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Structural equation modeling analysis of effects of leadership styles and organizational culture on effectiveness in sport organizations

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This study examines the effects of leadership styles and organizational culture on organizational effectiveness in Iranian sport organizations. 341 sport experts in the Physical Education Organization of the Islamic Republic of Iran and various sport Federations voluntarily filled out the Denison organizational culture survey (DOCS), multifactor leadership and organizational effectiveness questionnaires. Results of structural equation modeling (SEM) showed that transformational leadership has a significant positive influence on the effectiveness and organizational culture. Transactional leadership had a direct significant negative influence on organizational effectiveness and indirectly had a significant positive influence through organizational culture. In conclusion, the results showed that the proposed model has a good fit with this research data.

Key words: Leadership style, organizational culture, effectiveness, sport organizations.

INTRODUCTION

In recent years, effectiveness has become a topic of growing interest in the field of human service organizations (Cho, 2007). Scientists and scholars believe that effectiveness is the key to all organizational analysis and so, many organizations have concentrated on building up the capabilities of its members to perform well in dynamic environments (Lewis et al., 2009).

Scholars of management define effectiveness as the extent to which an organization achieves its goals (Cameron, 1981; Scott, 1977). With respect to sport organizations, Chelladurai and Haggerty (1991) noted that organizational effectiveness refers to how smoothly, efficiently and goal-directed an organization's internal processes are. Scholars believe that various factors affect organizational effectiveness including: organizational culture and leadership style. Organizational culture has been defined as relatively stable beliefs, attitudes, and values that are shared among organizational members (Williams et al., 1993), shared normative beliefs and shared behavioral expectations (Cooke and Szumal, 1993, 2000), or a particular set of values, beliefs, and behaviors that characterizes the way individuals and groups interact in progressing toward a common goal (Eldridge and Crombie, 1974). Schneider notes that, “(organizational) culture establishes the conditions for determining internal effectiveness; it determines whether performance is effective or ineffective and what effective and ineffective mean in the organization” (Kwantes and Boglarsky, 2007). Several research results indicate that organizations whose culture strengthen the staff participation in decision making, establish obvious and logical goals, adapt working methods and design for optimum work, perform at a higher level than organizations which feature less of these factors. Likert (1961), and many scientists, have suggested that the type of positive, employee-focused management practices that are consistent with the values espoused by the group culture are likely to inspire employees to contribute more effort to their work, which should result in higher levels of organizational effectiveness (Gregory et al., 2009).

One of the other factors affecting organizational effectiveness is leadership and its styles. House et al. (1999) noted that leadership is: the ability of an individual to
influence, motivate, and enable others to contribute towards the effectiveness and success of the organization (Donovan, 2002). The issue that has attracted most researchers is what kind of leadership style would be useful in the process of change and improving organizational performance; that is, whether leaders should: interact with those they supervise, consider their needs, and direct them by using reward or punishments or appealing to higher-level needs that might motivate them (Black, 2006; Aarons, 2006; Gardner and Stough, 2002). Effective leaders consistently use distinctive styles and influence their fellow members (Ethem and Nurcan, 2008). The findings show that transformational leadership has a significant direct influence on frustration and optimism, with the negative influence of frustration having a stronger effect on performance than the positive influence of optimism (Kennedy and Anderson, 2002). Success of sport organizations depends on implementation of management and effective leadership styles. In fact, leadership and management style are the factors that facilitate and encourage employees and influence organizational effectiveness directly or indirectly. In the following brief review of related literature, the key variables of this study are discussed.

