The Role Of Patient Activation Level In Improving Health Behaviors: A Cross-Sectional Study

Sağlık Davranışlarını İyileştirmede Hasta Aktiflik Düzeyinin Rolü: Kesitsel Bir Çalışma

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ABSTRACT

The importance of health behaviors was once again clearly understood during the COVID-19 pandemic. Individuals who are overweight, smokers and do not exercise regularly were affected much more negatively by the epidemic. In this process, there is a need to identify approaches that can improve health behaviors. In this study, we evaluated the patient activation measure (PAM), which we think may be one of these approaches and we examined PAM's association with health behaviors. The convenience sampling method were used. 402 patients who came to the university hospital in Kahramanmaraş, Turkey formed the sample of the study. Descriptive statistics and t-test technique were used. Patients with high PAM scores were significantly more likely to perform more exercise and use less smoked, compared to patients with the lowest PAM scores. Similarly, it was found that individuals with high patient activation weighed less. In the light of these data, it can be stated that increasing patient activation should be considered as very significant political instrument by countries for improving the well-being of individuals. Preparing leaflets and educational videos for patients could have a significant impact to increase the level of activation.

Key words: Patient activation, health behaviors, smoking, exercise, obesity

ÖZET

COVID-19 salgını ile birlikte bireylerin sağlık davranışlarının önemi bir kez daha anlaşılmıştır. Aşırı kilolu, sigara içen ve düzenli egzersiz yapmayan bireylerin salgından daha çok olumsuz etkilendiği bilinmektedir. Bu süreçte sağlık davranışlarını iyileştirebilecek yaklaşımların belirlenmesine ihtiyaç olduğu görülmektedir. Bu çalışmada bu yaklaşımlardan biri olabileceğini düşündüğümüz Hasta Aktiflik Düzeyini (HAD) ele aldık ve HAD'ın sağlık davranışları ile ilişkisini inceledik. Kolayda örnekleme yöntemi kullanılmıştır. Araştırmanın örneklemini Kahramanmaraş ilindeki üniversite hastanesine gelen 402 hasta oluşturmuştur. Tanımlayıcı istatistikler ve t-testi tekniği kullanılmıştır. HAD skorları yüksek olan hastaların, en düşük HAD skorlarına sahip hastalara kıyasla, daha fazla egzersiz yapma ve daha az sigara kullanma olasılıkları anlamlı derecede daha yüksekti. Benzer şekilde, hasta aktivasyonu yüksek olan bireylerin daha az kilolu olduğu bulundu. Bu veriler ışığında, hasta aktiflik düzeyinin artırılmasının, bireylerin iyilik hallerinin iyileştirilmesi için ülkeler tarafından çok önemli bir politik araç olarak görülmesi gerektiği ifade edilebilir. Hastalar için broşürler ve eğitim videoları hazırlamak, aktiflik düzeyini artırmak için önemli bir etkiye sahip olabilir.

Anahtar Kelimeler: Hasta aktifliği, sağlık davranışları, sigara, egzersiz yapma, obezite

1. INTRODUCTION

Activated patients believe that they have an important role in their healthcare and that they possess the knowledge, skills and confidence to fulfil this role. Since activated patients are very likely to engage in behaviors improving health, it is expected to increase and maintain patient activation (Greene et al., 2015; Hibbard et al., 2004; Mosen et al., 2007). There are four stages in patient activation: People do not grasp that they must play an active role in their own health and they may still believe that they can just be a passive recipient of care in the first stage. People may be deprived of the basic facts or have not understood the facts from a wide perspective including their health or recommended health regimens in the second stage. People have the key facts and are beginning to take action but may not have sufficient confidence and skill to support new behaviors in the third stage. People have adopted new behaviors but may not be able to maintain them in the face of stress or health crises in the fourth stage (Hibbard et al., 2007).

Today, countries have been increasingly focusing on the role of the patient in health management. Since patients play such an important role in identifying the need for care and the outcomes of this care, there has been a growing awareness on the need for patients to take more active and effective role in managing their own health and healthcare services (Greene & Hibbard, 2012; Greene et al., 2015). An important health policy-related question is: what is needed for consumers to become effective and competent managers of their own health and healthcare? What kind of skills, information, beliefs and motivation are required to be an "activated" or a more effective healthcare manager? These are important questions considering that we aim to improve the healthcare process and care outcomes (Hibbard et al., 2004). At this point, due to the fact that patient self-management is so critical to health outcomes, measuring activation and using the information to develop processes supporting

patient self-management could be an important key for improving the outcomes of care (Hibbard et al., 2007). It was noted that patients with a high level of activation were more likely to exhibit self-management behaviors, to use self-management services and to report high medication adherence than patients with the lowest scores. This population was found to be 10 times more likely to report high patient satisfaction scores and 5 times more likely to report high quality of life scores (Mosen et al., 2007). Similarly, there are results showing that individuals with high activation followed a well-balanced diet (Harvey et al., 2012), smoked less and consumed less alcohol (Kim et al., 2016), exercised more regularly and consumed more fruits and vegetables (Hibbard et al., 2004). Accordingly, we expect to see a significant relationship between patient activation levels and health behaviors.

