


Why Does Patient–Physician Communication Matter? More Active Patients, Decreased Healthcare Use and Costs

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Abstract

Today, the increase in the use of emergency health services is one of the most discussed issues. Solutions are sought to reduce the use of unnecessary resources. One of these solutions can be patient–physician communication. Along with this approach, the relationships between patient–physician communication, use of emergency health services, and length of hospital stay was evaluated in this study. In addition, the effect of communication with the physician on the patient activity level was also examined. A total of 724 patients (F/M 397/327, mean age 33.36 ± 15.22 years) were included in this cross-sectional study. “Pearson Correlation Test” and “Simple Linear Regression Test” were used to analyze the data. High communication between physician and patient were associated with higher levels of patient activation ($r = 0.632$; $P < .01$). Likewise, a negative correlation was found between patient–physician communication and emergency healthcare use ($r = -0.712$, $P < .01$) and length of hospital stay ($r = -0.317$, $P < .01$). We think that the positive development of patient–physician communication may be an important way to reduce the use of emergency health services. The findings obtained regarding the length of hospital stay support this result. In addition, it was concluded that good communication with the physician may be an important factor in patients taking a more active role in healthcare. Further research is suggested to examine whether the observed associations are causal.

Keywords

patient–physician communication, patient activation, healthcare use, cost

Introduction

Effective patient–physician communication is a central clinical function and the resulting communication is the heart and art of medicine. It is also a central element in the provision of healthcare (1). This communication between patient and physician is defined as “the relationship where the patient deliberately seeks help from a physician and the physician accepts the individual as a patient and consents to him/her” (2). When we look at the change of this relationship over time, we see that the role of the physician decreases gradually and the role of the patient increases gradually. With this change, a “patient-oriented approach” has emerged today (3). Many factors can be effective in establishing a good communication. Examples of these factors include race and ethnic origin, values and beliefs, gender of physicians, cognitive characteristics, behaviors of physicians, patients’ social styles, health status, personal characteristics, and disease status (4). As can be seen, characteristics related to both the patient and the physician are of great importance in the

communication between patient and physician. In this study, we wanted to evaluate the level of communication between patient and physician from the perspective of the patient. The point that should be kept in mind while evaluating this study is that better communication with the patient may result in a faster response to the treatment and the healing process of patients while feeling emotionally better and trusting their physician can be accelerated (5,6). A meta-analysis by Birkhäuser et al (7) supported this point and a small-to-moderate correlation between trust in physician

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and health outcomes was found. Similarly, Maly, Leake et al (6) found that the interactive communication between the patient and the physician was effective in reducing the pain experienced by breast cancer patients. Hojat et al (8) emphasized that physicians with a high level of empathy could better control patients' health outcomes.

With the studies mentioned above, we tried to explain that the attitudes of the physician in the relationship with the patient have an effect on the health outcomes. In the present study, we wanted to investigate a different dimension of patient–physician communication. As stated by Casu et al (9), we think that the patients' application to emergency health services and length of hospital stay may decrease with better communication between patient and physician. The primary aim of this study was to determine whether there is an effect of patient–physician communication on the use of emergency health services. Similarly, hospitalization times were also compared in order to provide further evidence. Today, the increasing use of emergency health services has been the main factor in designing this research. However, we observed that there is not much research in the literature on patient–physician communication, which we think may be effective in reducing the increase in the use of health services. For example, in a study conducted in individuals over 65 years of age, Weiss and Blustein (10) reported that patients with a strong communication with the physician were less likely to be hospitalized. Similarly, in a study conducted by Hearld and Alexander (11) on chronic patients, it was stated that with positive improvement in patient–physician communication, the use of emergency health service could be reduced. The hypotheses formed in line with these findings are given below.

H₁: As the communication between patient and physician increases, the use of emergency health services decreases.

H₂: As the communication between the patient and the physician increases, the duration of hospitalization decreases.

