Dissertation Abstract

# Patient Loyalty in the Hospital-Patient Relationship: The Mediating Role of Social Media\*

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### Abstract

This study aimed to investigate role of social media on patient loyalty. Based on related literature review, for assessing patient loyalty, a measurement scale, testing satisfaction shared by patient through social media, patient trust, strength of hospital-patient communication on social media, and perceived image of hospital on social media was developed. The data was collected from 625 patients by self-administered online questionnaires. Hypotheses about the role of social media were suggested based on existing body of knowledge so that we aimed to examine underlying mechanism between the predictors and patient loyalty by means of Structural Equation Modelling (SEM) framework. Findings demonstrated that satisfaction, shared by patients through social media, mediated the association between patient trust, strength of hospital-patient communication on social media, perceived image of hospital on social media, and patient loyalty. The findings provide an original empirical model with respect to gaining loyal patients whom are customers of hospitals and highlight the important role of social media in health communication.

**Keywords:** Health Communication, Patient Loyalty, Patient Satisfaction, Patient Relationship Management, Social Media.

<sup>\*</sup> This study was based on Ph.D. thesis of Hikmet Tosyalı, "Effect of Social Media on Patient Loyalty: A Research on Social Media Users" in department of Journalism, in Marmara University.

Tez Özeti

# Hastane-Hasta İlişkisi Bağlamında Hasta Sadakati: Sosyal Medyanın Aracı Rolü

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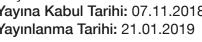
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Bu çalışma, sosyal medyanın hasta sadakati üzerindeki rolünü incelemeyi hedeflemistir. Hasta sadakatini değerlendirmek için; hastalar tarafından sosyal medyada paylaşılan memnuniyeti, hasta güvenini, sosyal medya üzerinde hastanehasta iletişiminin gücünü ve hastanenin sosyal medyada algılanan imajını test eden bir ölçüm envanteri, ilgili literatür temel alınarak geliştirilmiştir. Veriler çevrimiçi anket vasıtasıyla 625 kişiden toplanmıştır. Literatürde yer alan bulgular göz önünde bulundurularak hipotezler geliştirilmiş ve hasta sadakatini yordayan değişkenlerin Yapısal Eşitlik Modeli (YEM) aracılığı ile incelenmesi amaçlanmıştır. Çalışmanın sonuçları, sosyal medyada hastalar tarafından paylasılan memnuniyetin; yordayıcı değişkenler (hasta güveni, sosyal medya üzerinde hastane-hasta iletişiminin gücü, hastanenin sosyal medyada algılanan imajı) ve hasta sadakati arasındaki ilişki üzerinde aracı değişken olduğunu göstermiştir. Bulgular, hastanelerin müşterileri olan sadık hastalar kazanma noktasında özgün ampirik bir model sağlamakla beraber sosyal medyanın sağlık iletişimindeki önemini vurgulamaktadır.

Anahtar Kelimeler: Sağlık İletişimi, Hasta Sadakati, Hasta Memnuniyeti, Hasta İlişkileri Yönetimi, Sosyal Medya.







#### Introduction

In today's network-based society, it is not that easy to satisfy customers and gain their loyalty, due to fierce competitiveness among healthcare providers, changes in the needs of customers, and the abundance of choices (Wei-Jiao et al., 2017). Different sectors such as banking, tourism, transportation, and healthcare all need loyal customers in order to survive in challenging business environments. Considering the increased number of hospitals where patients are "customers", they need to keep loyal patients in order to survive.

If patients are not satisfied with a product or service, they are more likely to direct their attention to another provider. This means that customer loyalty has been a crucial factor in market competition (Kumar and Shah, 2004). Moreover, compared to previous years, there are more conscious patient profiles about services and illnesses through changes in technology, including online platforms, which enable interactions about various health topics related to informing patients (Househ et al., 2014). In parallel, the Internet has been the first source of information used by many patients (Hesse et al., 2010; Risson et al., 2016). Thus, patients can evaluate and compare the given health service, or they can get more information about the illness through different online resources, such as social media, before even taking the offered service.

Furthermore, the impact that social media has increased through the change from Web 1.0 to Web 2.0 - referring to an overlap in terms of network sites and social media (van Muhlen and Ohno-Machado, 2012). Web 2.0 refers to the era in which content and applications were continuously modified through participation and collaboration of all users, such as YouTube, Wikipedia, Flickr, and Facebook, in contrast to Web 1.0; the content and applications of which were passively received by users (Kaplan and Haenlein, 2010).

Therefore, individuals have the opportunity to take an active role on social media. Besides, according to the social media report from Individually Identifiable Health Information, or IIHI, it has been become increasingly important to be able to react quickly and decisively to events on social media (IMS Institute, 2014).

