T. (2012). Effects of organizational trust. *Organization Development Journal, 30*(2), 39–49.

Walumbva, F. O., Wu, C., & Orwa, B. (2008). Contingent reward transactional leadership, work attitudes, and organizational citizenship behavior: The role of procedural justice climate perceptions and strength. *The Leadership Quarterly, 19*, 251–265.

Wang, G., Oh, I. S., Courtright, S. H., & Colbert, A. E. (2011). Transformational leadership and performance across criteria and levels: A meta-analytic review of 25 years of research. *Group & Organization Management, 36*(2), 223–270.

Wang, P., & Rode, J. C. (2010). Transformational leadership and follower creativity: The moderating effects of identification with leader and organizational climate. *Human Relations, 63*(8), 1105–1128.

Whitney, J. O. (1994). *The trust factor, liberating profits and restoring corporate vitality*. New York, NY: McGraw-Hill.

Wiener, Y. (1982). Commitment in organizations, a normative view. *Academy of Management Review, 1*(7), 418–428.

Yukl, G. (2008). *Leadership in organizations*. Upper Saddle River, NJ: Prentice Hall.

Zigrang, C. B. (2000). *The correlation between a principal's leadership style and personality, as perceived by the teacher, and its effect on teacher job satisfaction*. Doctoral dissertation, available from ProQuest Dissertations and Theses database (UMI No. 9974042).

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