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THE EFFECT OF HEALTH CARE USERS' CONSUMER BEHAVIORS AND INTERNET HEALTH INFORMATION SEARCHES ON PATIENT EMPOWERMENT LEVEL

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ABSTRACT

This study aims to examine the effect of consumer behaviors and health-related internet use on the level of patient empowerment during the use of health services and the mediating role of consumers' e-health literacy levels in this relationship. The population consists of individuals with chronic diseases over the age of 18 living in Turkey. As a sample, 342 people were reached, but 297 questionnaires were included in the analysis after data control was ensured. The questionnaire consists of a consumer scale, a patient empowerment scale, an e-health literacy scale, and questions about searching for health information online. The necessary analysis was conducted using structural equation modeling. It has been determined that participatory consumer behavior exhibited during the use of health services has a positive effect on patient empowerment, while avoidance consumer behavior has a negative impact. In addition, because of the mediation analysis; The study concludes that e-health literacy has a mediating effect on the effect of health-related internet use on the level of patient empowerment. While the direct impact of health-related internet use on patient empowerment was negative, this effect was positive through e-health literacy. As a result, consumers who actively participate in the health system and have e-health literacy and use the internet to search for health information have high levels of patient empowerment.

Keywords: Consumer Behavior, Patient Empowerment, E-Health Literacy, Searching for Health Information on the Internet

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SAĞLIK HİZMETİ KULLANICILARININ TÜKETİCİ DAVRANIŞLARI VE İNTERNETTEN SAĞLIK BİLGİSİ ARAMALARININ HASTA GÜÇLENDİRME DÜZEYİNE ETKİSİ

ÖZ

Çalışmanın amacı, sağlık hizmeti kullanımı sırasında tüketicilerin sergiledikleri tüketici davranışlarının ve sağlıkla ilgili internet kullanımlarının hasta güçlendirme düzeyi üzerindeki etkisini ve bu ilişkide tüketicilerin e-sağlık okuryazarlığı düzeylerinin aracılık rolünü incelemektir. Evreni Türkiye'de yaşayan 18 yaş üzeri kronik hastalığı olan bireyler oluşturmaktadır. Örneklem olarak 342 kişiye ulaşılmış ancak veri kontrolü sağlandıktan sonra 297 anket analize dahil edilmiştir. Veri toplamak için çevrimiçi anket yöntemi kullanılmıştır. Anket formu, tüketici skalası, hasta güçlendirme ölçeği, e-sağlık okuryazarlık ölçeği ve internetten sağlık bilgisi arama ile ilgili sorulardan oluşmaktadır. Yapısal eşitlik modellemesi kullanılarak gerekli analiz yapılmıştır. Analiz sonucunda; sağlık hizmeti kullanımı sırasında sergilenen katılımcı tüketici davranışının hasta güçlendirme üzerinde pozitif, çekingen tüketici davranışının ise negatif etkisi olduğu tespit edilmiştir. Ayrıca yapılan aracılık analizleri sonucunda; sağlıkla ilgili internet kullanımının hasta güçlendirme düzeyi üzerindeki etkisinde e-sağlık okuryazarlığının aracılık etkisi olduğu sonucuna ulaşılmıştır. Sağlıkla ilgili internet kullanımının hasta güçlendirmeye doğrudan etkisi negatif iken, e-sağlık okuryazarlığı aracılığıyla bu etki pozitif olmuştur. Sonuç olarak, sağlık sistemine pasif olmadan aktif bir şekilde dahil olan hastaların hasta güçlenme düzeyleri daha yüksektir. Ayrıca güçlenmek için interneti kullanan hastaların, e- sağlık okuryazarlık düzeyleri yüksek ise hasta güçlenme düzeyleri artmaktadır. E- sağlık okuryazarlığı düşük olup internetten sağlık bilgisi arayan hastalar güçlenmeden ziyade sağlıklarını olumsuz etkileyecek davranışlar sergileyebilmektedir.

