Scientific Research Publishing

The Effect of Hospitals' Social Media Marketing on Patients' Health Perception: Research in Istanbul Province

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Abstract

Nowadays, the market in this sector encompasses almost every kind of healthcare service, such as health systems, hospitals, providers with multiple locations, individual practices, pharmaceutical companies, medical device manufacturers, health insurance plans, consumer brands, and more. Hospitals provide health services and care to sick or injured individuals through the expertise of doctors and nurses. Social media refers to interactive technologies that enable individuals to create, share, and express information, ideas, interests, and various forms of expression through virtual communities and networks; these communities and networks are established based on the prevalent internet connectivity that has become widespread in the digital era. The lifeblood of social media is user-generated content, which includes text posts or comments, digital photos or videos, and data generated through online interactions. Social media can help foster an individual's sense of connection to real or online communities and can be an effective communication tool. Having discovered the impact of this channel on consumers, business owners have included this area in their marketing strategies. It becomes critical to define and measure patients' perceptions of healthcare quality and to better understand what drives these perceptions. Today, there is a request to compile a summary of patients' viewpoints on health plans, hospitals, doctors, and overall health services. This study aims to investigate the impact of social media activities employed by hospitals in promoting their health services on patients' perception, specifically referring to the physical stimulation experienced by patients through their sensory organs. The questionnaire form created in this direction was then used as Google Form to obtain data. We acquired data regarding the opinions of social media users who receive hospital services in Istanbul. The 397 collected data were analyzed using SPSS, one of the statistical programs. The acceptance of our hypotheses de-

signed according to the model was determined as a result of the Anova and t test. In order to achieve positive outcomes for consumers using social media, hospital services should be conducted correctly and adhered to accordingly, as a consequence of this outcome. In future studies, it is recommended that the study be applied throughout Türkiye.

1. Introduction

Hospitals are institutions dealing with health services. Hospitals serve humanity and play a vital role in the social well-being of every society. Hospitals, equipped with all the necessary facilities to ensure patient health in the face of different diseases, are adapting to evolving marketing strategies in the digital era. With the advent of the digital age, the utilization of the internet is also on the rise, thanks to the convenient accessibility provided to all consumers through the introduction of the internet. The widespread use of the Internet, along with the quick progress of social and network technology, has resulted in the rapid expansion of the online community, distinguished by its focus on information sharing and interactive engagement. The network community is an effective tool for information exchange and social communication. The network members generate a high level of communication process through the interpersonal relationships created in network communities. Social media has rapidly become widespread and powerful, providing consumers with a new form of communication and interaction that fulfills their need for interactive, collaborative and personalized interaction, not only between consumers but also between consumers and brands. Social media consists of a group of internet-based applications based on the web 2.0 concept that encourage user connection, participation, collaboration and content sharing. Examples of social media include social networks (e.g. Facebook), (micro) blogs (e.g. Twitter), collaborative projects (e.g. Wikipedia), content communities (e.g. YouTube), virtual worlds (e.g. Second Life) and games. The popularity of social media creates opportunities for organizations. Social media facilitates and improves communication between businesses and customers. Today, companies are widely incorporating social media into their marketing activities. The provision of high-quality medical care and assurance of patient satisfaction, partly influenced by physicians' ability and willingness (Chen et al., 2015) to establish rapport with their patients and develop effective physician-patient communication. Reaching the target audience in marketing has a different importance as this target audience is large and large. Efforts should be made to reach the audience that the business has and is likely to target. Social media is of great importance in itself in order to initiate and develop a relational process between the targeted audience and the business.

This study is carried out in order to determine the effect of the use of social media marketing from digital media in the field of marketing of hospitals where individuals meet health services on the health perceptions of patients. It was tried to determine the hospital perceptions of consumers using social media in Istanbul, which has a population of approximately 16 million. Data collected from 397 people were analyzed in SPSS 25 program. The survey method in the study used a 5-point Likert-type scale. The data collected through the Google form were obtained within a one-month period. The questionnaire includes a demographic section and a second section consisting of scale statements. The total of 30 questions on the scale items includes both social media marketing and health perception scales. In order to determine the suitability of these scales for evaluation, Cronbach's Alpha values were determined to be appropriate with their sub-dimensions. Again, the ethics committee permissions of these scales in this study were obtained by the Gelişim University Senate Ethics Committee Commission. The hypotheses that were formulated in accordance with the study's model were confirmed through the t-test and Anova tests. The tests have led to the conclusion that one of our hypotheses is accepted, whereas the other one is rejected. It is believed that the study will lead to similar studies.

2. Social Media Concept and Marketing Process

Scientists and engineers started developing networks between the first super-computers that were created in the 1940s, eventually resulting in the emergence of the Internet and the World Wide Web. The earliest forms of the Internet, such as CompuServe, were developed in the 1960s. Primitive forms of electronic communication were also developed during this period. By the 70s, networking technology had developed and enabled communication through digital bulletin board systems. By the 1980s, personal computers were more widespread and social media was becoming more sophisticated. Internet relay chats or IRCs were first used in 1988 and remained popular until the 1990s (Awan et al, 2021).