#### 1. Social Media Usage in Health-Related Issues

As indicated in the report from United Unions (2009), it was predicted that the world population will exceed 9 billion and the proportion of people aged 60 years and over will increase by 17% - this means 1.6 billion in developed countries. However, in Turkey, the ratio of elderly people in the total population accounts for 6.3%. Besides, it has been predicted that this ratio will reach 10.88% by 2030 and 17.3% by 2050 (Akın and Ersoy, 2012). These numbers illustrate that average age, currently 60-65 years, will increase.

In this context, social media has been quite an effective tool in terms of informing the community and creating an impact on decision making. This is due to the fact that Generation Y and Generation Z are effective users of the internet and technology in general, and they will become the next elderly population in the foreseeable future. This is especially so for Generation Z, the so called social media generation, since they use the internet as their primary source for gathering information (Issa and Isaias, 2016).

Surveys report that there have been between 70-75% of online users who search for health care information in the United States and Europe (Alshaikh et al., 2014; Cooper, 2012). In addition, the number of people searching the keyword "health" on the Internet has considerably increased in Turkey. Reports indicate that the first reason for going online is to socially engage with friends and this is calculated as 80% of the time. Searching for health-related information is the third reason and this is calculated as 66.3% of the time (Turkish Statistical Institute, 2015).

World Health Organization (WHO) is one of the health institutions that use social media effectively. The Organization has about 4 million followers on Twitter and 3.5 million Facebook followers. WHO has published 509 videos on YouTube and these videos have been watched about 9.5 million times between the years of 2005 to 2015. For instance, the video entitled, "I had a black dog, his name was depression" was first shared by WHO in 2012 about the struggle with depression and it has 8 million views. Moreover, many viewers commented that the video helped them to cope with their depression.

In addition, a survey conducted in 2012 by the Pew Research Center and American Life Project showed that one out of every three individuals searched online to get information related to his/her health issue. For this particular project, 3014 people were surveyed in America. According to that report, 35% of participants searched either online or on social media about their health issue or their relative's health issue, and 77% of them who searched online, diagnosed themselves based on information acquired from online platforms. 46% of those, who made an online self-diagnosis, went to a doctor based on their assessed diagnosis and 41% of the self-diagnoses were confirmed by the doctor. In addition, women and university students were the majority of online self-diagnosticians (Fox and Duggan, 2013).

Another report indicated that 3351 (99.41%) out of 3371 hospitals in America use Facebook and Foursquare. 3342 (99.14%) of those use Yelp and 1713 (50.82%) of those use Twitter. 1699 of those hospitals (50.40%) use all four social media platforms, and 42 of them (1.25%) only use one or two social media platforms (Griffis et al., 2014). Those numbers demonstrate that when a hospital does not want to lose competitive power, it should utilize social media efficiently and approach patient relationship management with a holistic perspective by effectively using social media.

Consequently, uninterrupted communication between hospitals and patients increases perceived quality and prestige, so that hospitals should be able to reach their patients instantly and effectively with information technology and social media. It is inevitable that a hospital would take advantage of utilizing such a tool to make a difference in the face of competitors (Sütcü and Erdal, 2014). Thus, one of those advantages may be acquiring more loyal patients who would be willing to get services from the same hospital for an extended period of time.

## 2. Patient Loyalty

The concept of loyalty refers to a positive attitude, behavior that leads to repurchasing, and a long-term commitment from the consumer (Gremler and Brown, 1996; Oliver, 1999; Wong and Sohal, 2003; Zeithaml et al., 1996) towards a specific product, service or business. Through this sense of loyalty, the consumer

continues to buy subsequent needs from the same brand and recommends the brand to other consumers. In this context, loyalty is a concept which includes not only behavioral reactions but also attitudes as well (Kim et al., 2007), therefore, approaches to measuring loyalty are divided into two parts: behavioral and attitudinal (Chahal and Kumari, 2011; Curasi and Kennedy, 2002; Morgan and Hunt, 1994; Roberge et al., 2001). Behavioral loyalty refers to the act of repurchasing and attitudinal loyalty refers to the sense of commitment which directs behavior towards the brand or the business (Kurtuldu et al., 2008; Zhou et al., 2017). Also, attitudinal loyalty refers to the consumer's emotional loyalty towards the brand so that even if the consumer does not purchase it, he or she may recommend the brand to other consumers (Barksdale et al., 1997). Furthermore, it demonstrates positive reactions associated with the positive word of mouth (Gee et al., 2008; Khan and Fasih, 2014) and this is due to positive emotions that are felt towards that brand.

