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To cite this article: Naim Kapucu & Yusuf Ustun (2017): Collaborative Crisis Management and Leadership in the Public Sector, International Journal of Public Administration, DOI: [10.1080/01900692.2017.1280819](https://doi.org/10.1080/01900692.2017.1280819)

To link to this article: <http://dx.doi.org/10.1080/01900692.2017.1280819>



Published online: 07 Feb 2017.



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## Collaborative Crisis Management and Leadership in the Public Sector

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### ABSTRACT

The goal of this article is to discover how leadership competencies affect the perceived effectiveness of crisis management. The study, based on a self-reported survey of executive public leaders in Turkey, found that the core leadership competencies have a positive relationship with the effectiveness of crisis management. Among task-oriented, people-oriented, and organization-oriented categories of leadership behaviors, task-oriented leadership behaviors were found with the highest level of impact on the effectiveness of crisis management. The study demonstrated the importance of the core leadership competencies in the effectiveness of crisis leadership. The hypothesis testing with the covariance structure model supported the positive impact of the core leadership competencies on the effectiveness of crisis management. This study contributes to the literature on leadership during crisis situations, and also provides proposals for public managers and practitioners to increase their effectiveness in leading their organizations during crises.

### KEYWORDS

Crisis management;  
leadership behaviors;  
leadership competencies;  
leadership traits

### Introduction

Various types of crises impact the operations of organizations, from small local nonprofit organizations to international agencies, and even governments. The numerous crises varying in size, duration, and complexity have increased the importance of leadership in managing them. More comprehensive and professional preparation for large-scale crisis management is considered to be one of the primary objectives of public management in providing security for its citizens (Farazmand, 2007; Heller, 2012; Kapucu & Van Wart, 2006). The public now expects effective public sector leadership in crises more than they did in the past (Ink, 2006). The lack of leadership skills may lead to inadequate crisis management, which may cause loss of life and property (Murphy & Dunn, 2012). There are many examples of these all over the world such as well-known Hurricane Katrina in 2005 in the United States. The response to Hurricane Katrina was an example of poor crisis management caused by lack of the public leadership (Farazmand, 2007).

Managing crisis demands inter-organizational collaboration and collaborative leadership skills. In Turkey, observed shortcomings of collaboration in response to crises prompted a reorganization of the disaster management system for a centralized system (Hemansson, 2016). A leader's capacity is best tested in a crisis situation (Klann, 2003). Crises creates sensitive environments in which

leaders may have to make sudden and effective decisions using limited information. In these kinds of environment, emotions and instincts may quite easily override intellect and logic. In order to reduce the impact of these challenging events, every competent leader must take a number of actions prior to, during, and after crises.

The study focuses on public administrators' leadership role in crisis management. The literature, including the United Nations (UN) standards, recognizes natural and man-made crisis contexts. In this study, both man-made and natural disasters are included. The study examines the following research questions to better understand the role of effective crisis leadership in dealing with crises. What is the role of effective leadership in managing crises and disasters? How do the public administrator's leadership traits and skills impact the effectiveness of crisis leadership? How do the public administrator's leadership behaviors (task, people, and organization-oriented behaviors) influence the effectiveness of a crisis management?

The study builds on and contributes to earlier studies on collaborative leadership in crisis management in the public sector. Although earlier studies have examined collaboration in crisis management, they did not pay much attention to collaborative leadership at the time of crisis in the public sector. Therefore, this research provides valuable knowledge for scholars and practitioners in understanding the importance of the leadership competencies to accomplish effective crisis

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management in the public sector, especially during the response phase of a crisis. Before establishing the conceptual framework of this study, a brief overview of the Turkish administrative system is provided in the next section.

### Context of the study

Turkey experiences different kinds of natural and man-made disasters frequently. Roughly 92% of the land of Turkey is a potential earthquake area. Turkey has lost thousands of citizens in earthquakes and other natural disasters within the last two decades (Hemansson, 2016; Unlu, Kapucu, & Sahin, 2010). The legal framework is also of vital importance so as to better understand the Turkey context.

Turkish constitution indicates that, based on the “devolution of wider powers” principle, the central administrative structure of Turkey is divided into provinces and other lower administrative levels in terms of the geographical location and economic conditions, and according to the requirements of public service. Turkey has 81 provinces, and 919 districts under these provinces (Kapucu & Palabiyik, 2008). The “devolution of wider power” principle gives some of the powers of the central government to provincial organizations; therefore, it becomes possible to carry out the central government’s authority in the provinces by means of the governors who are the representatives of the central governments. The governors (vali), the highest public officials in a province, can make decisions on some issues determined by law and execute those decisions by their own authority. The provinces are subdivided into districts, headed by a district governor (kaymakam). In the Turkish administrative and crisis management system, the province, and district governors are the principal responsible public administrators to manage any type of crisis that occurs in their province or district jurisdiction (Kapucu, 2010).

### A leadership competency framework: leadership action cycle model

Collaborative leadership focuses on the administrators’ behaviors which facilitate a productive interaction and mobilize network participants to find effective solutions for problems (McGuire & Silvia, 2009). It is expected from leaders that they openly express their ideas, inspire people to mobilize, and concentrate on problems and results. However, collaborative leadership requires a different style of leadership. In this approach, the leader must guarantee and guard the progression of collaboration, ease of interaction, and struggle patiently with frustrations that may arise during the functioning of

collaboration. Collaborative leaders guide rather than control and concentrate on motivating rather than directing network participants (Carter, 2006).