The last decade has seen tremendous growth in the use of social media platforms such as WhatsApp, Instagram and Facebook (Chen & Qasim, 2021). Social network users, government agencies and commercial firms use social media to communicate and its use is growing tremendously (Cheung et al, 2021). Companies view social media platforms as vital tools to succeed in the online marketplace (Ebrahim, 2020). Social media marketing (SMM) refers to the utilization of social media platforms to promote processes or events commercially, with the aim of attracting potential consumers online (Royle & Laing, 2014). Due to the significant rise in community websites, numerous organizations are now seeking effective means to utilize these platforms in order to establish robust connections and communication avenues with users in order to foster amicable and intimate relationships to develop online brand communities (Ibrahim, 2021). Social media marketing enables activities that increase brand awareness as well as efficiently promote communication between customers and marketers

(Hafez, 2021). As the Internet has developed various applications and tools over time, new communication channels have been created and the way people interact has changed dramatically (Tarsakoo & Charoensukmongkol, 2020). Social groups create a sense of continuity for their members even without physically meeting (Yadav & Rahman, 2017). Brand communities refer to specific communities established based on interactions between brand consumers (Beig & Khan, 2018) that are not limited by geographical constraints (Chen & Lin, 2019).

The true meaning of social media can only be understood if you divide the word into two words:

- Social refers to the way people socialize with each other (professionally or personally).
- Media refers to the platforms where people socialize or use.

It refers to traditional media and modern media, i.e. social networking sites. But not all types of traditional media are social media (Sirola, et al. 2021). Social media sites can be called modern media (Pang, 2021). However, for better understanding, in this blog we will refer to social media sites as social media (Chen & Lin, 2019). Social media brings people from around the world together online, fostering a sense of interconnectedness and community (Dutot, 2020). Social media consists of social networks, blogs, micro blogs and wikis. Online communities are usually led by a creator who brings together ideal members to specialize in an interesting topic (Zollo, et al., 2020). Practically any topic can be used to foster an online community, as long as it brings members together (Henseler et al., 2015). These can be exemplified as podcasts, content communities, social bookmarking, virtual worlds. Some companies give some junior staff access to the company's social accounts just because they are young, so they need to know everything about social media. But the strategy of social sharing and hope has long been left behind. All businesses need to create a social media marketing strategy and operate business social accounts in a thoughtful, measured way (Jarman et al., 2021). Using social media marketing, advertisements appear more natural and less focused on sales (Wibowo, et al., 2021). Customers are more likely to react positively when they see your brand on their social media (Yadav & Rahman, 2018) feeds during a commercial break on their favorite show (Jarman et al., 2021).

There are Five Basic Features of Social Media Marketing

Having a good grasp of these will help you get better results from social media marketing.

Listening

It is one of the features to pay attention to in social media. Being a good listener, following social media conversations, and listening to consumers' comments about your brand and products will help you use social media better.

Content strategy and marketing

Another important feature is content strategy and marketing. The main focus

of social media is to produce content.

Interaction

One of the indispensable issues of social media is undoubtedly interaction. Interaction is calculated based on criteria such as how many people your posts on your social accounts have reached, how many total likes, comments and shares they have received.

Promotions and advertisements

When it comes to brands and advertisers, one of the elements to pay attention to on social media is promotions and advertisements.

Measurement and analysis

The last feature will be analysis and measurement. The most effective and beautiful aspect of the work done on social media is that all work done on these platforms is kept analytically (IdeaSoft, 2024).

3. Health Perception

Perception refers to the reception, interpretation, selection and organization of sensory information in psychology and cognitive science. Perception consists of signals in the nervous system generated by physical stimulation of the sense organs. Self-perceived health is defined as an individual's perception of health in general. An individual's perception of their own health is subjective. Health is defined not only as the absence of injury or disease, but also as a function of physical, mental and social well-being. Self-perceived health is often used as a subjective assessment of health. It is useful for assessing the overall health status of the population, as it reveals health inequalities and highlights the health needs of the population as a whole (Ertaş et al., 2019). According to the World Health Organization, self-perception can be considered a valid and robust indicator of morbidity and mortality of many diseases such as cancer, stress, cardiovascular diseases, among other chronic long-term health conditions. Low self-perception is associated with frequent use of health services (Mahendra, 2021). Among different patient subgroups and among older people, personal perception of health has been used to assess the effectiveness of health care interventions. Measurement of self-perceived health is done through a single-item question that involves rating health status on a 5-point scale from poor to excellent. It is therefore a popular metric because it is simple and cost-effective to deploy and evaluate (Gençyürek, 2019). As the popularity of social networking sites continues to rise, they are increasingly being used as a platform for social comparison, which in turn affects individuals' perception of their own health (Açıksöz, et al., 2013). Social comparison with others can lead to both positive and negative effects over time, depending on the interpretation of the comparison information. These comparisons show that perceptions of physical functionality may change as a result of these comparisons (Neter & Brainin, 2012). Social comparison involves comparing ourselves to others to assess and enhance our own abilities and qualities. Upward comparison takes place when we engage in a comparison with

someone whom we perceive as being in a more advantageous position than ourselves, whereas downward comparison occurs when we compare ourselves to someone whom we perceive as being in a less advantageous position than ourselves. Further advancements in social comparison theory have demonstrated that the emotional outcome that occurs following the comparison is contingent upon how the comparison is perceived, rather than the specific aspect being compared. In comparison, individuals may feel hope and inspiration that they can emulate the better-off target (in a positive upward comparison), or they may feel demoralized and depressed if they believe they will never improve. It is off-target (after a negatively interpreted comparison; negative upward comparison) (Uslu & Şeremet, 2020).