Consumer loyalty to a healthcare provider has been defined as patient loyalty (Sumaedi et al., 2015). According to Lombardi (2012), "loyal patients are the best type of patients" because if a patient is happy with the service, he or she can refer it to friends, family and co-workers. In a competitive environment, patient loyalty is significant for hospitals that do not want to lose their current clients. Sustainable business success highly depends on consumers who repurchase a product or service. To provide that, businesses should be able to make customers loyal since keeping current customers is less costly (Lin and Wang, 2006) as opposed to gaining new customers. In this regard, loyalty is a crucial factor that indicates whether a business maintains its presence or not (Pişgin and Ateşoğlu, 2015). Zhou et al. (2017) argue that long-term commitment to care and compliance with medical advice is significant in improving healthcare services and patient outcomes. Thus, for the benefit of both sides, patient loyalty must be managed by healthcare providers. In order to effectively manage, the factors that affect patient loyalty must be understood. In literature, although some results are contradictory, much empirical research has been conducted to determine these predictors. The terms that are dealt with include "satisfaction", "service quality", "perceived value", "brand image", "trust", and "commitment." (Zhou et al., 2017). This study aims to examine the underlying mechanisms between some of these predictors (trust, satisfaction, perceived image, and strength of hospital-patient communication with social media) and patient loyalty as the dependent variable.

# 3. Predictors of Patient Loyalty

#### 3.1. Patient Satisfaction

Satisfaction is defined as "a fairly temporal post-usage state for one-time consumption or a repeated experienced state for ongoing consumption that reflects how the product or service has fulfilled its purpose" (Oliver, 1999, 41). In the service industry, building relationships with customers especially provide long-term commitment through the increased satisfaction of customers (Belás and Gabcova, 2016). Constructing positive and long-term relationships makes customers feel valuable and secured and have positive contributions to customer satisfaction (Nakip and Özçifçi, 2015).

Patient satisfaction, one of the main indicators of service quality, (Milutinovic et al., 2009) is a parallel term with customer satisfaction in health services (Marley et al.,

2004) and the significantly positive effect of patient satisfaction on patient loyalty has been demonstrated in previous studies. (Amin and Nasharuddin, 2013; Bodet, 2008; Kessler and Mylod, 2011; Kim et al., 2007; Ndubisi, 2012). Moreover, patient satisfaction was suggested as the main indicator of patient loyalty in most of the studies (Chang et al., 2013). Therefore, patients sharing high levels of satisfaction as well as positive experiences on social media may be able to influence the market when it comes to loyal patients. Thus, the following hypothesis is proposed in terms of patient satisfaction:

Hypothesis 1: Satisfaction shared through social media will positively predict patient loyalty.

# 3.2. Patient Trust Toward Hospital

Even though Zeithaml et al. (1996) pointed out the necessity of trust and emphasized that repetitive buying behavior depends on a sense of trust from the customer towards management, there have been limited empirical studies on patient trust (Pearson and Raeke, 2000). In this challenging business environment, trust was viewed as one of the significant determinants of customer loyalty (Chiu et al., 2009; Lee, 2010). Also, in the healthcare sector, it has been shown that trust is one of the significant factors predicting patient loyalty (Hall et al., 2001; Keating et al., 2002; Kumar et al., 2013; Patayawati et al., 2013; Schers et al., 2002).

In addition, success in obtaining patient trust may provide an increased recommendation of the hospital by enabling to develop a sense of satisfaction (Dwyer et al., 1987; Geyskens et al., 1999). Besides, patient trust was found as a significant antecedent for patient satisfaction (Baker et al., 2003; Thom et al., 1999). However, not only a direct effect of trust on loyalty was found but also, an indirect effect was also found via satisfaction (Platanova et al., 2008; Suki, 2011). Considering these findings, we have parallel expectations. As such, the following hypothesis is put forward:

Hypothesis 2: Patient trust will be positively associated with patient satisfaction that is shared on social media, which in turn, positively predicts patient loyalty.

# 3.3. Strengths of Hospital-Patient Communication

Communication has been suggested to be one of the predictors in Customer Relationship Management or CRM (Alrubaiee and Al-Nazer, 2010). The same is also valid in terms of having successful relationships between patients and their healthcare providers (Astuti and Nagase, 2014). Visibility of hospitals on social media platforms within the scope of strength of hospital-patient communication, is significant since visibility provides occasions which include informing society about health-related issues, having interactive communication with patients that facilitate the acquisition of positive attitudes from patients about the hospital, recommending the hospital to others, and developing loyalty towards the hospital (Househ et al., 2014; Laroche et al., 2013; Lombardi, 2012).

Moreover, it is suggested that effective and patient-centered communication skills lead to greater patient satisfaction (Burgener, 2017; Zachariae et al., 2003). In addition, the Institute for Healthcare Communication (2011) reported that patient satisfaction can be increased through communication, in which, a team of healthcare specialists can explain information expressly, understand the patient, his/her

expectations, and introduce effective options. In a sense, information provided by the hospital and communication between the hospital and the patient may be quite influential in assuring that patients are not only satisfied but also loyal. Therefore, listening to the patients and quickly responding their requests and problems by means of all communication channels, especially social media, might be necessary in order to satisfy patients and gain their loyalty. The following hypothesis is suggested in terms of strength of hospital-patient communication with social media:

Hypothesis 3: Strength of patient relationships developed by hospitals through social media platforms, will be positively associated with a sense of satisfaction, which in turn, positively predicts patient loyalty.