The term “competence” is generally understood as including the education, knowledge, abilities, and experience of individuals who use them while performing a task. When assessing competencies for a position, there should be a connection between the competencies and the successful way a specific mission should be performed (Moore & Rudd, 2004). Competencies are developed based on a leadership experience, and literature are used increasingly and commonly in the public and private sectors. For instance, the results of research conducted by Bolden, Gosling, Marturano, and Dennison (2003) indicate that 29 different competency frameworks have been used by companies such as Lufthansa and Shell from the private sector and organizations such as the Senior Civil Service from the public sector in Turkey.

The leadership action cycle model, developed by Van Wart (2004), is a leadership competency framework that concentrates on public sector leadership and can be used for all levels of government. As a multidimensional leadership model, it integrates many leadership research trends developed by scholars in public administration. The model was established based on three types of leadership competencies: traits, skills, and behaviors. In the model, a leader is supposed to possess inborn traits and learned skills. According to the model, leadership behavior can be used as a foundation in assessing leadership effectiveness. Van Wart (2004) identifies 37 competencies linked to administrative or managerial leadership.

Kapucu and Van Wart (2008) indicate that these 37 generic competencies may change and adapt depending upon the mission of the organization, the position of the leader, and environmental requirements such as the crisis itself. Even though there are significant similarities in the wider view of leadership, the requirements and core competencies needed to achieve desired results differ under specific circumstances. Using the same theoretical framework, Kapucu and Van Wart (2008) implemented a qualitative investigation among senior emergency managers in the public sector and pointed out 12 competencies, from a field of 37, as core competencies for leadership effectiveness during the response phase of a crisis. These core competencies are decisiveness, flexibility, communication (informing), problem-solving, managing innovation and creativity, personnel planning, motivating, building and managing teams, decision-making, networking and partnering, scanning the environment, and strategic planning (Kapucu & Van Wart, 2008).

The impact of good leadership on diminishing the catastrophic effects of big disasters/crises was theorized by Kapucu and Van Wart (2006) in another study on the

subject of catastrophic hurricanes in the 2004 during the Atlantic hurricane season in Florida. According to the results of their study, leaders have a significant effect in terms of minimizing the harmful consequences of calamitous events by using their leadership competencies. On the contrary, leaders may worsen the results of a crisis if they either do not have or do not use adequate leadership competencies (Boin, T' Hart, Stern, & Sundelius, 2005).

Van Wart and Kapucu (2011) claim that "crisis management does not necessarily require all the same competencies of charismatic or transformational leadership as they are articulated in the literature" (p. 495). While some aspects of transformational leadership, such as inspirational motivation and idealized influence, overlap with crisis management, other aspects, such as intellectual stimulation, might be not applicable for crisis management. A crisis does not provide enough time to crisis managers to be able to make long-term changes. Twelve leadership competencies that are identified as effective in collaborative crisis management represent the leadership competencies explained by transformational and collaborative leadership theories.

### Leadership traits, skills, and behaviors

The traits approach aims to determine leaders' personal features based on three primary categories: physical, social, and individual characteristics (Lussier, 2002). According to the traits approach, a leader must possess various personal features, which are relatively innate or long-term dispositions, and different from other group members (Drummond, 2000). While traits are considered as inborn characteristics of a leader, skills are accepted as individual attributes that can be developed by learning (Boin et al., 2005). Skills are mostly practical and gained attributes. Education, experience, and training influence the improvement of leadership skills and competencies. Although there are certain inborn leadership skills, such as verbal communication skills, some famous leaders did

not have those skills inherently, but developed them by education (Van Wart, 2011).

The behavioral approach is based on followers' perception, according to which leaders can be defined by their behavior rather than the characteristics of leaders. Therefore, leadership is not a component specific to the individual, but rather it is considered a behavioral style that stems from a leader's relations with followers (Yukl, 2002). In the literature regarding behavioral approach some scholars define behavioral structure and activities of leaders, while others examine the differences between behavior structures of effective and ineffective leaders.

In the leadership action cycle model, Van Wart (2004, 2011) categorizes leadership behaviors as task-oriented, people-oriented, and organization-oriented. Task-oriented behavior gives weight to careful supervision of followers in order to achieve appropriate working methods and success. The main focus of this method is to establish a well-defined model of the organization, communication processes, and transaction methods between leader and followers (Bloisi, Cook, & Hunsaker, 2003). People-oriented leadership behaviors include activities such as mutual trust in interpersonal relationships, communication, and respect for the opinions of and caring about the emotions of subordinates. Leaders with these behaviors show more interest in the needs and desires of followers and act in this direction (Yukl, 2002). Finally, organization-oriented behaviors mostly focus on outside perspective, system approach, organizational culture, and organizational change. Organization-oriented behaviors involve "scanning the environment, strategic planning, articulating the mission and vision of the organization, networking and partnering, performing general management functions such as human resources and budgeting, decision making, and management of organizational change" (Van Wart, 2011, p. 234).

The conceptual model of crisis leadership was developed based on the literature (Figure 1). The framework incorporates 12 key leadership competencies as independent variables and some extraneous individual



Figure 1. Leadership action cycle model.

differences among leaders as control variables, which affect the perceived effectiveness of collaborative leadership in crisis management during crisis situations. In this study, the concept of perceived effectiveness of collaborative crisis leadership refers to the collaborative leadership effectiveness of district and deputy governors of Turkey during crisis situations. The model assumes that acquisition of these competencies by a leader positively influences the perceived effectiveness of collaborative crisis leadership.

### **Core leadership competencies in managing crisis**

This study tests five hypotheses to determine the role of leadership traits and skills and three types of leadership behaviors on the effectiveness of crisis leadership. In other words, this study aims to analyze the relationships between core leadership competencies (leadership traits, skills, and behaviors) and the effectiveness of crisis leadership. Therefore, it is hypothesized in the study that:

H1: There is a positive relationship between core leadership competencies and the perceived effectiveness of collaborative crisis leadership.

