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ORIGINAL RESEARCH ARTICLE

The Impact of Social Media on the Choice of Dental Implant Treatment

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Abstract

Purpose: The pervasive use of social media has led to widespread utilization of social media sharing within the realm of healthcare, including active engagement within dentistry practices. This study seeks to assess the impact of information concerning dental implant treatments shared on social media platforms on the decision-making processes of patients seeking such treatments. **Materials and Methods:** This research was configured as a web-based survey study targeting individuals aged 18 and above with no prior history of implant treatments and active social media usage.

Results: The online survey encompassed 401 participants, comprising 355 female and 46 male individuals. Notably, 41.1% of participants reported their initial exposure to dental implant concepts through dental practitioners. Analyses revealed a significant correlation between age and the choice of social media platform (p=0.001). Moreover, a statistically significant association was identified between participants' educational backgrounds and their primary information source regarding dental implants (p=0.044). Furthermore, correlations were observed between age and the impact of negative social media comments on treatment-related apprehensions (p=0.018), as well as between age and considerations regarding the brand or country of origin of dental implants in decision-making processes (p=0.006).

Conclusions: Findings suggest that social media content related to dental implant treatments exerts a direct influence on individuals' decision-making processes regarding implant procedures. Social media platforms are thus proposed as effective communication and marketing tools for dentists seeking to attract new patients.

Key words: Dental implant; Dentistry; Social media

Introduction

Today, the Internet constitutes the primary resource for numerous individuals seeking health information. As per a study, 88% of the American populace utilizes the Internet as a source of health-related information, with 20% opting for social media platforms for such content.¹ The swift proliferation of social media adoption within the medical community and healthcare institutions has sparked heightened interest among healthcare consumers towards social media channels. Professionals and entities across various sectors utilize social media tools to disseminate contact details, facility visuals, informative articles, and consumer feedback. Among the 5754 hospitals in operation in the United States, 21% maintain a presence on at least one social media platform.² Similarly, in Turkey, both public and private healthcare entities and physicians are progressively leveraging social media channels. Notably, in 2023, the official Instagram account of the Turkish Ministry of Health garnered 3.4 million followers, indicating the escalating utilization of social media within the healthcare sector.

Social media postings are actively embraced within dental practices due to their speed, efficacy, cost-effectiveness, and ability to target the appropriate audience. Dentists, healthcare organizations, and dental product marketers can reach the masses they serve through social media.³ Over the past three decades, dental implantology has emerged as a vital component of dental care.⁴ The provision of information concerning dental implantology holds significance both from a healthcare perspective and as a marketing tool. Positive feedback about dental implant treatments can dispel negative preconceptions associated with such procedures, thereby facilitating patient acceptance. Conversely, negative comments have the potential to impede patients' willingness to opt for implant treatments. For this reason, patients have increasingly sought information about dental implants in recent years.⁵ Access to such information equips the public with fundamental knowledge on dental implants, empowering them to contemplate dental implants as a viable treatment option when the need arises.⁶

The primary objective of this study was to evaluate the effects of dental implant treatment-related posts disseminated on Instagram





and Facebook, prominent social media platforms, on the decisionmaking behavior of patients pursuing dental implant treatments. The research aimed to ascertain to what degree patients are swayed by social media content when selecting a dentist, healthcare establishment, and dental implant brand during their implant treatment journey.

Material and Methods

This study was designed as a web-based questionnaire study, ethics committee approval was obtained before the start of the study (Ka-padokya University Ethics Committee, 29533901-050.99-15552), and the study was conducted according to the principles of the Declaration of Helsinki. Population and Sample: The population of the study consists of individuals seeking dental implant treatment who use at least one of the social media platforms, Instagram and/or Facebook.

Since the number of people who will seek dental implant treatment in Turkey cannot be known and the population is large, the minimum number of people to participate in the survey was determined using the following equation.⁷ $N = (z^2xp(1-p))/e^2$

In this study, the confidence level was set at 95%, the standard deviation was set at 0.5, and the margin of error was set at +/- 5%. The Z-score value at the 95% confidence level is 1.96. According to this; $N = ([1, 96]^2 x0, 5[0, 5])/[0, 05]^2 = 384.16$

The minimum number of people to participate in the survey was set at 385.

Exclusion Criteria: Individuals under 18 years of age, those with a history of implant treatment and/or no need for implant treatment, and those who did not use social media were excluded.

Data Collection Tools: An online questionnaire created on docs.google.com was used as a data collection tool. In the first part of the two-part questionnaire, the demographic data of the participants were collected; the preferred social media platform and where they first learned about implant treatment were asked. In the second part of the questionnaire, a 5-point Likert scale was used to determine the factors that influence an individual's decision-making mechanism in the implant treatment process. Response options ranged from 1 (not at all important) to 5 (very important).