DIRECT EFFECTS OF LEADERSHIP STYLES ON ORGANIZATIONAL EFFECTIVENESS AND ITS INDICES (COMMITMENT, SATISFACTION AND PERFORMANCE)

Leadership style is considered to be particularly important in achieving organizational goals (McColl-Kennedy and Anderson, 2002). Studies by Burton and Peachey (2009), and Rowold and Rohmann (2009) indicated that transformational leaders in comparison with transactional leader achieve better organizational outcomes (satisfaction, effectiveness and extra effort) and passive-avoidant leadership has significant negative effects on organizational outcomes (Rowold and Rohmann, 2009). The result of Xirasagar et al. (2005) research demonstrated that in combination, transformational, transactional and laissez-faire leadership explain 68% of the variation in rated effectiveness, 66 percent of satisfaction and 71% of subordinates’ extra effort. Transformational and transactional leadership are both positively associated with effectiveness and transformational leadership shows a larger effect size than transactional leadership. Laissez-faire leadership was negatively associated with the effectiveness variables. Ipinmoroti (2005) in his study investigated 169 athletes who participated in the Nigeria Colleges of Education Games in June 2005. The results reveal that transformational leadership behaviour of coaches had a significant impact on athletes’ satisfaction with their performance and therefore athletes who evaluate their coaches as highly transformational were more likely to be satisfied with their performance task. Doherty and Danylchuk (1996) in their study investigated 114 head coaches with the multifactor leadership questionnaire (MLQ) form 5X and results show that coaches' satisfaction, effectiveness, and extra effort were positively associated with transformational leadership (idealized influence, attributed charisma, individualized consideration, intellectual stimulation, inspiration) and transactional leadership (contingent reward). Coaches’ satisfaction and effectiveness were negatively associated with management-by-exception (active). Coaches’ satisfaction, effectiveness, and extra effort were negatively associated with management-by-exception (passive) and passive-avoidant leadership. None of the leadership styles had a significant relationship with organizational commitment. According to the results of hierarchical regression analysis, only transformational leadership had a significant effect on coaches’ satisfaction, effectiveness, and extra effort. The result of Chiun et al. (2009) and Bucuniene and Skudiene’s (2008) research indicated that transformational leadership had a significant positive effect on organizational commitment and transactional leadership has no significant effects on organizational commitment (Chiun et al., 2009). Passive-avoidant leadership had a negative and significant relationship with employees’ affective and normative commitment and doesn’t have any significant correlation with continuance commitment (Bucuniene and Skudiene, 2008). Also, the results of Riaz and Haider’s (2010) research showed that transformational and transactional leadership have significant positive effects on job success. Transformational leadership has a positive significant effect on job satisfaction, but transactional leadership has no significant effect on job satisfaction.

Indirect effects of leadership styles on organizational effectiveness and its indices

Leadership style can affect organizational effectiveness through organizational culture. The results of Xenikou and Simosi’s (2006) research demonstrated that transformational leadership has an indirect positive impact on performance via achievement orientation culture. The study by Hsu (2002) on 822 full-time employees in Taiwan sport/fitness clubs showed that leadership (transactional and transformational) has a positive and stronger significant effect on organizational effectiveness via organizational culture. Also, the results of Agbonna and Harris’ (2000) research showed that leadership style (participative style and supportive leadership) had a positive significant effect on organizational performance indirectly. Instrumental leadership had a negative effect on organizational performance indirectly. The result of Wallace and Weese’s (1995) research showed that the organizations led by high transformational leadership, culture-building activities of managing change, achieving goals, coordinated teamwork, and customer orientation are administered to a greater degree than organizations led by low transformational leaders.
Effects of organizational culture on organizational effectiveness and its indices

