Spiritual Leadership and Organizational Culture: A Study of Structural Equation Modeling

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Abstract
The aim of this study is to test the spiritual leadership behaviors of school principles in a structural equation model. The study is designed to test causality with the assumption that causality exists between the two variables. In this study, spiritual leadership behavior of managers is treated as the independent variable whereas the organizational culture is the dependent variable in the model. Population of this research is 2447 primary school teachers who were working in 32 primary schools in Ataşehir-Istanbul/Turkey. Sampling group consists of 359 voluntary teachers defined with (layer) cluster sampling method according to three income levels (high-mid-low). Data are collected in two scales which were originally developed by researcher. The Spiritual leadership scale consisted of two components and five subscales (performance: commitment, vision, productive and attendance: belonging, believe). The Organizational Culture Scale consisted of four subscales (managerial, social, value and aim). In order to test the structural equity model designed in the research, path coefficients and defined relations between implied and observed variables are used. Findings show that attendance highly affects performance and, in turn, performance affects school culture at the mid-level. It is suggested that the perception of spiritual leadership be improved in structural equation models in future studies.

Keywords
Spiritual Leadership, Organizational Culture, Structural Equation Modeling

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Big man approach to leadership which had dominated leadership arguments before the 1900s initiated the emergence of Personal Qualities of Leadership, the leadership approach of the 1900s. The results of Stogdill (1948, 1950) and Myers’s (1954) studies, which put forth that leadership has no meaningful relationship with any physical traits including intelligence, prepared the end of personal quality approach. In the 1940s, group approach of leadership (Whyte, 1943) started to be influential. Conducted studies pioneered the earliest experimental studies of Ohio State (Halpin, & Winer, 1957) and Michigan Universities (Katz, & Kahn, 1952) which were the source for modern leadership studies. Parallel to these developments, in the 1960s, behavioral leadership approach (Fiedler, 1967) was effective. These leadership theories are such: administrative style leadership theory (Blake, & Mouton, 1964), X-Y leadership theory (McGregor, 1960), system four leadership theory (Likert, 1971). Following this period however situational leadership approach which builds its theory on the present situation, was attempted to be clarified. They were: Active leadership theory (Fiedler, 1967); 3D leadership theory (Reddin, 1970); way-objective theory (Hause, 1971); contingency leadership theory (Hersey, & Blanchard, 1972) and normative leadership theory (Vroom, & Yetton, 1973). In the aftermath of the 1990s new theories emerged in leadership approaches: Shared leadership (Gronn, 2006), future focused leadership (Marx, 2006), ethical leadership (Rubenstein, 2003), cultural leadership (Sergiovanni, & Starratt, 1988), service leadership (Ferch, 2005) and spiritual leadership (Fleischman, 1990; Fry, 2003; Maddock, & Fulton, 1998) are some of them.

**Spiritual Leadership**

The origin of spiritual leadership concept is based on the word spirit. According to Anderson (2000), spirit is originated from the Latin word spiritus which means breath. Spirit which is defined as the abstract power keeping people alive and invigorated means a person’s deep connection with self and awareness of realities in human nature (Fairholm, 1997). In religion and philosophy, spirit is delimited as the non-material existence of human beings which keeps its vitality even after death (Baloglu, & Karadag, 2009).

Unlike classic organizational, administrative and leadership theories;
spiritual leadership deals with people’s spiritual aspects at work (Fairholm, 1997). In this leadership theory, it is rather hard to separate leadership from religious faith image and eliminate the conflicts concerning it. Several researchers and writers consider spiritual leadership as a leadership of faith and they direct their studies on this aspect (Barna, 2005; Caldwell, Kallestad, & Sorensen, 2004). However some researchers handle spiritual leadership differently and include in it religious leadership as well and try to explain it this way (Ashmos, & Duchon, 2000; Cavanagh, 1999; Cooper, 2005; Fleming, 2004; Fry, 2003; Giacalone, Jurkiewicz, & Fry, 2005; Klenke, 2003; Matherly, & Fry, 2005; Robertson, 2005; Sendjaya, & Sarros, 2002; Shaw, 2006; Thompson, 2004). Fleming views spiritual leadership as a totally world-based attempt while Thompson (2004) states spiritual leadership as a leadership type which focuses on organizational meaning. Fry (2003) mentions that people have to satisfy some certain needs to survive and he considers spirituality as one of these basic needs. As expressed by Guillory (2002), spiritual leadership means forming a work environment where people can exhibit their talents and functions thoroughly and which is based on trust and humanistic values (Benefiel, 2005; Burkhart, 2008; Ferguson, & Milliman, 2008; Fry, & Cohen, 2009).

