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Transformational Leadership Style and Employee Creativity

A Case Study in Yazd Medical University

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The present study was conducted to explore the relationship between transformational leadership style and employee creativity in Shahid Sadoughi University of Medical Sciences in 2014. This was a descriptive cross-sectional study with a sample of 365 workers from Shahid Sadoughi University of Medical Sciences conducted in 2014. Three questionnaires (including transformational leadership style, creative atmosphere, and employee creativity) were used to collect data. Correlation coefficient tests, along with coefficient of determination, scatter diagrams, and regression analysis, were applied to respond the research questions. Findings revealed a significant correlation between transformational leadership style and its components with creative atmosphere and also between creative atmosphere and its components with employee creativity. A direct statistically significant relation between transformational leadership style and its components with employee creativity was also confirmed ($P < .05$). This study highlights the critical role of transformational leadership in employee creativity and recommends managers to regularly allocate their time in implementation and expansion of such a leadership style to create a creative atmosphere in accordance with organization's goals and subsequently increase personnel creativity. Key words: *creative atmosphere, employee creativity, transformational leadership style*

TODAY, GIVEN THE intensity and complexity of competition, innovation is considered to be one of the main advantages for organizational success and survival. Almost all types of organizations need to create and develop innovative ideas for survival. In the current world, an economic system has evolved dramatically, and those companies unable to adapt themselves to a changing environment may be doomed to extinction.¹

Organizations should immediately react to environmental threats and take advantage of available opportunities through the adoption of a flexible structure that requires fundamental changes in existing organizations.² The only logical way to reach appropriate solutions in the face of such change is the use of employee creativity. Employee creativity helps organizations survive through empowering personnel to present creative ideas and apply them in the creation of the organization's goods or organizational procedures.³ Creativity is described as “an attempt to make a purposeful change in social or economic power of an organization, the use of mental ability to create a new idea or concept, also an ability to create a new idea or thought in management such as developing a new product.”⁴

One of the important ways of increasing innovation is to create a stimulating atmosphere for creativity. Managers must always be ready to welcome new ideas and actively seek creative proposals.^{5,6} A creative atmosphere in a workplace is connected with an appropriate working culture.⁷ Lauer⁸ regarded such an atmosphere as a variable that can be evaluated and has

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282

significant impact on researches focusing on creativity. According to Treffinger et al,⁹ creative atmosphere refers to creative problem solving that helps individuals increase their ability to achieve organizational objectives and take advantage of new opportunities. On the other hand, the internal environment should be such that employees always be kept aware of the causes and processes of changes occurring in the system. In such situations, the role of transformational leadership would be much more important.² Bass and Avolio¹⁰ have defined such a leadership style as one in which leaders motivate their subordinates to look at their work from a new prospective and seek to develop higher levels of ability and potentiality among personnel. In addition, transformational leadership style stimulates colleagues and subordinates to work beyond their own interests and consider the group's benefits.¹¹ Similar studies revealed a significant relation between transformational leadership style and subordinates' creativity, team success, and organizational learning.¹²⁻¹⁶ Transformational leadership was confirmed to have positive and effective influence on motivation, organizational commitment, and productivity.^{17,18} Four dimensions were considered for such a leadership style, including charisma (idealized influence), inspirational motivation, intellectual stimulation, and individualized consideration. In relation to charismatic influence, creative leaders provide vision and sense of commitment, respect, and self-confidence, as well as positive thinking among subordinates. Such leaders are more flexible, encourage higher standards, and determine challenging objectives for employees. Regarding inspirational motivation, a transformational leadership style acts as a model for subordinates and facilitates emotional issues to enhance awareness and understanding of organizational objectives among employees. Such leaders encourage followers to challenge traditional methods and processes. Intellectual stimulation deals with conceptualization, understanding and analysis of problems, and determination of relative solutions. In such a leadership style, employees are supported to identify their challenges and analyze the root causes of dilemmas and also to search for creative methods for creation and development of their abilities.¹⁹ Individualized

consideration includes leaders' behavior, which promotes employee satisfaction through guidance, support, and special attention to their needs.¹⁰ Intrinsic motivation felt by organizational staff is an important source of creativity. Transformational leadership behaviors bear a close relationship to creativity determinants in the workplace. Some of these behaviors include vision, innovation support, autonomy, encouragement, recognition, and challenge.²⁰ Several studies have concluded that transformational leadership is mostly applicable in changing situations as it strengthens the culture of innovation in organizations.²¹

