Reliability Analysis Of The Turkish Version Of The Patient Activation Measure

Hasta Aktivasyonu Ölçeğinin Türkçe Versiyonunun Güvenilirlik Analizi

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ABSTRACT

Aim: The aim of this study is to perform the internal reliability analysis of the "Patient Activation Measure", which was developed by Hibbard et al.

Methods: The study covered 32 female and 17 male patients that applied to the Family Medicine Clinic of the Medical School of Trakya University between the dates of 01 February-01 March 2016 and consented to be included in the study. The patients were randomly-selected and they were between the ages of 20-64. After the "Patient Activation Measure' was translated into Turkish language, a 20-Item socio-demographic survey and the 13-Item Patient Activation Measure were applied through face-to-face interviews.

Results: The average age of 32 female and 17 male patients was 36.8. The Cronbach's alpha of internal reliability coefficient of the measure was computed as 0.887. The patients' scores were between 0 and 100, and their mean score was computed as 52.1.

Conclusion: The results of the analysis performed with adults between the ages of 20-64 concluded that the internal reliability of the measure was sufficiently high.

Keywords: reliability, patient activation measure, patient participation, primary care

ÖZET

Amaç: Bu çalışmada Hibbard ve ark. tarafından geliştirilen "Patient Activation Measure" ölçeğinin iç güvenilirlik analizinin yapılması amaçlanmıştır.

Yöntem: Çalışmaya 01 Şubat-01 Mart 2016 tarihleri arasında Trakya Üniversitesi Tıp Fakültesi Aile Hekimliği Polikliniğine başvuran çalışmayı kabul eden rastgele seçilmiş 20-64 yaş arası 32 kadın 17 erkek hasta alınmıştır. "Patient Activation Measure' ölçeğinin çevirilerinin yapılması ardından 20 soruluk sosyodemografik form ve 13 soruluk Hasta Aktivasyonu Ölçeği yüz yüze görüşülerek uygulanmıştır.

Bulgular: 32 kadın 17 erkek hastanın yaş ortalaması 36,8 olarak saptandı. Ölçeğin iç güvenilirlik katsayısı Cronbach's alfa 0,887 bulundu. Katılımcıların 0-100 arasında hesaplanmış puanlarının ortalaması 52,1'dir.

Sonuç: Ölçeğin 20-64 yaş arası yetişkinlerde yapılan analiz sonucunda iç güvenilirliliğinin yeterince yüksek olduğu sonucuna varılmıştır.

Anahtar kelimeler: güvenilirlik, hasta aktivasyon ölçeği, hasta katılımı, birinci basamak

Introduction

Day after day, patients have to make choices that affect their lives, health conditions and care needs. The patients with chronic diseases often need to follow complex treatment regimes, monitor their own health status, maintain lifestyle changes, seek and decide on the professional care they need, and handle their problems on their own (1). The active patient, who was conceptualized by Hibbard et al. (1), is a person that knows how to manage his health condition, how to maintain his functionality and how to prevent his health from deteriorating. Active patients possess the knowledge and behavior enabling them to manage their health, cooperate with the health team, maintain their health and access proper and high-quality care (2). Primary healthcare is where patients actively connect with providers, start establishing long-term relations

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and rationally manage their health. Their experiences should increase their confidence and abilities in their self-management. Increasing patients' confidence and abilities for self-care is an important problem of primary care (3). The differences between patients and physicians in terms of status, knowledge and power are quite deep-rooted in the medical culture, and the roles of passive patient and paternalistic physician become conventional in medical care. However, this conventional role has become defunct for the active patient and physician. It has been replaced by empowered patients who are actively involved in health care and whose activation is supported and encouraged by physicians towards cooperation, partnership and equality (4). Supporting patients in becoming active in their health management is an important task for the family physicians. In their clinical practices, the family physicians need specific and practical measurement tools in order to evaluate the patient activation. The Patient Activation Measure (PAM) is a reliable and valid tool that measures patient activation (5). In 2004, Hibbard et al. (6) developed the 22-item the "Patient Activation Measure" and the 13-item short form. The PAM was formulated in two versions targeting people with or without chronic disease, with few semantic differences (6). Patient activation has four levels. At Level 1, the individual cannot yet understand that he must be active in his health matters. He lacks confidence in managing his own health. At Level 2, the individual has a lack of information related to his basic condition (such as treatment, self-care). He has a few experiences and successes in terms of behaviors. He considers his physicians in charge and trusts him. At Level 3, the individual has the key facts regarding his condition and treatment. He might lack confidence and skills in terms of getting into action. At Level 4, the individual may change his behaviors but may struggle in maintaining behavior in times of stress or change (7).