Anahtar Kelimeler: Tüketici Davranışı, Hasta Güçlendirme, E-Sağlık Okuryazarlığı, İnternetten Sağlık Bilgisi Arama

INTRODUCTION

The use of health services is a complex process that requires consumers to exhibit a set of behaviors when making health-related decisions. These behaviors aim at the effective use of health services and improving health outcomes. In recent years, examining the factors affecting the behavior of health care consumers has become an important research area. In this context, the effects of health-related internet use and consumer behaviors on the level of patient empowerment are questioned.

The aim of patient empowerment is to encourage self-management to maximize the health of the individual (Funnel et al., 1991). It is known that chronic diseases seriously affect people and economic factors and that the share of deaths due to these diseases in total mortality rates is high (Turkey Household Health Survey, 2017). By learning to self-manage, people with chronic diseases are more likely to integrate into society and the workforce (Lancet, 2012). Programs on chronic disease self-management support individuals to gain confidence and skills to recognize warning symptoms, take medication and decide on the most appropriate treatment.

The widespread use of the internet in the field of health has facilitated individuals' access to health-related information and resources and has transformed health services. The Internet provides access to a broad repository of health-related information, supporting consumers to obtain information and make decisions about health care. An important aspect of health-related internet use is that it can contribute to the patient empowerment process. Patient empowerment is an approach that aims for individuals to actively participate in health decisions and manage their health status. The Internet can support patient empowerment by providing opportunities for individuals to search for health-related information, understand their own health status, evaluate treatment options, and communicate with healthcare professionals.

The development of information access and communication technology, people's awareness, the increase in chronic diseases and the increase in people's expectations have caused paradigm shifts both in general social phenomena and in health, and with this paradigm shift, individuals have started to take a more active role in their diseases (Yıldırım, 2015a). The increase in life expectancy also increases people's responsibilities regarding their health. In order to fulfill these responsibilities and take an active role effectively, consumer bias, health promotion and consumer empowerment are required (Yıldırım, 2015a).

The most important factor in searching for health information on the Internet is the e-health literacy of consumers. E-health literacy empowers consumers to choose accurate and reliable health information, access health services, understand their health status, and evaluate treatment options. The number of health resources on the Internet is increasing and consumers must have e-health literacy skills to benefit from this large pool of information.

This study examines the effect of consumer behaviors and health-related internet use on patient empowerment levels and the mediating role of consumers' e-health literacy levels in this relationship.

I. LITERATURE

The philosophy of empowerment assumes that to be healthy, people need to have the psychosocial skills to bring about changes in their personal behavior, social situation and the institutions that affect their lives, and patient empowerment plays an important role in the development and implementation of a plan to improve the patient's health and quality of life (Anderson et al., 1995). Patient empowerment is to ensure the patient's participation in the process by taking more responsibility and a more active role in decision-making about their health (Schulz and Nakamoto, 2011).

Castro et al. (2016) stated that the main condition for patient empowerment is dialog and effective communication between service providers and patients. Other conditions are a patient-centered approach, development of patients' competencies such as health literacy and active participation of the patient. The World Health Organization defines patient empowerment, which is important for public health, as "a process in which people have more control over decisions and actions that affect their health" (WHO, 1998).

Turning the passive patient into an active, participatory consumer in health services is one of the premises of patient empowerment. In addition to individual outcomes such as increased quality of life, rational use of medication, increased satisfaction and reduced costs, it is known that it can lead to improved public health and reduced costs while increasing the quality of healthcare services (Carman et al., 2013; Birkeland et al., 2021; Tzeng and Pierson, 2017; Zhang et al., 2017). The behaviors that consumers exhibit during the use of health services (passive, participatory, interrogatory...) are important factors in the process of empowerment.

