

Hospital managers' leadership style from the staff's viewpoint and its relationship with hospital indicators

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Abstract

Aims: Providing ideal therapeutic services and improving the hospital processes highly depends on staff's team-work and managers' leadership styles and leadership styles affects the effectiveness and efficiency. This study was performed with the aim of determining managers' leadership style from staffs' viewpoints in one of Tehran's hospitals and its relationship with hospital indicators.

Methods: This descriptive-analytical cross-sectional study was done on 394 staffs of a hospital in Tehran who were selected by proportionate and simple random sampling method in 2009. Demographic characteristics' questionnaire and Likert leadership style questionnaire (after confirming its validity and reliability) were used for data collection and data analysis was done by Chi-square and ANOVA tests using SPSS 16 software.

Results: 13.7% of staff stated that their managers' leadership style was exploitative-authoritative, 56.1% benevolent-authoritative, 28.2% consultative and 2 % of them considered it participative. There was a significant relationship between leadership style of managers and BOR, ALOS, BT and BTI indicators with the significance levels of 0.003, 0.006, 0.003 and 0.002, respectively.

Conclusion: Although choosing the authoritative leadership style from the staffs' viewpoint is not far from mind regarding the organizational environment, use of consultative and participative leadership styles and using training methods for applications of the mentioned styles is suggested in order to improve the organizational efficiency.

Keywords: Hospital, Leadership Style, Hospital Indicators, Managers, Staff

Introduction

In fact, management is the coordination of human and material resources in order to achieve organizational goals in a way that is acceptable to the society [1]. If we pay attention to the management process, we will see that it consists of four basic functions, namely programming, organization, leadership and control. Leadership is the most important key elements of management; therefore, it is critical for team work [2]. Many experts and scientists believe that the only factors determining the differentiation aspect between a successful and an unsuccessful organization is the dynamic and effective leadership. The leadership style of managers reflects their manner of interaction with the supervised staff [3].

In 21th century, Health organizations encounter new and basic challenges in terms of management each of which is important concerning the development and promotion of leadership for the health care and treatment [4, 5].

In the health sector, hospitals are of the important and major organizations that provide health services and with their special facilities, play a crucial role in

returning of patients' physical and mental health in the society and education of experts in the health sector [6].

Optimal providing of health services and improving of the hospital processes depend on the participation of the entire human resources and providing continuous, optimal and efficient services and to a large extent, the staff's team work and leadership style of the managers of these organizations [7]. Regarding the importance of the hospital and the way of handling the affairs and its resources, applying useful and efficient ways for guiding and directing of the resources is necessary since researches in the health sector has shown that the managers' leadership style is correlated with the organization's efficacy, efficiency and profit and productivity [8, 9, 10, 11]. Furthermore, managers' leadership style and the staff's job satisfaction and organizational commitment are closely correlated [12, 13, 14]. On the other hand, one of the criteria of measuring the success of a hospital's performance and determining of the rate of attaining the desired objectives are hospital statistics and indicators [15]. It could be said that improved hospital indexes means the efficiency and efficacy of the hospital activities, or

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in other words, the proper performance of the staff and proper use of resources.

In a research which was conducted in one of the hospitals affiliated to the Tehran Social Security Organization in 2001, aiming at investigating the role of participative management on the performance of hospital, participative management brought about a decrease in hospital Bed Turn by 48.8% in the first six months of the mentioned year and a reduction in the patient stay in hospital and a halt in the Bed Turn by 25.8% and 11.11% respectively, which were statistically significant [16]. In another study which was conducted to investigate the relationship between the leadership style of the hospital managers and the functional indexes of the hospital in eight hospitals in Qom in 2004, indexes such as BOR, ALOS, BTI, the number of entire daily occupied beds and the proportion of active beds to the fixed ones had a reverse relationship with the managers' leadership style; meaning that as the managers' leadership showed tendency to the participative style, the frequency of the above indicators became less and the other indicators (the proportion of patient's admission for each bed, the ratio of the bed turn, raw mortality rate, etc.) had a direct correlation with leadership style. But overall, there was no statistically significant correlation between the hospitals' performance indicators and the score of managers' leadership style [17]. The results of another study which was undertaken in 63 nursing units in four hospitals in the United States reflect the fact that in units that had participative management style, a high level of cooperation and a low level of job stress existed among the staff.