The patient activation has been described as “with understanding one's role in the care process and having the knowledge, skill, and confidence to manage one's health and health care” (12). It is expected that patient activation is improved and sustained at higher levels as more active patients have a higher possibility to show health-improving behavior (13–15). It is believed that one of the factors improving the patient activity in this study is patient–physician communication. Some of the studies have revealed results supporting this approach. A study conducted by Alexander et al (14) on chronic patients has concluded that the interest of the physician on the patient affects the patient activity positively. A study conducted by Alegría et al (16) also showed similar results. It was found that physician–patient communication was associated with patient activity and it might have an effect on reducing inequity in healthcare services.

H₃: There is a positive relationship between physician–patient communication and patient activity.

Methods

A field survey method based on questionnaires was used in this study.

Patients

A total of 724 patients (F/M 397/327, mean age 33.36 ± 15.22 years), who were admitted to a training and research hospital for treatment, were included in this cross-sectional study. The study was conducted between December 23, 2019 and January 8, 2020. The study included individuals who were 18 years or older, volunteering to participate, who can speak Turkish (regardless of ethnicity), and who had received emergency healthcare or had been hospitalized at least once during the past year. Patients who stated that they had mental health problems were not included in the study. This sample group was chosen to evaluate the impact of patient–physician communication on healthcare utilization and indirectly on costs. Verbal informed consent was obtained from the patients for their anonymized information to be published in this article.

Evaluation of Patient–Physician Communication and Patient Activation

The scale used in the research consists of three parts. In the first part, six questions were asked to determine the personal characteristics of the patients. At this point, the patients were asked about their age, gender, whether they had health insurance, how many times they had been hospitalized in the past year, and how many times they applied to emergency health services in the last year. A total of 54.8% of the participants were female and 45.2% were male. The mean age was 33.36 ± 15.22 years. A total of 82.7% ($n=599$) of the patients stated that they had health insurance and 16% ($n=116$) stated that they did not. A total of 623 patients answered the question about the number of admissions to the emergency department in the past year and the average number of admissions was 3.68 ± 3.13 . Similarly, the duration of hospitalization in the past year was asked and it was determined that 283 patients responded to this question (mean duration of hospitalization: 2.62 ± 2.05).

In the second part, “Patient–Physician Communication Scale (PPC)” was used to determine the perceptions of patients about the communication (17). The scale is a Likert-type scale and patients were asked to assess how confident they were between 1 (not confident at all) and 5 (very confident) for each question asked. The scale consists of 10 expressions such as “I understand what my physician is saying,” “I have a physician who answers all my questions” and “I know what questions to ask the physician.” Turkish

validity and reliability study of the scale was conducted by Akbolat et al (18). In this study, the reliability coefficient (Cronbach's alpha value) of the scale was calculated as 0.90. In the exploratory factor analysis to test the validity, it was stated that the Kaiser–Meyer–Olkin (KMO) value was 0.899 and the total variance explained was 54.16%. In the present study, the reliability coefficient (Cronbach's alpha value) of the scale was found to be 0.85. In addition, the KMO value was found to be 0.853 and the total variance explained was 59.35%.

In the third chapter, the activity levels of patients were determined using "Patient Activity Scale" (PAM) (19). The scale is a Likert-type scale; the patients are asked to score the questions from 1 ("I totally agree") to 4 ("I do not agree at all"), depending on how much they agree with the statement. The validity and reliability of scale consisting of 13 questions were conducted (20). The scale includes expressions such as "When all is said and done, I am the person who is responsible for managing my health condition," "I am confident that I can follow through on medical treatments I need to do at home" and "I am confident I can figure out solutions when new situations or problems arise with my health condition." The reliability coefficient of the scale (Cronbach alpha value) was found to be 0.81 in the study. In the exploratory factor analysis performed to test the validity, the KMO value was 0.75 and total variance was 33.10%. In our study, reliability coefficient of the scale (Cronbach alpha value) was calculated as 0.82. In addition, the KMO value was 0.806 and total variance was 62.02%.