#### **Traits and skills**

Two leadership traits, “decisiveness and flexibility,” and one leadership skill, “communication (informing),” will be examined in this group of competencies.

##### **Decisiveness**

Leader decisiveness indicates the degree to which a leader desires to make decisions and to act decisively. Decisiveness has been determined to be an important trait that a leader should have and it is theoretically paired with assertiveness. While a decisive leader’s behavior is expressed with clarity and precision in decision-making, indecisive behaviors are seen as a reason for organizational failure (Williams, Pillai, Lowe, Jung, & Herst, 2009). Powerful and decisive leadership is becoming a particularly important requisite when crisis situations occur (Yukl, 2002).

##### **Flexibility**

This trait can be understood as the ability and readiness to react in considerably different ways based on different situational necessities. A leader should have a wide-ranging response collection and ability to apply the

correct response that is suitable for situational requirements (Zaccaro, Gilbert, Thor, & Mumford, 1992).

##### **Communication**

Communication can be defined in general as transmission of information, ideas, and emotions from one to others (Barrett, 2006). In the end, all management activity is based on the functioning of a communication process because any kind of managerial decisions, their results, and the vision of an organization’s future can be realized and be meaningful if they are transferred to employees and other stakeholders (Barrett, 2006). Based on the prior studies, it is hypothesized in the study that:

H2: There is a positive relationship between leadership traits and skills and the perceived effectiveness of collaborative crisis leadership.

H2a: There is a positive relationship between leadership traits and skills and the perceived effectiveness of collaborative crisis leadership through task-oriented leadership behaviors.

H2b: There is a positive relationship between leadership traits and skills and the perceived effectiveness of collaborative crisis leadership through people-oriented leadership behaviors.

H2c: There is a positive relationship between leadership traits and skills and the perceived effectiveness of collaborative crisis leadership through organization-oriented leadership behaviors.

##### **Task-oriented behaviors**

Two task-oriented behaviors will be examined through the use of problem-solving and managing innovation and creativity.

##### **Problem solving**

The literature provides diverse definitions about the concepts of problem and problem-solving competency. One definition of problem is that it is a perceived difficulty or obstacle, a gap between a result and a desired situation, or perhaps an undesirable situation that is able to be resolved with little difficulty (Evans, 1991). According to Yukl (2002), problem-solving describes work-related problems, analyzes problems in a timely and logical manner, recognizes reasons for problems and finds permanent and coherent solutions,

performs decisively to accomplish solutions, and solves significant problems or crisis.

### **Managing innovation and creativity**

According to Amabile and Amabile (1983), creativity is to be able to develop new and useful ideas, while innovation is the successful realization of creative ideas in an organization. After all, creativity occurs at the individual level, while innovation occurs at the organizational level. The inputs of organizational innovation are comprised of individual characteristics of the persons who created the organization as well as features of teams and the organization. To transform these inputs to innovative behaviors and innovative products, it requires a culture and environment that supports innovation (Woodman, Sawyer, & Griffin, 1993). Based on these explanations, it is hypothesized in the study that:

H3: There is a positive relationship between task-oriented leadership behaviors and the perceived effectiveness of collaborative crisis leadership.

### **People-oriented behaviors**

The second group of behavioral competency consists of people-oriented behaviors, which are team building, planning and organizing personnel, and motivating followers in crisis leadership.

#### **Team building**

A team can be defined as a distinguished group that consists of two or more people with a specific role or task, acting in a compatible manner for common and valued objectives, goals, and missions (Salas, Dickinson, Converse, & Tannenbaum, 1999). A team is formed by a small number of individuals with complementary skills. These people act in accordance to common objectives and performance goals and they have mutual responsibilities within this context (Katzenbach & Smith, 1993). In other words, a team is a collection of people coming together for a specific purpose. Team-building behaviors of a leader provide better relationships and communication among followers, and ultimately increase the effectiveness of the organization.

#### **Planning and organizing personnel**

The leader's competency in planning and organizing personnel refers to his/her ability to identify long-term goals and policies to utilize personnel and personnel roles. The main concern in planning and organizing staff is to find the best way to distribute and regulate work in order to encourage staff. This behavior involves

employing staff and continually improving their effectiveness by using "training, development activities, performance appraisal (when it is robust), social events related to work, team building, and recognition and rewards activities" (Van Wart, 2004, p. 197). Human resources planning and organization is a dynamic process, which provides well-trained and satisfied employees in the short-term and stability and continuity in organizational culture in the long-term.

### **Motivating**

Motivation is generally an internal attitude that evokes certain behaviors (Spector, 2000). The concept of motivation contains some factors that mobilize human behaviors, and determines the direction and period of those behaviors. These factors can be internal and external motivating factors. There is intrinsic motivation for employees when they perform a specific job which is engaging and exciting for them. On the other hand, if they perform the same job for rewards such as making money, or getting a promotion or fame, the motivation is extrinsic. Sometimes, personal satisfaction means a lot more than money, but monetary awards are also important (Dessler, 1997). Either intrinsic or extrinsic motivation can inspire people's sense of enthusiasm and persistence (Daft, 2000). Thus, it is hypothesized in the study that:

H4: There is a positive relationship between people-oriented leadership behaviors and the perceived effectiveness of collaborative crisis leadership.

### **Organization-oriented behaviors**

The last group of leadership behaviors is organization-oriented behaviors. These behavioral leadership competencies include networking and partnering, decision-making, scanning the environment, and strategic planning.

#### **Networking and partnering**

Networks are considered as a different management structure alongside markets and hierarchies (Rhodes, 1997). Markets are multicenter, atomized, and chaotic structures. States or companies are hierarchical and centralized bodies. However, networks have more pluralistic governance forms. Networks, as an alternative form of social and political organization approaches, challenge traditional forms of social organization and management understanding. A leader's task in a network is to provide collaboration among the people and organizations. Therefore, the network will be constructed, and the flow

of resources, such as information, expertise, and technology among interdependent organizations, can be ensured.