This reduced job stress had caused an increase in the quality of nursing care; moreover, the participative management had increased the staff's and patients' satisfaction [18].

The aim of this study was to investigate the relationship between managers' leadership style from the staff's point of view and hospital indicators.

Methods

This is a descriptive-analytical study conducted in a cross-sectional design in 2009. The study population was the staff of a military hospital. Using the formula [19], the sample size was obtained to be 391 subjects.

In the next step and regarding the number of employees and quota sampling in hospital's nursing, paraclinical, administrative and supportive, financial, clinical and training sectors, finally the number of participants came out to be 394 subjects using the approximation method. In the final stage, for selecting

samples in each part, simple random sampling method was used.

The main tool of data collection was the Likert's leadership style questionnaire. The mentioned questionnaire includes two parts of demographic characteristics of responders (including 8 questions) and evaluation of the leadership style in staffs' viewpoint (including 24 five-option Likert scale questions as very low, low, average, high and very high).

The tool's validity was confirmed using the opinions of 5 experts and its reliability was confirmed using similar studies ($r=0.85$) [17, 20].

For scoring and assessing the leadership style, given that questions were in a five-option form, the maximum score was calculated as 120 and then using scientific resources [21, 22], leadership style scoring was specified as follows:

- 1- Authoritative-Exploitative leadership style with a score of 24 to 53;
- 2- Authoritative-Benevolent leadership style with a score of 53 to 75;
- 3- Consultative leadership style, with a score of 75 to 98;
- 4- Participative leadership style with a score of 98 and above.

The second questionnaire was related to the demographic characteristics of the hospital studied organization and calculation of the Bed Occupancy Rate (BOR) indicator, Average Length Of Stay (ALOS), Bed Turn (the number of bed use times), Bed Turn Interval (BTI) and associated components to calculate the mentioned indicators (number of active and fixed beds, the total daily hospitalized patients, the number of discharged patients, the number of those who died before and after 24 hours and the number of transfers among the wards).

Data was analyzed by SPSS 16 statistical software after collection. The frequency distribution and central and distribution parameters were used in order to describe the data.

In order to analyze the data, Chi-square and ANOVA were used. The KS test was used in order to use ANOVA test and given the normality of data distribution, the mentioned test was used. In order to observe the ethical considerations, the permission of relevant authorities in the concerned hospital was obtained and the full name of participants was not mentioned in the data collection tool.

Results

257 patients (65.6%) of the studied subjects were male and 339 patients (86.3%) were married.

In terms of education level, BA level had the highest frequency distribution with 195 subjects (49.7%), and the PhD degree had the lowest frequency distribution with 2 subjects (0.5%).

The highest frequency of subjects in terms of major was medical sciences field with the number of 258 subjects (67.4%) and the lowest frequency distribution was associated with the art field with the number of 6 subjects (0.8%). In terms of employment status, most of subjects were contractual employees with the number of 179 subjects (46.1%) and the lowest frequency distribution was associated with the project employment with the number of just one subject (0.3%).

The age of subjects ranged between 21 to 65 years and their mean age was 34.76 ± 7.183 years. The highest frequency distribution of subjects in terms of age was related to the age group of 31 to 40 years with 184 people (47.9%) and the lowest frequency distribution belonged to the age group of above 60 years with the number of one subject (0.3%). The job experience of the studied subjects ranged from one to 30 years and the average of their job experience was 10.52 ± 6.475 years.

The highest frequency distribution of subjects in terms of job experience belonged to the history of one to 10 years with 222 subjects (58.9%) and the lowest frequency distribution belonged to the history of 21 to 30 years with 31 subjects (8.2%).