H1: There is a significant difference between patient activation and health behaviors.

2. METHOD

2.1. Patients

This is a cross-sectional study. 402 patients (F/M 235/167, mean age 41,43±17,99) who were admitted to training and research hospital for treatment were included in this study. The convenience sampling method were used. Data were collected from September 27 to October 15, 2021. Individuals over the age of 18 were included in the study on a voluntary basis.

2.2. Evaluation of Patient Activation

The 13-item Patient Activation Measure (PAM) developed by Hibbard et al. (2005) was used to identify patient activation. How much participants agreed with the statements was determined by using a Likerttype scale (between 1=totally disagree and 4=totally agree). Turkish validity and reliability study of the scale was conducted by Kosar and Besen (2019). The Cronbach's Alpha level of the study was found to be 0.870. In terms of validity, the Kaiser-Meyer-Olkin (KMO) value was found to be 0.798 and the total variance to be 64.16%. These findings show that the scale is reliable and valid.

2.3. Statistical Analysis

SPSS version 26.0 (SPSS Inc., Chicago, IL, USA) was used for data analysis. The scores for patient activation showed normal distributions. Descriptive statistics, including mean, standard deviations, frequency and percentage, were used to analyze the demographic characteristics, health behaviors and patient activation. The t-test was used to examine the relationships between health behaviors and patient activation. The level of significance was .05.

3. RESULTS

Patients were asked some questions to evaluate personal features (Table 1). The mean age of participants was 41.43±17.99. There were more female participants (58.5%) than male participants (41.5%). It was found that 64.9% of the participants did not smoke and 57.2% did not exercise regularly. Similarly, the body mass indexes of participants were calculated by measuring their weight and height and 56.0% of them was found to be "overweight." On the other hand, in this section, whether there was a relationship between the level of patient activation and health behaviors was examined. The relationship between patient activation and health behaviors were presented in Table 2.

Table 1. Socio-Demographic Characteristics of Respondents

	N	%
Gender (n=402)		
Female	235	58.5
Male	167	41.5
Marital Status (n=402)		
Married	252	62.7
Single (Unmarried, Divorced/Widowed)	150	37.3
Health Insurance (n=402)		
Yes	384	95.5
No	18	4.5
Smoking (n=402)		
Yes	141	35.1
No	261	64.9
Regular Exercise (n=388)		
Yes	158	40.7
No	230	59.3

Body Mass Index (BMI) (n=386)		
25 under	161	41.7
25 and above	225	58.3
	Mean	**Standard Deviation**
Age	41.43	17.99
Patient Activation	82.30	16.53

It was found out that individuals with a higher level of patient activation, exercised more regularly (p=0.000; p < 0,05) and smoked less (p=0.000; p < 0,05). On the other hand, according to the Ministry of Health, people with a body mass index of 25 or more are considered overweight. Table 2 showed that individuals with lower patient activation were more overweight (p=0.010; p < 0,05). Based on these results, the Hypothesis 1: "There is a significant difference between patient activation and healthy living behaviors" was accepted.

Table 2. An Analysis on the Relationships between Patient Activation and Health Behaviors

Health Behaviors		Patient Activation			
		Average	Standard Deviation	T	p
Regular Exercising	Yes (n=158)	94.59	5.66	15.226	0.000*
	No (n=230)	73.75	16.55		
Smoking	Yes (n=141)	69.62	20.02	-11.060	0.000*
	No (n=261)	89.15	8.45		
Body Mass Index (BMI)	25 under (n=161)	84.63	15.23	2.586	0.010*
	25 and above (n=225)	80.20	17.52		
* p < .05					

4. DISCUSSION

The aim was to address whether there was a significant relationship between patient activation and health behaviors (smoking, a well-balanced diet and obesity) in the study.

One major health problem that is adversely affecting the health of the world population is obesity. It is stated that it has taken the place of malnutrition and communicable diseases (Kopelman, 2000). The World Health Organization lists obesity as one of the 10 most high-risk diseases (WHO, 2000). According to the data of the Turkish Statistical Institute, there is a decrease in the rate of obesity in Turkey (Balci & Küçükkendİrci, 2019). In our study, we measured patients' height and weight and calculated their body mass indexes. Based on the calculation of the Ministry of Health, we considered a person with a body mass index of 25 or more as overweight. In the present study, it was found that individuals with a low patient activation were more overweight. These findings are also supported by other studies in the literature (Greene & Hibbard, 2012; Harvey et al., 2012).