Statistical Method: Data were analyzed using IBM SPSS V23. The Shapiro–Wilk test was used to test for normality. Kruskal–Wallis test was used to compare non–normally distributed data according to groups of three or more, and Dunn's test was used for multiple comparisons. Pearson chi–squared test was used to analyze cat– egorical variables by groups. Analysis results were presented as frequency (percentage) for categorical variables and mean ± stan– dard deviation and median (minimum–maximum) for quantitative variables. The significance level was set at p<0.05.

Results

The study involved a total of 444 questionnaire responses, with 43 participants excluded based on predetermined exclusion criteria. Thus, the analysis encompassed data from 401 individuals, comprising 355 females (88.5%) and 46 males (11.5%). The demographic characteristics, including age and education level of the participants, are delineated in Table 1. Notably, a majority (70.8%) of the participants reported using the social media platform Instagram. While the usage rate of Facebook stood at 0.7%, the combined usage of Instagram and Facebook was reported at 28.4%.

In exploring the sources through which participants initially acquired information about dental implants, 41.1% cited dentists, 34.9% indicated relatives or friends, and 23.9% referred to social media platforms as their primary source (Table 1).

A statistically significant correlation was observed between age and the choice of social media application among participants Table 1. Demographic characteristics of the participants

	Frequency (n)	Percentage (%)
Gender		
Male	46	11,5
Female	355	88,5
Age		
18-24 years old	44	11
25-34 years old	154	38,4
34-44 years old	138	34,4
45-54 years old	55	13,7
55-64 years old	10	2,5
Education level		
Primary education	21	5,2
High School	68	17
Associate Degree	46	11,5
Bachelor's Degree	209	52,1
Graduate Degree	57	14,2
Social media application used		
Instagram	284	70,8
Facebook	3	0,7
Instagram/Facebook	114	28,4
Where did you first		
hear about dental implants		
Dentist	165	41,1
Family/Friends	140	34,9
Social media	96	23,9

(p=0.001). Breakdown by age group revealed that 88.64% of individuals in the 18-24 age bracket utilized Instagram, contrasting with a usage rate of 40.00% among those aged 55-64. Facebook usage registered at 0.00% in the 18-24 demographic and 10.00% in the 55-64 cohort. The combined usage of Instagram and Facebook was reported at 11.36% for the 18-24 group and 50.00% among those aged 55-64 (Table 2)

In the analysis investigating the relationship between participants' level of education and their primary source of information about dental implants, a statistically significant association was identified (p=0.044) (Table 3)

Furthermore, when examining the significance of various factors influencing individuals' preference for dental implant treatment– particularly the impact of previous treatment experiences of relatives and friends– a notable difference in values was observed (p=0.001). This indicates that as individuals age, the influence of their social circle's treatment experiences becomes more pronounced in shaping their preference for dental implant treatment. Additionally, a statistically significant difference was found in the median values attributed to dentist recommendations across groups (p=0.034) (Table 4). However, no significant disparities were detected in the multiple comparisons of dentist recommendations.

Regarding where participants acquired knowledge about dental implants, an analysis based on age revealed significant differences in median values associated with knowledge and experiences from relatives and friends (p=0.001) and information obtained from dentists (p=0.039) (Table 5). Multiple comparisons indicated no significant differences between these groups.

In the analysis of participants' concerns and fears regarding dental implant treatment, stratified by age, a statistically significant difference was observed in the scores related to negative comments about dental implant treatment on social media (p=0.018) (Table 6).

Another significant finding emerged when evaluating the importance of brand/country of origin across age groups, with a statistically significant difference in median values recorded (p=0.006) (Table 7). Additionally, significant differences were noted in the social media awareness scores among different age brackets (p=0.009).

Moreover, the analysis of recommendation scores from relatives

Table 2. Examining the link between age an	id social media use
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	18-24	25-34	34-44	45-54	55-64	Total	Test	p*
							Statistics	
		1	Which social m	edia app do yo	u use?			
Instagram	39(88,64)	113(73,38)	91(65,94)	37(67,27)	4(40,00)	284(70,82)		-
Facebook	0(0,00)	1(0,65)	0(0,00)	1(1,82)	1(10,00)	3(0,75)	25,809	0,001
Instagram/Facebook	5(11,36)	40(25,97)	47(34,06)	17(30,91)	5(50,00)	114(28,43)		

*Pearson chi-square test

Table 3. Examining the relationship between the level of education and where the concept of dental implant was first learned

		What is your e	ducation level?			 Test Statistics 	p *
Primary	High	Associate	Bachelor's	Graduate	Total		Р .
education	School	Degree	Degree	Degree	Total		
8(38,10)	23(33,82)	15(32,61)	87(41,63)	32(56,14)	165(41,15)		
10(47,62)	20(29,41)	17(36,96)	77(36,84)	16(28,07)	140(34,91)	15,866	0,044
3(14,29)	25(36,76)	14(30,43)	45(21,53)	9(15,79)	96(23,94)		