Over-identification with others who fare worse in social comparison can lead to feelings of malaise, which over time can be associated with reduced perceptions of quality of life and lower self-esteem (Farivar & Richardson, 2021). Personal development only occurs when comparative knowledge is interpreted positively. Studies showing the importance of interpreting social comparison include those looking at coping and perceptions of quality of life (Lee, Kim, & Liew, 2021). People tend to share positive and attractive photos and write about happy and successful events, which means that the material is often upward comparison material and as a result the comparer may see themselves more negatively.

People, that is, patients, want to hear information from real doctors so that they can get more accurate information. We can do this thanks to digital platforms. Thanks to social media channels for direct communication, doctors, hospitals and polyclinics can provide accurate information to people in their own audience. In this way, the consumer reaches the correct information. It is very important for patients' satisfaction that they can get exactly the information they want whenever they want. Accurate information is important not only for the health of the patient, but also for the success of the doctor and the institution.

Online health communities present challenges as a form of communication as text-based communication lacks non-verbal cues, requires participants to have access to the internet, can lead to internet addiction, and can cause anxiety due to delay in seeking medical help (Kuloğlu & Uslu, 2022).

4. Method

4.1. Purpose of the Study

Social media is a unique enabler for healthcare businesses in communicating and disseminating marketing messages, realizing product offerings and managing their brand image. For healthcare businesses, this means building new relationships with potential customers and increasing sales of their products through existing satisfied customers. The importance of communication with customers of health enterprises working as hospitals is related to creating the phenomenon of trust between the customer and the customer, gaining the understanding of

the customers, increasing the preference rates, providing reminders, creating awareness and persuasion. Social media has become crucial in the creation and growth of brands due to the fast advancement of technology. Healthcare businesses have started to develop new strategies through social media to market their products/services, brands and reach target audiences.

4.2. Study Population and Sampling

This study will be conducted to determine the health perception of patient consumers using social media in the province of Istanbul and to what extent it affects health perception. Istanbul has a population of approximately 16 million. A total of 398 people were surveyed here. Since 3 of them were missing, they were excluded from the evaluation and the data were analyzed with a total of 395 people. To assess the extent to which events on social media impact the perception of health among consumers of hospitals in Istanbul as part of health marketing, individuals aged 18 and above who use the internet will be included. The questionnaire form is based on a 5-point Likert scale and will be completed through face-to-face interviews and the application of the questionnaire prepared in Google Form. The study will investigate the situation of hospitals, as well the situation of consumers who use social media and their perception of health. Consumers will be divided into strata by evaluating the demographic characteristics of hospital consumers by taking into account the 90% confidence interval and 0.10% error rate within the study population consisting of health consumers using social media in Istanbul province. Stratified Sampling is a sampling technique that ensures representation of subgroups within the population in the sample (Balci, 2013: p. 100).

4.3. Data Collection Technique

Included in the questionnaire are demographic variables such as gender, age, marital status, education, income, and occupation, which will be used to determine the activities of hospital consumers addicted to social media and their health perception status in the digital age. The second part consists of 30 statements in total. Of these, social media marketing consists of 15 items and this section consists of sub-variables such as 9 questions on activity and six questions on liking. It consists of a 15-item health perception statement. Cronbach's Alpha values of the sub-dimensions of the Social Media Marketing Scale are 0.868 for 15 statements. Social Media Marketing Activity sub-dimensions were 0.815 for Activity with 9 questions and 0.736 for Like with 6 questions. The Social Media Marketing scale is based on the scale developed by Yadav and Rahman (2017) and adapted into Turkish by Yüksekbilgili (2018).

The health perception scale developed by Diamond et al. (2007) and adapted into Turkish by Kadıoğlu and Yıldız (2012) was used in this study. The Cronbach's Alpha value of the scale, which has no sub-dimensions and consists of 15 statements in total, was 0.759. A five-point Likert-type method was used in

the study. The questionnaire was first tested by applying it to a pilot group of 59 people. After determining that the scale items were appropriate, the study was continued in this way. Ethics committee permission was also obtained (Istanbul Gelisim University Senate Ethics Committee Commission). Exploratory system from mixed research methods will be used in this research. The quantitative data will be collected and the results will be interpreted in this system. The research investigated whether the use of social media marketing methods for marketing activities has an impact on the perception of health among internet users in Istanbul province. Necessary permissions were also obtained for the scales used in the study. While creating the scale regarding the effect of health perception of health consumers using social media, the scale will be finalized as a result of the opinions of experts on the subject. An application will be developed for health consumers who use social media at a rate 10 times higher than the substances applied, based on the preliminary research and pilot studies to be carried out. The questionnaire to be applied will be finalized by conducting validity and reliability analyzes using the data obtained as a result of these studies.

4.4. Limitations of the Research

It is the global standardization efforts in the methods applied in the calculation of these data. In addition to temporal inconveniences, there are also financial limitations in the scope of the study. Due to these limitations, a study that can be applied throughout Türkiye has been conducted only in Istanbul province.