The cross-sectional studies that have been conducted since 2004 found that patient activation was related to healthy behaviors (e.g. physical activity, eating fruits and vegetables), appropriate use of health care system (e.g. having a regular source of care, not delaying care), behaviors of consuming care (e.g. researching physician qualifications, preparing a list of questions for a doctor visit), chronic care self-management (e.g. eye examinations for people with diabetes, keeping diary of blood pressure readings), and control of chronic illness (e.g. HbA1c control, fewer hospitalizations) (8).

Individuals with low levels of activation are more likely to feel overwhelmed with the task of managing their health, have little confidence in their ability to have a positive impact on their health, misunderstand their role in the care process, have limited problem-solving skills, have had substantial experience of failing to manage their health, and have become passive in managing their health, and say that they would rather not think about their health (9).

Multiple international studies have demonstrated that people who score higher on the PAM are significantly more likely than people who score lower to engage in preventive behavior such as having regular check-ups, screenings, and immunizations. Highly activated people are also significantly more likely to engage in healthy behavior such as eating a healthy diet and getting regular exercise. Highly activated patients are two or more times as likely as those with low activation levels to prepare questions for a visit to the doctor; to know about treatment guidelines for their condition; and to seek out health information, including comparisons of the quality of health care providers. They have lower rates of hospitalizations and emergency department visits (10).

It was found that the interventions that develop and support patients' problem-solving skills increased patient activation and improved health outcomes (11). In this study, our goal was to perform the reliability analysis of the Turkish version of the PAM, which is used in primary care regardless of having chronic disease. In this way, the individual's activation level can be found and developmental intervention can be performed.

Methods

The study covered 32 female and 17 male patients that applied to the Family Medicine Clinic of the Medical School of Trakya University between the dates of 01 February-01 March 2016 and consented

to be included in the study. The patients were randomly-selected, and they were between the ages of 20-64. A socio- demographic survey and the 13-Item PAM were applied through face-to-face interviews were applied to the patients. The data was evaluated by using the SPSS program, and Cronbach's alpha reliability analysis was performed.

"Patient Activation Measure" is a Guttman-like scale, which has 13 questions and measures patient activation. Its reliability and validation was studied in the Netherlands, Denmark, Spain, Germany, and Israel. After the English-Turkish and Turkish-English translations were made, it was applied to the patients through face-to-face interviews along with a socio-demographic survey.

Results

Thirty two participants were female and 17 participants were male. The average age was 36.8. Thirty five participants were married (71.4%), 12 participants were single (24.5%), 1 participant was divorced (2%) and 1 participant was a widow (2%). 7 participants were elementary school graduates (14.3%), 2 participants were elementary/secondary school graduates (4.1%), 13 participants were high school graduates (26.5%), 8 participants were college graduates 16.3(%), 17 participants were university graduates (34.7%), and 2 participants had master's degree (4.1%). While 27 participants never smoked (56.3%), 3 participants used to smoke but quitted (6.3%), and 18 participants smoked (37.5%). The average monthly household income of the participants was 3171.4 TL. Their mean BMI was 25.39. Thirty seven participants did not consume alcohol (77.1%). Among the 11 participants who consumed alcohol (22.9%), 2 of them were in the risk group according to the WHO and 9 of them were not in the risk group. 41 participants were not on a diet (85.4%). 1 participant was following a diet prescribed by a dietician (2.1%). 6 participants were dieting on their own (12.5%). 10 participants accessed health information via internet (20.4%), and 38 participants accessed health information by consulting a physician (77.6%). When we looked at their reasons for applying to health institutions, we saw that getting a prescription was the main one with 34% (Table 1).