### **Decision-making**

There is no doubt that every crisis is unique and may require different types of effort and intervention (Kapucu & Garayev, 2011). Therefore, in crisis situations there is always some level of uncertainty which causes fear and stress within the community. According to Kapucu and Van Wart (2006), “catastrophic disasters are characterized by unexpected or unusual size, disruptions to the communication and decision-making capabilities of the emergency response system itself, and an initial breakdown in coordination and communication” (p. 280). Especially in the response phase, public managers must perform many different tasks such as search and rescue operations, coordination between rescue teams and other stakeholders, provide food and shelter, and most importantly, they must make rapid and accurate decisions with limited information in a time-sensitive environment.

### **Scanning the environment**

Environmental scanning refers to searching for opportunities and risks that may come from outside of a particular entity or organization. Government organizations mostly gather information from other governmental entities, private sector organizations, customers, and legislative and supervisory agencies that have influence on the organization. Effective leaders can assess whether the information is vital and pertinent, and assure that this information is obtained from various sources rather than a single source. This competency is crucial for a leader especially in dynamic environments. If external factors overwhelm a leader, the whole organization may be in danger (Van Wart, 2004).

### **Strategic planning**

There are multiple definitions of the concept of strategic planning that covers common features of planning and strategy. Bryson (2011) describes strategic planning as a methodical endeavor to yield fundamental decisions and actions which shape and lead the organization’s objectives, actions, and working methods. Based on these explanations, it is hypothesized in the study that:

- H5: There is a positive relationship between organization-oriented leadership behaviors and the perceived effectiveness of collaborative crisis leadership.

## **Method**

To examine how leadership competencies influence the perceived effectiveness of crisis management in the public sector, this research utilized structural equation modeling (SEM) in analyzing the data. An online questionnaire was developed through Qualtrics Survey Software and was used to collect data. The survey included a total of 70 questions, including demographic questions and open-ended questions.

This research analyzed the issue at the individual level. The unit of analysis of this research was territorial state representatives such as the district and province governors, deputy province governors, administrative inspectors, and high- and middle-level bureaucrats of Turkish Ministry of Interior who were the study population of this research. Province deputy governors, administrative inspectors, and Ministry of Interior high- and middle-level bureaucrats are appointed by the central government from the pool of district governors who have completed a specific time span in public service. Therefore, they are considered to have adequate knowledge and experience in crisis leadership.

An e-mail including a link to the survey was sent to all of 2,095 territorial state representatives. Since the survey was sent to the entire population, any special sampling method was not used. Three hundred and thirty people responded to the survey. However, 29 responses were excluded from the data for further analysis because they did not complete in more than 50% of the survey questions. The final dataset of the study was comprised of 301 responses.

The SEM was used in this research. SEM is defined as “a very general statistical modeling technique widely used in the behavioral sciences” (Hox & Bechger, 1998, p. 1). SEM is one of the common ways to test hypotheses on relationships among observable and non-observable (latent) variables (Hoyle, 1995). There are several views regarding the necessary sample size for SEM analysis in the related literature. This study followed the recommendation of Boomsma and Hoogland (2001) that 200 cases are an appropriate sample size for a proper SEM analysis. With its sample size of 301, this study had an adequate sample size for the analysis.

SPSS Statistic, version 17, and AMOS software were utilized to run the analyses. In the first stage, descriptive statistics were performed by using SPSS to understand general characteristics of the data, and assess the general picture. And then, in addition to descriptive statistics in the form of frequency distribution, correlation analysis was performed to identify relations among study variables and the possible multicollinearity

problems between indicators of each latent construct. As a common issue, multicollinearity occurs when two or more variables are highly correlated.

The SEM is conducted to validate the theoretically driven model (Wan, 2002). The SEM mainly consists of the measurement model and the structural model (Byrne, 2010). Confirmatory factor analysis (CFA) was utilized for each latent construct in order to examine whether the hypothesized measurement models fit the data. When the model did not fit, the model was revised until reaching a fit model. The covariance structure model (CSM) was developed after validating the measurement models of the latent variables. The CSM consists of exogenous, mediating, endogenous latent variables, and control variables. A CSM was utilized to examine the structural relationships between core leadership competencies (leadership traits and skills and leadership behaviors) and the effective crisis leadership of Turkish province and district governors.

## Results and discussion

In terms of the study population's professional positions, the frequency and percentage distributions of the target population were as follows: 171 province governors constitute 8.2% of all population, 498 deputy province governors represent 23.7% of total, 866 district governors represent 41.3% of target population, 191 administrative senior inspector constitute 9.2% of total, 134 Ministry of Interior high- or middle-level bureaucrats represent 6.4% of all population, and 236 candidate district governors constitute 11.2% of total target population of survey. In terms of respondents' professional positions, district governors constitute the largest respondent group with 135 valid responses (45.9%). Deputy province governors constitute the second largest group (56; 19.0%) of the respondents. Fifty-two respondents listed their professional position as an administrative senior inspector, which is 17.7% of all respondents. Thirty-three interior ministry high- or middle-level bureaucrats validly responded to the survey questions, which represents 10.9% of all responses. With 16 valid responses, candidate district governors constitute 5.4% of respondents. Due to the low proportion of province governors relative to other positions, it is not surprising that only three province governors completed the survey. Another reason could be the province governors' heavy work-related responsibilities. This group accounts for 1.0% of the study participants.