# 3.4. Perceived Image of Hospital

The perceived image of a hospital can be defined as how the hospital is known and recognized by society. Being known as successful, trustworthy, innovating, sincere, or qualified, is a reflection of the hospital having a positive image in society, and those perceptions are important for hospitals in gaining loyal patients (Kim and Kim, 2005; Severi and Ling, 2013). When individuals experience health-related problems, there may be a general tendency to go to the hospital which is most familiar, since there may be positive images of the hospital in the individual's mind. In addition, Qin and Prybutok (2013) reported that not only service quality, perceived value and patient satisfaction but also the image is one of the key factors which influence patient loyalty.

Moreover, there are studies which demonstrate the direct effect of brand images on customer satisfaction (Chahal and Bala, 2012; Wu, 2011). Additionally, Juhana et al. (2015) found that brand image affects not only patient loyalty but also patient satisfaction in public hospitals. The same direct effect was reported in health care, which means that the perceived image of the hospital positively affected patient satisfaction (Kumar et al., 2014; Srivista and Kumar, 2014). However, there are studies which show an indirect effect of corporate images, rather than a direct effect, on loyalty (Chou and Kim, 2009; Minser and Webb, 2010). Consequently, the following hypothesis is suggested in terms of the perceived image of hospitals:

Hypothesis 4: The perceived image of the hospital, which has been formed through social media, will be positively associated with patient satisfaction, and this will positively predict patient loyalty.

## 4. The Current Study

In the light of aforementioned reports, we argue that social media may be an impactful factor in gaining the loyalty of patients in the health sector. Therefore, we aim to investigate the role of social media on patient loyalty in terms of its effects on previously shown variables such as communication between patients and hospitals (e.g. Laroche et al., 2013), patient satisfaction (e.g. Lai-Ming Tam, 2012), perceived images of hospitals (e.g. Qin and Prybutok, 2013), and trust towards hospitals (e.g. Patayawati et al., 2013).

We developed integrated items - related to previously shown antecedents of patient loyalty - with social media. After exploring and confirming factor structure of developed constructs, we tested the conceptual model (as shown in Figure 1) within a Structural Equation Modelling (SEM) framework, which is a common methodology,

in order to investigate the concept of customer loyalty (Chou and Kim, 2009; Matzler et al., 2007; Minser and Webb, 2010).

The study has several contributions to the existing body of knowledge. Firstly, we suggested a unique conceptual model that has never tested the association between the aforementioned predictors and patient loyalty, in terms of the role of social media. Thus, findings have the potential to fill the gap regarding the role of social media on patient loyalty. Secondly, the measurement scale that we developed may be a useful tool for further research intending to examine the role of social media on patient loyalty. Finally, having considered massive usage of social media, it can be concluded that the findings have the potential to introduce effective marketing strategies and insights for hospitals and marketing managers, with respect to visibility on social media.

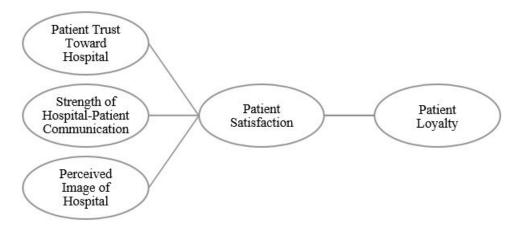


Figure 1: Conceptual model

## 5. Method

#### 5.1. Procedure and Participants

The self-administered questionnaire was conducted with 625 participants via social media platforms and mobile applications such as Twitter, Facebook, and WhatsApp. This method does have its limitations; however, the sample is not representative of the total population. Consequently, there is a constant difference between the results from the sample and the theoretical results from the entire population.

References of the measured constructs were shown in Table 1. Hence, the developed items represent the concepts in the empirical model and ensure the content validity of the scales. Exact English wording of the items can be seen in the Appendix.

The questionnaire consisted of two parts. In the first part of the survey, six questions were related to demographic information of the participants (age, gender, education, average income per month). In the second part, there were 28 items associated with 5 factors as shown in the research model.

The questionnaires were designed using a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Data was collected and analyzed using descriptive analysis, Cronbach's Alpha, Exploratory Factor Analysis (EFA), correlation analysis supported by IBM SPSS 20, and Structural Equation Modelling (SEM). This was supported by MPlus 6.11, with a maximum likelihood estimation to test the proposed hypotheses (Muthén and Muthén, 2010). SEM is a second-generation multivariate

technique that combines multiple regressions with confirmatory factor analysis to simultaneously estimate a series of interrelated dependence relationships. SEM is a widespread technique that is used in several fields including marketing, psychology, social sciences, and information systems (Suki, 2011).