Smoking is one of the most preventable causes of death and disease in the world. Causing the death of 100 million people in the 20th century, smoking still kills more than 5 million people annually. In average, a non-smoker lives 13 to 14 years longer than a smoker. Approximately 80% of smokers live in low and middle income countries, where tobacco-related disease and mortality is at the highest level (Isralowitz et al., 2016). It is estimated that there are still around 20 million tobacco addicts in Turkey and that 100 to 150 thousand people lose their lives every year due to diseases associated with smoking (Buturak et al., 2016). In the light of these data, whether patient activation had a significant impact on reducing tobacco use was examined in our study. It was concluded that individuals with a high level of patient activation smoked less. Kim et al. (2016) also found a similar result in their study. Our results were also found to be in consistency with the literature.

Regular physical activity is of vital importance for physical and mental well-being and health. It helps to improve one's overall health and fitness, lose weight, reduce health risk and promote good mental health (Sarkar & Sil, 2017). Regarding regular exercising in Turkey, we can see that many sports facilities have been established in recent years. However the number of people exercising is not high as expected (Kaya et al., 2018). Whether patient activation was associated with regular exercising was examined in our study. It was concluded that individuals with high patient activation exercised more regularly. In their study, Hibbard et al. (2004) also obtained similar results. Therefore, it could be noted that our findings support the relevant literature.

There are many studies in the literature suggesting that the patient activation approach, which can be considered as an important political instrument to improve health statuses of individuals can be adapted and developed (Alegría et al., 2008; Frosch et al., 2010; Hibbard et al., 2009; Hibbard et al., 2007). For example, in a study on patients with diabetes, the aim was to increase activation by showing patients videos. As a result of the study, patients become more activated in their communication with their physicians and participated in the care process more actively, improving health outcomes as well (Williams et al., 2005).

Another method that can be used to increase patient activation is preparing question booklets for patients. In a study conducted by the Right Question Institute in the US, patients, who referred to primary healthcare services, were handed over a question booklet before they see the physician to increase patient activation. This approach was found to be beneficial in increasing patient activation and improving communication with physicians (Deen et al., 2011). In another study, the aim was to increase patient activation by using call centers. In this project called "usual coaching", patients were grouped based on their levels of activation and individuals in the tailored coaching group had significantly improved activation scores, improved clinical indicators, and decreased hospitalization and the use of Emergency Department (Harvey et al., 2012).

5. CONCLUSION

It was concluded that individuals with higher patient activation engaged more in regular exercise, smoked less and maintained a well-balanced diet based on their body mass indexes. According to the results obtained, we were able to highlight the potential role of patient activation in terms of improving health behaviors. In the light of these data, it can be stated that increasing patient activation should be considered as very significant political instrument by countries for improving the well-being of individuals.

REFERENCES

Alegría, M., Polo, A., Gao, S., Santana, L., Rothstein, D., Jimenez, A., Hunter, M. L., Mendieta, F., Oddo, V., & Normand, S.-L. (2008). "Evaluation of a Patient Activation and Empowerment Intervention in Mental Healthcare", Medical Care, 46(3):247-256. https://doi.org/10.1097/MLR.0b013e318158af52

Balci, H., & Küçükkendİrci, H. (2019). "Obezite ve Obezite Cerrahisinde Beslenme", Türk Bilimsel Derlemeler Dergisi, 12(2):45-50. https://www.derleme.gen.tr/index.php/derleme/article/view/333

Buturak, Ş. V., Günal, N., Özçiçek, G., Rezaki, H. Ö., Koçak, O. M., Kırıcı, A. G., Kabalcı, M., Dural, K., & Özpolat, B. (2016). "Sigara Bırakma Polikliniğine Başvuran Hastaların Sosyodemografik Özellikleri ve Sigara Bağımlılık Şiddetleri", Turkish Journal of Clinics and Laboratory, 7(1):72-76. https://doi.org/10.18663/tjcl.05665

Deen, D., Lu, W.-H., Rothstein, D., Santana, L., & Gold, M. R. (2011). "Asking Questions: The Effect of a Brief Intervention in Community Health Centers on Patient Activation", Patient Education and Counseling, 84(2):257-260. https://doi.org/10.1016/j.pec.2010.07.026

Frosch, D. L., Rincon, D., Ochoa, S., & Mangione, C. M. (2010). "Activating Seniors to Improve Chronic Disease Care: Results from a Pilot Intervention Study", Journal of the American Geriatrics Society, 58(8):1496-1503. https://doi.org/10.1111/j.1532-5415.2010.02980.x