4.5. Research Model

The objective of this section is to assess the level of awareness among health consumers regarding the impact of customer relations facilitated through social media marketing channels employed by hospitals. The model created in this context is as shown in Figure 1 below.
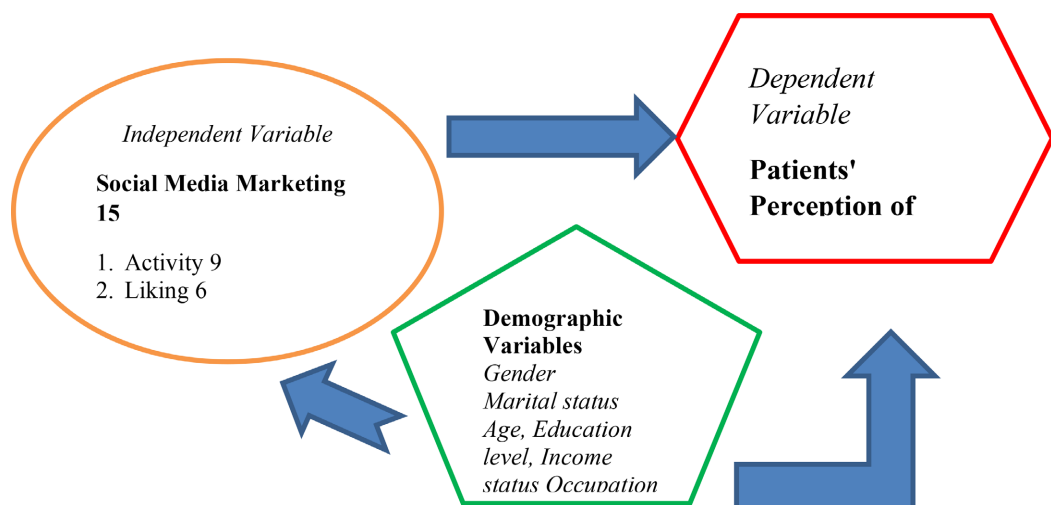

Figure 1. Research model.

4.6. Research Hypotheses

The following approaches were considered in constructing the hypotheses;

What is the effect on the health perception of healthcare consumers using social media: The expected outcome is that health perception will be influenced through the use of social media. The hypotheses pertaining to this matter are as follows;

Hypothesis 1: Hospitals' use of social media marketing has a positive effect on health perception.

Hypothesis 2: Hospitals' use of social media marketing has a positive effect on health perception in terms of demographic variables.

4.7. Data Analysis

The validity and reliability analysis findings obtained as a result of the pilot research conducted for the scales in the questionnaire form to be used to collect data in the study are presented below.

Cronbach's Alpha coefficient results for the scales and sub-dimensions used in the research are given in Table 1. According to the results, the reliability of the Social Media Marketing Scale, its Activity sub-dimension and the Health Perception Scale used in the research was found to be "highly reliable", while the reliability of the Social Media Marketing Scale's Liking sub-dimension was found to be "quite reliable".

According to the results obtained in the analysis of the items of the "*Activity*" sub-dimension of the Social Media Marketing Scale used in the research, since the correlation of each item with the scale total was higher than 0.300, it was decided that there was no need to remove items from the scale in the context of reliability analysis.

Again, according to the analysis of the items of the "*Liking*" sub-dimension of the Social Media Marketing Scale, since the correlation of each item with the scale total was higher than 0.300, it was decided that there was no need to remove items from the scale in the context of reliability analysis.

Table 4 Analysis of the items of the Health Perception Scale used in the research.

According to the analysis of the items of the Health Perception Scale used in the research, the items Health Perception1, Health Perception5, Health Perception10

Table 1. Cronbach's Alpha coefficient results for the scales and sub-dimensions used in the study.

Scale	Item number	Cronbach's Alpha
Social Media Marketing Scale	15	0.868
Social Media Marketing Activity	9	0.815
Social Media Marketing Liking	6	0.736
Health Perception Scale	11	0.759

and Health Perception11, whose correlation with the scale total was lower than 0.300, were removed from the scale in the context of reliability analysis.

4.7.1. Result Values of Frequency Tables

Frequency distributions of the respondents according to their gender are given in Table 2. According to the results, the rate of female respondents was 56.9% and the rate of male respondents was 43.1%.

Frequency distributions of the respondents according to their marital status are given in Table 3. According to the results, the rate of married respondents was 23.2% and the rate of single respondents was 76.8%.

Frequency distributions of the respondents according to age groups are given in Table 4. According to the results, 11.1% of the respondents were 18 - 22 years old, 75.3% were 23 - 32 years old, 4.5% were 33 - 42 years old and 9.1% were 43 - 49 years old. There is a significant relationship between age, one of the demographic factor groups, and the availability of health services and products. In the relationship between age and technology, young people in healthcare services prefer the process in terms of age in health marketing along with technology. Older people value the physical aspect of healthcare rather than social media.

Frequency distributions of the respondents according to their educational level are given in Table 5. According to the results, 15.6% of the respondents have high school education, 5.5% have associate's degree, 47.1% have bachelor's

Table 2. Frequency distribution of the respondents according to their gender.

Gender	Number	Percentage
Female	226	56.9
Male	171	43.1
Total	397	100.0

Table 3. Frequency distribution of respondents according to their marital status.

Marital status	Number	Percentage
Married	92	23.2
Single	305	76.8
Total	397	100.0

Table 4. Frequency distribution of respondents according to age groups.

Age group	Number	Percentage
18 - 22 years old	44	11.1
23 - 32 years old	299	75.3
33 - 42 years old	18	4.5
43 - 49 years old	36	9.1
Total	397	100.0

degree and 31.7% have postgraduate education.