In this study, .75 was used as the multicollinearity threshold. In total, four multicollinearity problems were

**Table 1.** Cronbach's alpha scores of measurement models.

Measurement model	Number of items		Cronbach's alpha score	
	Before	After	Before	After
Leadership traits and skills	15	14	.949	.945
Task-oriented leadership behaviors	9	8	.939	.932
People-oriented leadership behaviors	13	11	.950	.938
Organization-oriented leadership behaviors	15	15	.944	.944
Effectiveness of crisis leadership	11	11	.936	.936

detected. Therefore, four indicators were excluded from the models in order to solve multicollinearity problem. All of the control variables were not significant at  $p < .05$ , thus the control variables were also removed from the CSM.

Reliability tests the extent to which a scale is able to measure the intended issue. For reliability, a test must be repeatable in and transferable to similar research (Trochim, 2016). In order to confirm the reliability of this study's scales, Cronbach's alpha coefficient analyses were performed. Table 1 indicates the Cronbach's alpha values, calculated by SPSS.

The table shows that all constructs achieved excellent measurement reliability with the lowest value of .932 for task-oriented behaviors, and the highest value of .945 for leadership traits and skills.

### Leadership traits and skills

This study hypothesized a positive association between leadership traits and skills, and the perceived effectiveness of crisis leadership. The only exogenous latent variable of the study, leadership traits and skills, was measured by 14 items, which reflect different attributes of leadership traits and skills.

Survey participants were asked to indicate to what extent they agreed that the leadership traits and skills of the district or province governor whom they had given an opportunity to examine, investigate, or observe closely in a crisis situation impacted the effectiveness of crisis management. First five indicators of this variable evaluated decisiveness trait of the leaders. In general, more than half of the respondents supported that the district or province governors had clarity and precision in their decisions during the crisis (58.8%), had a high level of self-confidence when making a decision (60.1), did not lose his/her self-control under stress (63.3%), made decisions independently, when appropriate, by considering himself/herself the primary decision-maker (52.8), and they did not hesitate to use initiative, if necessary, by taking into account possible risks (60.7%).

Regarding flexibility, a majority of the respondents agreed or strongly agreed with the statements that the district or province governors had a capacity to react with distinctive methods to different situational necessities (64.4%), adapted to different needs (such as adapting to an extremely stressful working environment) when needed (68.8%), and they can diagnose the situation quickly and determine the proper form of behavior that will achieve a positive result (61.0%).

In the model, the only skill of the leaders, which is especially important in crisis leadership, was communication. The respondents supported the statements of all seven indicators. According to the respondents, the district or province governors communicated with stakeholders regularly, as needed (62.8%), developed and executed external and internal communication with stakeholders (victims, organizations, and the media) in the crisis (49.1%), utilized information and communication technologies (ICT) in order to maintain a precise and constant flow of information (48.5%), chose appropriate communication channels and methods (Internet, TV, radio, and such) in the crisis (44.6%), identified barriers for listening to the staff and other stakeholders in the crisis (50.4%), reduced barriers for listening to the staff and other stakeholders (52.9%), and they involved all stakeholders in crisis communication plans (50.9%). Overall, responses to the indicators of leadership traits and skills accumulate within strongly agree and agree responses. The disagreed and strongly disagreed responses are low, and generally constitute around 20% of total respondents.

The factor loading values of all the indicators were greater than .40 (from .51 to .88); hence, none of them were excluded from the traits and skills measurement model. Among the 14 indicators, the indicator “*diagnosing the situation quickly*” has the strongest impact on the latent variable of leadership traits and skills, with a regression coefficient of .88, followed by the indicator “*using distinctive methods*” with a regression coefficient of .80. The other indicators had moderate regression weights except the indicator “utilized ICT,” which had a noticeably lower regression coefficient value (.51) than other indicators.

### **Task-oriented leadership behaviors**

The task-oriented leadership behaviors variable is the first of three mediating variables of this study. This latent variable was designed to measure the perceptions of Turkish province and district governors as to what extent task-oriented leadership behaviors play a mediating role between leadership traits and skills and the perceived effectiveness of crisis leadership. The research

hypothesis was supported with a standard regression coefficient of positive .33, which means there is a statistically significant association between these two constructs as specified in the hypothesis testing.

A measurement model was created by utilizing eight indicators to analyze if the hypothesized model fits the data. Two task-oriented leadership behaviors, problem-solving and managing innovation and creativity, were evaluated by the respondents. The statements regarding problem-solving were supported by almost half of the respondents. Participants were requested to indicate to what extent they agreed that the governors showed adequate problem-solving behaviors during a crisis. Respondents supported that the district or province governors defined the problem and formulated responses in a crisis situation (48.8%), developed a systematic approach in analyzing problems (36.8%), generated alternatives by creating a list of options to solve problems and chose the best option (48.1%), and they promoted collaborative problem-solving (58.5%). The respondents reported weaker support to the statements of managing innovation and creativity compared with their previous answers. Only 38.5% of all respondents approved that the district or province governors created an organizational culture of innovation and creativity by encouraging and rewarding followers who intend to make change and achieve successful results. They benefited from the creative and innovative ability of the staff and partner institutions (49.3%), had willingness to take risks and to consider new and untested approaches at times of crisis (44.9%), provided a welcoming atmosphere in which followers did not feel any pressure (38.3%), and they provided the tools and opportunities for learning and innovation (42.3%).

The results of CFA implied that all indicators in the revised measurement model have significant factor loadings at  $p < .05$ , and the factor loadings of indicators ranged between .67 and .87. While the indicator “*benefiting from the creative and innovative ability of the staff and partner institutions*” had the highest factor loading with the value of .87, the indicator “*generating alternatives*” had the lowest factor loading with the value of .67.

### **People-oriented leadership behaviors**

The people-oriented leadership behaviors variable is the second latent mediating endogenous construct in this study. The measurement model of people-oriented leadership behaviors is specified with 11 indicators. The 11 items reflect different attributes of people-oriented behaviors. Participants were asked to indicate their

evaluation about three core people-oriented leadership behaviors, team building, planning and organizing personnel, and motivating, which are crucial for effective crisis leadership.