Yıldırım (2015a) explained consumerism behaviors in health services as follows: Participatory consumerism means that the consumer takes responsibility for his/her health, observes his/her health status and makes efforts to stay healthy. interrogatory consumerism refers to the behavior of questioning the situations (waiting time, technology used, time, etc.) encountered by the consumer during the purchase of health services. Attitude consumerism refers to consumer behavior that does not comply with the doctor's instructions regarding treatment and partially or completely rejects them. Avoidance consumerism, on the other hand, refers to those who avoid being alone and show avoidance consumer characteristics. In particular, demonstrating participatory behavior is the most important factor in ensuring patient empowerment (Castro et al., 2016).

Based on this, hypothesis H1 and sub-hypotheses were formed as follows:

H1. Consumer behaviors that consumers exhibit during healthcare service use affect their level of patient empowerment.

H1a. Participatory consumer behavior exhibited by consumers during healthcare service use affects patient empowerment levels.

H1b. Interrogatory consumer behavior exhibited by consumers during healthcare service use affects patient empowerment levels.

H1c. Attitude consumer behavior that consumers exhibit during healthcare service use affects patient empowerment levels.

H1d. Avoidance consumer behavior exhibited by consumers during healthcare service use affects patient empowerment levels.

Patients' use of the internet to search for health information has increased and the use of the internet for this purpose has become popular (Lefebvre, 2013; Jacobson, 2007). Information and communication technologies is accepted as the primary factor that enables patients to be more active in their medical treatment and care, to access medical information, weaken the hierarchy between patients and medical professionals, even enable patients to be producers of health information and services, thus empowering patient (Sulik and Eich-Krohm, 2008).

Şantaş and Şantaş (2020) stated that Internet-based applications and mobile phone technologies are widely used to provide changes in patient behavior, facilitate patient-physician communication, and ensure patients' participation in the treatment process. Individuals with the same disease participate in virtual communities such as online support groups as a way of communicating with each other and empower each other by supporting (Tekin et al., 2009). Studies by Jiang and Street (2018) and Risling et al. (2017) show that there is a positive and significant relationship between health-related internet use and patient empowerment, and internet use contributes to empowerment.

In this context, the H2 hypothesis was formed as follows:

H2. The degree of health-related internet use of consumers affects patient empowerment levels.

Effective use of the internet and empowering consumers is only possible through the informed use of the internet. Milne et al. (2015) stated that although access to and use of e-health resources is increasing, it is difficult for those with limited e-health literacy to find, understand and benefit from these resources, and that an e-health resource to be truly useful depends on having sufficient literacy and skills. Since anyone with access to social media can post "advice" on how to deal with a specific health problem, it is important to establish reliable online communication channels to prevent health problems (Smailhodzic et al. 2016). Being able to distinguish trustworthy sources from untrustworthy ones requires consumers to be e-health literate. E-health literacy has been defined as the ability to search, locate, understand, evaluate and use health information from electronic sources to discuss or solve a health problem (Norman and Skinner, 2006a). As a result, a consumer

with a high level of e-health literacy is expected to have a higher level of patient empowerment.

The H3 hypothesis formed in this direction is as follows:

H3. Consumers' e-health literacy levels affect their level of patient empowerment.

One of the issues investigated in the study is whether participatory, interrogatory, taking a stand and avoidance consumer behaviors that consumers exhibit during the use of health services affect their e-health literacy levels. It is assumed that the degree of e-health literacy can be influenced by factors such as health awareness of consumers, responsibility taken for health, relationship with the physician, and interrogatory treatment options. Consumers who are aware of and take responsibility for their health are expected to have higher e-health literacy levels. The H4 hypothesis and sub-hypotheses formed in this context are as follows:

H4. Consumer behaviors that consumers exhibit during healthcare service use affect their e-health literacy levels.

H4a. The participatory consumer behavior that consumers exhibit during healthcare service use affects their e-health literacy levels.

H4b. The interrogatory consumer behavior that consumers exhibit during healthcare service use affects the level of e-health literacy.

H4c. The attitude consumer behavior that consumers exhibit during healthcare service use affects the level of e-health literacy.