**Table 1:** The Constructs and References

Variables	Adapted from (references)
Patient Trust Toward Hospital	Househ et al. (2014) Papatya et al. (2012)
Strengths of Hospital- Patient Communication	Househ et al. (2014) Laroche et al. (2013) Severi and Ling (2013)
Perceived Image of Hospital	Kim and Kim (2005) Severi and Ling (2013)
Patient Satisfaction	Derin and Demirel (2013) Kim et al. (2007)
Patient Loyalty	Erdoğmuş and Çiçek (2012) Kim and Kim (2005)

# 5.2. Findings

**Descriptive Analysis Results:** Out of 625 participants, 342 were female, which accounted for 54.7% of the group, were social media users who completed the online survey. In terms of distribution of age among the participants, 3.8% of them were below 18 years old, 26.6% of them were 19-24 years old, 41.4% of them were 25-35 years old, 20.6% of them were 36-45 years old, and 7.5% of them were 46 years old or older. More than half of the participants graduated from university, which accounts for 364 of the participants, equaling 58.2% of the group. The remaining 24.6% of the participants graduated from universities with master's degrees, 7% of them graduated with doctorate degrees, and the rest of the 10% only graduated from primary school or high school. In terms of income, 18.1% of the participants earned less than 1.000 Turkish lira per month. 15.8% of participants earned 1.001-2.000 Turkish lira, 17.9% of participants earned 2.001-3.000 Turkish lira, 16.3% of participants earned 3.001-4.000 Turkish lira, and 31.8% of participants earn more than 4.000 Turkish lira per month.

**Exploratory Factor Analysis:** Before conducting SEM to test the hypotheses, EFA was conducted on 28 items with varimax rotation. The factors were based on eigenvalues greater than one accounting for 62.21% of the variance. Five components were retained in the final analysis. In addition, it seems that all factors were reliable since alpha values ranged from .76 to .90. Table 2 shows factor loadings after rotation.

Table 2: Exploratory Factor Analysis Results

Factors of The Scale		Factor Loadings						
Patient Loyalty (PL)	F1	F2	F3	F4	F5			
PL1	.684							
PL2	.752							
PL3	.724							
PL4	.808							
PL5	.830							
PL6	.792							
PL7	.783			1				
Patient Trust Toward Hospital (PT)								
PT1		.622						
PT2		.782						
PT3		.808						
PT4		.781						
PT5		.746						
Patient Satisfaction (PS)								
PS1			.800					
PS2			.853					
PS3			.820					
PS4			.834					
Strengths of Hospital-Patien	t Communi	cation (l	PC)					
PC1				.719				
PC2				.708				
PC3				.564				
PC4				.680				
PC5				.709				
PC6				.650				
PC7				.682				
Perceived Image of Hospital (PI)								
PI1					.476			
PI2					.488			
PI3					.660			
PI4					.738			
PI5					.768			
Explained Variance (%)	30,56	8,46	7,00	11,98	4,21			
Cronbach's Alpha	0.90	0.87	0.90	0.86	0.76			

**Correlation Analysis:** Zero-order correlations among key constructs (see Table 3), suggested that perceived images of hospitals, strength of hospital-patient communication, satisfactory experiences shared by the patient on social media, and patient trust, all had a significant association with patient loyalty. Additionally, age and education were found to be significantly and positively associated with the mediator variable, which was satisfactory experiences shared by patients on social media. Thus, we controlled the possible influences of those two demographic variables on the mediator variable during further analysis.

Table 3: Bivariate Results Among Latent and Demographic Variables

		1	2	3	4	5	6	7	8	
1	Strength of hospital-patient communication									
2	Perceived image of hospital	.304***								
3	Patient satisfaction	.248***	.262***							
4	Patient trust	.223***	.118***	.157***						
5	Patient loyalty	.125***	.133***	.150***	.135***					
6	Age	.024	030	.104**	.023	.032				
7	Gender	006	007	.016	019	.007	.129***			
8	Education	.031	019	.077**	.065**	.030	.135***	.049**		
9	Income (per month)	051	106	.062	031	.015	.818***	.187***	.410***	
No	Note. *p < .05; **p < .01; ***p < .001, two-tailed.									

