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Mediating Effect of Organizational Climate between Transformational Leadership and Innovative Work Behaviour

Rabia Imran
Arid Agriculture University

M. Anis-ul-Haque
Quaid-i-Azam University

The research conceptualized organizational climate as a mediator between transformational leadership and innovative work behavior. The research was carried out on a purposively selected sample of 320 managers from Fast Moving Consumer Goods organizations from all over Pakistan. Multifactor Leadership Questionnaire (Bass & Avolio, 1995), Innovative Work Behaviour Questionnaire (Zaman, 2006), and Open System Model and Rational Goal Model subscales of Organization Climate Measure (Patterson et al., 2005) were used to assess the constructs of the present study. Multiple/hierarchical regression analyses were used to test the hypothesized relationship. Results revealed partial mediating role of open system model and fully mediating role of rational goal model of organizational climate in relationship between transformational leadership and innovative work behavior. Implications of these findings are discussed and suggestions have been made for future research.

Keywords: organizational climate, open system model, rational goal model, transformational leadership, innovative work behavior

Business scenarios developed over the last two decades have increased challenges for the organizations. The organizations now face the threats of global competition, technological changes, and increasing customer expectations. This situation has

Rabia Imran, University Institute of Management Sciences, PMAS Arid Agriculture University, Rawalpindi, Pakistan.

M. Anis-ul-Haque, National Institute of Psychology, Quaid-i-Azam University, Islamabad, Pakistan.

Correspondence concerning this article should be addressed to Rabia Imran, University Institute of Management Sciences, PMAS Arid Agriculture University, Shamsabad, Murree Road, Rawalpindi 46300, Pakistan. E-mail: rabiaimran@yahoo.com

increased the importance of promoting innovative workplaces for the long-term survival of the organizations. Innovation demands personal involvement of the employees, as they have to use their full potential and perform beyond expectation (Ramamurthy, Flood, Slattery, & Sardessai, 2005). The organizations willing to maintain their competitive edge foster the innovative work behavior of their employees.

In the present scenario, innovation is not only confined to specialists, scientists, and other research and development professionals but organizations for long-term success, must encourage and develop the innovative potential of all of their employees. With the work being more knowledge based, the employees are considered to be an important source and are encouraged to exhibit innovative work behaviors for increased business performance and organizational success (Axtell et al., 2000). Innovative work behavior is described as the intentional creation, introduction, and application of new ideas within a work role, group or organization, in order to benefit performance (Janssen, 2000). It is not only the development of new and creative ideas but it also encompasses their implementation (Dorenbosch, Engen, & Verhagen, 2005; Janssen, 2000; Janssen, Shooebeek, & Van Looy, 1997).

Due to increased competition it is becoming important for the organizations to transform and go beyond their traditional management practices. Leaders also feel pressurized to find high performance and transformational characteristics in them. When compared to transactional leadership, innovation is encouraged with the help of transformational leadership (Howell & Avolio, 1993). Transformational leaders are future oriented, concerned about planning, open-minded, and energetic. The leaders with this style become role models for their subordinates by gaining their trust and confidence. They seek new and unconventional ways of working, build employees morale, and commitment. Such leaders encourage subordinates to think beyond themselves and become high performers (Bass, 1985). The leaders with transformational style encourage employees to think differently, look for new prospects, and find new solutions to the problems. Higher order needs are also addressed and creativity is stimulated by using intrinsic motivation. Followers are motivated to perform beyond expectation, to adopt innovative approaches in their work (Mumford, Scott, Gaddis, & Strange, 2002) and to analyze problems in innovative ways.

Past research in the field of innovation and leadership are relatively separate areas, not adequately benefited by each other.

The existing literature on innovative work behavior focused on its determinants and concluded that such behavior is determined by interaction of individuals with other people (Anderson, De Dreu, & Nijstad, 2004). Leadership, especially transformational leadership was found to be an important factor in this regard (Gumusluoglu & Ilsev, 2009; Reuvers, Engen, Vinkenburg, & Evered, 2008).

The attempt made to examine the relationship of transformational leadership with innovative behavior showed inconsistent findings. A research conducted by Basu and Green (1997) on employees and leaders of a manufacturing plant found a negative relationship between transformational leadership and employee's innovative behavior. Krause (2004) found transformational leadership style unrelated to innovative behavior whereas, some studies show positive relationship between innovative behavior and transformational leadership (e.g., Boerner, Eisenbeiss, & Griesser, 2007; Jung, Chow, & Wu, 2003; Lee & Jung, 2006; Reuvers et al., 2008).