Statistical Analysis

SPSS 26.0 version was used to analyze the data (SPSS, Chicago, IL). The data is assumed to show normal distribution if the kurtosis and skewness values are between "−2" and "+2" (21). The kurtosis value was −0.911 and the skewness value was 1.942 for PPC. Kurtosis value of the patient activity scale was −0.914 and skewness value was 0.877. "Pearson Correlation Test" and "Simple Linear Regression Test" were used to analyze the data.

Results

In this section, it is evaluated whether hypotheses formulated within the scope of the research are accepted or not. The results of the correlation analysis are shown in Table 1. The increase in the communication between the patient and the physician was found to decrease admission (the number of visits) to emergency health services ($r = -0.712$; $P < .01$) and "Hypothesis 1" was accepted. In the same way, it was observed that the duration of hospitalization decreased with increasing communication between patient and physician ($r = -0.317$; $P < .01$) and "Hypothesis 2" was accepted. However, significant relationships were found between PPC ($r = 0.183$), PAM ($r = 0.127$), use of emergency health

services ($r = -0.311$), duration of hospitalization ($r = -0.197$), and health insurance ($P < .01$).

As can be seen in Table 1, a positive correlation was found between individuals' PPC and PAM ($r = 0.632$; $P < .01$) and "Hypothesis 3" was accepted. However, a model was established in which PPC was taken as independent variable and admissions to emergency health services was taken as the dependent variable (Table 2). It was found that the independent variables explained 50.7% of the total variance of the dependent variable.

In Table 2, the linear regression model established was found to be statistically significant ($P = .000$; $P < .05$). It was found that the most important factor affecting the use of emergency health services was patient–physician communication and the effect was negative.

When Table 3 is examined, it is observed that the level of patient–physician communication explains 39.9% of the total variance in the patient activation levels. The model was found to be statistically significant ($P = 0.000$, $P < .01$). When beta coefficients of the applied regression model are examined, it is understood that the level of patient–physician communication affects the patient activation level positively.

Discussion

The role of patient–physician communication in the efficient use of scarce resources was evaluated in this study. In addition, the effect of communication with the physician on the patient's activity level was also examined.

It is thought that the use of health services may decrease with the positive development of patient–physician communication (9,22). We have obtained a similar result in the study that was carried out in order to strengthen this approach. Our findings suggest that the positive development of patient–physician communication may be an important way to reduce the use of emergency health services. When the relevant literature is examined, it is seen that there are supportive studies even if they are limited. In a study conducted on chronic patients, it was emphasized that the use of emergency health services may decrease with the strengthening of patient–physician communication (11).

Another factor we focused on in order to determine the effect of the communication between the patient and the physician on the use of health services was the duration of hospitalization. When we look at the literature, it is seen that there are studies emphasizing a significant relationship between these two variables (9,10,22). Although our findings were not very strong, a negative correlation was found between patient–physician communication and the length of hospitalization.

When we look at the studies in the literature about the use of health services, one of the points emphasized is that unnecessary use will decrease and this may lead to a decrease in costs (10,12,23,24). Our research shows that with the positive development of patient–physician communication, the use of emergency healthcare services and hospitalization

Table 1. Investigation of the Relationship Between Emergency Health Services, Duration of Hospitalization, Health Insurance, PAM, and PPC.

		I	II	III	IV	V
PPC (I)	Pearson "r"	I				
	P					
	N					
Admission to Emergency Health Services (II)	Pearson "r"	−0.712**	I			
	P	.000				
	N	612				
Duration of Hospitalization (III)	Pearson "r"	−0.317**	0.256**	I		
	P	.000	.000			
	N	283	273			
PAM (IV)	Pearson "r"	0.632**	−0.502**	−0.305**	I	
	P	.000	.000	.000		
	N	706	623	283		
Health Insurance Status (V)	Pearson "r"	0.183**	−0.311**	−0.197**	0.127**	I
	P	.000	.000	.001	.001	
	N	698	615	280	715	

** $P < .01$.

Abbreviations: PPC, Patient–Physician Communication Scale; PAM, Patient Activity Scale.

periods may decrease. In this regard, our findings are consistent with the literature.