Organizations that emphasize a creative atmosphere can strengthen certain skills such as the development of new ideas, flexibility, and resistance to failure. On the other hand, a structural aspect of organization, human resource management, organizational culture, atmosphere, and strategy finds a supportive mechanism for innovation through creativity. We conducted the current study to highlight the importance of transformational leadership as an important variable and a key resource supporting competitive advantage, providing desirable outcomes such as effectiveness, efficiency, and organizational success. According to theoretical and practical significance of creativity and role of transformational leadership, this study was conducted to assess the relationship between transformational leadership style and employee creativity in Shahid Sadoughi University of Medical Sciences in 2014.

METHODS

This was a descriptive cross-sectional study conducted among employees working in Shahid Sadoughi University of Medical Sciences in 2014. Considering the fact that the study population consisted of staff working in different health centers affiliated with the medical university, samples were selected by stratified random sampling method. Sample was also divided between centers varying in number of employees where a proportional allocation methodology was used. In this method, sample size was calculated to be 365 subjects through Cochran formula, which was allocated based on each category size.

In order to gather data and measure research variables, 3 separate questionnaires were used. The first questionnaire was related to transformational leadership style with 39 questions assessing 4 dimensions of idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. The second questionnaire, which was developed by Ekvall et al,²² consisted of 40 questions to evaluate creative atmosphere of a workplace through analysis of 9 factors of challenge or involvement, freedom, idea support, playfulness or humor, constructive conflicts, risk taking, trust or openness, debate, and idea time. Finally, the third questionnaire, consisting of 21 questions, was related to employee creativity, measuring 3 dimensions: expertise, creative thinking, and motivation. Questions about demographic variables (including sex, education, age, work experience, and marital status) were also asked. Content and face validity of the questionnaires were checked in a panel of experts. The questionnaires' reliability was approved in similar studies conducted in Iran ($\alpha > .92$). Coefficient tests, along with coefficient of determination, scatter diagrams, and regression analysis, were applied to respond research questions.

RESULTS

The majority of the study sample (54.8%) evaluated the status of transformational leadership style at a moderate level in the organization, whereas the lowest number (11.2%) evaluated

Table 1. The Relationship Between Transformational Leadership Style and Creative Atmosphere

Variable	R	P	Coefficient of Determination
Creative atmosphere	0.664	.000	0.441

it at a low level. Furthermore, among different dimensions of transformational leadership style, the highest and lowest mean scores relatively belonged to idealize influence and intellectual stimulation. Of the study participants, 62.5% evaluated the organizational climate at an average level in terms of creativity. Also, among its 9 factors, the highest and lowest mean scores belonged to constructive conflicts (3.26) and debate (2.92). Finally, the majority of participants (54.8%) evaluated staff creativity score at a high level, and 42.5% at a moderate level.

Results obtained from Pearson correlation coefficient revealed that there was no statistical relation between transformational leadership style and creative atmosphere ($r = 0.664, P > .05$). Positive correlation coefficient and slope of regression line in Figure 1 show the direct relation between these variables.

The coefficient of determination (R^2) between 2 variables of transformational leadership style and creative atmosphere was 0.441, which indicated that 44.1% of change in creative atmosphere score was justified by transformational leadership style (Table 1).