The effect of organizational climate on innovation and employees' innovation is empirically examined in past researches (Montes, Moreno, & Fernandez, 2004; Suliman, 2001). The majority of empirical work focused on climate's effect on organization or team level innovations (Amabile, Conti, Coon, Lazenby, & Herron, 1996; Burningham & West, 1995; Nijhof, Krabbendam, & Looise, 2002; West & Anderson, 1996). The relationship between organizational climate and innovative work behavior was conceptualized by Solomon, Winslow, and Tarabishy (2004). Empirical studies that explored the relationship of climate with innovation at individual level exhibited mixed results. The research by Bunce and West (1996) found no relationship between organizational climate and innovation. Similarly, De-Jong and Den-Hartog (2005) found non-significant relationship between the two constructs. In contrast, Axtell et al. (2000) and Axtell, Holman, and Wall (2006) found positive correlation between organizational climate and innovation.

Recent development in the field of organizational climate is the emergence of the Competing Values Model that taps the core organization values and symbolizes organizational climate (Haakonsson, Burton, Obel, & Lauridsen, 2008; Patterson et al., 2005). This model has four quadrants: Human Relations, Internal Process, Open Systems, and Rational Goal. Patterson et al. (2005) suggested testing this model to explore climate as a predictor of organizational outcomes, that is, to explore the

relationship between specific climate dimensions in or across quadrants and a wide variety of outcomes. Haakonsson et al. (2008) used this model to establish the relationship between organizational climate and leadership styles and their effect on organizational performance by providing deeper insight of the misfits between organizational climate and strategy and their effects on performance. Therefore, there is a lack of empirical evidences concerning the relationship between organizational climate and innovative work behavior in the frame of any theoretically sound model and a valid measure. So there exists a need to study organizational climate in the frame of a refined model and examining its relationship with the innovative work behavior. The current research fills this gap and addresses this issue by examining the open system and rational goal model of organizational climate with innovative work behavior, as suggested by Patterson et al. (2005). The present research hypothesizes the relationship of open system quadrant and rational goal quadrant (Competing Values Model) with innovative work behavior.

The role of leadership in formulation and modification of the climate is considered vital. Climate is the shared perception of the policies and procedures of the organization and these policies and procedures are formulated and implemented by the organizational leaders (Wilson-Evered, Härtel, & Neale, 2001). Organization creates its own climate with the help of leader's behavior (Schien, 1990). Leaders influence the climate through their visible actions over time that subsequently becomes employees' perceptions. Employees would be encouraged to innovate only when they perceive that leader demands certain organizational practices that encourage innovation. Previous researches establish the role of leadership style in the climate formation (Mumford et al., 2002). West (1990) found an explicit relationship between climate and leadership styles. The relationship between transformational leadership and organizational climate has also been explored by empirical studies (e.g., Haakonsson et al., 2008; Jung et al., 2003; Wilson-Evered et al., 2001) finding significant and positive association between them.

The relationship between transformational leadership and innovative work behavior needs to be further examined in its causal direction, that is, how transformational leadership may shape innovative work behavior and lead employees to become more innovative (Reuvers et al., 2008). The relationship also needs to be explored in a broader perspective as it does not exist

in isolation. Various contextual factors are very important and affect the way transformational leader leads employees to be more innovative (Reuvers et al., 2008). The climate of an organization, as one of the most important contextual factor, is very significant for the organization as it influences the employee's innovative work behavior.

Earlier research evidence treating organizational climate as an important contextual variable between transformational leadership and innovative wok behavior are limited in number, for instance, Ekvall and Ryhammar (1998) found social climate mediating the relationship between leadership style and organizational outcomes. Mumford et al. (2002) suggest that transformational leaders may influence organizational climate, mediating the relationship between transformational leadership and innovative work behavior. A study conducted by Jung et al. (2003) concluded that empowerment and support for innovation (as organizational climate dimensions) mediate the relationship between transformational leadership and organizational innovation. De Jong (2006) found that contextual variables like innovative climate moderate the relationship between leader's behavior and innovative work behavior. However, this area is relatively unexplored and needs attention. The current research fills this gap by examining the mediating role played by organizational climate in the relationship between transformational leadership and innovative work behavior.

Previous researches relating to transformational leadership and innovation were dominantly focused at organizational level (Gumusluoglu & Ilsev, 2009; Jung et al., 2003) and were conducted in a western context (Neal, Griffen, & Hartt, 2000; Sellgren, Ekvall, & Thomas, 2008; Solomon et al., 2004). There are very few empirical studies on individual level and yet in a western context supporting the relationship between transformational leadership and innovative work behavior (Reuvers et al., 2008; Wilson-Evered et al., 2001).