The average of bed occupancy of the studied hospital varied between 58.36% (April) to 86.98% (May) in the period of 12 months in 2009 and the mean of Bed Occupancy Rate in the hospital was 79.18 ± 79.18 . Patients' Average Length of Stay within the mentioned period ranged between 3.30 days (July) and 3.68 days (February) and its mean was 3.47 ± 0.11 days. Bed Turn ranged between 16.43 times (April) and 25.96 times (May) and the mean bed turn in the hospital was 22.83 ± 2.30 times. Moreover, the time interval of bed turn in this hospital ranged between 0.50 days (May) to 2.53 days (April) within the mentioned period and its mean was 0.962 ± 0.51 days. According to 221 employees (56.1%) of the studied hospital, the leadership style of managers was authoritative, according to 111 employees (28.2%), 54 employees and 8 employees it was consultative (28.2%), authoritative-exploitative (13.7%) and participative (2%), respectively.

Table 1- Comparison of the frequency distribution of the leadership style of managers from the staff's viewpoint in terms of sex among the studied subjects using Chi-square test

Leadership Style→ Gender↓	Authoritative-Exploitative		Authoritative-benevolent		Consultative		Participative		Sum		Level of Significance
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	
Male	35	13.6	141	54.9	76	29.6	5	1.9	257	100	0.035
Female	31	23	76	56.3	27	20	1	7	135	100	

Table 2- Comparison of the mean the leadership style of manager's staffs' viewpoint in terms of such indicators as bed occupancy rate (BOR), Average Length of Stay (ALOS), bed turn (BT) and bed turn interval (BTI) in the studied hospital in 2009 using ANOVA and LSD test.

Leadership Style→ Index↓	Authoritative-Exploitative	Authoritative-benevolent	Consultative	Participative	Level of Significance
Bed occupancy rate (BOR)	80.72	79.37	78.33	74.95	0.003
Average Length Of Stay (ALOS)	3.49	3.47	3.46	3.41	0.006
Bed turn (BT)	23.16	22.86	22.66	22	0.003
Bed turn interval (BTI)	0.85	0.94	1	1.19	0.002

Table 1 represents the comparison of the leadership styles of managers from the staff's viewpoint in terms of sex among the studied subjects, that there was a statistically significant relationship between gender and leadership styles ($p < 0.05$).

Among the other studied demographic variables (age, marital status, educational discipline, education level, type of employment and job background) and managers' leadership style, no statistically significant

correlation was found ($p > 0.05$).

There was a statistically significant correlation between the Bed Occupancy Rate (BOR), Average Length Of Stay (ALOS), Bed Turn (BT), Bed Turn Interval (BTI) and managers' leadership style from the staff's viewpoint ($p < 0.05$). Authoritative-exploitative leadership had the highest mean of BOR, highest mean of BT and had the lowest mean of BTI. The mean of ALOS in the participative leadership style

was slightly lower compared to the rest of leadership styles (Table 2).

Discussion

In the present study, most responders were male that is not consistent with Torabi's study [19] and Seyyed Javadi's study [21] that most of their responders were female (53.1% and 58% respectively). Since the administrative, financial and support sections' personnel were also participating in the present study, the highest rate of males compared to females is justified. Moreover, in the present study, most responders were married that is consistent with the results obtained by Torabi [19], Tajvar [20] and Seyyed Javadi [21].

In the abovementioned studies, 80.8%, 81% and 73% of the subjects were married, respectively. With regard to the further frequency distribution of the subjects in the fourth decade of age and given that individuals typically get married in the third and fourth decade of their life, the obtained result is reasonable. In the present study, the highest level of education was associated to BA level which is consistent with the results of Torabi's [19] and Seyyed Javadi's [21] studies, in which 57.1% and 45% of responders had bachelor's degree, but it is not consistent with Tajvar's study [20] in which most responders held a PhD certificate.