Hunt, Sekaran, and Schriesheim (1982) express that rediscovering leadership phenomenon is a necessity for the modern world. Leadership, one way or another, is based on a spiritual aspect for certain (Ashar, & Lane-Maher, 2004; Bennis, 2002; Casey, 2004; Gull, & Doh, 2004; Klein, & Izzo, 1999; Klenke, 2003; McGee-Cooper, & Trammell, 2002; Sheep, 2004; Wheatley, 2002) and spiritual leaders aim to create a prolific work place which includes highly motivated staff. Individuals can, by means of work, find the meaning of life (DeKlerk, 2005) and know themselves better. With such a perspective, work is a medium for the individual to rediscover himself/herself (Hoffman, 2003). Spirituality, on the other hand, impacts work (Perrone, Webb, Wright, Jackson, & Ksiazak, 2006) and includes in itself carrying faith, which is a personal affinity, to work in a manner that shapes it (Ashmos, & Duchon, 2000; Eisner, & Montuori, 2003; Fry, Matherly, Whittington, & Winston, 2007; Klenke, 2003; Komala, & Ganesh, 2007; Milliman, Czaplewski, & Ferguson, 2003; Sanders, Hopkins, & Geroy, 2004).
Organizational Culture

In the administrative science literature, organizational culture, from the last quarter of the 20th century, has become popular for its studies directed on particularly organizational performances, efficiencies, administrative effectiveness and organizational behaviors (Alvesson, 1990; Hofstede, 1998). A group of scientists claim that this popularity stems from organizational culture theory and assert that the culture of organizational life which reflects its subjective aspect is like an answer to the dominance of positivist approach in the American organizational theories (Davey, & Symon, 2001). This has led the researchers who study on organizational culture concept to a research strategy split (Burrell, & Morgan, 1979) and this condition has been frequently discussed among researchers (Firestone, 1987; Louis, 1983; Pang, 1996; Smirich, 1983).

Parallel to these discussions, this study is formed within the framework of organizational culture which is based on the open system theory (Katz, & Kahn, 1978). Within the scope of system theory, systems are categorized under two names on the whole: The systems which interact with their surrounding are termed as open while the ones non-interactive are named as closed (Cole, 1993; Owens, 1981). Researchers who approach culture generally from pragmatic aspect underline topics such as administration of culture, changing of culture and power of culture (Cameron, & Ettington, 1988; Lundberg, 2001; Smart, & Hamm, 1992). As stated by İlhan (2006) in such researches although organizations are set into a wider cultural structure, still socio-cultural qualities develop within the organization.

Up until today, many researchers have put their fingers on the effects and practices of leadership on organizational culture (Bass, 1990; Goffee, & Jones, 1999; Hood, 2003; Kouzes, & Posner, 2002; McKee, 2003; Verschoor, 2006). As stated by Bodinson (2005): organizational culture can only be developed by leadership. Regardless of the growing interest in the spiritual aspect or organizational leadership, in the literature there is not sufficient data explaining the impacts of spiritual leadership on organizational culture (Markow, & Klenke, 2005; Mitroff, & Denton, 1999; Pfeffer, 2003; Wren, 1994). In this study impacts of organizational culture on spiritual leadership have been analyzed within the scope of structural equation modeling and attempted to be explained within the framework of perceived spiritual leadership phenomenon of primary education principals by teachers.
Method

Design
This study explains, by employing structural equation modeling, the theoretical model which asserts that primary education principals’ spiritual leadership behaviors affect the process of organizational culture formation. In the pattern of this work, in order to analyze the extent to which spiritual leadership behaviors, by interacting with each other, affects the process of organizational culture formation; a causal pattern has been used. In several research studies in the literature a close connection has been detected between the leadership behaviors of primary education principals who compose the variables of this particular study and organizational culture (see: Çelikten, 2003; Flores, 2004; Griffith, 2004; Knutson, Miranda, & Washell, 2005; Şahin, 2004; Tsui, Zhang, Wang, Xin, & Wu, 2006; Özdemir, 2006). In this study which is patterned based on the idea that the relationship which is obtained from research results, spiritual leadership behaviors are taken as independent variables whereas organizational culture is accepted as dependent variable (Neuman, 2007).