Conceptually, the relationship between organizational culture and effectiveness is strong (Kwantes and Boglarsky, 2007), thus studying the relationship between the variables mentioned has been receiving more attention in recent years. The results of Faerman (2009), Denison et al. (2007), Kwantes and Boglarsky (2007), and Hsu’s (2002) research showed that there is a positive and significant relationship between organizational culture and effectiveness and the results of Yilmaz and Ergun’s (2008) research indicated that organizational culture has a positive and significant effect on organizational effectiveness. The involvement trait is the most prominent of the four traits in terms of fostering employee satisfaction and overall performance. The mission trait had a strong significant effect on financial performance and overall performance and no significant effect on employee satisfaction. Consistency and adaptability traits don’t have any significant effect on employee satisfaction and overall performance. Denison and Mishra (1995) investigated 764 organizations and contended that organizational culture is a strong predictor for organizational effectiveness indices such as; quality, job satisfaction and performance. Also the results of Denison, Haaland, and Goelzer’s (2003) research indicated that there is a significant relationship between all twelve organizational culture indices and overall organizational effectiveness in the three regions, North America and Europe, Mid-East, and Africa (EMEA), but there is no significant relationship in the Asia region. Similarly, Denison et al. (2007) in a research aimed at diagnosing organizational culture examined 169 organizations in North America. The results showed that there is a significant correlation between organizational culture and effectiveness. Fey and Denison (2003) indicate that consistency and adaptability were found to be the prime drivers of effectiveness for Russian firms struggling in a transition economy, but for firms in the US the mission trait appears to be the strongest determinant of effectiveness. The results of Coffey’s (2003) research indicated that consistency, adaptability and mission traits (based on organizational culture Denison’s model) had a positive and significant relationship with organizational effectiveness, but there is no significant relationship between the involvement trait and organizational effectiveness. The results of Gregory et al.’s (2009) research showed that organizational culture had a direct positive impact on people’s satisfaction and had an indirect impact on organizational effectiveness via people’s satisfaction.

Effects of leadership styles on organizational culture

Sarros et al. (2008) noted that transformational leadership had a positive and significant effect on organizational culture. The results of Eppard’s (2004) research indicated that there is a positive and significant relationship between leadership styles and organizational culture. Transformational leadership is a predictor of constructive culture and transactional leadership is a predictor of defensive culture.

Considering the literature review and afore mentioned studies, it turns out that some studies consider the effect of leadership style on organizational effectiveness as having a direct effect while others consider it as having an indirect effect via organizational culture and some studies confirm the effect of organizational culture on effectiveness and others reject it. Also, most research in relation to the considered variables are conducted separately but a few studies have been conducted in terms of simultaneous effect of these variables on each other. Thus, regarding the previous literature review, a theoretical model has been specified for research variables and the main purpose of this study has been to test a specified model (effect of leadership styles and organizational culture on organizational effectiveness in sport organizations) with variance-covariance obtained sample data and simultaneous effect of variables in research model is tested accordingly.

METHODS

Since the purpose of this research is investigating the effect of leadership style and organizational culture on organizational effectiveness, the purpose of the research is practically-oriented. The collection of data indicates that it is present-oriented; but in terms of structural equation modeling, it is future-oriented; considering the data collection method it is descriptive and considering correlation it is regression analysis and covariance.

Statistical population

The population of the study consisted of experts of a physical education organization of the Islamic Republic of Iran and all Iran sports federations’.

Participation

The sample of the study was 400 experts (Bachelor degree and above) of physical education organization and all sports federations’ of the Islamic Republic of Iran. Sample size was determined using Krejcie and Morgan’s table and a stratified sampling method has been used to select samples from two populations. Of 411 questionnaires distributed among the participants, 341 questionnaires (82.9 %) were returned.

Measures

Organizational culture

The Denison organization culture survey (DOCS) was used to measure respondents’ perceptions of organizational culture. DOCS included 60 items component form of involvement trait (15 items), consistency (15 items), adaptability (15 items) and mission (15 items) and participants in a five point 1-5 Likert scale (strongly disagree = 1, disagree= 2, Neutral= 3, agree= 4, strongly agree= 5)
Table 1. Descriptive statistics for the constructs used in the study.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transformational leadership</td>
<td>2.71</td>
<td>0.491</td>
<td>(0.92)²</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transactional leadership</td>
<td>2.39</td>
<td>0.511</td>
<td>0.875**</td>
<td>(0.86)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avoidant leadership</td>
<td>1.52</td>
<td>0.654</td>
<td>-0.254**</td>
<td>-0.152**</td>
<td>(0.75)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organizational effectiveness</td>
<td>3.01</td>
<td>0.704</td>
<td>0.637**</td>
<td>0.593**</td>
<td>-0.250**</td>
<td>(0.96)</td>
<td></td>
</tr>
<tr>
<td>Organizational culture</td>
<td>3.12</td>
<td>0.492</td>
<td>0.540**</td>
<td>0.537**</td>
<td>-0.125*</td>
<td>0.732**</td>
<td>(0.96)</td>
</tr>
</tbody>
</table>

² Reliability coefficient alphas in diagonal in parentheses; ** p < 0.01, * p< 0.05.