Since more than 61% of the studied subjects were clinical and nursing staff with BA, this result also seems reasonable. The highest frequency of educational discipline in this research belonged to medical sciences majors that regarding the high participation of nurses in this study, one can expect these results.

The highest frequency of employment type in this research was contractual employment which is not consistent with the result of Mosadegh Rad's research [16], since 51.5% of employees had been in definite official employment status.

Since at the present time, official employment of the staff occurs rarely and in most organizations contractual employees are applied, therefore the contractual employment of most individuals seems natural. The highest frequency of responders' age was associated to the age group of 31 to 40 years old which is not consistent with the results of Tajvar [20] but supports the results of Mosadegh Rad [16].

According to the results of this study, in the studied hospital within the period of 12 months in 2009, the average of Bed Occupancy Rate (BOR) was 79.18%, the average of Average Length Of Stay (ALOS) was

3.47%, the average of patient stay was 3.47% and the average of Bed Turn Interval (BTI) was 0.96 days which seems logical and desirable. If one wants to evaluate the managers' performance in terms of efficacy, they may measure indicators as BOR, ALOS, BT and BTI. Concerning the evaluation of efficacy indicators of the hospital, the lower the BOR, ALOS, BT and BTI, the more desirable the status of the given hospital will be. Regarding the studied hospital, the high percentage of BOR and BT and the low average of patient stay and the halt in BT confirm that overall, the functional indicators are appropriate and the applied leadership style can affect these indicators.

In this study, managers' leadership style has been stated to be 56.1% authoritative-benevolent, 28.2% consultative, 13.7% authoritative-exploitative and 2% participative.

According to the results, most managers had authoritative-benevolent leadership style; in other words, they attempted to be more attentive toward the working environment and determine their duties and less consider the relationship between individuals. These individuals are more bound to the work principles and laws, determine organizational goals and strategies and manage all tasks themselves and are less inclined toward delegating authority to the staff.

A similar study has been undertaken by Arab [23] entitled "Investigating the effect of organizational structure and management practices on hospital indicators".

The results of the study showed that authoritative-benevolent leadership style with 47.45% and participative leadership style with 5.86% were respectively the most and least common types of leadership style which is completely consistent with our results. In a study conducted by Tajvar [24] entitled "Investigating the leadership style of directors and hospital managers and its effect on hospital indicators", it was found that the most common type of leadership style is authoritative-benevolent and the least common one is participative style, which completely supports the results of the present study. In Hamidi's study [11] entitled "investigating the managers' leadership style of Iran Medical University affiliated hospitals and its relationship with the hospital's performance", it was found that 75% of managers had a task-oriented leadership style that is consistent with the results of the present study.

Afqahi [25] in a study entitled "Application of the Fiedler's contingency model in the measurement of leadership style in Isfahan province hospitals' management and its relationship with management performance" concluded that 82.4% of managers have

a relation-oriented leadership style which is not consistent with the results of the present study. Moreover, Zarnosheh Farahani [26] in a research aiming at investigating the relationship between leadership style and the strategies of contradiction's management in directors and managers of the hospitals affiliated to one of Tehran's medical sciences universities, came to the conclusion that 62.5% of managers have a relation-oriented leadership style that does not support the results of present study. In Foote's study [27], in Mississippi University of the U.S., it was revealed that 43% of managers' leadership style is participative. In the study by Ansari [24], it was also found that managers have a relation-oriented leadership style that does not support the results of present study. In a study conducted in order to investigate the leadership style and organizational maturity in training hospitals affiliated to the Ardabil Medical Sciences University [21], it was found that 59.4% of managers have authoritative leadership style. Likewise, in Lajevardi's study [14] the management style of most managers in both state hospitals and private hospitals was of the authoritative type. Underwood and Kenner [28], in their study found that the majority of nurse managers are task-oriented rather than relation-oriented, which is consistent with the results of the present study.

