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THE ROLE OF PATIENT ACTIVATION AND PERSONAL FACTORS ON PATIENT-PHYSICIAN INTERACTION

Fedayi YAĞAR* , Mehveş TARIM**

* Research Assistant,Health Management Department,Kahramanmaraş Sütcü İmam University,Turkey

fedayiyagar@hotmail.com

ORCİD Number: 0000-0002-3436-6583

**Prof.Dr., Marmara University, Faculty of Health Sciences

mtarim@marmara.edu.tr

ORCID Number: 0000-0002-3726-9439

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Research Article

Abstract: This study examines whether the patient-physician interaction level differs according to some personal factors of the patients. 244 patients who came to the university hospital between certain dates to be treated constitute the sample of the study. In the research, a moderately significant positive relationship was found between patient-physician interaction and patient activity and educational status. It was observed that there was a negative and low level relationship between age variable and patient-physician interaction. It has been determined that the individuals with health insurance have better interaction with physicians. No significant difference was found between gender and income status and patient-physician interaction. As a result, this study shows that patient-physician interaction perceptions in healthcare settings vary according to personal patient characteristics. We think that these differences provide important evidence in designing policies to improve health systems at the individual application level.

Key Words: Patient Physician Interaction, Patient Activation, Age, Education Level, Health Insurance

1. Introduction

Interaction between the patient and the physician has been classified in several studies (Szasz and Hollender, 1956; Emanuel and Emanuel, 1992; Roter and Hall, 2006). When we look at these classifications, we see that there are two terminal points. We can state the first point as the situation where the doctor is dominant. This point defines “Activity-Passivity Model” (Szasz and Hollender, 1956), “Paternalistic Model” (Emanuel and Emanuel, 1992) and “Paternal Communication” (Roter and Hall, 2006). These approaches focus on information asymmetry between the patient and the physician. The patient plays a more passive role in the decision making process (Budych et al., 2012; Yağar, 2019). On the other extreme point, patient is expected to have a more active role. This point is defined as "Mutual Participation Model" (Szasz and Hollender, 1956), "Interpretive Model" (Emanuel and Emanuel, 1992) and "Consumer Communication" (Roter and Hall, 2006). When we look at the present, it can be said that the patient-centered approach, expressed as the second point, is preferred.

The interaction between the patient and the physician has three main purposes. These; creating a good interpersonal relationship, strengthening the exchange of information and involving patients in the decision making process (Berry, 2007). Particularly, it is very important to ensure the participation of patients in the process. Studies show that patients participating in the process are more satisfied (Jalil et al., 2017; Chen et al., 2008; Boissy et al., 2016) and feel more loyalty (Berry et al., 2008; Kuteyi et al., 2010; Razzaghi and Afshar, 2016). Likewise, it is known that patients who think that they participate in the decisions about their treatment have positive results in their health outcomes (such as reduction of pain felt or control of hemoglobin A1c) (Maly et al., 2004; Hojat et al., 2011; Birkhaur et al., 2017). The investigated studies make it clear why the interaction between the patient and the physician should be good. In this study, it is aimed to examine some variables (personal characteristics and activity levels of patients) that may be related to the level of interaction in order to improve the process.

2. Method

2.1. Study Population and Sampling

It is a cross-sectional study. Necessary permissions were obtained for the implementation of the study (27/11/2019-E.49354). The population of the study consists of the patients who came to the university hospital in Kahramanmaraş on 23.12.2019-08.01.2020 for treatment and stated that they have a chronic illness. KSU Training and Research Hospital has been serving since 30.10.2000. In 2013, it moved to its new building in KSÜ Avşar Campus, where 5 polyclinics, 9 dormitory blocks, conference hall and administrative building are located (KSU, 30.08.2020). The total number of beds in the hospital is 516. In terms of health personnel, a total of 690 people are working, including 242 nurses, 238 physicians, 207 other health personnel and 3 midwives (Kahramanmaraş Governorship, 30.08.2020).

The sample of the study consisted of 244 patients who agreed to participate in the study and stated that they were over 18 years old. The fact that the patients answered the questionnaire in the hospital environment can be expressed as an important matter in the study. This situation can affect the objective evaluation. However, evaluations of the patients were taken immediately after receiving the service. With this approach, it was thought that the true opinions of the patients could be revealed better. Likewise, in order to reduce the impact of the hospital environment, the evaluations of patients waiting mostly in the hospital garden were taken into account.

2.2. Data Collection Instruments

The scale used in the study consists of three parts. In the first part, there are questions in which the descriptive characteristics of the patients are determined. In this section, patients were asked about their ages, genders, educational levels, health insurance and income status. In the second part, "Patient Activation Measure (PAM)" developed by Hibbard et al. (2004) was used to determine the activity levels of the patients. The Turkish validity and reliability of the 13-question scale (statements were evaluated between 1 = strongly disagree and 4 = strongly agree) was made by Koşar and Besen (2019). In our study, the reliability coefficient of the scale (Cronbach Alpha) was found to be 0.864. In the third section, "Patient-Physician

Interaction Scale (PPI)" developed by Maly et al. (2004) was used to determine the interaction of patients with their physicians. The Turkish validity and reliability of the 10-question scale ((statements were evaluated between 1 = not sure at all and 5 = very sure) was made by Akbolat et al. (2016). In our study, the reliability coefficient of the scale (Cronbach Alpha) was found to be 0.882.

2.3. Data Analysis

SPSS 22.0 version was used to analyse the data. Non-parametric tests were used in the study since the data on patient-physician interaction did not show a normal distribution. "Mann-Whitney U Test" and "Spearman Correlation Test" were used to evaluate the data.