Leadership style

The multifactor leadership questionnaire (MLQ) form 5X-short was used to measure leadership style profiles in sport managers. MLQ included 36 items and five subscales; idealized attributes (4 items), idealized behaviors (4 items), intellectual stimulation (4 items), inspirational motivation (4 items), individual consideration (4 items) for transformational leadership and three subscales: contingent reward (4 items), management by-exception (active) (4 items), management by-exception (passive) (4 items) for transactional leadership and one subscale; Laissez faire (4 items) for passive/avoidant leadership. Participants responded to a five point 0 to 4 Likert scale (not at all = 0, once in a while = 1, sometimes = 2, fairly often = 3, and frequently, if not always = 4) answered questions. MLQ is probably the most widely used scale to measure leadership, and has produced reliable results across various cultures (Rehman Toor, Ofori, 2009). Avolio et al. (1995, 1999) used confirmatory factor analysis (CFA) on large pool of data (N=1394), in order to provide for construct validity of the MLQ-5X. According to them, the MLQ-5X scales exhibited high internal consistency and factor loading. Tejeda et al. (2001) confirmed the validity of the MLQ-5X and found internal consistency coefficients (Cronbach alpha) of 0.90 for idealized attributes; 0.91 for idealized behaviors; 0.94 for inspirational motivation; 0.91 for intellectual stimulation; 0.93 for individual consideration; 0.88 for contingent reward; 0.79 for management by-exception (active); 0.90 for management by-exception (passive) and 0.88 for Laissez faire.

Organizational effectiveness

The Hsu organizational effectiveness questionnaire (OEQ) was used to measure overall effectiveness and their indices. OEQ included 19 items and four subscales; decision making (5 items), organization (5 items), job satisfaction (6 items) and personnel relationships (3 items). Participants responded to a five point 1 to 5 Likert scale (strongly disagree = 1, disagree = 2, Neutral = 3, agree = 4, strongly agree = 5) answered questions. Organizational effectiveness questionnaire validity was approved by 10 Associate and Assistant Professors level degree in sports management. The reliability of the questionnaire in this study using Cronbach alpha was calculated at 0.96.

Statistical methods

To examine correlations between latent variables and the observed variables a confirmatory factor analysis was used and to examine the structural model (correlation between latent variables) path analysis was used. To analyze data, SPSS (version 16) and LISREL 8.51 software with 95% confidence level was used.

RESULTS

Reliability and validity

The measurement items were evaluated for reliability and validity. Construct reliability was first estimated with the internal consistency method using Cronbach’s alpha. In Table1, the Cronbach’s alpha values of each scale in this study range from 0.75 to 0.96, the suggested cut-off value of 0.70 or higher (Nunnally and Bernstein, 1994).

Based on the measurement model, convergent validity of the constructs was assessed. A construct’s convergent validity is recognized if the items are significantly related to the factor (Nunnally and Bernstein, 1994). Also, a standardized factor loading of 0.50 or higher, ideally 0.70 or higher, provides strong evidence of convergent validity (Hair et al., 2005). In this study, all the items have significant factor loadings, that is, t-values are greater than 1.96 at the significance level of 0.05, and most items have factor loadings greater than 0.70, suggesting adequate convergent validity.

Tests of measurement model

Before testing the structural model, to ensure the accuracy of measurement model, confirmatory factor analysis (CFA) was used. Factor analysis of second-order was performed for exogenous variables (leadership styles) and endogenous variable (organizational culture and organizational effectiveness). The fit indices for measurement models suggested a good fit to the data (all $\chi^2 / df < 3$, all NFI $\geq 0.96$, all NNFI $\geq 0.98$, and all CFI $\geq 0.98$) (Table 2).