Therefore, the present research addresses this limitation by investigating the extent to which organizational climate affect innovative work behavior in a non-western and collectivist society, like Pakistan. It is evident from the past researches that certain variables like education level, organizational tenure, and employee's age have potential influence on employee's innovative behavior programs (Jung et al., 2003; Mumford et al., 2002).

Accordingly, the present study examines the role of transformational leadership as a variable that is predicted to have an effect on organizational climate that subsequently effect innovative work behavior among the subordinates. Based on the review of earlier research, the following hypotheses were formulated.

1. Open system perceptions of organizational climate would have positive mediating effect in the relationship between transformational leadership and innovative work behavior.
2. Rational goal perceptions of organizational climate would have positive mediating effect in the relationship between transformational leadership and innovative work behavior.

Method

Sample

Purposive sample of 320 managers from Fast Moving Consumer Goods (FMCGs) organizations participated in the research. The sample constituted managers working in five different functional areas; marketing/sales, finance/accounts, personnel, general management, and production. Descriptive characteristics of the sample are presented in Table 1.

Table 1
Demographic Characteristics of the Sample (N = 320)

Categories		*n*	%
Gender	Men	232	72.5
	Women	88	27.5
Age (Years)	Between 20 and 30	174	54.4
	Between 31 and 40	128	40
	Between 41 and 50	18	5.6
Education	Bachelors	82	26.6
	Masters	238	74.4
Experience	0-5 yrs	138	43.1
	6-10 yrs	106	33.1
	11-15 yrs	42	13.1
	16-20 yrs	26	8.1
	20 & above	8	2.6

Cont…

Categories		*n*	%
Functional Level	Marketing/Sales	120	37.5
	Finance/Accounting	57	17.8
	Personnel	21	6.5
	General Management	48	15
	Production	28	8.8
	Others	46	14.4
Organization Size	Less than 100	8	2.5
	101-500	27	8.5
	501-1000	19	5.9
	1001-5000	259	80.9
	5001-10000	7	2.2

Instruments

Innovative Work Behavior Questionnaire. Innovative work behavior was measured by a unidimensional Innovative Work Behavior Questionnaire (Zaman, 2006). The scale consisted of 22 items rated on 5-point Likert-type scale (1= *strongly disagree* to 5 = *strongly agree*) with possible score range of 22-110. The alpha reliability coefficient of the test scores on Innovative Work Behavior Questionnaire was found to be .90 for the current sample.

Organizational Climate Measure. Organizational climate was measured by Organization Climate Measure (OCM; Patterson et al., 2005). The scale comprised four subscales. Keeping in view the objectives of the research, only two subscales (a) Open System Model (13 items) and (b) Rational Goal Model (20 items) were used. Items were rated on 5-point Likert-type scale (1= *strongly disagree* to 5 = *strongly agree*).The alpha coefficients of the test score for the present sample were .86 and .87 for Open System Model and Rational Goal Model subscales, respectively.

Multifactor Leadership Questionnaire. Transformational leadership was measured using a 20-item subscale from the Multifactor Leadership Questionnaire (MLQ; Bass & Avolio, 1995). The MLQ has been extensively used and is considered a well-validated measure of transformational leadership. All items were rated on a 5-point scale ranging from *strongly disagree* (1) to *strongly agree* (5). Cronbach's alpha coefficient of the scores for the present sample was established as .92.

Procedure

The respondents of the concerned organizations were approached through the administration of the organizations. In addition, necessary instructions and purpose of the research was explained on the first page of the questionnaire. The second page included biographical information. Participants were assured that the provided information will be used only for research purposes. All respondents were guaranteed confidentiality and anonymity. The consent of the employees as well as their respective supervisors was taken before the administration of questionnaires. A total of 500 questionnaires were given and 400 were collected back. Out of these returned questionnaires, 320 were completely filled in all respect.

Results

Descriptive statistics including means, standard deviation, and reliability coefficients of all the variables are provided in Table 2.

Table 2

Descriptive Statistics and Correlation Matrix of the Test Scores on all Variables (N = 320)

Variables	No. of items	*M*	*SD*	I	II	III	IV
I. Innovative Work Behavior	22 (.90)	79.17	12.58	-			
II. Transformational Leadership	20 (.92)	60.57	12.09	.32*	-		
III. Open System Model	13 (.86)	44.82	8.86	.63*	.31*	-	
IV. Rational Goal Model	20 (.87)	66.49	12.09	.67*	.43*	.67*	-

* $p < .01$

Note. Parenthesis shows alpha reliability values of the test scores.