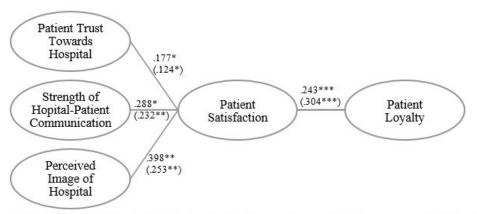
**Measurement Model:** According to the factors shown in Table 2, five latent variables including patient loyalty, patient trust toward hospitals, patient satisfaction, strength of hospital-patient communication, and perceived images of hospitals, were assessed in light of EFA results. Therefore, each item in Table 2 was handled as observed variables. The maximum likelihood estimation procedure was used. While evaluating model fit, goodness-of-fit indices that are comparative fit index (CFI), root mean square error of approximation (RMSEA) [90%CI], and standardized root mean square residual (SRMR) were interpreted. Combination of cutoff values CFI > .90, RMSEA < .08, and SRMR < .08 are considered as good and CFI > .95, RMSEA < .05, and SRMR < .05 are considered as an indicator of excellent fit (Hu and Bentler, 1998). In terms of CFA results, following the modification indices, two covariance statements were added to improve goodness-of-fit and it was concluded that the measurement model introduced good fit for the data [( $\chi^2$  (338) = 1031.119, p < .001), CFI = .923, TLI = .914, RMSEA = .057, SRMR = .051].

**Structural Model:** The conceptual model (shown in Figure 2), was suggested in light of the four hypotheses that were tested. Before evaluating the hypotheses, the structural model indicated good model fit  $[(\chi^2 (395) = 1207.310, p < .001), CFI = .911, TLI = .902, RMSEA = .057, SRMR = .076]. There was a significant association between patient satisfaction - shared on social media - and patient loyalty (B = .243, SE = .037, p < .001) thus, Hypothesis 1 was confirmed.$ 

Participants scoring higher on patient trust had greater patient satisfaction which they shared on social media (B = .177, SE = .083, p = .032). In addition, significant positive association between patient trust and patient loyalty was mediated by shared satisfaction (B = .043, SE = .021, p = .042) thus, Hypothesis 2 was also confirmed.

Moreover, strength of hospital-patient communication developed by hospitals through social media platforms significantly predicted satisfaction shared by patients on social media (B = .288, SE = .112, p = .010). Furthermore, as we proposed in Hypothesis 3, the association between strength of hospital-patient communication and patient loyalty was mediated by patient satisfaction (B = .070, SE = .029, p = .016).

Perceived images of hospitals significantly predicted satisfactory experiences shared by patients on social media (B = .398, SE = .120, p = .001). Besides, indirect significant association between perceived images of hospitals and patient loyalty was found via patient satisfaction (B = .097, SE = .033, p = .003). Thus, Hypothesis 4 was also confirmed.



*Note.* \*p < .05, \*\*p < .01, \*\*\*p < .001. Unstandardized regression coefficients were reported. Standardized estimates are in parentheses (N=625). Observed variables were not shown for sake of clarity.

Figure 2: Results of path analysis

#### Conclusion

Today, the most significant source for gathering information is from online and social media. Generation Z which is also called the "social media generation" was born after the year 2000. Due to their young age, these individuals are dependent on their families and will gain their economic independence after about 5-10 years where they will learn to make decisions on their own. Therefore, in the future, it is predicted that social media will become more important in reaching and communicating with these individuals. That is why hospitals should already assess strategies in positioning their brand. In this context, we aimed to investigate the role of social media on patient loyalty. A new scale was developed based on existing knowledge in which predictors of patient loyalty, such as strength of hospital-patient communication on social media, perceived images of hospitals on social media, satisfactory experiences shared by patients on social media, and patient trust were integrated.

We found that patient trust, strength of hospital-patient communication on social media, and perceived images of hospitals on social media, have indirect effects on patient loyalty via satisfactory experiences shared on social media. Positive associations between patient trust, strength of hospital-patient communication, perceived images of hospitals and patient satisfaction had already been reported in previous studies, as it is consistent for our findings (e.g. Baker et al., 2003; Burgener, 2017; Juhana et al., 2015). Another consistent result is that patient satisfaction was shown as a strong predictor of patient loyalty (Amin and Nasharuddin, 2013; Kessler and Mylod, 2011). Besides, this study demonstrated that shared satisfaction of patients on social media is a significant indicator of whether they are loyal patients to the hospital or not. Apart from a direct role of shared satisfaction on patient loyalty, this variable also has a significant role in the mechanism where strength of hospital-patient communication, patient trust, perceived images of hospitals, and patient loyalty relationships exist. Thus, as a theoretical implication, the more the

patients have communication and positive images of hospitals on social media and trust towards hospitals, the more they shared their satisfaction of given services on social media, which in turn, leads to greater loyalty towards the hospital. In this context, we believe that following recommendations for hospitals should be given as practical implications of the study:

Hospitals should be visible and active on social media. The patients who receive health services should be directed to social media accounts belonging to the hospital, and the hospital should keep in touch with the patients.