Tests of structural model

The structural equation model (SEM) technique was utilized to test the proposed effects between latent
variables. The results of the structural model showed that calculated indices provided good model fit \[ \chi^2 \text{(109, N = 341)} = 190.44; \text{RMSEA} = 0.047; \text{CFI} = 1.00; \text{NNFI} = 1.00; \text{RMR} = 0.036; \chi^2 / \text{df} = 1.75 \]. Standardized path coefficients, can be used as a standardized regression coefficient for examining one latent variable in relation to another. Results from this study indicate that transformational leadership significantly and positively influenced on organizational effectiveness \( (\gamma = 0.71, p < 0.01) \) and organizational culture \( (\gamma = 0.37, p < 0.01) \). Furthermore, transactional leadership significantly and positively influenced on organizational culture \( (\gamma = 0.28, p < 0.01) \) and significantly and negatively influenced on organizational effectiveness \( (\gamma = -0.56, p < 0.01) \). Passive-Avoidant leadership is not a significant influence on organizational culture \( (\gamma = 0.06, p > 0.05) \) and significantly and negatively influenced on organizational effectiveness \( (\gamma = -0.23, p < 0.01) \). Finally, organizational culture significantly and positively influenced organizational effectiveness \( (\beta = 0.64, p < 0.01) \) (Figure 1).  

Table 3 presents the direct, indirect effects and total effects of research model variables. Examination of the path coefficients showed that transformational leadership has a stronger direct impact on organizational effectiveness than indirect \( (0.71 \text{ vs. 0.24}) \). Although transactional leadership has a significant and negative direct effect on organizational effectiveness \( (-0.56) \), it has a significant and positive indirect effect via organizational culture \( (0.18) \). Passive-avoidant leadership has a significant and negative direct effect on organizational effectiveness \( (-0.23) \), but this effect is not significant indirectly \( (0.04) \).

DISCUSSION

The purpose of this research was to study the effect of leadership styles and organizational culture on organizational effectiveness. The results showed that transformational leadership has a strong significant and positive effect on organizational effectiveness. Transformational leaders inspire their employees, engage with them and emphasize on higher levels of success achievement by increasing needs and motivations of their followers in the workplace (Mandell and Pherwani, 2003). Sport transformational leaders communicate with their employees, coaches and athletes and pay attention to individual differences and help their subordinates in fulfilling their potential talents and increasing their responsibilities in the organization (Jandaghi et al., 2009). Also, these leaders strengthen the independence and challenges and motivate them through understanding and extending their self-discovery to do their utmost and in this way sports organizations can increase effectiveness. In sum, the results of this study are consistent with previous research conducted by Burton and Peachey (2009), Rowold and Rohmann (2009), Xirasagar et al. (2005), and Doherty and Danylchuk (1996).

Transformational leadership has an indirect but significant and positive effect on organizational effectiveness through organizational culture. Bass noted that transformational leaders frequently work towards changing the organizational culture in line with their vision. Similarly, Brown (1992) observes that good leaders need to develop the skills that enable them to alter aspects of their culture in order to improve their organizational performance (Ogbonna and Harris, 2000). This study suggests that sport transformational leaders can have a favorable impact on organizational culture by determining short and long term goals, drawing organizational vision, developing organizational learning, increasing coordination and integration in different parts of the organization, increasing empowerment, developing team-oriented capabilities, introducing new ideas into the organization and encouraging creativity and organizational innovation, changing degree of formalization and organizational centralization, and in this way can increase athlete and employee performance and improve effectiveness in sports organizations. The results of this study about the effect of transformational leadership on organizational effectiveness through organizational culture are consistent with the previous research conducted by Xenikou and Simosi (2006), Hsu (2002) and Ogbonna and Harris (2000) and with regard to the effect of transformational leadership on organizational culture the results are consistent with the previous research conducted by Sarros, Cooper and Santora (2008) and Eppard (2004).