Population and sampling
Population of this study consists of total 2447 primary education teachers—737 class teachers, 1705 field teachers employed in 32 public primary schools—in 2008-2009 education term within the borders of Istanbul-Ataşehir district (MEB, 2008). In order to detect sampling of study primary education schools in cosmos, 359 primary education teachers, who work in 21 public schools which were detected according to three-layer group sampling method according to socio-economic structure (high-middle-low) of their region, volunteered to participate in the research (McMillan, & Schumacher, 2006).

Instruments
The Spiritual Leadership Scale. In order to find out the perception levels of scale, principals’ performed spiritual leadership behaviors by employees a draft scale, based on Fry Spiritual Leadership Theory (Fry, 2003), has been developed. For the structural validity analysis of scale, it was understood that first of all, with Kaiser Meyer Olkin=.87 and Bart-
lett ($p < .01$) test analysis results of gathered data, factor analysis could be made. At the end of factor analysis obtained by applying varimax linear axis rotation technique (Kline, 1994; Rennie, 1997; Stapleton, 1997; Stevens, 1996), self values of twenty six items of scale were composed of five sub scales bigger than 1 and over the sub scale variables obtained, it was composed of two basic components with positive loads and in congruity with scale theory. Self value total of scale in sub scales is 18.32 and declared variance percentage total is 44.47 and factor loads of sub scale items vary between 0.37 and 0.74. Reliability of scale was analyzed by internal consistency method. Cronbach alpha internal consistency coefficient of scale varies between 0.71 to 0.89.

The Organizational Culture Scale: Draft scale is based on open system theory (Katz, & Kahn, 1978) to detect people’s organizational culture in general and in particular to detect school culture perceptions. For the structural validity analysis of scale, it was understood that first of all, with Kaiser Meyer Olkin=.93 and Bartlett ($p < .01$) test analysis results of gathered data, factor analysis could be made. At the end of factor analysis obtained by applying Quartimax linear axis rotation technique, self values of twenty three items of scale were composed of four sub scales bigger than 1. Self value total of scale in sub scales is 15.35 and declared variance percentage total is 41.21 and factor loads of sub scale items vary between 0.32 and 0.81. Reliability of scale was analyzed by internal consistency method. Cronbach alpha internal consistency coefficient of scale varies between 0.74 to 0.87.

Procedure

The main objective of this study is, by analyzing teachers’ perceptions of primary education principals’ spiritual leadership behaviors and its connection to organizational culture, to test a developed independent theoretical model. In this study structural equation modeling is employed to determine spiritual leadership behaviors and its connection to school culture in terms of acceptable cause–result variables and their indicators. To test structural equation model, to investigate appropriate theoretical models and enable a unification of measurement errors in both observed and latent variables, path analysis was employed in place of multiple regression analysis (Williams, 1989).
Results

In this particular model of study, GFI value was found to be 0.91. AGFI goodness-of-fit value, similar to GFI, was found as 0.88. This indicates that GFI and AGFI goodness-of-fit values for the theoretical model are appropriate for obtained data. On the other hand, RMSEA value was detected as 0.07. This indicates that only a few variances and covariances were not explained by the structured theoretical model. In this study, $\chi^2/df$ ratio was found to be 1.81. The fact that this ratio is smaller than 2 means a good fit between observed and multiplied covariance matrixes (Anderson, & Gerbing, 1984; Cole, 1987; Jöreskog, & Sörbom, 2001; Kline, 2005; Marsh, Balla, & McDonald, 1988; Schumacker, & Lomax, 1996).

In the theoretical model of the study, mutual relationships between variables are statistically meaningful for each variable. However, the highest regression power of the theoretical model within latent variables belongs to Peace Behavior and Organizational Culture variables. Additionally, this highest regression power belongs to Efficiency variable for Performance latent variable; Faith for Peace latent variable; and Administrative variables for Organizational Culture variable.