Frequency distributions of the respondents according to their monthly income are given in Table 6. According to the results, the highest clustering was observed in the 0 - 8500 TL group with 34.5% and the lowest clustering was observed in the 15,501 - 19,500 TL group with 6.0%.

The frequency distribution of the respondents according to occupation is given in Table 7. According to the results, it was observed that 27.0% of the respondents were workers, 13.6% were officers, 30.2% were students and 29.2% had other occupations.

4.7.2. Statistical Results for Scale Items

When examining the averages in the frequency distribution and descriptive statistics for the items of the "*Activity*" sub-dimension in the Social Media Marketing Scale, it can be observed that the item "*Social Media Marketing Activity3*" has the highest mean of 3.78, while the item "*Social Media Marketing Activity6*"

Table 5. Frequency distribution of the respondents according to their educational level.

Education level	Number	Percentage
High school	62	15.6
Associate degree	22	5.5
Bachelor's degree	187	47.1
Postgraduate	126	31.7
Total	397	100.0

Table 6. Frequency distribution of the respondents according to their monthly income

Monthly income	Number	Percentage
0 - 8.500 TL	137	34.5
8.501 - 11.500 TL	94	23.7
11.501 - 15.500 TL	25	6.3
15.501 - 19.500 TL	24	6.0
19.5001 TL and above	117	29.5
Total	397	100.0

Table 7. Frequency distribution of the respondents according to their occupation.

Occupation	Number	Percentage
Worker	107	27.0
Officer	54	13.6
Student	120	30.2
Other	116	29.2
Total	397	100.0

has the lowest mean of 3.15. When analyzing the frequency distribution and descriptive statistics of the items within the "*Liking*" sub-dimension, which is a separate sub-variable, it becomes apparent that the item "*Social Media Marketing Liking* 2" has the highest mean of 3.94, while the item "*Social Media Marketing Liking*" has the lowest mean of 3.47.

Descriptive statistics for the Social Media Marketing Scale and its sub-dimensions are given in Table 8. Upon analyzing the averages, it becomes apparent that the "*Liking*" sub-dimension has the highest mean of 3.70, while the "*Activity*" sub-dimension has the lowest mean of 3.51.

Frequency distribution and descriptive statistics for the items of the Health Perception Scale are given in Table 14. Upon analyzing the averages, it becomes apparent that the "*Health Perception*4" sub-dimension has the highest mean of 4.00, while the "*Health Perception*13" sub-dimension has the lowest mean of 2.17.

4.7.3. Analysis of Research Variables in terms of Demographic Variables

Whether there is a difference in the Social Media Marketing Scale and its sub-dimensions used in the questionnaire in terms of gender variable was analyzed by t-test. According to the obtained results, no statistically significant difference was found in the Social Media Marketing Activities Scale and its sub-dimensions used in the questionnaire in terms of gender variable.

Whether there is a difference in the Social Media Marketing Scale and its sub-dimensions in terms of marital status was analyzed by t-test. According to the obtained results, no statistically significant difference was found in the Social Media Marketing Activities Scale and its sub-dimensions in terms of marital status.

Whether there is a difference in the Social Media Marketing Scale and its sub-dimensions in terms of Age Group variable was examined by ANOVA test and according to the obtained results, no statistically significant difference was found in the Social Media Marketing Scale and its sub-dimensions used in the questionnaire in terms of Age Group variable.

As a result of the ANOVA test examining whether there is a difference in the Social Media Marketing Scale and its sub-dimensions in the questionnaire in terms of the Educational Status variable, no statistically significant difference was found in the Social Media Marketing Scale and its sub-dimensions used in the questionnaire in terms of the Educational Status variable.

According to the results of the ANOVA test whether there is a difference in the Social Media Marketing Scale and its sub-dimensions used in the questionnaire in terms of the Monthly Income variable, no statistically significant difference

Table 8. Descriptive statistics for the social media marketing scale and its sub-dimensions.

Dimension/Scale	Mean	Standard Deviation
Social Media Marketing Activity	3.51	0.65
Social Media Marketing Liking	3.70	0.74
Social Media Marketing MEAN	3.58	0.63

was found in the Social Media Marketing Scale and its sub-dimensions used in the questionnaire in terms of the Monthly Income variable.

Whether there is a difference in the Social Media Marketing Scale and its sub-dimensions used in the questionnaire in terms of occupational variable was analyzed by ANOVA test and no statistically significant difference was found in the Social Media Marketing Scale and its sub-dimensions used in the questionnaire in terms of occupational variable.

The values shown in Table 9 were examined with the t-test to see if there was a difference according to the gender variable in the Health Perception Scale used in the survey. According to the obtained results, no statistically significant difference was found in the Health Perception Scale used in the questionnaire in terms of gender variable.

Whether there was a difference in the Health Perception Scale used in the survey according to marital status was analyzed with t-test. The results obtained are shown in Table 10 and according to them, no statistically significant difference was found in the Health Perception Scale used in the survey according to marital status.

Whether there is a difference in the Health Perception Scale used in the questionnaire in terms of the Age Group variable was examined by ANOVA test and the obtained results are given in Table 11. According to the obtained results, no

Table 9. Examination of the health perception scale used in the questionnaire in terms of gender variable.

