

A Study of Leadership Behavior, Patient-Physician Relationship and Performance of Physician

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ABSTRACT

Objectives: The patient-physician relationship is an important topic for any hospital. The leadership behavior of physician may influence the culture of treatment teamwork and further more, it may affect the patient-physician relationship and performance of the physicians. The purpose of this study was to verify the relationship of leadership behavior, patient-physician relationship and physician performance.

Methods: The sample of this study came from a hospital. We used a structural questionnaire to collect the data, including leadership behavior of the physician, patient-physician relationship and physician performance. The questionnaire was filled in by physicians' assistants in the examination room of the Outpatient Department.

Results: The leadership style of consideration was significantly associated with the patient-physician relationship (Pearson's $r=0.87$, $p<0.001$). The number of outpatients was significantly related to the initiating structure style (ANOVA, $p=0.038$). The staff's satisfaction was associated with the leadership style of consideration (ANOVA, $P<0.001$). We further found this relationship was strongly positive in regression model ($\beta=0.61$, $p<0.001$, adjusted $R^2=78\%$).

Conclusions: We suggested the hospital could improve the patient-physician relationship by understanding the leadership behavior of the attending physician. The physicians with lower consideration were especially found in the groups that were working on improving their patient-physician relationship and satisfaction of staff.

Keywords:

Leadership Behavior; Patient-Physician Relationship; Physician Performance

1. Introduction

The patient-physician relationship is important for any hospital [1]. It is affected by the attitude and treatment process of physicians and nurses [2] and the system of insurance and payment [3, 4]. The key factor of patient-physician relationship is personal communication, including: listening to the patient, respecting the patient and understanding the patient's situation. In the view of the patient [5], it is also influenced by fulfilled requests for service, being treated as an independent individual and participating in medical service decision-making [6, 7]. The relationship between patient and physician could be evaluated by patient trust. There are three dimensions to assess patient trust: honesty, competency and agency/fidelity [2]. Some studies have reported that patient trust is correlated with the number of previous visits, longer relationships with their physicians, and overall patient satisfaction [7, 8, 9, 10, and 11].

Most studies reported that leaders have two types of leadership style: initiating structure and consideration [12, 13]. Some studies reported the style of leadership influenced performance of organization and satisfaction of staff [14, 15, 16, and 17].

Physicians are the leaders of treatment teamwork. Their leadership style may influence the culture of the team, satisfaction of staff, and attitude of team personnel to patient. It may further influence physician performance. The purpose of this study is to verify the relationship of leadership behavior, patient-physician relationship and physician performance.

2. Material and methods

The sample of this study came from one hospital. We used a structural questionnaire to collect data. The questionnaire was filled in by physicians' assistants in the examination room of the Outpatient Department. The leadership behavior of the physician and the patient-physician relationship were evaluated by their assistants of treatment. Finally, 38 questionnaires were collected. These 38 evaluated physicians were all the visiting staff of the Outpatient Department in this hospital.

The questionnaire items covered demographic data, leadership style of physician, patient-physician relationship and physician performance. The leadership style of the physician was measured using Leaders Behavior Description Questionnaire (LBDQ-XII) [13, 18]. It consists of 20 items. We used 5-point Likert-type scale for physicians' assistants to declare whether they are in agreement or disagreement with

the item related to the physician. The questionnaire divides leadership into two styles, including initiating structure and consideration. The total score for each style ranges from 10 to 50: the higher the score, the better the leadership style. The patient-physician relationship was measured using a nine-item questionnaire, Likert-type response scale, based on the Patient Trust in the Physician Scale [7]. Its total score ranges from 0 to 9: the higher the score, the better the patient-physician relationship. The performance of the physician was evaluated by two criteria: teamwork satisfaction of the physician's assistant and average number of outpatients. The Cronbach α of whole questionnaire was 0.844.

