



ORIGINAL ARTICLE

The Relationship between Multiple Intelligence and changing Leadership Style among Heads of Alborz Medical University Departments in 2012

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ABSTRACT

This research intends to study the relationship between multiple intelligence and changing leadership style among heads of Alborz medical university departments-2012. The research method was of descriptive-correlation type. Its statistical population included 103 of medical university department in Alborz in 2012. They were selected through proportional stratified sampling. Data collection tool included multiple intelligence and leadership style questionnaires. . Data analysis was conducted at three levels of descriptive statistics (mean, standard deviation, frequency distribution table, and diagrams) as well as inferential statistics (Pearson's correlation coefficient and multivariate regression analysis) using SPSS16. Research findings showed that there was a significant relationship between general multiple intelligence and body, musical, and interpersonal intelligence with (general) changing leadership style. There was a positive significant correlation between musical and interpersonal intelligences with ideal penetration, also exiting between visual, body, verbal, logical, musical, and interpersonal intelligences with inspiring motive. Likewise, there was a positive correlation between visual, body, verbal, logical, and musical intelligences with intellectual stimulation, also exiting between visual and logical intelligences with principals' individual considerations.

Key words: leadership style, changing leadership, multiple intelligence

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INTRODUCTION

In the broadest sense, organizations are the main foundations of contemporary society and the management is the most important factor in the downfall or survival of organizations [1]. The management development in the last decade and the presence of organizations in today's complex and competitive world reminds this fact that management like other sciences requires special expertise. Managers should know their surrounding environment, drive the current situation to the desired situation, and manage their organization by recognizing the required principles, techniques, and tools [2]. Leadership is one of the five functions of management and it is considered as a basic process in the organization. As the director and coordinator of the activities in the group, the important role of leaders emphasizes this point that the need for leadership in all social activities -especially in higher education- is evident and critical [3].

In achieving organizational objectives and in terms of dealing with individuals, training manager requires special intellectual, scientific, moral, and characteristics abilities that differentiate the management of education from the management of other organizations [4].

In the leadership role of manager and its relationship with intelligence, Bass stated that one of the characteristics of effective leaders and managers is their high intelligence that distinguishes them from their followers [5].

As long as people believe that intelligence plays an important role in leadership, questions such as (whether the intelligent people have more opportunities for leadership?) have always been proposed [6]. In fact, it can be said intelligence is effectively associated with leadership perceptions and

environmental factors. This study aims to investigate the impact of intelligence on management behavior and style of training managers.

MATERIALS AND METHODS

This is a descriptive – correlation study. Data are collected through two questionnaires: Gardner's multiple intelligence and transformational leadership style.

The Multiple Intelligence Questionnaire was designed in 1999 by Walter McKenzie. This questionnaire has 90 items and nine subscales that each of them considers one of the multiple intelligences. These subscales include logical - mathematical intelligence, visual - spatial intelligence, bodily - kinetic intelligence, verbal - linguistic intelligence, musical intelligence, interpersonal intelligence, intrapersonal intelligence, naturalism intelligence, and existentialism intelligence [7]. Farnhaym et al (2002) mentioned that the validity of this scale- based on Cronbach's alpha index- is 78%. Khosravi et al (2006) stated that the reliability of this scale for all eight intelligences is about 80% [8].

For conceptualization of transformational and pragmatic leadership, Bass added seven factors to Multifactor leadership Questionnaire in 1985: charisma, inspiration management, intellectual stimulation, individualized consideration, contingency reward, expectation management, and turbulent management. In the present study, a 40-items questionnaire of Fariborzi (2003) survey - it had been used to measure the transformational leadership of IT project managers in Mashhad- was used. The reliability was calculated using Cronbach's alpha coefficient (96%); this value indicates high internal consistency among the phrases. The validity of this questionnaire was examined by Fariborzi (2003) and Dalvand (2007). A list of the target population was prepared after the permission of Education – Research Department in Medical Sciences University of Alborz. The sample consists of 103 training managers of this university. However, researcher introduced and expressed the purpose of research and distributed the questionnaire among the respondents. Managers who did not complete the questionnaire were excluded from the sample. Using SPSS16, the Pearson correlation, multivariate regression analysis, and descriptive and inferential statistics were conducted for data analysis. The significance level of $\alpha=0.01$ and $\alpha=0.05$ were considered to test the hypotheses.

RESULTS

The population consisted of all 103 managers (male=73, female=30) of Medical Sciences University of Alborz. Of male sample, 35% and 64.3% have studied in the medical fields and paramedical fields. Also, of female sample, 6.17% and 4.82% have studied in the medical fields and paramedical fields.

The average of transformational leadership style components' scores among the managers was respectively as follows: ideal influence= 4.0755, inspiration motivation= 4. 4737, rational motivation= 3. 7596, personal considerations=3. 9014, and transformational leadership styles=4. 0525. Also, based on results, the average of multiple intelligences components' scores was respectively as follows: Visual intelligence= 36.4091, physical intelligence=33. 2576, verbal Intelligence=36. 0455, logic Intelligence= 36.4394, musical intelligence=33. 5455, interpersonal intelligence= 40.0758, intrapersonal intelligence= 37. 6515, naturalism intelligence= 39. 0606, and multiple intelligence= 36.5606. According to the results, at the significant level of $p < 0.001$, the multiple correlation coefficient and determination coefficient was calculated $R=0.471$ and $R^2=0.221$, respectively.