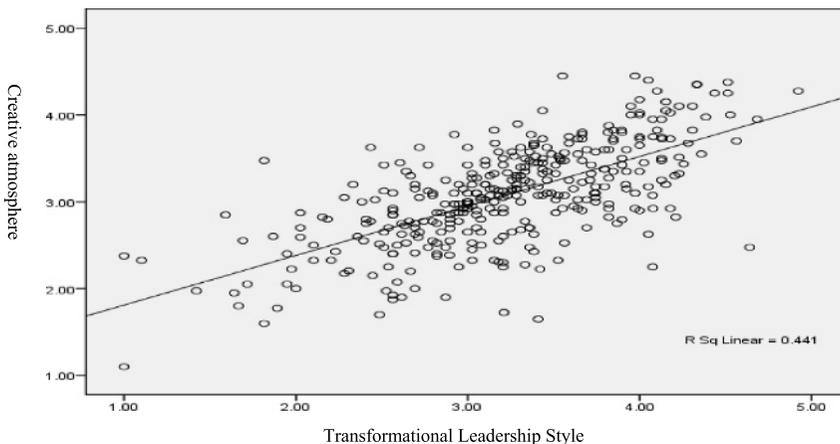


Figure 1. Relation between transformational leadership style and creative atmosphere.

Table 2. Regression Coefficients of Components of Transformational Leadership Style and Creative Atmosphere

Variable	<i>B</i>	SE	Standard Estimation of β	<i>t</i>	<i>P</i>
Idealized influence	-0.044	0.054	-.058	-0.816	.415
Inspirational motivation	-0.031	0.065	.205	2.38	.01
Intellectual stimulation	-0.151	0.063	.24	3.3	.001
Individualized consideration	-0.043	0.064	.32	4.09	.00

Regression analysis revealed that individualized consideration had the most influence on creative atmosphere, and the next priorities respectively belonged to intellectual stimulation and inspirational motivation (Table 2).

Results obtained from Pearson correlation coefficient between variables of creative atmosphere and employee creativity proved a significant statistical relation ($r = 0.417$, $P < .05$). Positive correlation coefficient and slope of regression line in Figure 2 show the direct relation between these variables.

The coefficient of determination (R^2) between mentioned variables was 0.174, which indicated that 17.4% of change in employee creativity was justified by creative atmosphere (Table 3).

As Table 4 depicts, regression analysis revealed that among different factors of creative atmosphere, idea time had the most influence, and the next priorities relatively belonged to idea support and risk taking.

Another study hypothesis involved evaluation of transformational leadership style as one of the predictor variables on employee creativity. Results obtained from Pearson correlation coefficient proved a significant statistical relation

between 2 variables ($r = 0.425$, $P < .05$). Distribution of points and the slope of regression line in Figure 3 show the direct relation between variables.

The coefficient of determination between mentioned variables ($R^2 = 0.181$) also confirmed that 18.1% of change in employee creativity score was due to leadership style (Table 5).

Furthermore, as Table 6 depicts, regression analysis revealed that among different factors of transformational leadership style, intellectual motivation had the most influence.

DISCUSSION

The findings of the present study revealed a significant statistical relationship between transformational leadership style and creative atmosphere, so that higher scores in transformational leadership style led to increases in creative atmosphere. In addition, most managers received high scores in terms of idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration, which led to an increase in creative atmosphere. According to the study, one of the factors that can be used in organizations

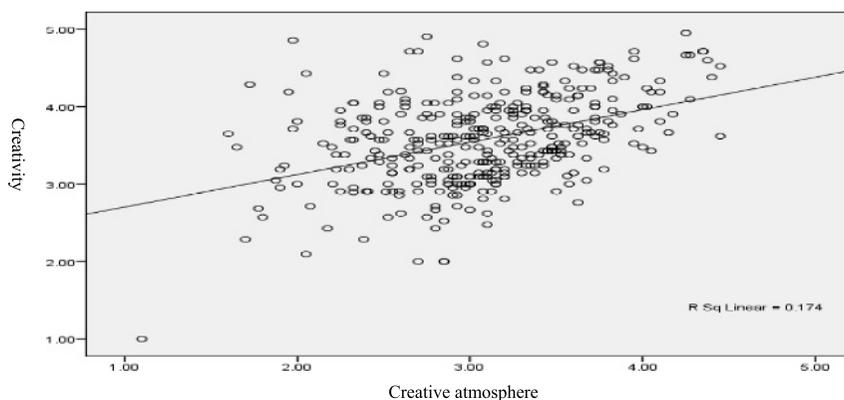
**Figure 2.** Relation between creative atmosphere and creativity.