Some statements of team-building behaviors, compared with other questions, received the lowest agreed responses. The respondents think that the district or province governors enhanced group identity by creating a group mission, vision, common interests, and shared values among participating organizations in a crisis (60.6%), encouraged the staff to work as a team (42%), selected the proper number of people with well-balanced capabilities for the best group structure (40.6%), built teams with special training, skills, and competencies in the crisis (31.6%).

The majority of the respondents approved the statements about leadership behaviors of the district or province governors in planning and organizing personnel. The respondents think that the district or province governors arranged the division of labor according to the duties and responsibilities of the staff (58.4%), scheduled personnel by using negotiation and perceptions of fairness (56.7%), matched staff preferences and competencies to the work as much as possible (53.9%), and they evaluated and supported the staff's performance and helped them perform better (59.2%).

More than half of the respondents supported that the district or province governor established a positive relationship with the staff by making them feel that their contribution was important (55.6%), appreciated the staff's efforts in a timely and appropriate manner (48%), explained how rewards and significant commendations are distributed and used them to motivate followers (64.6%). Almost half of the respondents think that the district or province governors evaluated fairly the staff's contribution to the crisis response team (46%), and just 35.3% of them think that the district or province governors explained rules and procedures to ensure that subordinates had understood the consequences of deviations, and executed punishment when deviations occurred.

### **Organization-oriented leadership behaviors**

The latent construct of organization-oriented leadership behaviors is the last mediating variable of the study and is measured using 15 items. This variable consists of networking and partnering, decision-making, scanning the environment, and strategic planning. Almost three out of four respondents (74.4%) agreed or strongly agreed that the district or province governor whom the respondents had given an opportunity to examine, investigate, or observe closely in a crisis

situation periodically contacted external stakeholders, politicians, and other strategic allies. The respondents observed that the district or province governors developed long-term relationships with stakeholders (48.1%), constantly exchanged information with other organizations in the network during a crisis (67.5%), and they were open to partnerships during crisis intervention and answered to collaboration needs of others at the maximum level (58%).

A vast majority of respondents agreed with the statements, which evaluated decision-making behaviors of the leaders. According to the respondents, the district or province governors made decisions with limited information under time pressure in response to crises (64.8%), made quick decisions during a crisis compared with routine management (76.5%), sought counsel from others in analyzing the situation (61.9%), reacted differently during the crisis (although nervous, became more focused and solution oriented) (67%), and they detected problems correctly without losing sight of the complete picture and made correct decisions by considering the possible consequences (54.6%).

The third important organization-oriented leadership behavior for crisis leadership is scanning the environment. The respondents evaluated this leadership behavior with three questions. More than half of all respondents (55%) agreed or strongly agreed that the district or province governor identified and used multiple relevant sources of external information, and followed up on significant external trends, such as new developments in technology (51%). Almost half of the respondents also agreed that the district or province governor reflected on the significance of external trends for the organization (45.8%).

The agreement rates of the respondents with the statements about strategic planning behaviors of the leaders were not as high as previous behaviors. The total percentage of respondents who agreed or strongly agreed that the district or province governor collected systematic and comprehensive data from the staff and stakeholders was 42 of all respondents. Just 38.4% of total respondents think that district or province governors regularly reviewed the mission and capabilities of the organization for strategic planning. According to 34.3% of total respondents, the district or province governor developed a step-by-step comprehensive strategic plan for crisis management. Overall, except for the last four indicators, agreement responses exceed disagreement responses for each indicator of this construct.

The critical ratios of parameter estimates for the revised model show that all regression coefficients were

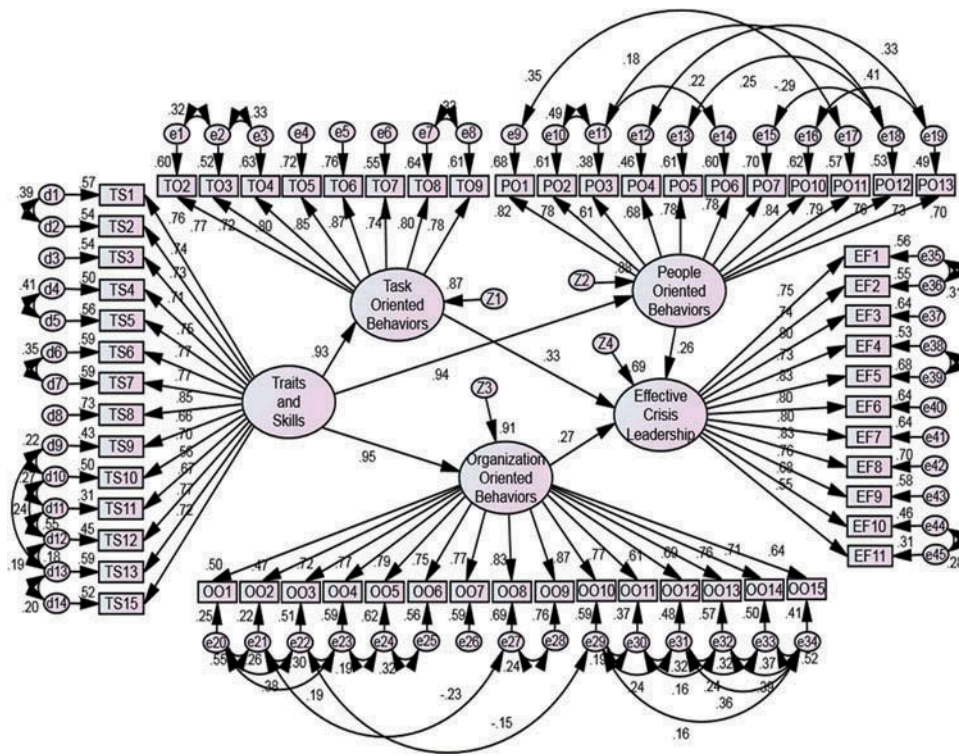


Figure 2. Covariance structural model.

significant at  $p < .05$  ( $CR > 1.96$ ). All indicators had substantially high factor loading values, from .51 to .85.