Greene, J., & Hibbard, J. H. (2012). "Why Does Patient Activation Matter? An Examination of the Relationships between Patient Activation and Health-Related Outcomes", Journal of General Internal Medicine, 27(5):520-526. https://doi.org/10.1007/s11606-011-1931-2

Greene, J., Hibbard, J. H., Sacks, R., Overton, V., & Parrotta, C. D. (2015). "When Patient Activation Levels Change, Health Outcomes and Costs Change, Too", Health Affairs, 34(3):431-437. https://doi.org/10.1377/hlthaff.2014.0452

Harvey, L., Fowles, J. B., Xi, M., & Terry, P. (2012). "When Activation Changes, What Else Changes? The Relationship between Change in Patient Activation Measure (PAM) and Employees' Health Status and Health Behaviors", Patient Education and Counseling, 88(2):338-343. https://doi.org/10.1016/j.pec.2012.02.005

Hibbard, J. H., Greene, J., & Tusler, M. (2009). "Improving the Outcomes of Disease Management by Tailoring Care to the Patient's Level of Activation", The American Journal of Managed Care, 15(6):353-360. https://europepmc.org/article/med/19514801

Hibbard, J. H., Mahoney, E. R., Stock, R., & Tusler, M. (2007). "Do Increases in Patient Activation Result in Improved Self-Management Behaviors?", Health Services Research, 42(4):1443-1463. https://doi.org/10.1111/j.1475- 6773.2006.00669.x

Hibbard, J. H., Mahoney, E. R., Stockard, J., & Tusler, M. (2005). "Development and Testing of a Short Form of the Patient Activation Measure", Health Services Research, 40(6p1):1918-1930. https://doi.org/10.1111/j.1475- 6773.2005.00438.x

Hibbard, J. H., Stockard, J., Mahoney, E. R., & Tusler, M. (2004). "Development of the Patient Activation Measure (PAM): Conceptualizing and Measuring Activation in Patients and Consumers", Health Services Research, 39(4p1):1005-1026. https://doi.org/10.1111/j.1475-6773.2004.00269.x

Isralowitz, R., Afifi, M., Reznik, A., & Sussman, S. (2016). Cigarette Smoking Among Youth: A Regional Health Problem. In Mental Health and Addiction Care in the Middle East (pp. 93-107). Springer.

Kaya, F., Şimşek, B., & Erzeybek, M. S. (2018). "Güneydoğu Anadolu'da Genç Nüfusun Spor Yapma ve Fiziksel Aktiviteye Katılma Eğilimleri: Batman İl Örneği, Türkiye", Spor Eğitim Dergisi, 2(1):21-28. https://dergipark.org.tr/en/pub/seder/issue/35879/396841

Kim, J. Y., Wineinger, N. E., & Steinhubl, S. R. (2016). "The Influence of Wireless Self-Monitoring Program on the Relationship between Patient Activation and Health Behaviors, Medication Adherence, and Blood Pressure Levels in Hypertensive Patients: A Substudy of a Randomized Controlled Trial", Journal of Medical Internet research, 18(6):1-14. https://doi.org/10.2196/jmir.5429

Kopelman, P. G. (2000). "Obesity As a Medical Problem", Nature, 404(6778):635-643. https://doi.org/10.1038/35007508

Kosar, C., & Besen, D. B. (2019). "Adaptation of A Patient Activatıon Measure (PAM) into Turkish: Reliability and Validity Test", African Health Sciences, 19(1):1811-1820. https://doi.org/10.4314/ahs.v19i1.58

Mosen, D. M., Schmittdiel, J., Hibbard, J., Sobel, D., Remmers, C., & Bellows, J. (2007). "Is patient Activation Associated with Outcomes of Care for Adults with Chronic Conditions?", The Journal of Ambulatory Care Management, 30(1):21-29. https://doi.org/10.1097/00004479-200701000-0005

Sarkar, J., & Sil, P. (2017). "Benefit of Exercises on Health: Study of Health Status of Young Adult Women Participating Exercise Regularly", Nutrition and Physical Education, 3(2):342-344. https://www.journalofsports.com/pdf/2017/vol2issue1/PartF/2-1-81-323.pdf

WHO (2000). Obesity : preventing and managing the global epidemic : report of a WHO consultation. World Health Organization. https://apps.who.int/iris/handle/10665/42330

Williams, G. C., McGregor, H., Zeldman, A., Freedman, Z. R., Deci, E. L., & Elder, D. (2005). "Promoting Glycemic Control through Diabetes Self-Management: Evaluating a Patient Activation Intervention", Patient Education and Counseling, 56(1):28-34. https://doi.org/10.1016/j.pec.2003.11.008