H4d. The avoidance consumer behavior exhibited by consumers during healthcare service use affects the level of e-health literacy.

Tosun and Hoşgör (2021) stated that as the level of internet use of consumers to search for health information increases, their e-health literacy levels also increase, and that those who use the internet for at least 4 hours a day have a higher level of e-health literacy. Kıral (2022) stated in his study that the participants constantly use mobile health applications because they find them useful and safe, and that e-health literacy increases as they use mobile applications. It is known that health-related internet use significantly increases e-health literacy (Özer et al., 2020). The H5 hypothesis formed in this context is as follows:

H5. Consumers' degree of health-related internet usage affects their e-health literacy levels.

One of the aims of the study is to determine whether consumers' e-health literacy levels play a mediating role in the effect of both the behaviors of consumers during health service use and health-related internet use on the level of patient empowerment.

It is assumed that e-health literacy levels have a mediating role in the effect of consumers who exhibit participatory, interrogatory, attitude or avoidance consumer behaviors on patient empowerment levels. The hypotheses established in this context are as follows:

H6. There is a mediating role of e-health literacy levels in the effect of participatory consumer behavior exhibited by consumers during healthcare service use on patient empowerment levels.

H7. There is a mediating role of e-health literacy levels in the effect of consumers' interrogatory consumer behavior during healthcare service use on patient empowerment level.

H8. There is a mediating role of e-health literacy levels in the effect of consumers' attitude consumer behavior during healthcare service use on patient empowerment level.

H9. There is a mediating role of e-health literacy levels in the effect of avoidance consumer behavior of consumers during healthcare service use on patient empowerment level.

The high level of e-health literacy in the patient's use of the internet to search for health information will make empowerment positive. Norman and Skinner (2006b) stated that electronic health resources will provide little value if consumers do not have the skills to interact with them effectively. Bravo et al. (2015) on the other hand, stated that patient empowerment on false information would cause patients to think that they know everything about their health status and that trying to manage their health in this way would result in risky results contrary to expectations. When individuals with low health literacy unconsciously search for health information online, it may lead to negative health outcomes instead of empowering them.

The hypothesis formed in this context is as follows:

H10. There is a mediating role of e-health literacy levels in the effect of consumers' health-related internet usage levels on patient empowerment levels.

It is known that patient empowerment results in an improved quality of life, increased capacity to cope with negative emotions, improved relationships with one's environment and patient-physician relationships, implementation of decision and behavior changes, improved control, personal satisfaction, mental health, healthy nutrition and patient self-efficacy (Aujoulat et al., 2007; Barr et al., 2015; Yılmaz et al., 2020). Therefore, drawing attention to this important concept and raising awareness in individuals on this issue can be considered as an important contribution of the study.

II. MATERIAL AND METHODS

A. Population and Sample

The population of the research consists of individuals aged 18 years and over, living in Turkey and having a chronic disease. The reason why the sample consisted of patients with chronic diseases is that the patient empowerment scale was designed for chronic patients. As a sampling method, judgmental sampling, one of the non-random sampling methods, was preferred. Yeniceri (2011) stated that there are various approaches for sample size in the structural equation model and stated that the sample size can be between 100 and 200, between 400 and 500, or 5 times as much as the variables in the model. In this context, a total of 342 people were surveyed in the study. However, 45 unsuitable questionnaires were removed and 297 questionnaires were included in the analysis.

B. Data Collection Technique and Tool

An online questionnaire was used as a data collection technique. In the research, scales that have been used in previous studies whose validity and reliability have been proven were utilized. The scales used are shown in Table1.