Table 1: Correlation results of the research variables

T statistic Predictors	Multiple correlation ratio	Determinant ratio	F	F Sig	Beta	Beta Sig
	R	R ²	F	F Sig	β	β Sig
Visual intelligence	0.471	0.221	206.18	0010.<P	0.471	0010.<P
Visual intelligence	0.339	0.115	289.8	01.<0P	0.339	01.<0P
Visual intelligence	.5800	0.336	936.15	0010.<P	.4220	0010.<P
Visual intelligence	.4610	0.212	258.17	0010.<P	.4610	0010.<P
Visual intelligence	0.375	0.141	470.10	01.<0P	0.375	01.<0P

Among the predictor variables- based on the highest significant level-, only the visual intelligence variable has remained and other predictor variables were excluded from the analysis. Based on the results, at the significance level of $P < 0.01$, the determination factor and F-statistic was calculated as $R^2=0.115$ and 8.289, respectively.

Also, the visual intelligence and musical intelligence significantly explain the inspiration motivation. About visual intelligence, $P < 0.01$, $R^2=0.141$, and $F= 10.470$. It can be said that this intelligence is important in predicting the individual considerations.

DISCUSSION

According to the results, visual intelligence significantly explains the overall score of transformational leadership style. This intelligence is important in predicting transformational leadership style. It accounts for 22% of the variance in transformational leadership style score. Findings show that the components of multiple intelligences such as visual intelligence, logical intelligence, physical intelligence, interpersonal intelligence, musical intelligence have a significant prediction potential for predicting transformational leadership style. This means that when managers have different multiple intelligences, they will have significant idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. The Findings also show that whenever a person has multiple intelligences, he will have significant transformational leadership style.

Based on the results, the visual intelligence and musical intelligence account for a total of 33% of the variance in inspiration motivation. Multiple variables have the third effect and prediction power of inspirational motivation in transformational leadership style. This means that whenever a person has high and significant visual intelligence and musical intelligence, he will have more effective transformational leadership styles. Findings indicate that multiple intelligences have the fourth significant effect and prediction power for the intellectual stimulation component in transformational leadership style. This means that when individuals have different multiple intelligences, they will be more successful in creating rational motivation and transformational leadership in workplace and among the employees.

The findings indicate that there is a significant relationship between the components of multiple intelligences and individual consideration component in transformational leadership style. This means that people who have multiple intelligences, they consider the needs, motivations, and aspirations of their employees in their transformational leadership style and advice, guide, and direct them. This is consistent with the findings [9, 10].

CONCLUSION

Gardner [11] stated that multiple intelligences can have desirable individual and collective benefits. People not only are able to understand the existence of multiple intelligences in their essence, but also they can use them quite flexibly and usefully to the roles that different societies have created for them. Individuals can be equipped with multiple intelligences at home, school, organization, business, or street [11]. The results obtained in this study showed that there is a significant relationship between the multiple intelligences and skills, achievements, and performances. Also, there is a significant and positive correlation between multiple intelligences (general) and transformational leadership style. Transformational leaders are those who will lead the organization toward better position. They see themselves as change agents. Therefore, they will have courage and risk-taking soul. They are able to work literally and emotionally with people.

According to Gardner's theory, people who have higher intelligence, they have better relationships and management skills. In the appointment of managers, it is better that more attention is paid to their ability to benefit from leadership styles.

REFERENCES

1. Bass, B.M, Ovolio, B.J, Jung, D.I. & Berson,y.(2002). Predicting unit performance by assessing transformational and transactional Leadership. *Journal of Applied psychology* , 88, 207-218.
2. Gardner, H. (1995). *Leading minds: anatomy of leadership*. New yourk. Basic.
3. Davis, k. (1986). *Human Behaviourat, work*. Newyork: mc Graw. Hill Book Company.
4. Etzioni, Amitai.(1964). *Modern organization*, New jersey. Prentice.
5. French. John R. and Bertram Raven.(1959). " The Bases of social power", in D. cartwright, ed, *studies. In social power*. Ann Arbor. Michigan.
6. Miller. Lawerence. M.(1996). *Behavior management. New skills fo Business and in dustry*, Atlanta Behavioral system. P. 235.
7. Mans, C.C, and sims, H.p.(2002). *The new super leadership. Leading others to lead Them selves*.New Delhi.
8. Murphy, kevim. R & Davishofer, charleso. (2002). *Psychological Testing, principles, and Applications*, second Edition, prentice Hall.
9. Owens. R.G.(1998). *Organizational Behavior In Education*, sixth ed. Boston. Allyh and Bacon
10. Murphy, kevim. R & Davishofer, charleso. (2002). *Psychological Testing, principles, and Applications*, second Edition, prentice Hall.
11. Gardner, H. (1995). *Leading minds: anatomy of leadership*. New yourk. Basic.