3. Results

Data on the descriptive characteristics of the participants are shown in Table 1. It was observed that approximately 59% of the patients were women, most of them had health insurance (83.6%) and the most university graduates (41.8%) participated in the study. In addition, it was determined that the average age of the participants was 41,09±17,18 and the average income was 2761,00-1947,58 TL (Turkish Lira).

Table 1. Descriptive Characteristics of the Participants

Participants	n	%	Participants	n	%
Gender			**Education Level**		
Female	143	58,6	Illiterate	2	0,8
Male	101	41,4	Literate	14	5,7
			Primary school	17	7,0
Health Insurance			Middle School	27	11,1
Yes	204	83,6	High school	63	25,8
No	39	16,0	University	102	41,8
			Master and PhD	19	7,8
Regular Sports			**Smoking**		
Yes	93	40,9	Yes	84	35,0
No	139	59,1	No	156	65,0

PPI levels of patients with health insurance (p=0,000; P<0,05), regular sports (p=0,000; P<0,05) and non-smoking patients (p=0,000; P<0,05) were found to be better (Table 2). On the other hand, it was observed that the interaction between the patient and the physician did not differ according to the gender variable.

Table 2. Examining the Relationship between Gender, Smoking, Sports, Health Assurance and PPI

		PPI		
		Mean Rank	U	P
Gender	Female (n=143)	119,49	6814,000	0,785
	Male (n=101)	121,97		
Health Insurance	Yes (n=200)	127,26	2449,000	0,000*
	No (n=39)	87,79		
Regular Sports	Yes (n=93)	151,54	3204,500	0,000*
	No (n=139)	93,05		
Smoking	Yes (n=84)	89,11	3915,500	0,000*
	No (n=156)	137,40		
P < 0,05				

Table 3 shows that there is a moderately significant positive relationship between patient-physician interaction and patient activity (r = 0.579; p <0.01) and educational level (r = 0.418; p <0.01). Likewise, there was a negative and low-level relationship between age variable and PPI (r = -0,156; p <0.05).

Table 3. Examining the Relationship between PAM, Income Status, Education Level, Age and PPI

		PAM	Income Status	Education Level	Age
PPI	Pearson "r"	0,579**	0,097	0,418**	-0,156*
	p	0,000	0,221	0,000	0,017
	N	240	161	240	233
**p<0,01; *p<0,05					

4. Discussion

This study examined the relationship between the patient's personal characteristics and activity levels and the patient-physician interaction level. The findings reveal that the level of interaction between the patient and the physician differs according to patient perceptions.

Individuals who think that they have the knowledge, skills and confidence in healthcare are expected to take more actions that improve their health. This shows that individuals have high levels of activity (Mosen et al., 2007). This level is desired especially in chronic diseases. Researches on the subject show that it positively affects both health outcomes (Parchman et al., 2010; Kim et al., 2016) and patient-physician relations (Alexander et al., 2012; Alegria et

al., 2009). In our research, a result supporting the literature was found. A positive correlation was found between patient activity and PPI ($r = 0.579$; $p < 0.01$).

It is known that elderly patients with high level of relationship with the physician are more stable in the treatment process (Maly et al., 2004). On the other hand, studies show that the communication of individuals with the physician decreases as they get older (Belcher et al., 2006; Liang et al., 2013). In our study, it was found that there is a low level of significant relationship between the age variable and PPI ($r = -0.166$; $p < 0.05$). Although the level of relationship we obtained is low, it seems to support the literature.

In our study, it was determined that the individuals with health insurance were higher in relation to the physician, while the income status and gender variables were not related to PPI. Research conducted by DeVoe et al. (2009) supports our conclusion about health insurance. In this study, it was emphasized that the interaction of individuals without insurance with physicians is not good. In the same study, the gender variable was also taken into consideration and it was stated that men communicate better than women. In the study conducted by Jensen et al. (2010), the income status variable was taken into consideration and it was stated that PPI levels of high income individuals are better.

In a study conducted in 31 countries by Aelbrecht et al. (2019) on approximately fifty thousand participants, it was emphasized that the level of PPI increases as the level of education increases. Likewise, in a study conducted by Lu and Zhang (2019), it was observed that individuals with high education level participated more in the decision making process with the physician. In our research, a similar result was found and a positive significant relationship was found between the education level and PPI.

In summary, we observed that young individuals, individuals with higher education levels, individuals with health insurance and individuals with high patient activity levels interact better with physicians. From the perspective of the patient, with the short-term trainings to be given, both the patients' level of activity can be increased and the elderly individuals can be better interacted. Researches provide evidence that education can play an important role at this point (Worrall et al., 1998; Guzman and Dino, 2020; Williams et al., 2005; Remmers et

al., 2009). On the other hand, the role of physicians in this interaction should not be forgotten. In this process, physicians should pay attention to the patient's opinions, try to communicate better and be able to empathize.

This study includes the patients who come to Kahramanmaraş Sütçü İmam University Training and Research Hospital for treatment between certain dates. Therefore, the results of the study reflect the views of the patients who applied to the hospital, and it is unlikely that these findings will be generalized to all patients. However, it can be said that the results obtained can provide important clues in revealing the relationship between variables. Finally, some suggestions have been made for future research. First, a larger sample can be studied to increase the generalization of the results. Second, a model can be created that takes into account the different personal characteristics of the patients. Third, studies that take patient and physician evaluations into account can be conducted to provide a more holistic perspective.

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