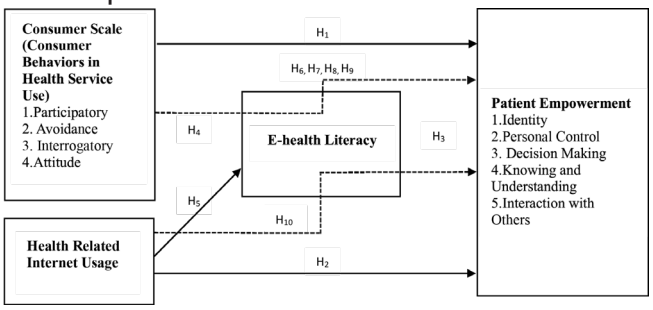
TABLE 1 | Scales Used in the Study

Scale Name	Purpose of the scale	Author- year	Turkish validity-reliability	Factor-Items
Consumer Scale	To determine the consumer behaviors exhibited by consumers during the use of health services	Pruitt (1987)	Yıldırım (2015a)	6 factors 35 items
Patient Empowerment Scale	To determine consumers' levels of patient empowerment	Small et.al (2013)	Kaya and Işık (2018)	5 factors 37 items
E-health Literacy Scale	To determine the level of e-health literacy of consumers	Norman and Skinner (2006)	Coşkun and Bebi (2014) Gencer (2017)	8 items
Health Related Internet Use Scale	To determine the health-related internet usage status of consumers	Jiang and Street (2019)		4 items

C. Research Model

The research model created in line with the objectives of the study is given in Figure 1. According to the model, the consumer behaviors that consumers exhibit during the use of health services and the degree of health-related internet use affect their level of patient empowerment. Consumers' e-health literacy levels play a mediating role in this relationship.

FIGURE 1 | Research Model



III. RESULT

A. Demographic Characteristics of Participants

The demographic characteristics of the individuals participating in the study are presented in Table 2.

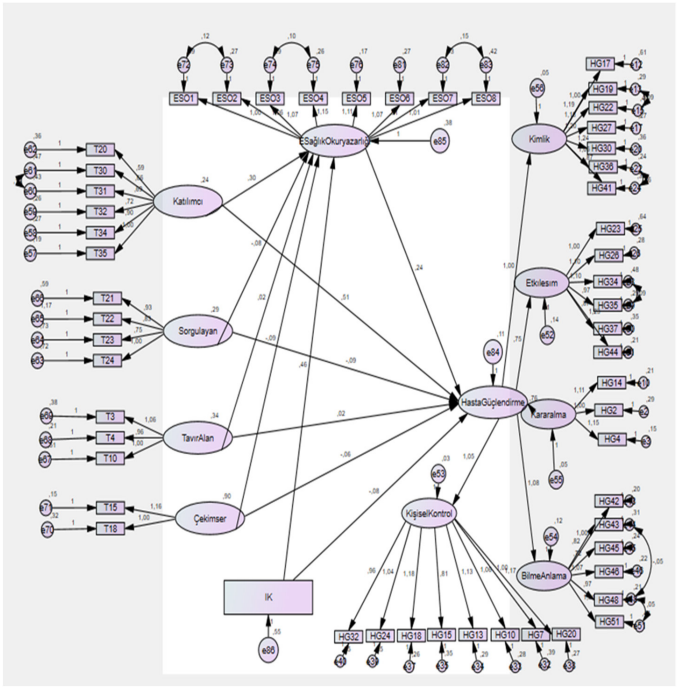
TABLE 2 | Demographic Characteristics of Participants