*Pearson chi-square test

Table 4. What is the importance of the following options among the reasons for choosing implant treatment? Comparison of the answers to this question according to age groups

	How old are you?					Test	p*
-	18-24	25-34	35-44	45-54	55-64	Statistics	p.
Past dental implant	2,36 ± 1,38	3,14 ± 1,46	3,36 ± 1,41	3,31 ± 1,46	4,40 ± 0,84	23,068	<0,001
treatment experiences	2,50	3,00	3,00	3,00	5,00	23,008	<0,001
of relatives/friends	(1,00- 5,00)a	(1,00- 5,00) b	(1,00- 5,00) b	(1,00- 5,00) b	(3,00- 5,00) b		
Social media reviews on	2,59 ± 1,54	2,82 ± 1,42	2,93 ± 1,35	2,80 ± 1,27	3,60 ± 1,17	F 019	0,285
positive dental implant	2,00	3,00	3,00	3,00	3,50	5,018	0,285
experiences	(1,00- 5,00)	(1,00- 5,00)	(1,00- 5,00)	(1,00- 5,00)	(2,00- 5,00)		
Advice from	4,18 ± 1,15	4,03 ± 1,04	4,07 ± 1,16	3,58 ± 1,34	4,50 ± 0,85	10.20	0.02/
my dentist	5,00	4,00	5,00	4,00	5,00	10,39	0,034
	(1,00- 5,00)	(1,00- 5,00)	(1,00- 5,00)	(1,00- 5,00)	(3,00- 5,00)		

*Kruskall Wallis H test, a-c: No difference between groups with the same letter. Mean ± standard deviation; median (minimum-maximum)

Table 5. Where did you learn about dental implants? Please rate the impact of the following options on your knowledge of dental implants from 1 to 5. Comparison of responses to the question by age group

]		Test	n*		
	18-24	25-34	34-44	45-54	55-64	Statistics	p*
Knowledge and experience	2,14 ± 1,25	3,01 ± 1,51	2,97 ± 1,44	3,20 ± 1,41	3,70 ± 1,16	18,147	0,001
of relatives/friends	2,00	3,00	3,00	3,00	3,00	10,14/	0,001
	(1,00- 5,00)a	(1,00- 5,00) b	(1,00- 5,00) b	(1,00- 5,00) b	(2,00- 5,00) b		
Information about dental	2,80 ± 1,52	2,84 ± 1,43	3,03 ± 1,41	2,69 ± 1,30	3,10 ± 1,45	3,016	0 555
implants on social media	3,00	3,00	3,00	3,00	3,00	3,010	0,555
	(1,00- 5,00)	(1,00- 5,00)	(1,00- 5,00)	(1,00- 5,00)	(1,00- 5,00)		
From the information	4,20 ± 1,19	3,94 ± 1,29	3,81 ± 1,30	3,51 ± 1,37	4,40 ± 0,97	10,085	0.020
I got from my dentist	5,00	4,00	4,00	4,00	5,00	10,085	0,039
	(1,00- 5,00)	(1,00- 5,00)	(1,00- 5,00)	(1,00- 5,00)	(2,00- 5,00)		

*Kruskall Wallis H test, a-c: No difference between groups with the same letter. Mean ± standard deviation; median (minimum-maximum)

Table 6. What is the importance of the following options in the reasons underlying your concerns/fears about dental implant treatment? Comparison of the answers to this question according to age groups

			How old are you	?		Test	p*
	18-24	25-34	35-44	45-54	55-64	Statistics	P.
Negative experiences of	2,80 ± 1,46	2,77 ± 1,51	2,68 ± 1,54	2,98 ± 1,38	4,00 ± 1,05	8,47	0,076
relatives/friends	3,00	3,00	2,50	3,00	4,00	0,47	0,070
	(1,00- 5,00)	(1,00- 5,00)	(1,00- 5,00)	(1,00- 5,00)	(2,00- 5,00)		
Negative comments about dental	2,34 ± 1,41	2,34 ± 1,39	2,45 ± 1,40	2,38 ± 1,16	3,80 ± 0,79	11,936	0,018
implant treatment found	2,00	2,00	2,00	2,00	4,00	11,930	0,018
on social media	(1,00- 5,00)a	(1,00- 5,00)a	(1,00- 5,00)a	(1,00- 5,00'a	(3,00- 5,00) b		
Possible complications	3,00 ± 1,61	3,11 ± 1,41	3,18 ± 1,47	3,25 ± 1,14	4,00 ± 1,63	1 166	0.2/7
I learned from the dentist	3,00	3,00	3,00	3,00	5,00	4,466	0,347
	(1,00- 5,00)	(1,00- 5,00)	(1,00- 5,00)	(1,00- 5,00)	(1,00- 5,00)		
Pain/swelling after implant	2,57 ± 1,48	2,53 ± 1,39	2,71 ± 1,48	2,95 ± 1,28	3,50 ± 1,08	8 2 / 2	0.082
treatment that I learned about	2,00	2,00	2,50	3,00	3,50	8,243	0,083
on social media	(1,00- 5,00)	(1,00- 5,00)	(1,00- 5,00)	(1,00- 5,00)	(2,00- 5,00)		