We used t-test and ANOVA (analysis of variance) to verify the relationship between leadership style of physician / patient-physician relationship and physician performance. We further introduced Pearson's correlation coefficient to evaluate the relationship between these continuous variables. We also used linear regression model to reveal the effect of the leadership style of the physician or the patient-physician relationship variables with physician performance. All statistical operations were performed using SPSS version 17.0.

3. Results

Table 1 showed the results of t-test and ANOVA between the patient-physician relationship and physician performance. Gender, age, average number of outpatients, and teamwork satisfaction of the physician's assistant were significantly associated with the patient-physician relationship ($p < 0.001$, $p = 0.025$, $p = 0.044$, and $p < 0.001$; respectively).

Table 1. Association between patient-physician relationship and physician performance

variable	n	Mean	SD	T / F	p-value ^a
gender					
1.male	34	3.48	0.40	6.867	<0.001
2.female	4	2.81	0.14		
age				4.085	0.025
1. ≤ 40	7	3.06	0.33		
2. 41-50	20	3.56	0.38		
	3. > 50	11	3.35	0.48	1<2
average number of outpatients				3.001	0.044
1.<30	7	3.02	0.30		
2.30-39	12	3.43	0.41		
3.40-49	9	3.49	0.45		
	4. ≥ 50	10	3.59	0.41	1<4
teamwork satisfaction of physician's assistant				37.721	<0.001
1.satisfied	13	3.85	0.17		
2.ordinary	17	3.31	0.33		
	3.unsatisfied	8	2.90	0.14	1>2>3

^a t-test/ANOVA

The results of relationship between leadership style and performance of physician were showed as table 2, compared the physicians with 30-39 and bellow 30 of average number of outpatients, those with higher initiating structure scale were more likely to have higher average number of outpatients, where as those with higher scale of consideration leadership were not. Contrary to this relationship, the physicians with higher consideration scale were more likely to have higher teamwork satisfaction, but those with higher initiating structure scale were not.

Table 2. Association between leadership style and physician performance

Variable	n	Mean	SD	F value	p-value ^a
initiating structure					
average number of outpatients					
< 30	7	28.29	5.82	3.147	0.038
30-39	12	35.33	5.47		
40-49	9	33.67	4.87		
≥ 50	10	34.50	4.01		
teamwork satisfaction of physician's assistant				0.738	0.485
1.satisfied	13	34.92	2.72		
2.ordinary	17	32.71	7.10		
3.unsatisfied	8	32.50	4.87		
consideration					
average number of outpatients				0.700	0.559
< 30	7	29.14	3.89		
30-39	12	32.50	5.63		
40-49	9	32.00	6.14		
≥ 50	10	32.50	5.15		
teamwork satisfaction of physician's assistant				52.230	<0.001
1.satisfied	13	37.46	3.02		
2.ordinary	17	30.41	2.81		
3.unsatisfied	8	25.38	1.92		1>2>3

^a t-test/ANOVA

Table 3 was the results of Pearson's correlation. Teamwork satisfaction of physician's assistant showed positive association with patient-physician relationship($r=0.83$, $p<0.001$) and consideration leadership($r=0.87$, $p<0.001$). Average number of outpatients was significantly related to the patient-physician relationship($r=0.40$, $p=0.012$). It was not associated with leadership style. The association with the patient-physician relationship and the leadership style of consideration was significant ($r=0.82$, $p<0.001$), but the initiating structure was not.

Table 3. Pearson's correlation results among patient-physician relationship, leadership behavior and physician performance

variable	average number of outpatients	teamwork satisfaction of physician's assistant	patient-physician relationship	initiating structure	consideration
average number of outpatients	1.00	-	-	-	-
teamwork satisfaction of physician's assistant	0.22 (0.194)	1.00	-	-	-
patient-physician relationship	0.40 (0.012)	0.83 (<0.001)	1.00	-	-
initiating structure	0.22 (0.192)	0.15 (0.367)	0.27 ^a (0.105 ^b)	1.00	-
consideration	0.18 (0.292)	0.87 (<0.001)	0.82 (<0.001)	0.17 (0.318)	1.00

a. correlation coefficient b. p value

Table 4 and 5 were the results of regression models of physician performances. Table 4 was the average number of outpatients model, and table 5 was the teamwork satisfaction of physicians' assistants. After adjusted gender and age of the physicians, all variables were not significant in the average number of outpatients model. In the model of the teamwork satisfaction of the physicians' assistants, it revealed the positive relationship between the leadership style of consideration and the patient-physician relationship with teamwork satisfaction ($p<0.001$ and $p=0.038$, adjusted $R^2=78\%$).