Age	n	%	Economic Situation	n	%
Under 25	65	21,9	Top	22	7,4
26-35	81	27,3	Middle	249	83,8
36-45	54	18,2	Bad	26	8,8
46-55	50	16,8	**Total**	**297**	**100**
Over 56	46	15,5			
Total	**297**	**100**			
Gender			**Chronic Disease**		
Female	175	58,9	Asthma	29	9,8
Male	122	41,1	Diabetes	29	9,8
Total	**297**	**100**	Blood Pressure	43	14,5
			Heart and Vascular Diseases	22	7,4
Education status			COPD (Chronic Obstructive Pulmonary Disease)	0	0
Associate Degree	78	26,3	Arthritis (Joint Inflammation, Back Pain, Low Back Pain, Neck Pain, Osteoporosis)	23	7,7
Bachelors' Degree	138	46,5	Cancer	7	2,4
Graduate Degree	81	27,3	Alzheimer's Disease and Other Dementias	1	0,3
Total	**297**	**100**	Bone Resorption	3	1
			Depression, Anxiety, Stress	36	12,1
Marital Status			Obesity	14	4,7
Married	174	58,6	Chronic Fatigue Syndrome, Fibromyalgia	24	8,1
Single	123	41,4	Bowel Syndrome or Abdominal Problems	34	11,4
Total	**297**	**100**	Other (Allergy, Rheumatism, Migraine, FMF, Immune Problem, Kidney Disorders,)	58	19,5
			Other	35	11,8
Place of Residence					
Village-Town-District	58	19,5			
Province	105	35,4			
Metropolitan	133	44,8			
Total	**297**	**100**			

B. Structural Equation Model and Mediation Analysis Results

The results of the structural equation modeling and mediation analysis conducted using the AMOS program for testing the hypotheses of the study are given in Figure 2 and Table 3.

FIGURE 2 | Research Model SEM Analysis Result Graph



Goodness of Fit Indexes: CMIN/DF (χ^2/df) =2,002; GFI=,746; CFI=,842; RMSEA=,058

TABLE 3 | Standardized Regression Coefficients (β), Standard Error (S.E.), Critical Ratio (C.R.), Significance Coefficient (p) and 95% Confidence Interval

Hypotehises		Structural Path	β	S.E.	C.R.	p	95% Confidence Interval	
							Lower Bound	Upper Bound
DIRECT EFFECT								
H_1	H_{1a}	**P → PE**	**0,527**	**0,081**	**6,266**	**0,000**	-	-
	H_{1b}	I→ PE	-0,107	0,059	1,576	0,115	-	-
	H_{1c}	A → PE	0,02	0,045	0,363	0,717	-	-
	H_{1d}	**Av → PE**	**-0,121**	**0,026**	**-2,292**	**0,022**	-	-
H_2		**IU→PE**	**-0,129**	**0,036**	**-2,238**	**0,025**	-	-
H_3		**ESO → PE**	**0,36**	**0,048**	**4,949**	**0,000**	-	-
H_4	H_{4a}	**P→ EHL**	**0,203**	**0,092**	**3,25**	**0,001**	-	-
	H_{4b}	I → EHL	-0,058	0,095	-0,811	0,418	-	-
	H_{4c}	A → EHL	0,013	0,075	0,209	0,834	-	-
	H_{4d}	**Av→EHL**	**-0,115**	**0,042**	**-2,086**	**0,037**	-	-
H_5		**IU→EHL**	**0,47**	**0,056**	**8,208**	**0,000**	-	-
INDIRECT EFFECT								
H_6		**P → PE**	**0,073**	-	-	-	**0,006**	**0,148**
H_7		I → PE	-0,021	-	-	-	-0,087	0,056
H_8		A → PE	0,005	-	-	-	-0,049	0,048
H_9		Av→ PE	-0,042	-	-	-	-0,089	0,007
H_{10}		**IU → PE**	**0,169**	-	-	-	**0,091**	**0,248**

P: Participatory, I: Interrogatory, A:Attitude, Av: Avoidance, EHL: E-Health Literacy , IU: Health Related Internet Use, PE: Patient Empowerment

The goodness of fit values of the model are given in Figure 2. Accordingly, CMIN/DF (χ^2/df), CFI, and RMSEA values are within acceptable values (Gürbüz, 2019, Baumgartner & Homburg, 1996; Halim et al., 2018; Carlback, J., & Wong, A. 2018.) As a result of the analysis.

Participatory consumer behavior has a significant and positive effect on patient empowerment level (β=0,527; p=0,000). Avoidance consumer behavior has a significant and negative effect on patient empowerment level (β= -0,121; p=0,022). In this case, H1a and H1d are accepted.