Table 1. Most frequent reasons for applying to health institutions

	n	%	Valid %	Cumulative %
Getting a prescription	16	32.7	34.0	34.0
Acute conditions	13	26.5	27.7	61.7
Chronic disease follow-up	3	6.1	6.4	68.1
Preventive healthcare	5	10.2	10.6	78.7
Other	10	20.4	21.3	100.0
Total	47	95.9	100.0	
Lost data	2	4.1		
Total	49	100,0		

The PAM scores were evaluated on a 0-100 scale, and the mean score was 52.1. The reliability analysis of the 13-item PAM found that the Cronbach's alpha value was 0.887. The means and standard deviations of the PAM scores are indicated in Table 2.

Table 2. The means and standard deviations of the PAM scores

	Mean	Standard deviation	N
measure_question	3.06	0,775	49
measure_question2	3.08	0,702	49
measure_question3	2.88	0,696	49
measure_question4	2.92	0,786	49
measure_question5	3.08	0,812	49
measure_question6	2.18	0,972	49
measure_question7	3.04	0,706	49
measure_question8	2.88	0,666	49
measure_question9	2.57	0,979	49
measure_question0	2.73	0,861	49
measure_question1	2.49	0,869	49
measure_question2	2.51	0,869	49
measure_question3	2.37	0,859	49

There was no significant difference when patient activation levels were compared to: gender, age, education status, marital status, monthly household income, BMI, smoking, alcohol consumption, reason for applying to health institutions ($p>0.005$).

Discussion

The Patient Activation Measure (PAM) was developed in 2004 by Hibbard et al. (1), and the short form was developed in 2005 (7). In 2012, a study addressed the reliability and validation of the Dutch version of the PAM in the Netherlands and found that Cronbach's alpha value was 0.88, and calculated the mean score as 61.3 (12). In 2009, a study covering a patient group with dysglycaemia in Denmark found that Cronbach's alpha value was 0.89 (6). In 2014, an Israeli study focused on the psychometric properties of the Hebrew translation of the PAM and found that Cronbach's alpha value was 0.77. This study included 203 participants between the ages of 25-80, had no exclusion criteria, and calculated the mean score as 70.7 (13). In 2013, a study on the validation of the German version found that the Cronbach's alpha value was 0.84 and calculated the mean score as 68.3 (14). In 2014, a study conducted in South Korea in 270 patients with osteoarthritis calculated the Cronbach's alpha value as 0.88 (15). In our study, the PAM scores were calculated on a scale of 0-100, and the mean score was 52.1. The internal reliability analysis indicated that the Cronbach's alpha value was 0.887. When this value is compared to the other reliability analyses conducted in other populations, it is seen that they are close. The measure was formulated for people with chronic diseases, and it can be applied to people without chronic disease with few semantic differences. Our study aimed for its application to all people regardless of having chronic diseases. Therefore, the patients between the ages of 20-64 that applied to our clinic were randomly selected.

The study by Hibbard et al. (16) in 2008 indicated that people who are younger, more educated and have higher incomes tend to be more activated. Our study did not find a significant relation between patient activation and the person's age, gender and income.

The study by Greene et al. (8) in 2011 found a significant relation between patient activation level and using preventive care such as cancer screening, being obese or smoking. In our study, the ratio of using preventive care was 10.6% and there was no significant relation with patient activation level. According to our study, there was no significant relation between patient activation levels and the person's BMI or smoking.

Conclusion

Our study conducted the internal reliability analysis of the Turkish version of the "Patient Activation Measure" and found that the Cronbach's alpha coefficient was 0.887. The results of our study were similar to results of the reliability analyses performed in different societies. Patient Activation Measure, which is a tool to be used for measuring patient activation levels, can shed light into new studies.

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