### **Perceived effectiveness of collaborative leadership in managing crises**

The survey used 11 items to measure the perceived effectiveness level of crisis leadership. These items indicate different attributes of leadership effectiveness in crises. The majority of survey respondents agreed or strongly agreed that the district or province governors whom they had an opportunity to examine, investigate, or observe closely in the crisis situation showed effective collaborative leadership in the crisis. Regarding facilitating crisis management functions, the cumulative percentage of survey participants who either agreed or strongly agreed is 50.5%. Half of the respondents (50%) either agreed or strongly agreed that the district or province governor successfully implemented crisis management plans in mobilizing his/her own personnel and resources, while 28.4% disagree or strongly disagree. Nearly half of the respondents (48.8%) accepted that the district or province governor successfully included emerging resources in the implementation of crisis management plans. Overall, agreement responses exceeded disagreement responses for each of the 11 indicators. The results indicate that almost half of the

respondents showed their agreement for each item. In other words, the district or province governors demonstrated effective collaborative leadership in a crisis which was examined, investigated, or observed closely in the crisis situation by the respondents.

This study tested five hypotheses and three sub-hypothesis to determine the role of leadership traits and skills and three types of leadership behaviors on the perceived effectiveness of crisis leadership. Whether or to what extent these hypotheses are supported can be examined based on the results of SEM analysis. The covariance structural model, which is revised according to the results of SEM, is presented in Figure 2. The relationship of the effectiveness of crisis leadership with each of the control variables was insignificant. Based on the theoretical framework and literature review, the following hypothesizes were tested in this study:

H1: There is a relationship between core leadership competencies and the perceived effectiveness of collaborative crisis leadership.

The outcomes of SEM analysis supported the first hypothesis of this study. The relationships among core competencies and the effectiveness of crisis leadership were all positive and statistically significant at the .05 level. Consequently, it is safe to claim that core

leadership competencies positively influence perceived effectiveness of collaborative crisis leadership.

**H2:** There is a positive relationship between leadership traits and skills and the perceived effectiveness of collaborative crisis leadership.

To assess whether leadership behaviors mediate the relationships between leadership traits and skills and the effectiveness of collaborative crisis leadership, the significance of the structural paths from leadership traits and skills to each leadership behaviors was checked. As the sub-hypotheses H2a, H2b, and H2c indicated, the results of revised SEM demonstrate that leadership traits and skills have significant and positive relationships with task-oriented, people-oriented, and organization-oriented leadership behaviors.

**H2a:** There is a positive relationship between leadership traits and skills and the perceived effectiveness of collaborative crisis leadership through task-oriented leadership behaviors.

The results of revised SEM show that leadership traits and skills has a significant and positive relationship with task-oriented leadership behaviors, with a regression coefficient value of .932; and that a positive correlation exists between task-oriented leadership behaviors and the effectiveness of crisis leadership, with a correlation coefficient of .331 at  $p < .05$ . This implies that task-oriented leadership behaviors partially mediate the relationship between leadership traits and skills and effectiveness of collaborative crisis leadership.

**H2b:** There is a positive relationship between leadership traits and skills and the perceived effectiveness of collaborative crisis leadership through people-oriented leadership behaviors.

The results of revised SEM show that leadership traits and skills have a significant and positive relationship with people-oriented leadership behaviors, with a regression coefficient value of .937; and that a positive correlation exists between people-oriented leadership behaviors and the effectiveness of crisis leadership, with a correlation coefficient of .262 at  $p < .05$ . This result indicates that people-oriented leadership behaviors partially mediate the relationship between leadership traits and skills and effectiveness of collaborative crisis leadership.

**H2c:** There is a positive relationship between leadership traits and skills and the perceived

effectiveness of collaborative crisis leadership through organization-oriented leadership behaviors.

The results of revised SEM show that leadership traits and skills have a significant and positive relationship with organization-oriented leadership behaviors, with a regression coefficient value of .954. In addition, a positive correlation exists between organization-oriented leadership behaviors and the effectiveness of crisis leadership, with a correlation coefficient of .270 at  $p < .05$ . This also implies that organization-oriented leadership behaviors partially mediate the relationship between leadership traits and skills and effectiveness of collaborative crisis leadership.

The results indicated that leadership traits and skills have a positive relationship with the perceived effectiveness of collaborative crisis leadership, which is mediated by leadership task, people, and organization-oriented behaviors.

**H3:** There is a positive relationship between task-oriented leadership behaviors and the perceived effectiveness of collaborative crisis leadership.

The results of analysis indicated that task-oriented leadership behavior was the strongest effective mediating construct on endogenous variable, with a positive regression coefficient .33 at  $p < 0.05$ . The finding showed that the effectiveness of crisis leadership level is positively influenced by task-oriented leadership behaviors. In other words, the more the leaders in crisis situations implement their task-oriented behaviors as a leader's competency, the higher their effectiveness levels will be.

**H4:** There is a positive relationship between people-oriented leadership behaviors and the perceived effectiveness of collaborative crisis leadership.

The results of the revised SEM show that people-oriented leadership behaviors have a positive relationship with effectiveness of collaborative crisis leadership, with a standardized regression coefficient value of .262 at  $p < .05$ . The direction of the relationship is positive as expected, and the relationship between people-oriented leadership behaviors and the effectiveness of collaborative crisis leadership was found to be significant. The results of this study indicate that people-oriented leadership behaviors increase the effectiveness of collaborative crisis leadership.