Interrogatory and attitude consumer behavior do not affect the level of patient empowerment. Accordingly, H1b and H1c are rejected. According to these results, H1 is partially accepted.

Consumers' degree of health-related internet usage affects the level of patient empowerment significantly and negatively (β= -0.129; p=0.025). According to this result, H2 is accepted. Accordingly, it can be said that as the degree of health-related internet usage increases, the level of patient empowerment decreases.

Consumers' e-health literacy levels have a significant positive effect on patient empowerment levels (β= 0.360; p= 0.000). According to this, H3 is accepted.

The effect of consumer behaviors exhibited by consumers during the use of health services on their e-health literacy levels was analyzed and the following results were obtained:

The level of participatory consumer behavior exhibited by consumers significantly and positively (β= 0.203; p=0.000) affects the level of e-health literacy. Avoidance consumer behavior affects the level of e-health literacy significantly and negatively (β=-0.115; p=0.037). It is seen that interrogatory and attitude consumer behaviors exhibited by consumers during the use of health services do not have significant effects on the level of e-health literacy.

Thus, while H4a and H4b are accepted, H4c and H4d are rejected. According to these results, H4 is partially accepted.

Consumers' degree of health-related internet use has a significant and positive effect on their e-health literacy levels (β= 0.470; p=0.000). Thus, H5 is accepted. Accordingly, it can be expected that consumers with high internet usage levels will also have high e-health literacy levels.

Within the scope of the research, it was also investigated whether e-health literacy has a mediating effect on the effect of consumer behaviors exhibited by consumers during the use of health services and the degree of health-related internet use on patient empowerment levels.

There are three widely used approaches to examine the mediation effect. These are Baron and Kenny's (1986) mediation test, Sobel test (1982) and Bootstrap method (Preacher and Hayes; 2004, 2008) (cited in Kinaş, 2021: 49).

Gürbüz (2019) stated that there are various criticisms of the other two approaches, and according to the research, the calculations made over the bootstrap distribution give more reliable results. For this reason, the mediation effect was calculated using the Bootstrap method. In mediation analyses conducted with the Bootstrap method; in order for the hypothesis to be accepted, the values in the 95% confidence interval should not include the value 0 (zero) (Gürbüz, 2019). Statistical information regarding the results of the analysis is given in the indirect effects section of Table 3. Accordingly, the results obtained are as follows:

Since the 95% confidence interval boundary values in the P→PE relationship are (0.006)- (0.148) and do not include zero and the significance value is (p=0.000), it can be concluded that EHL has a significant mediating effect.

Limit values of 95% confidence interval in the relationship between I→PE, A→PE and Av→PE are respectively. and EHL did not have a significant mediating effect because it included zero in the I→PE, A→PE relationship and the significance values were respectively, and the Av→PE significance value can be expressed.

Since the 95% confidence interval limit values are (0.091) -(0.248) in the IU→PE relationship, it does not include zero and has a significance value, it can be concluded that ESO has a significant mediating effect. While health-related internet use directly affects patient empowerment β= -0.129 (p=0.003) negatively, it indirectly affects β=0.169 (p=0.000) positively through e-health literacy. This can be explained as the use of health-related internet together with e-health literacy positively affects patient empowerment.

According to these results, H6 and H10 were accepted, while H7, H8 and H9 were rejected.

IV. DISCUSSION

Considering that participatory consumer behavior is the behavior of individuals who can actively communicate with the service provider, take responsibility for and manage their own health during the use of health services, it is an expected result that participatory behavior will positively affect patient empowerment levels. Holmström and Röing, (2010), Castro et al. (2016), Lupo et al. (2018), Hickmann et al. (2022) stated that there is a relationship between patients' participatory behavior and patient empowerment levels. Castro et al. (2016) consider participatory behavior as the basis for providing patient empowerment. For this reason, as the level of consumers' participatory consumer behavior increases, the level of patient empowerment will also increase. In this study, a result supporting the literature has emerged and it is seen that the patients who adopt participatory behavior have a high level of patient empowerment.