Table 4. Regression result for number of outpatients

variable ^a	Unjusted beta	Adjusted beta	95%CI	p-value
patient-physician relationship	1.71	0.45	-0.80-4.23	0.175
initiating structure	0.02	0.07	-0.08-0.12	0.693
consideration	-0.09	-0.30	-0.28-0.09	0.312
R square	0.21			
Adjusted R Square	0.06			

^a adjust gender and age

Table 5. Regression result for teamwork satisfaction of physician's assistant

variable ^a	Unjusted beta	Adjusted beta	95%CI	p-value
patient-physician relationship	0.57	0.34	0.03-1.11	0.038
initiating structure	0.00	-0.03	-0.03-0.02	0.692
consideration	0.09	0.61	0.05-0.12	<0.001
R square	0.82			
Adjusted R Square	0.78			

^a adjust gender and age

4. Discussion

The result of this study demonstrated that consideration leadership of physician is significantly associated with patient-physician relationship (Pearson's correlation: $r = 0.82$, $p < 0.001$) but the initiating structure leadership is not. We further found consideration leadership of the physician is a key factor of teamwork satisfaction of physicians' assistants (regression model: adjusted $\beta = 0.61$, $p < 0.001$). We also found the patient-physician relationship and initiating structure leadership of the physician are associated with average number of outpatients in ANOVA ($p = 0.044$, $p = 0.038$, respectively), but these relationships were not significant in regression model ($p = 0.175$, $p = 0.693$).

The consideration leadership of physician is associated with the patient-physician relationship. This result revealed the interpersonal skills of the physician may not only affect the relationship of the patient but also the support staff. If the physician could be considerate of the support staff and respect their opinions, then the culture of treatment teamwork could improve the patient-physician relationship.

Our study found the physician's leadership style of consideration was significant with teamwork satisfaction. Many studies in non-medical establishments reported leaders may influence the culture of organization, improve morale of subordinates, and then promote work place satisfaction [19]. Our study verified the physician's leadership style is also related to the satisfaction of workers in a medical team.

Our study found initiating structure leadership was significantly different with number of outpatients but consideration was not. The reason for this difference may be that initiating structure style of leadership could accommodate much more patients. In low number of outpatients, the support staffs have time to talk, so the assistants felt the physicians were considerate. However, in regression model, number of outpatients was not significantly associated with leadership style. It demonstrated that there was other variables not considered in our study which affected number of outpatients. For example, the faculty of the physician may be a key factor for number of outpatients. Our study included 38 physicians in one hospital. The size of sample was too small to divide their faculty for statistics. Further studies are recommended in considering this variable to verify our result.

This study had several limitations. First, the subjects of our study were from one hospital. Further studies are recommended in subjects of physicians from other hospital to verify our present findings. Second, the patient-physician relationship was evaluated by physicians' assistants, not by patients. This may produce a biased result of the patient-physician relationship. However, the leadership style was evaluated by the support staff of physicians. It was difficult to collect data from a different

evaluator. We recommend further studies to design other methods to verify these results.

In conclusion, this study found consideration leadership of physician is relative to the patient-physician relationship. It is also a key factor for teamwork satisfaction of physicians' assistants. We suggested the hospital could improve the patient-physician relationship by evaluating leadership behavior of physicians. The physicians with lower consideration leadership were especially found in the groups that were working on improving their patient-physician relationship and satisfaction of staff.

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6. References

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