**H5:** There is a positive relationship between organization-oriented leadership behaviors and the

perceived effectiveness of collaborative crisis leadership.

The results of the SEM analysis also supported the last hypothesis of this study. With the standardized regression coefficient value of .27, there was a statistically significant relationship at  $p \leq .05$  between organization-oriented leadership behaviors, a mediating latent variable, and the effectiveness of crisis leadership, an endogenous latent variable. The critical ratio score was 2.146, which is higher than the suggested score of 1.96. Consequently, it is safe to claim that organization-oriented leadership behaviors positively influence effectiveness of collaborative crisis leadership.

The research hypotheses were supported by the empirical findings of the study, which means that the results of the study are consistent with the propositions of theoretical models and theories used in the study. The latent constructs have statistically significant relationships with the perceived effectiveness of crisis leadership. Moreover, the results show that mediating variables are also vital for comprehending the relationship between core leadership competencies and the effectiveness of crisis leadership. These hypotheses expected that an increase in the exogenous variable would produce an increase in mediator variables, and indirectly an increase in the endogenous variable. The theoretical framework that guided this study was built on the extant literature. The theoretical suppositions of previous studies that beyond other possible explanatory factors, the perceived effectiveness of crisis leadership is a function of the core leadership competencies utilized by leaders during a crisis were supported and confirmed by this study.

According to the results of this research, task-oriented leadership behaviors greatly increase the effectiveness of crisis leadership. However, the effects of people-oriented and organization-oriented leadership behaviors on the effectiveness of crisis leadership are also not low. Research results can be interpreted as provincial and district governors should consider the potential of their subordinates, develop and motivate them to perform their tasks, and maintain good communication with them. Although the research results do emphasize the importance of task-oriented behavior, it is not possible to say that focusing only on task-oriented behaviors alone will increase the efficiency of crisis management. In such a case, there will not be any change or development either in the personnel or in the structure of the organization.

Leaders generally need to coordinate effectively all different governmental agencies, other sector representatives, and even volunteer individuals. In such an

environment, leaders need different kinds of authority sources, such as legal, contractual, and voluntary to deal with issues in disseminating information, organizing financial-material allocations, and distributing responsibilities and authority. The results also confirm the findings in previous studies in literature. Networking and partnering behaviors of leaders are represented with four indicators in the SEM revised model as the indicators of organization-oriented behaviors. Those four indicators had .50, .48, .72, and .77 factor loading, which are over the determined threshold (.40) and significant at  $p < .05$  level. Based on the results of the SEM, networking and partnering behaviors of leaders during a crisis have a significant impact on the perceived effectiveness of crisis leadership as mentioned in Kapucu and Van Wart's (2006) study.

## Conclusion

This study analyzed the impact of leadership competencies on perceived effectiveness of crisis leadership in the crisis management context in Turkey. The vital importance of having an effective crisis management system and adequate crisis leaderships can be understood in terms of continuity of government operations. A mismanaged crisis can damage the reputation of a government and erode the citizens' trust of a government. Their core leadership competencies for crisis situations should be developed in training programs before appointing them to especially critical areas with crisis potential such as frontier towns in southeast part of the country's disaster-prone prareas.

The competency model that was developed in this study can be utilized in several ways in the public management practice. The competency set is a good source to evaluate a candidate for district governors' adequate preparedness for an interview or examination. The more a candidate fits the requirements of the district governor position, the more he/she will be perceived as an effective leader during a crisis. Therefore, a good match between the position and candidates' competencies will increase the potential for better crisis management. The general directorate of staff of the Turkish Interior Ministry may use this model as a criteria set when recruiting new district governors.

Crisis management is one of the most important tasks of provincial and district governors. A governor needs to be adequately informed about his/her duties and responsibilities before being appointed to his/her workplace. In this way, he/she recognizes and needs to increase his/her necessary competencies for crisis leadership. Education and training programs are the main

tools to inform the governors properly. In light of this or similar studies, an education and training program needs to be arranged for governors in order to provide them with the required skills and competencies for crisis leadership. These organizations may certify the attendants according to their achievement. Governors with these certificates may be appointed to the provinces and districts with high potential for crises. Such an implementation in personnel policy will lead to a surge of governors acquiring the expertise they will need to improve their needed competencies.

Anyone who desires to be a governor in Turkey must graduate from some certain disciplines. In other words, formal education at undergraduate or graduate level in Turkey does not provide required competencies for crisis leadership by future governors. The Ministry of Interior can work closely with the universities to eliminate this gap. Again, these competencies can be a framework for such a curriculum that aims to provide necessary training and preparedness for future governors.

This research has a cross-sectional design, which is a time-saving and efficient technique to examine research hypotheses. The use of cross-sectional research poses some limitation due to a lack of a sequential timeline; in other words, a time-order sequence is not available in order to infer causation (Shadish, Cook, & Campbell, 2002). Utilization of multiple methods and sources, such as agency records, interviews, and first-line managers' evaluations, could help researchers to collect and analyze additional data about the effects of leadership traits, skills, and behaviors on the perceived effectiveness of crisis leadership. Moreover, because SEM was used to discover the relationships between variables, the study is limited to the quantitative method. Future researchers can take the findings of this research as a starting point, and bring these results to a further point which they can use for other qualitative or mixed methods and sources. With longitudinal research, the researchers can study the stability of and changes in predictors, and their impacts on outcome variables linearly. The data from this research project could be used as a basis for a longitudinal study. This study uses a self-reported survey as the primary data source, which makes it subject to the method variance problem to some extent because respondents might have a tendency to not indicate their actual behaviors and views.

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