Improving patient activation, which is defined as the person's ability and willingness to manage health and health services, can be a key component in eliminating inequalities in healthcare quality (16). It is known that patient activity has an important role, especially for improving health outputs. Evidence is found in the literature showing that individuals having high patient activity are more satisfied with healthcare services (25–27), they feel more faithful (28–30) and their treatment progresses more positively (6–8). These evidences have shown that we can have important achievements by increasing patient activity level.

Depending on the circumstances and conditions of the country of residence, some factors may affect the use of emergency health services. When we look at the statistics in Turkey, we see that the use of health services has increased rapidly in recent years (31). When we look at the legal regulations made in this field, we see that there is no monetary contribution in emergency healthcare use (32). In this respect, patients were asked whether they had health insurance and the correlation between health insurance status

and use of emergency health services was investigated. The findings showed that individuals without health insurance used emergency health services more. These data indicate that legal regulations in the country and economic status of individuals may have an impact on the use of health services.

Another aim of the study was to examine whether patient–physician communication has an important effect regarding the strengthening of patient activation. It has been observed that there are limited findings showing that there is a positive significant relationship between these two factors in the literature (14,16). It was found that there has been a positive significant relationship between patient–physician communication and patient activity in the study. Our findings support the results in the literature.

Education can be used to improve the level of communication between the patient and the physician. There are evidences showing that short-term training given in institutions and undergraduate courses about communication might be an important factor for the physicians. For instance, in the meta-analysis conducted by Zolnierrek and DiMatteo (33) and systematic review conducted by Levinson et al (34), it has been stated that communication level of physicians with patients can be improved by training the

Table 2. The Impact of Patient–Physician Communication Scale (PPC) on the Use of Healthcare Services.

Model		Non-standardized coefficients		Standard coefficients		
		Beta	Standard Error	Beta	t	P
I	(Constant)	15.610	0.484		32.245	.000*
	PPC	−0.306	0.012	−0.712	−25.046	.000*
R: 0.712 ^a		R ² : 0.507		F: 627.306		P < .001

^aDependent variable: Use of Healthcare Services.

Table 3. The Impact of PPC on PAM.

Model		Non-Standardized Coefficients		Standard Coefficients		
		Beta	Standard Error	Beta	t	P
I	(Constant)	22.971	2.516		9.129	.000*
	PPC	1.363	0.063	0.632	21.625	.000*
R: 0.632 ^a		R ² : 0.399		F: 467.638		P < .001

^aDependent variable: PAM.

Abbreviations: PPC, Patient–Physician Communication Scale; PAM, Patient Activity Scale.

physicians. Furthermore, it is known that short-term training given to the patients strengthens the communication in terms of patients (35).

Conclusion

We believe that the positive development of patient–physician communication may be an important way to reduce the use of emergency health services. Our findings related to the duration of hospitalization support this result. Similarly, it could be noted that the attitude of a physician is very effective in order to make the patient more active in the treatment process. Physicians taking training for communication and developing their empathy skills can provide significant contribution on their communication with the patient. However, there are limited studies on unnecessary use of emergency health services. In this context, it is thought that the results obtained in the present study will contribute to the literature. In addition, the model established in this study should be expanded for future studies and the impact of different variables on the use of emergency health services should be discussed.

Limitations

There are some basic limitations in our study. First, the cross-sectional design precludes making causal inferences about the relationship between patient activation, patient physician communication, and healthcare use. Further research is suggested to examine whether the observed associations are causal. Secondly, because patients from other provinces of the country were not included in this study, our findings cannot be generalized to all patients in the country.

Declaration of Conflicting Interests

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Ethical Approval

Ethical approval to report this case was obtained from the Social Sciences and Humanities Ethics Committee of Kahramanmaraş Sütçü İmam University (ref. no. E47203).

Informed Consent

Verbal informed consent was obtained from the patient(s) for their anonymized information to be published in this article.

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