The results showed that transactional leadership has a significant and negative influence on organizational effectiveness directly and has significant and positive effects on organizational effectiveness through organizational culture indirectly. In explaining the reason for negative impact, it can be said that according to Burns, transactional leadership is used for static and non-changing situations. Since sports organizations operate in a dynamic environment, it seems probable that in this environment transactional leadership does not have a positive effect on organizational effectiveness and using transformational leadership for this organization can be...
more effective. Burns (1978) stated that transactional leaders focus on the current needs of subordinates (Gardner and Stough, 2002) and include some "exchanges" between the leader and follower, in which followers are rewarded for meeting specific goals or performance criteria (Aarons, 2006; Schriesheim et al., 2006). In this leadership style, leaders operate within the existing environment and prefer efficiency and predictability to creativity and change (Block, 2003). So, effectiveness is low and can be inverted. In explaining the reasons for positive effect of transactional leadership on organizational effectiveness through organizational culture, it can be stated that within the organization, transactional leaders emphasize work standards, assignments, task oriented goals, implement rules and regulations, so, emphasis on these factors directs organizational culture to organizational consistency and mission achievement (according to the model of Denison). According to Fey and Denison (2003), Denison et al. (2007), Mian and Jun (2008) and Yilmaz and Ergun (2008) it turns out that focusing organizational culture on consistency and a mission has a positive and significant impact on organizational effectiveness, and so transactional leadership has a positive impact on effectiveness via organizational culture. The results of this study about indirect and positive effect of transactional leadership on organizational effectiveness through organizational culture are consistent with the previous research conducted by Hsu (2002).

The results showed that passive-avoidant leadership has a direct significant and negative influenced on organizational effectiveness and indirectly no significant effects on organizational effectiveness. The Lassez faire style means that the leader is the most passive leadership in the spectrum of leadership. In this type of leadership, the leader shows a state of non transactional and avoids decision making and assign responsibilities (Burke and Collins, 2001). There is no reward, negotiation and the leader doesn't try to control subordinates and so employees often lack motivation (Bass, 1997; Bass and Avolio, 1993). Also, their followers must identify organizational problems and resolve them (Fisher, 2003). Bass (1990) noted that Lassez faire leadership has negative correlations with other active styles of leadership and negative effects on subordinate’s behaviour and performance. Overall, passive-avoidant leadership is considered as an ineffective leadership style (Antonakis et al., 2003; Hartog et al., 1997). The results of this study are consistent with
the previous research conducted by Xirasagar et al. (2005) and Doherty and Danylchuk (1996).

The results showed that organizational culture has a significant and positive effect on organizational effectiveness. Schneider pointed out that organizational culture establishes the conditions for determining internal effectiveness and it determine whether performance is effective or ineffective (Kwantes and Boglarsky, 2007). Siehl and Martin (1990) suggest that culture influences employee attitudes and that those attitudes, in turn, impact organizational effectiveness (Gregory et al., 2009). Schein noted that organizational culture influences the behavior of organizational members and so individuals behave in ways that are consistent with their values; therefore, the culture of an organization can create behavioral expectations in which the employees behave directly in ways that are consistent with their culture. This relationship between culture and behavior is the theoretical basis for the assertion that culture influences effectiveness (Gregory et al., 2009). Overall, we conclude that organizational culture acts as a system of social control and can influence employees’ attitudes and behaviour through the values and beliefs operating in a company (MacIntosh and Doherty, 2010). Developing positive employee attitudes requires a cultural orientation that values empowerment, team orientation, and capability development (Yilmaz and Ergun, 2008). Likert suggests that employees who are satisfied and happy attempt to perform at their potential, exhibit positive attitudes, engage in collaborative effort (Gregory et al., 2009) and this collaborative effort can lead to increases in organizational effectiveness (Ostroff, 1992). The results of this study are consistent with the previous research conducted by Faerman (2009), Yilmaz and Ergun (2008), Denison et al. (2007), Kwantes and Boglarsky (2007), Denison et al. (2003), Fey and Denison (2003), Denison and Mishra (1995), and Hsu (2002).

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