	Gender	N	Mean	Standard Deviation	t	p
Health Perception Mean	Female	226	2.95	0.619	−0.96	0.340
	Male	171	3.01	0.625		

Table 10. Examination of the health perception scale used in the questionnaire in terms of marital status.

	Marital status	N	Mean	Standard Deviation	t	p
Health Perception Mean	Married	92	3.08	0.644	1.81	0.070
	Single	305	2.94	0.612		

Table 11. Examination of the health perception scale used in the questionnaire in terms of the age group variable.

	Age Group	N	Mean	Standard Deviation	F	P
	18 - 22 y.o	44	3.0145	0.70389	0.302	0.740
Health Perception Mean	23 - 32 y.o	299	2.9614	0.61394		
	33 y.o plus	54	3.0202	0.60164		
	Total	397	2.9753	0.62168		

statistically significant difference was found in terms of the Age Group variable in the Health Perception Scale used in the questionnaire.

Whether there is a difference in the Health Perception Scale used in the questionnaire in terms of education level was analyzed by ANOVA test and the results are given in Table 12. According to the results, no statistically significant difference was found in the Health Perception Scale used in the questionnaire in terms of education level.

Whether there is a difference in the Health Perception Scale used in the questionnaire in terms of Monthly Income variable was analyzed by ANOVA test and the obtained results are given in Table 13. According to the obtained results, no statistically significant difference was found in the Health Perception Scale used in the questionnaire in terms of Monthly Income variable.

Whether there is a difference in the Health Perception Scale used in the questionnaire in terms of occupational variable was analyzed by ANOVA test and the obtained results are given in Table 14. According to the obtained results, no statistically significant difference was found in the Health Perception Scale used in the questionnaire in terms of occupation variable.

4.7.4. Analysis of the Relationship between Health Perception and Social Media Marketing Variables

The correlation analysis results for the relationship between the Social Media Marketing scale and its sub-dimensions used in the questionnaire and the Health

Table 12. Examination of the Health Perception Scale used in the questionnaire in terms of educational level.

	Educational level	N	Mean	Standard Deviation	F	P
Health Perception Mean	High School	62	2.89	0.583	1.621	0.184
	Associate degree	22	2.76	0.447		
	Bachelor's degree	187	2.99	0.636		
	Postgraduate	126	3.03	0.639		
	Total	397	2.98	0.622		

Table 13. Examination of the health perception scale used in the questionnaire in terms of monthly income variable.

	Monthly income	N	Mean	Standard Deviation	F	P
Health Perception Mean	0 - 8.500 TL	137	2.96	0.639	1.24	0.295
	8.501 - 11.500 TL	94	2.89	0.532		
	11.501 - 19.500 TL	49	2.98	0.606		
	19.501 TL and above	117	3.05	0.671		
	Total	397	2.98	0.622		

Perception scale are given in Table 15. The correlation coefficients between the variables are statistically significant. It is evident that there is a positive relationship between the variables. In this case, when there is an increase in one of the variables, it is expected that there will be an increase in the other variable.

The linear regression model results of the Health Perception variable and Social Media Marketing variable are given in Table 16. According to the ANOVA test, the model was found statistically significant. In addition, the coefficient of

Table 14. Examination of the health perception scale used in the questionnaire in terms of occupational variable.

	Occupation	N	Mean	Standard Deviation	F	P
Health Perception Mean	Worker	107	2.94	0.578	2.299	0.077
	Officer	54	3.16	0.690		
	Student	120	3.00	0.654		
	Other	116	2.90	0.581		
	Total	397	2.98	0.622		

Table 15. Correlation analysis results for the relationship between the social media marketing scale and its sub-dimensions and the health perception scale used in the questionnaire.

		(X1)	(X2)	(X3)	(X4)
Health Perception (X1)	Correlation coefficient	1	0.093	0.145**	0.278**
	p		0.065	0.004	0.000
Activity (X2)	Correlation coefficient	0.093	1	0.691**	0.663**
	p	0.065		0.000	0.000
Liking(X3)	Correlation coefficient	0.145**	0.691**	1	0.083
	p	0.004	0.000		0.101
Social Media Marketing (X4)	Correlation coefficient	0.278**	0.663**	0.083	1
	p	0.000	0.000	0.101	

**Correlation is significant at the 0.01 level (2-tailed).

Table 16. Linear regression model results for Health Perception variable and Social Media Marketing variable

	Regression Coefficients	Standard Regression Coefficients	t	P
Fixed	1.167		3.696	0.000
Social Media Marketing	0.608	0.278	5.753	0.000
R	**R square**	**Adjusted R square**	**F**	**P**
0.278	0.077	0.075	33.094	0.000

determination (corrected) of the model was calculated as 0.075. Accordingly, 7.5% of the variability in the Health Perception variable is explained by the Social Media Marketing variable through the linear regression model. According to the student-t test for the significance of the coefficients of the regression model, both coefficients are statistically significant. According to these results, the estimation of the regression line is:

(Health Perception) = 1.167 + 0.608 * (Social Media Marketing)

According to the standard regression coefficient, an increase of 1 unit in the Social Media Marketing variable is expected to cause an increase of 0.278 units in the Health Perception variable.