Individuals may think that health-related messages shared by hospitals are more reliable. Thus, if informative content regarding a disease or advice for healthy lifestyles is regularly shared, then it may be of interest and concern to social media users and the users may share those messages. As a result, visibility and interaction can be increased.

Sharing experiences and maintaining relationships via social media should be sincere, genuine, and formal. However, important content like health-related issues should not be too formal. Interested and sincere messages may be impactful on satisfaction and the commitment of not only current patients but also potential patients.

Content and strategies may be developed on alternative social media platforms which do not include competing hospitals. Organizing these activities by including famous people and social media phenomenon may empower images of hospitals and attract attention.

The current study needs to be considered within the context of some limitations. Sampling strategy of the study limits the generalizability of the results, and causal relationships cannot be inferred due to the cross sectional investigation. Besides, measurements in this paper were self-reported, therefore, social desirability bias may be a threat to the validity of the questionnaire survey. Nevertheless, by means of a structural model in a large community sample, this is the first study examining the role of social media, in terms of previously shown predictors of patient loyalty. The findings provide an empirical model with respect to gaining loyal patients to hospitals and highlighting the important role of social media in the health care sector. Consequently, overall results have the potential to expand the limited literature related to the role of social media on patient loyalty. It is worth pursuing findings for not only further research in different countries facing different contexts in the world but also sector representatives and public relations offices of hospitals.

Finally, while people were getting medicine and treatment suggestions from family members or friends for their illnesses in the past, today, it seems that online resources and social media are the routes people use when searching for medicine and treatment (De Martino et al., 2017; Risson et al., 2016). Moreover, since individuals direct their attention to new communication channels instead of e-mail or telephone, sector representatives should use social media more actively by informing patients about encountered health-related problems and sharing useful health-related strategies through social media. Thus, sector representatives using strategies, that foster patient trust, perceived images, and quality of communication with patients, are more likely to increase patient loyalty as indicated by the findings of this research.

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## **APPENDIX**

#### **Original Scale:**

Sizin veya bir yakınınızın sağlık problemi olduğunda genellikle tercih ettiğiniz hastanenin adını yazınız.

.....

# Patient Loyalty (PL)

- **PL1.** Bu hastaneye gideceğim zaman tedirginlik yaşamam.
- **PL2.** Mecbur kaldığım için farklı bir hastaneye gitsem ve sunulan hizmetten memnun kalsam bile sonraki ihtiyaçlarımda yine bu hastaneye giderim.
- **PL3.** Ufak tefek aksaklıklar yaşasam da bu hastaneden hizmet almaya devam ederim.

- PL4. Güvenimi kazanmayı başardığı için bu hastaneden vazgeçmem.
- **PL5.** Bu hastaneden hizmet aldıktan sonra kendimi rahatlamış hissederim.
- **PL6.** Bu hastaneyle ilgili çevremdekilere her zaman güzel şeyler söylerim.
- **PL7.** Benden tavsiye isteyenlere bu hastaneyi öneririm.

# **Patient Trust Toward Hospital (PT)**

- **PT1.** Sahip olduğu imkânlar ve sunduğu sağlık hizmetleri hakkında bilgi sahibi olduğum bir hastaneye daha çok güvenirim.
- **PT2.** Gittiğim hastanede görevli personelin; beklenti ve ihtiyaçlarımı anlaması, bana karşı nazik ve kibar davranması kendimi güvende hissettirir.
- PT3. Güvendiğim bir hastaneye karşı kendimi daha yakın hissederim.
- **PT4.** Benim için hastanenin güvenilir olması, fiyatının düşük olmasından daha önemlidir.
- PT5. Mesafe olarak bana uzakta olsa bile güvendiğim hastaneye gitmeyi tercih ederim.

# **Patient Satisfaction (PS)**

- **PS1.** Kaliteli hastanelerin desteklenmesi gerektiğini düşündüğüm için, hizmet aldığım hastaneyle ilgili memnuniyetimi sosyal medyada paylaşırım.
- **PS2.** Hizmet aldığım hastaneyle ilgili şikâyetlerimi sosyal medyada paylaşırım.
- **PS3.** Hizmet aldığım hastaneden memnun kalırsam sosyal medyada diğer kullanıcılara bu hastaneye gitmelerini tavsiye ederim.
- **PS4.** Hizmet aldığım hastaneden memnun kalmazsam sosyal medyada diğer kullanıcılara bu hastaneye gitmemelerini tavsiye ederim.