In the study, it was concluded that as consumers' health-related internet use increases, patient empowerment levels decrease. Contrary to the conclusion here, Samoocha et al. (2010) state that there is some scientific evidence for the effectiveness of the internet in improving health outcomes by increasing existing knowledge, helping to achieve behavior change, and empowering patients by increasing participation in health services. Tekin et al. (2009) also emphasized that since there is a wide variety of information on the İnternet, consumers may be confused, and problems may arise such as incomplete information, self-diagnosis, applying treatments that should not be done, and not applying to a health professional on time.

In the literature, besides studies stating that the internet has a positive effect on patient empowerment (Forkner, 2003; 2010; Petric et al., 2017; Samoocha et al., 2010), there are also studies stating that health information on the internet can affect patients negatively (Kim et al., 2009; Smailhodzic et al. 2016). Therefore, it would be beneficial to look at the effect of obtaining health information from the internet on the level of patient empowerment together with e-health literacy. While health-related internet use directly affects patient empowerment negatively, it has an indirect positive effect through e-health literacy.

This can be explained as the use of health-related internet together with e-health literacy positively affects patient empowerment. Discussions about whether health-related information on the internet is unreliable (Can et al., 2014; Forkner, 2003; Kim et al. 2009; Milne et al., 2015) and whether it really increases the level of patient empowerment (Suarez et al., 2001; Shashank & Bichile, 2004), it is seen that health-related internet use positively affects patient empowerment together with e-health literacy.

It has been observed that consumers' e-health literacy levels have a significant positive effect on patient empowerment levels. In other words, as the e-health literacy levels of consumers increase, patient empowerment levels will also increase. This result is in line with previous studies. When the level of e-health literacy is high; it is known that it has health-promoting and empowering benefits such as increased healthy lifestyle behavior, increased awareness of when individuals will take action for their health (Ergün et al., 2019), increased awareness of rational drug use (Tosun & Hoşgör, 2021), increased adoption of healthy lifestyle behaviors such as health responsibility, spiritual development and interpersonal relationships, physical activity (Yoğurtçu & Haney, 2019). Just as participation is a fundamental strategy for patient empowerment (Funnel 2016, Castro, 2016), health literacy is at the heart of consumer empowerment and thus health promotion (Yıldırım, 2015b).

As a result of the analysis, it is seen that another hypothesis formed as "Consumers' degree of internet usage about health affects their e-health literacy levels" is accepted. Accordingly, it can be expected that consumers with high internet usage levels will also have high e-health literacy levels. Looking at the literature, Ertas et al. (2019) stated in their study that the e-health literacy levels of those who use the internet and participate in internet-based applications are higher.

CONCLUSION

In this study, the factors that positively affect the level of patient empowerment were found to be consumer participation, being aware

of and taking responsibility for their illness, and e-health literacy, while the factors that negatively affect the level of patient empowerment were found to be consumer's hesitant behavior and searching for health information on the internet without e-health literacy.

These results once again showed that patient participation and health literacy are effective factors in empowering patients, taking an active role in treatment processes, increasing the quality of life, reducing the costs of health services, reducing unnecessary visits to health institutions or being aware of when to apply to health institutions, and adopting health-promoting behaviors.

It is recommended that institutions such as health institutions, educational institutions and non-governmental organizations organize trainings on patient empowerment and health literacy to increase public health awareness. It will be important for health policy makers to adopt policies that include measures to raise public health awareness and encourage patients to empower themselves. In addition, more research on patient empowerment by public health specialists and academicians who conduct research on the subject will provide in-depth research on the subject. Thus, new strategies to increase the level of patient empowerment and recommendations to improve the current situation may emerge. Research and publication ethics have been complied within this study.

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