Table 2 shows means, standard deviations, and inter-scale correlation of the test scores of all the variables in the research. The mean ranges from minimum value of 44.82 (Open System Model) to a maximum value of 79.17 (Innovative Work Behavior). The inter-scale correlation matrix shows significant

positive correlation among all the variables of the research. The reliability statistics of the instrument scores used in the present study indicate that they are highly reliable, with alpha values ranging from .86 to .92.

Multiple regression analysis for control variables, i.e., organizational experience, age, and education was also conducted. The results reveal organizational experience, age, and education do not have any significant affect on the relationship between transformational leadership and innovative work behavior.

Consistent with the recommendations of Baron and Kenny (1986), regression analyses were conducted to examine the hypothesized relationships among the variables. For a variable to function as a mediator Baron and Kenny (1986) suggested following conditions: (a) independent variable must be related to dependent variable, (b) independent variable must be related to the mediator, (c) mediator must be related to the dependent variable, and (d) when independent variable and the mediator are included, the direct relationship between independent variable and the dependent variable should become significantly smaller (partial mediation) or non-significant (full mediation).

Regression analysis was carried out to test the mediation effect of open system model and rational goal model on the relationship between transformational leadership and innovative work behavior (see Tables 3 and 4).

Table 3

Regression Equation Coefficients for Transformational Leadership and Open System Model with Innovative Work Behavior (N = 320)

Variables	R^2	*F*	*B*	*SE*	*β*	*t*
Step 1						
Constant			61.61	3.01	-	20.49*
Transformational Leadership	.10	35.90	.62	.10	.32	6.0*
Step 2						
Constant			34.63	3.23	-	10.72*
Transformational Leadership	.41	108.93	.27	.09	.13	2.98*
Open System Model			.83	.07	.58	12.79*

* $p < .01$

Table 3 showed regression analysis of transformational leadership as a predictor of innovative work behavior. In step 1 transformational leadership was entered into regression equation predicting innovative work behavior. In the second step open system model was entered. The value of R^2 change = .31, with $F(1, 317) = 163.61$, $p < .001$ explains variance of 31% by additional effect in innovative work behavior. The regression weights substantially reduced (.32 to .13) but were significant. If the regression weight is reduced, but it is still significant, it provides evidence of partial mediation (Baron & Kenny, 1986). It means that independent variable has both direct effects on dependent variable and indirect effects through mediator.

To test the mediation effect of rational goal model on the relationship between transformational leadership and innovative work behavior, transformational leadership was entered into regression equation predicting innovative work behavior in step 1 and in the second step rational goal model was entered (see Table 4).

Table 4

Regression Equation Coefficients for Transformational Leadership and Rational Goal Model with Innovative Work Behavior (N = 320)

Variables	R^2	F	B	SE	β	t
Step 1						
Constant			61.65	3.01	-	20.49*
Transformational Leadership	.10	35.89	.62	.10	.32	6.0*
Step 2						
Constant			32.05	3.17	-	10.12*
Transformational Leadership	.45	127.60	.08	.09	.04	.84
Rational Goal Model			.68	.05	.65	14.04*

*$p < .001$

Table 4 indicated that the value of R^2 change = .35, with $F(1, 317) = 97.13$, $p < .001$ explains variance of 35% by additional effect in innovative work behavior. The regression

weights reduced (.32 to .04) and turned insignificant in step 2. This shows full mediation, as according to Baron and Kenny (1986), if the regression weight is reduced to non-significance it is a sign of full mediation. It means that transformational leadership has indirect effect on the innovative work behavior through organizational climate.

Discussion

Over the years, a number of research findings have reported the relationship between leader behaviors and creativity in organizations. During the past decade the transformational leadership has gained wide popularity among leadership researchers and several empirical and theoretical studies have found that transformational leaders realign their follower's values and norms, promote both personnel and organizational changes, and help followers to exceed their initial performance expectation (e.g., Jung & Avolio, 2000). However, little empirical work has investigated the existence and nature of this link (Mumford et al., 2002).

This research was designed to examine the mediating role of organizational climate (Open System and Rational Goal) on relationship between transformational leadership and innovative work behavior. Findings based on 320 managers from 16 Pakistani Fast Moving Consumer Goods companies provide support to our proposition that transformational leadership enhances innovative work behavior indirectly by creating an organizational climate in which employees are encouraged to tryout innovative ideas and approaches. The results confirmed that transformational leadership facilitates the open system model of organizational climate characterized by flexibility and external focus that in turn positively affect the innovative work behavior.