The linear regression model results of the effect of Social Media Marketing sub-dimensions on Health Perception are given in Table 17. The significance of the linear regression model between Health Perception and Social Media Marketing sub-dimensions was analyzed by ANOVA test. According to the ANOVA test, the model was found statistically significant. In addition, the adjusted R-squared coefficient for the model was calculated as 0.088. This value shows that 8.8% of the variability in Health Perception is explained by Social Media Marketing sub-dimensions through the linear regression model. When analyzing the effect coefficients of Social Media Marketing sub-dimensions, it is evident that the effect of the Liking dimension on Health Perception is higher than the standard regression coefficients. According to the standard effect coefficients, it is expected that when there is a one unit increase in the perception of Liking, there will be a 0.400 unit increase in Health Perception, and when there is a one unit increase in the perception of Activity dimension, there will be a 0.369 unit increase in Health Perception. According to these results, the estimation of the regression line is:

(Health Perception) = 0.850 + 0.338 (Liking) + 0.352 * (Activity)

The linear regression model results of the effect of Social Media Marketing sub-dimensions on Health Perception are given in Table 18. The significance of the linear regression model between Health Perception and Social Media Marketing sub-dimensions was analyzed by ANOVA test. According to the ANOVA test, the model was found statistically significant. In addition, the adjusted

Table 17. Linear regression model results on the effect of social media marketing sub-dimensions on health perception.

	Regression Coefficients	Standard Regression Coefficients	t	p
Fixed	0.850		2.518	0.012
Liking	0.338	0.400	6.026	0.000
Activity	0.352	0.369	5.563	0.000
R	**R square**	**Adjusted R square**	**F**	**p**
0.304	0.092	0.088	20.027	0.000

R-squared coefficient for the model was calculated as 0.088. This value shows that 8.8% of the variability in Health Perception is explained by Social Media Marketing sub-dimensions through the linear regression model. When analyzing the effect coefficients of Social Media Marketing sub-dimensions, it is evident that the effect of the Liking dimension on Health Perception is higher than the standard regression coefficients. According to the standard effect coefficients, it is expected that when there is a one unit increase in the perception of Liking, there will be a 0.400 unit increase in Health Perception, and when there is a one unit increase in the perception of Activity dimension, there will be a 0.369 unit increase in Health Perception. According to these results, the estimation of the regression line is:

(Health Perception) = 0.850 + 0.338 * (Liking) + 0.352 * (Activity)

The results of the hypotheses based on the model created according to the study purposes are shown in Table 19 below.

5. Discussion, Conclusion and Suggestions

Social media continues to transform the way organizations and consumers interact. The high monthly revenues generated by Facebook, the biggest social networking site in the world, indicate that social media extends beyond conventional marketing platforms. The use of social media in healthcare is not as advanced as in other industries, and this can be partially attributed to distinct ethics and ethical guidelines. Healthcare social media is evolving from simple information-sharing functions to addressing complex public health issues such as healthcare quality and safety. Experiences shared online regarding the satisfaction and quality of healthcare organizations and providers can influence

Table 18. Linear regression model findings on the effect of social media marketing sub-dimensions on health perception.

	Regression Coefficients	Standard Regression Coefficients	t	P
Fixed	0.850		2.518	0.012
Liking	0.338	0.400	6.026	0.000
Activity	0.352	0.369	5.563	0.000
R	**R Square**	**Adjusted R Square**	**F**	**p**
0.304	0.092	0.088	20.027	0.000

Table 19. Results of the hypotheses based on the model.

HYPOTHESES	p value	Condition
H1: Hospitals' use of social media marketing has a positive effect on health perception.	0.850	Agreed
H2: Hospitals' use of social media marketing has a positive effect on health perception in terms of demographic variables.	0.092	Rejected

consumers' healthcare decisions. Ensuring the accuracy of quality metrics on social media sites of healthcare organizations and providers is important for all stakeholders. The potential impact of user-generated metrics on healthcare consumer decision-making and market share is uncertain. The majority of the literature on social media in healthcare is qualitative, focusing primarily on implications and applications. It is suggested that feedback and ratings on social media and other online rating tools may be associated with objective measurements of patient satisfaction, as well as hospital quality and safety.

According to the results of this study, 27.0% of the respondents were workers, 13.6% were officers, 30.2% were students and 29.2% had other occupations. Based on the obtained data, the highest concentration is in the 0 - 8500 TL group with 34.5% and the lowest concentration is in the 15,501 - 19,500 TL group with 6.0%. According to the results, 15.6% of the respondents have high school education, 5.5% have associate's degree, 47.1% have bachelor's degree and 31.7% have postgraduate education. According to the findings obtained in addition to these data, it was observed that 11.1% of the respondents were in the 18-22 age group, 75.3% in the 23 - 32 age group, 4.5% in the 33 - 42 age group and 9.1% in the 43 - 49 age group. According to other results, the rate of married respondents was 23.2% and the rate of single respondents was 76.8%. Based on the analysis of the data, the rate of female respondents was 56.9%, while the rate of male respondents was 43.1%. According to all findings, Health Perception 1, Health Perception 5, Health Perception 10 and Health Perception 11 items with a correlation lower than 0.300 with the scale total were removed from the scale in the context of reliability analysis. According to the obtained findings, since the correlation of each item with the scale total was higher than 0.300, it was decided that there was no need to remove items from the scale in the context of reliability analysis. Based on these exploratory values, it was concluded that it was not necessary to remove any of the items belonging to the scale according to the reliability analysis values as a result of the scale total status and correlation being more than 0.300 for each item.