# **Strengths of Hospital-Patient Communication (PC)**

- **PC1.** Sağlıkla ilgili konularda toplumu bilinçlendirmek için sosyal medyada paylaşımlarda bulunan bir hastane, halk sağlığı için önemli bir görevi yerine getirmiş olur.
- **PC2.** Hastanelerin sosyal medyada paylaştıkları bilgiler sayesinde sağlıkla ilgili gelismelerden daha hızlı haberdar olurum.
- **PC3.** Sosyal medya, yeni hasta çekmede hastaneler için iyi bir fırsattır.
- **PC4.** Bir hastanenin sosyal medyada paylaştığı kurumsal bilgiler, o hastane hakkında daha fazla fikir edinmemi sağlar.
- **PC5.** Bir hastanenin sosyal medyada yaptığım eleştiriyi fark edip şikâyetimle ilgilenmesi, hasta iliskilerine ve hastalarına önem verdiğini gösterir.
- **PC6.** Bir hastanenin; başarıyla sonuçlandırdığı tedavi ve ameliyatlar, tıp alanına getirdiği yenilikler gibi başarı hikâyelerini sosyal medyada paylaşması o hastanenin itibarını güçlendirir.
- **PC7.** Bir hastaneyle ilgili sosyal medyada çok fazla olumsuz yorum olması, o hastanenin itibarını zayıflatır.

## Perceived Image of Hospital (PI)

- **PI1.** Facebook, Twitter, Youtube, Kurumsal Blog gibi sosyal medya araçlarını daha aktif kullanan bir hastanenin diğerlerine göre daha samimi olduğunu düşünürüm.
- **PI2.** Facebook, Twitter, Youtube, Kurumsal Blog gibi sosyal medya araçlarını daha aktif kullanan bir hastanenin diğerlerine göre kendine daha çok güvendiğini düşünürüm.
- **PI3.** İki hastaneden; sosyal medyadaki takipçi sayısı fazla olanın imajı diğerinden daha güçlüdür.
- **PI4.** Bir hastanenin sosyal medya takipçileri arasında ünlü kişilerin olması hastanenin imajını güçlendirir.

**PI5.** Ünlü kişileri tedavi eden hastanelerin daha kaliteli ve profesyonel hizmet sunduğunu düşünürüm.

# **English Translation:**

Which hospital do you usually prefer when you have or a relative has a health problem?

.....

# **Patient Loyalty (PL)**

- **PL1.** I do not feel uneasy when I go to this hospital.
- **PL2.** If I am going to a different hospital because I must, and I am satisfied with the service provided, I will go to this hospital again for my next needs.
- **PL3.** I will continue to receive services from this hospital even if I have minor disruptions.
- **PL4.** I will not give up on this hospital because this hospital has succeeded in winning my trust.
- **PL5.** I feel relieved after receiving service from this hospital.
- **PL6.** I always say good things to people around me about this hospital.
- **PL7.** I recommend this hospital to all those who ask for advice.

# **Patient Trust Toward Hospital (PT)**

- **PT1.** I am more confident in a hospital that I have information about possibilities and health services that I have.
- **PT2.** I went to the staff at the hospital; I can feel my expectation and needs, I feel safe and gentle towards myself.
- PT3. I feel myself closer to a hospital I trust.
- **PT4.** For me, it is more important that the hospital is reliable because the price is low.
- **PT5.** I prefer to go to the hospital where I am safe even if I am away.

# **Patient Satisfaction (PS)**

- **PS1.** Since I think that quality hospitals should be supported, I share my satisfaction with the hospital where I receive services on social media.
- **PS2.** I share my complaints on social media about the hospital I work with.
- **PS3.** If I am satisfied with the hospital I receive, I would recommend that other users on social media go to this hospital.
- **PS4.** If I am not satisfied with the hospital I receive, I would recommend the other users on social media not to go to this hospital.

## **Strengths of Hospital-Patient Communication (PC)**

- **PC1.** A hospital, which shares information through social media to raise public awareness of health issues, has fulfilled an important task for public health.
- **PC2.** I know more rapidly about health-related developments by the information hospitals share on social media.
- **PC3.** Social media is a good opportunity for hospitals to draw new patients.
- **PC4.** The institutional information shared by a patient on the social media allows you to get more insight into that hospital.
- **PC5.** A patient's awareness of the criticism I have made on social media and their interest in complaint indicates that they care about patient relationships and patients.
- **PC6.** A doctor; sharing success stories such as treatments and surgeries that he/she has successfully concluded, innovations he/she has brought to the field of medicine in the social media strengthens that hospital's reputation.

**PC7.** Too much negative comment on social media about a hospital weakens the reputation of that hospital.

# Perceived Image of Hospital (PI)

- **PI1.** I think that a hospital using social media tools such as Facebook, Twitter, Youtube and Corporate Blog is more intimate than the others.
- **PI2.** I think that a patient who uses social media tools such as Facebook, Twitter, Youtube, and Corporate Blog is more confident than others.
- **PI3.** Of two hospitals; the image of the one having more followers on social media is stronger than the other.
- **PI4.** Among the social media followers of a hospital, famous people are the image of the hospital.
- **PI5.** I think that hospitals treating famous people offer better quality and professional services.