In structural equation modeling, correlation coefficients indicate variance ratio of exogenous variables within endogenous variables. In line with this, correlation coefficients of the components of theoretical models obtained from this study vary between 0.51 and 0.84. The correlation coefficients of observed variables are generally higher ($r > 0.50$). This condition implies that none of the observed variables in the theoretical model is a latent variable. Moreover, the total of observed variables in the study determined to be having a stability coefficient around 0.88 which means the efficiency to measure theoretical model.

Another component of this study is organizational culture. Multiple correlation coefficients of observed variables were 0.79, 0.51, 0.62 and 0.53 for administrative, social, value and objective, respectively. Amongst these four observed variables, administrative aspect is the most significant and reliable variable determining organizational culture perception. Besides for the theoretical model, stability total coefficient was found to be a reliable level like 0.86.

Despite the fact that the unity of two measurement components’ stability total coefficients were rather high, stability of structural equati-
ons was merely 0.67. This shows that only 67% of organizational culture perception variable was explained with performance and peace connections.

A positive and statistically meaningful relationship was found between organizational culture and performance ($r=0.29$) and peace ($r=0.60$), respectively. Besides as sub-components of spiritual leadership and peace ($r=0.46$) there is a positive and statistically meaningful relationship.

Spiritual leadership behaviors of primary education principals affect organizational culture level positively. In terms of performance component this effect is 0.42 while in peace component it rises to a degree as high as 0.76. Of these two spiritual leadership behavior groups, peace is the most important variable affecting organizational culture level.

**Discussion**

Through the path analysis made on the data obtained from sampling group, it was determined that goodness-of-fit indexes of created model were in sufficient levels. This deduction points out that spiritual leadership and organizational culture model can be structured. In Fry’s (2003) research on the relationship of spiritual leadership with organizational culture and Matherly and Fry (2005) and Wheatley’s (2002) studies, findings assert that spiritual leadership is a significant determiner of organizational culture. The results of the present study are in support of the possibility of obtained model.

In this study, the model between spiritual leadership behaviors and organizational culture is structural equation modeling. The analysis of relationships in structural equation modeling was conducted in two phases: (i) Teachers’ perceptions of primary education principals’ spiritual leadership behaviors, (ii) its effects over organizational culture and spiritual leadership behaviors’ effects on administrative, social, value and objective which are observed variables of organizational culture (Purkey, & Smith, 1985). The findings obtained in this phase of study can be summarized such:

- As peace-oriented behaviors of primary education principals increased, teachers’ perceptions on organizational culture level increase as well and similarly as performance-oriented behaviors increase, teachers’ perceptions on organizational culture also heighten.
- Peace and performance oriented behaviors of primary school prin-
principals enable teachers to perceive positively the administrative, social, value and objective aspects which are variables of organizational culture.

- Moreover, there is a positive relationship between peace and performance variables. In that case, both of these two variables cause even more increase in teachers’ perceptions of an organizational culture.

- Structural equation modeling reveals that organizational culture concept may have multiple variables, this formed structural equation modeling simply explains a variance of 67% of organizational culture variable.

All these findings are parallel to the deduction obtained from the research in literature concerning the relationship between leadership types and organizational culture that transformational (Avolio, & Bass, 2002; Bass, 1985), protective (Trice, & Beyer, 1993), visionary and charismatic (Davis, 1984; Schein, 1985; Trice, & Beyer, 1993) leadership has a vital role in organizational culture. Also, this deduction implies the most significant mechanism that a spiritual leader can use to construct and strengthen organizational culture. This mechanism is also named as sense of belonging. Spiritual leader tries to strengthen the followers’ sense of belonging to an organization. Parallel to this process, by creating faith in followers, s/he offers a peaceful environment as an outcome of both processes. This union stimulates two vital determiners of organizational culture which are administrative and value aspects (Deal, & Peterson, 1998).

To summarize, in this study, organizational culture, according to teachers’ perceptions, is composed of four factors which are administrative, social, value, and objective. The findings prove that peace affects organizational culture strongly; performance variable however impacts school culture in medium level. However, this structural equation modeling explains only 67% total variance of the relationship between spiritual leadership perception and organizational culture. This finding necessitates defining more variables on spiritual leadership and organizational culture perception in the structural equation modeling which will be formed after next research.
References/Kaynakça