The reliability of the Social Media Marketing Scale and its Activity sub-dimension and Health Perception Scale, which were taken as the study variables, were found to be "highly reliable", while the reliability of the Social Media Marketing Scale's Liking sub-dimension was found to be "quite reliable". According to the findings of the linear regression model of the effect of Social Media Marketing sub-dimensions on Health Perception, the significance level investigated for the regression model with a linear value between Health Perception and Social Media Marketing sub-dimensions was evaluated through ANOVA test. Based on the ANOVA test, the model was found to be statistically significant. In addition, the adjusted R-squared coefficient was evaluated as 0.088 depending on the model. This result shows that 8.8% of the variability in Health Perception is explained by Social Media Marketing sub-dimensions through the linear regression model.

When analyzing the effect coefficients of Social Media Marketing sub-dimensions, it is evident that the effect of the Liking dimension on Health Perception is higher than the standard regression coefficients. According to the standard effect coefficients, it is expected that when there is a one unit increase in the perception of Liking, there will be a 0.400 unit increase in Health Perception, and when there is a one unit increase in the perception of Activity dimension, there will be a 0.369 unit increase in Health Perception. Based on the estimation of the regression line according to the results in the study, the linear regression model findings of the Health Perception variable and the Social Media Marketing variable were statistically significant according to the ANOVA test. In addition, the coefficient of determination (adjusted) of the model was calculated as 0.075. Accordingly, 7.5% of the variability in the Health Perception variable is explained by the Social Media Marketing variable through the linear regression model. According to the student-t test for the significance of the coefficients of the regression model, both coefficients were found to be statistically significant. According to the standard regression coefficient, an increase of 1 unit in the Social Media Marketing variable is expected to cause an increase of 0.278 units in the Health Perception variable. The correlation values for the variables in the correlation analysis findings for the relationship between the Social Media Marketing scale and its sub-dimensions and the Health Perception scale used in the questionnaire were found to be statistically significant. It is concluded that the variables have a positive relationship with each other. With this result, an increase in one of the variables leads to an increase in the others. Whether there is a difference in the Health Perception Scale used in the questionnaire in terms of the Age Group variable was examined by ANOVA test and according to the obtained results, no statistically significant difference was found in the Health Perception Scale used in the questionnaire in terms of the Age Group variable. Whether there is a difference in the Health Perception Scale used in the questionnaire in terms of marital status was analyzed by means of t-test. The findings of the study revealed that there was no statistically significant difference in terms of marital status when considering the Health Perception Scale in the questionnaire. As the other variable in the questionnaire, the difference in the Health Perception Scale in terms of gender was analyzed using t-test. Depending on the results, no statistically significant difference was found in the Health Perception Scale in the questionnaire in terms of gender variable. The difference in the Social Media Marketing Scale and its sub-dimensions in the questionnaire in terms of occupational variables was analyzed by means of ANOVA test and the findings revealed that there was no statistically significant difference in the Social Media Marketing Scale and its sub-dimensions in terms of occupational variables. Whether there is a difference in the Social Media Marketing Scale and its sub-dimensions in the questionnaire in terms of Monthly Income variable was analyzed by ANOVA test and no statistically significant difference was found in the Social Media Marketing Scale and its sub-dimensions used in the question-

naire in terms of Monthly Income variable. Whether there is a difference in the Social Media Marketing Scale and its sub-dimensions used in the questionnaire in terms of gender variable was analyzed by t-test. According to the results, no statistically significant difference was found in the Social Media Marketing Activities Scale and its sub-dimensions used in the questionnaire in terms of gender variable. When examining the means in the frequency distribution and descriptive statistics for the items of the Health Perception Scale, it can be observed that the highest mean is found in the item "Health Perception 4" at 4.00, while the lowest mean is found in the item "Health Perception 13" at 2.17. Upon analyzing the descriptive statistics for the Social Media Marketing Scale and its sub-dimensions, it becomes evident that the "Liking" sub-dimension exhibits the highest mean of 3.70, whereas the "Activity" sub-dimension demonstrates the lowest mean of 3.51. In the frequency distribution and descriptive statistics for the items of the "Liking" sub-dimension of the Social Media Marketing Scale, the highest mean was 3.94 in the "Social Media Marketing Liking 2" item and the lowest mean was 3.47 in the "Social Media Marketing Liking" item. The frequency distribution and descriptive statistics for the items of the "Activity" sub-dimension of the Social Media Marketing Scale show that the highest mean is in the "Social Media Marketing Activity 3" item with 3.78 and the lowest is in the "Social Media Marketing Activity 6" item with 3.15.

The first hypothesis, "Hospitals' use of social media marketing has a positive effect on health perception." was accepted with a value of 0.850, while the second hypothesis, "Hospitals' use of social media marketing has a positive effect on health perception in terms of demographic variables." was rejected with a (p) value of 0.092.

As a result of all these data, it was concluded that the use of social media marketing in hospitals' digital environment positively impacts patients' perception of health.

6. Suggestions

This study, which is conducted in today's world where digitalization and the internet are widely utilized, and which focuses on businesses where marketing is extensively practiced, will serve as a precedent for future studies of a similar nature. Further studies in the field of social media will be particularly effective in the health sector. Considering the variations present in this sector, it is advisable for it to be utilized in other domains of the service industry. Additionally, it is suggested to broaden the scope of application for this research.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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