However, Jafarabadi [29] concluded in his study that most of the nurses had consultative leadership style that is inconsistent with the results of the present study. Likewise, Avery and Ryun [30] stated, in their article that Australian managers prefer to employ supportive styles compared to authoritative ones. Dolan [31] also stated in his study that the majority of nursing personnel state that their perception of leadership style of the managers of the relevant wards has been consultative.

Although in developed countries participative management is confirmed for its positive effect on employees' satisfaction and hospital efficiency, Mozich, Still and Morrison believe that what makes the application of a style appropriate or inappropriate for an organization is the matter of conditions and occasions [32, 33].

Paul Hersey and Kenneth Blanchard, in their situational leadership theory believe that good behavior or management style changes with the maturity level of followers (the way of arousal, competence, experience and interest of inferiors in responsibility acceptance).

The dominant culture of the organization also plays an important role in the success of the leadership style [16]. Mosadegh Rad suggests that there is no single

appropriate leadership style for all conditions, and it is better for managers to select a leadership style suited to employees' organizational maturity and culture [34].

On the other hand, providing more information for managers on leadership styles, strengths and weaknesses of each one and necessary conditions for their application could lead to the correct leadership style and higher efficiency [16]. Arab, in his article, using the sequence leadership model of Tannenbaum and Schmidt notes that it is better to consider factors related to the characteristics of the manager and his/her inferiors and the organizational conditions and status for choosing an appropriate style of leadership in a hospital organization [35]. It is worth mentioning that in researcher's opinion, with regard to the organizational culture governing the studied hospital, the selection of authoritative-benevolent style seems logical. Nevertheless, given the positive effect of consultative and participative styles on issues such as increased job satisfaction and organizational commitment and reduced job stress, the absence of the staff and their move in organizations and finally the increased utility of human and organizational force, teaching the way of employing these styles to managers and the staff should be considered in educational programs of the hospital and necessary dispositions in this regard should be made by decision-makers and directors.

In the present study, there was a significant relationship between the manager's leadership style and responders' gender. In other words, from viewpoint of 54.9% of men and 56.3% of women, the manager's leadership style was authoritative-benevolent. In Torabi [19] and Mosadegh Rad's [16] study, there was no significant correlation between the manager's leadership style and gender which is not consistent with the present study results. In terms of the relationship between gender and the leadership style, Stephen Robins believed that the most common difference between men and women is their leadership style. Women incline toward employing democratic styles and encourage men to participate. In this respect, men are more willing to issue command and control the affairs, but it is surprising that these differences are sometimes ambiguous [36]. In Bull's study, no significant relationship was found between the manager's leadership style and demographic characteristics of the responders, such as age, gender, working history, and education level [37]. Likewise, in Karen Wetheral's study, there was no significant statistical correlation between the leadership style and gender [38]. The results of the present study revealed

that there is significant statistical correlation between the mean percentage of BOR, Average Length Of Stay (ALOS), BT and BTI and the manager's leadership style from the staff's point of view that can be associated with further notice to the tasks and fulfilling of the assigned works to the employees and their close monitoring and control on the side of managers and one can summarize it in the duty oriented feature of managers. It can be concluded that the manner of managers can affect the motivation and ability of employees and lead to improvement of hospital indicators through interaction with them. Since the style effective in hospital efficacy is the authoritative style except for Average Length Of Stay, one can claim that other factors may involve in the increase or decrease of the mentioned indicators and finally in the optimal performance of the hospital that this point necessitates further research. These results are consistent with those of Hamidi [11] in hospitals affiliated to the Iran University of Medical Sciences. In Arab's study [23], indicators such as BOR, Average Length of Stay (ALOS), BT and BTI had a reverse relationship with the manager's leadership style point; in other words, the closer the manager's leadership style to the participative style, the lower the frequency of above indexes. In this respect, except for Average Length of Stay, all the remaining indicators are consistent with the leadership style that was dominant in the given research (which is the very authoritative-benevolent style), but in general, in Arab's study [23], no statistically significant correlation was observed between hospital indicators and the manager's leadership style point which is not consistent with the results of the present study. In Mosadegh Rad study [16] with the subject of investigating the relationship between the manager's leadership style and Isfahan's university hospitals, Bed occupancy rate (BOR), ALOS, Bed turn (BT) and Bed turn interval (BTI) were 57.30%, 4.07 days, 51.40 times and 3.03 days respectively. With regard to the fact that in the mentioned research, the style of most hospital managers had been participative, no correlation was observed between their managerial style and hospital's performance rate which is not consistent with present results.