The results also show that rational goal model characterized by control and external focus mediates between transformational leadership and innovative work behavior, as leadership style would matter a lot if employees' perceive unfavorable climate for innovative work behavior. We found that rational goal model fully mediated the transformational leadership and innovative work behavior as compared to open system model that partially mediated this relationship. The open system model focuses on flexibility and external focus whereas rational goal model focuses on control and external focus. As our sample had come from

Pakistan, where cultural values are relatively high in power distance (Hofstede, 1997), in such societies and culture, employees tend to prefer managers take more control of the work processes and to lead by example (Chow, Shields, & Wu, 1999). Employees in such culture may feel confused when left alone to figure out what they need to do and how to accomplish their goal. It seems that it might be one of the possible reasons for the greater control and externally focused organizational climate (Rational Goal Model) that fully mediates between the transformational leadership and innovative work behavior.

The innovative approaches and behavior to work, typically requires making risky decisions, and if not accompanied by guidance and some structure could not be considered as a conducive and appropriate climate. Tayyab (2009) also found significant positive relationship between formalization and knowledge creation in a study of 813 managers from 50 corporate organizations of Pakistan. The present research not only validates the applicability of competing values model in current context but also found as mediating between transformational leadership perception and innovative work behavior.

The hypothesized mediating role of organizational climate was supported. A research conducted by Ekvall and Ryhammar (1998) found climate as a lever of leadership styles. They concluded that employee centered leadership style affects creativity outcomes within the organization but only through influencing climate. Jung et al. (2003) reported that along with other factors organization's climate for innovation played mediating role between transformational leadership and organizational innovation. The results of the current research are in line with the result of Jung et al., showing that organizational climate mediates between the relationship of transformational leadership and innovative work behavior. The present research finds organizational climate, specifically the rational goal model of organizational climate as one of the important factors strengthening the relationship between transformational leadership and innovative work behavior.

Limitations and Recommendations

Future research could fruitfully explore whether our findings on the link between transformational leadership and innovative work behavior would differ across context or sample. Although we have found encouraging results, it is important to recognize

that the current findings also have limitations. First, the entire sample had come from fast moving consumer goods organizations. Although this sample helped to control for industry effects, it also precluded different factors and relationships that may differ across organizations. Secondly, as with all cross-sectional survey data, conclusions about causality must be tempered. The future research could benefit the area with the use of longitudinal data to further explicate such causal relations. A third potential limitation relates specifically to the use of self-report data, commonly identified as a potential source of common method bias. However, researchers have shown that common method bias is rarely strong enough to invalidate research findings (e.g., Kark, Shamir, & Chen, 2003). Fourthly, the analyses were based on the unidiemensional measures of innovative work behavior and transformational leadership. It is recommended that future research may replicate this research considering all facets of these two variables.

Finally, this research only examined the affect of two quadrants of competing values model i.e., open system model and rational goal model and their association with innovative work behavior and transformational leadership. It is suggested that the other two quadrants; human relations and internal process of competing values model that are led by other leadership styles may also be empirically tested.

Implications

The research has both theoretical and practical implications. From theoretical perspective, present research makes a significant contribution to the existing body of knowledge in the field of innovative work behavior as little attention has been made to the analysis of the influence of leadership in fostering the organizational climate that subsequently affect the innovative work behavior. The competing values model is for the first time being empirically tested with innovative work behavior and finally, the research promotes a theoretical model which integrates different aspects of organizational climate, transformational leadership and innovative work behavior. The research suggests that the managers should become aware of the role of their leadership style in creating a climate that is conducive for innovative work behavior among the employees. The research provides guidelines useful for managers in enhancing employee's innovative behaviors. Organizations can

train leaders to create conducive organizational climate that specifically emphasized external focused as well as more controlled rational goal model of organizational climate to ensure innovative behavior.

The management may focus on transformational leadership as a fundamental aspect of supervisory practices due to its impact on perceptions of organizational climate and innovative work behavior. Findings of the research also serve as a first step in exploring innovative behavior in Pakistani business organizations. The findings of this research provide an initial understanding and can pave the way for further investigation in this area. Overall, the current research provides support for organizational climate based mediating model of innovative work behavior. The results showed that open system model of organizational climate partially mediates, whereas rational goal model fully mediates the relationship between transformational leadership and innovative work behavior.

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