Table 3. The Relationship Between Employee Creativity and Creative Atmosphere

Variable	<i>r</i>	<i>P</i>	Coefficient of Determination
Employee creativity	0.417	.000	0.174

to improve creative atmosphere is a transformational leadership style. Furthermore, results obtained from regression analysis conformed that individualized consideration had the most influence on creative atmosphere (0.324). Study findings also revealed a significant relationship between creative atmosphere and employee creativity, which was confirmed by similar studies conducted by Sheykhali-zadeh and Seyedameri,²³ Seyedameri,²⁴ and Zand Moghadam,²⁵ who concluded that one of the external factors affecting employee creativity and innovation was the creation of a stimulating workplace.²³⁻²⁵ Creativity cannot be developed in an unsuitable or unsatisfactory environment. Therefore, organizations should facilitate working condition so that the emergence of new ideas can easily arise among managers and employees.²⁶ Similarly, Samadi and Shirzadi Isfahani²⁷ confirmed a direct significant relationship between creative atmosphere and employee creativity, also adding that motivation for progress, foresight, risk taking, and creativity indices were higher compared with theoretical mean scores. Therefore, it was expected that employee creativity would increase

through the promotion of a creative atmosphere.²⁷ Study findings also confirmed a direct positive relationship between transformational leadership style and employee creativity so that by promoting transformational leadership behavior, intrinsic motivation would increase and subsequently lead to creativity. Literature conformed to our findings and reported that such a behavior provides opportunities for development of personnel ability to change traditional approaches through strengthening communication and support of shared values.^{26,28-30} Several studies have been conducted to analyze the effect of transformational leadership style on organizational performance, personnel behavior, effectiveness and satisfaction, culture, morality, and creativity. Khan et al³¹ found that transformational leadership had a significant positive effect on organizational innovation.

CONCLUSION

In a creative environment, personnel trust each other and have the courage to seek new ideas and convert their inventions into action without fear of failure. Thus, organizations are suggested to welcome new ideas and provide necessary support for creative employees through encouraging them. In such organizations, personnel have the opportunity to provide appropriate recommendations without being afraid of potential risks. Therefore, it is suggested that managers work toward creating a supportive atmosphere in the workplace to increase employee satisfaction



Figure 3. Relation between transformational leadership style and creativity.

Table 4. Regression Coefficients of Components of Creative Atmosphere and Employee Creativity

Variable	B	SE	Standard Estimation of β	t	P
Challenge/involvement	-0.049	0.055	-.068	-0.884	.378
Freedom	0.208	0.052	.249	3.97	.00
Idea support	-0.171	0.061	-.225	-2.79	.005
Playfulness/humor	0.089	0.048	.116	1.86	.063
Constructive conflicts	0.032	0.061	.04	0.524	.601
Risk taking	0.147	0.055	.171	2.65	.008
Trust/openness	-0.013	0.055	-.017	-0.24	.81
Debate	-0.021	0.062	-.026	-0.33	.738
Idea time	0.23	0.054	.295	4.259	.00

Table 5. The Relationship Between Employee Creativity and Leadership Style

Variable	R	P	Coefficient of Determination
Employee creativity	0.425	.000	0.181

and effectiveness and also to meet subordinates' needs and develop opportunities for prosperity and their promotion to higher levels. In order to strengthen intellectual motivation, managers should be encouraged to support new ideas instead of simply stressing traditional approaches. Empowering employees and encouraging creativity techniques such as brainstorming can be

helpful for the purpose. To strengthen inspirational motivation, transformational leadership style is also proposed because such a leadership style has high expectations for all employees and entrusts them with challenging responsibilities. Also, improving transformational leadership style and enhancing employee creativity help to create a receptive organizational atmosphere toward change and encourage constructive interactions among employees.

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Table 6. Regression Coefficients of Transformational Leadership Components and Employee Creativity

Variable	B	SE	Standard Estimation of β	t	P
Idealized influence	0.108	0.067	.141	1.603	.11
Inspirational motivation	0.065	0.082	.085	0.8	.424
Intellectual stimulation	0.128	0.078	.154	1.64	.102
Individual consideration	0.069	0.08	.085	0.87	.385

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