McDermott and Stock, in their article on the evaluation of the performance of New York hospitals in the United States, using operation and production management in hospital, selected the Average Length Of Stay index [39] and stated that one functional goal that contains many of the functional aspects, is the Average Length Of Stay [40, 41] indicating the mean time that the patient spends in hospital [42]. Most

hospitals consider the Average Length Of Stay as a vital functional index [39] and previous studies show that this index is in relation with cost, efficacy, care quality and service rapidity [42, 43, 44, 45]. Therefore, one can consider this index as a general proper index for performance evaluation. Overall, McDermott and Stock have deemed this index as a tool for the evaluation of hospitals' organizational performance, especially from strategic perspective [39] and for confirming their view, they have mentioned that many researchers of hospital affairs have widely used it as an important tool for reflecting multiple and deferent dimensions of performance evaluation that include cost [43, 44, 46], quality [42], efficacy [45] and profit-yielding [47, 48, 49, 50, 51, 52, 53, 54]. In most studies, the lower level of the patient mean stay in hospital has been considered as the level of optimal performance [42, 47, 54], since this shows the more rapid treatment of patient and better efficacy of resources and lower cost [55, 42]. Moreover, different views have been posed regarding the relationship of the patient mean stay and the quality issue [39]. The result of a wide empirical study on 13 various diseases showed that the lower level of the index is associated with better performance [42]. With respect to the above explanations, McDermott and Stock state that since the patient mean stay indicator is in continuous relationship with different aspects of performance; therefore, it can be used as a comprehensive and valid indicator for evaluating the hospital performance [39].

In the present study, the patient mean stay was 3.5 days. Although the given index can be justified up to maximally four days in terms of standard [56], but by further research, some ways may be suggested in order to reduce the patient mean stay in hospital through re-examining the process of patients' admission up to discharge, comparing the way of treatment and conducting the clinical courses of action for patient in comparison with national and international standards, studying the reasons of repeated referrals, imposing unnecessary treatments on patient, reducing the medical errors and etc. The last point is that, in the present study, three other efficacy indicators were employed besides the given indicator, the amount of which is logical and justifiable and given the duty-oriented style of hospital managers, it is logical that one expect higher efficacy, just as this relationship was statistically significant. Kunders in his study states that hospital costs may be reduced by increasing the quality and utilization. Moreover the use of hospital indexes, such as BOR, ALOS and BT can be effective [57].

With regard to the great changes in the management science, managers of the organizations have become considerably interested in participative management rather than conventional management style. Due to the specializing nature of the hospital and the presence of various staff in different job categories, without a participative management system, the organization's survival in the competitive market is condemned to ruination. The important fact is that managers should primarily receive sufficient trainings in terms of participative leadership and perceive the aim of applying the style and then employ this style in hospitals in order to increase the organization utility [6]. On the one hand, the present study revealed that there is relationship between the studied indicators and the leadership style. Therefore, in order to evaluate the utility in hospital, concentrating on the proper leadership style and evaluating the mentioned indexes especially Average Length of Stay is essential.

Conclusion

From the staff's viewpoint, authoritative-exploitative leadership style and participative leadership style are respectively the most and the least leadership styles applied by managers and there is statically significant relationship between Bed Occupancy Rate (BOR), Average Length of Stay (ALOS), Bed Turn (BT) and Bed Turn Interval (BTI). Although with respect to the available organizational environment, selecting the authoritative leadership style from the staff's point of view is not impossible, using the participative and advisory leadership style and instructing the application of the mentioned methods in order to promote the organizational efficiency is suggested.

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