*Kruskall Wallis H test, a-c: No difference between groups with the same letter. Mean ± standard deviation; median (minimum-maximum)

				Test	p *		
	18-24	25-34	35-44	45-54	55-64	Statistics	P
Brand/Country	3,27 ± 1,34	3,77 ± 1,32	3,94 ± 1,29	3,80 ± 1,30	4,50 ± 1,08	14,276	0,006
of manufacture	3,00	4,00	5,00	4,00	5,00	14,270	0,000
	(1,00- 5,00) a	(1,00- 5,00) ab	(1,00- 5,00) b	(1,00- 5,00) ab	(2,00- 5,00) b		
Dental implant	3,98 ± 1,09	4,05 ± 1,05	3,91 ± 1,23	4,07 ± 1,02	4,30 ± 0,82	1,143	0,887
price	4,00	4,00	4,00	4,00	4,50	1,145	0,887
	(1,00- 5,00)	(1,00- 5,00)	(1,00- 5,00)	(2,00- 5,00)	(3,00- 5,00)		
Awareness	2,43 ± 1,28	2,38 ± 1,35	2,25 ± 1,34	2,85 ± 1,33	3,20 ± 0,92	13,480	0,009
on social media	2,00	2,00	2,00	3,00	3,00	13,400	0,009
	(1,00- 5,00) ab	(1,00- 5,00) ab	(1,00- 5,00) a	(1,00- 5,00) b	(2,00- 5,00) ab		
Relative/Friend	2,43 ± 1,39	3,17 ± 1,42	3,03 ± 1,46	3,40 ± 1,30	4,10 ± 0,99	17 220	0.002
advice	2,00	3,00	3,00	3,00	4,50	17,230	0,002
	(1,00- 5,00)a	(1,00- 5,00) bc	(1,00- 5,00) b	(1,00- 5,00) bc	(3,00- 5,00)c		
Dentist Advice	4,34 ± 0,96	4,40 ± 0,90	4,21 ± 1,05	3,87 ± 1,32	4,70 ± 0,67	8,844	0,065
Dennist Auvice	5,00	5,00	5,00	4,00	5,00	0,044	0,005
	(1,00- 5,00)	(1,00- 5,00)	(1,00- 5,00)	(1,00- 5,00)	(3,00- 5,00)		

Table 7. Analysis of responses to the question "Please rate from 1 to 5 the factors that influence your choice of dental implant to be used" by age group.

*Kruskall Wallis H test, a-c: No difference between groups with the same letter. Mean ± standard deviation; median (minimum-maximum)

 Table 8. Examining the impact of social media posts and comments on physician choice by age group

		Test	n				
	18-24	25-34	35-44	45-54	55-64	Statistics	р
The impact of social media	3,39 ± 1,48	3,31 ± 1,28	3,22 ± 1,37	3,07 ± 1,40	3,60 ± 1,51	2,618	0,624
posts on physician selection	4,00	3,00	3,00	3,00	4,00	2,018	
	(1,00- 5,00)	(1,00- 5,00)	(1,00- 5,00)	(1,00- 5,00)	(1,00- 5,00)		
The impact of social media	3,59 ± 1,34	3,53 ± 1,21	3,54 ± 1,23	3,29 ± 1,20	3,80 ± 1,40	2 225	0,505
comments on physician selection	4,00	4,00	4,00	3,00	4,00	3,325	
	(1,00- 5,00)	(1,00- 5,00)	(1,00- 5,00)	(1,00- 5,00)	(1,00- 5,00)		

and friends revealed a statistically significant difference between age groups (p=0.002) (Table 8).

It is worth noting that no statistically significant differences were found between age and the impact of social media posts and comments about physicians on physician selection. Furthermore, the responses to questionnaire questions were compared based on educational level, revealing no significant correlation between the parameters and educational attainment (p>0.050).

Discussion

Advancements in internet technology have facilitated widespread global use of the internet for information sharing and research purposes. Social media, a prominent communication platform, has emerged as a valuable tool in the realm of healthcare, among other fields, enabling individuals to access information about products, healthcare services, businesses, or brands.^{1,2}

In 2021, 57% of individuals aged 16-74 in the EU reported utilizing the internet for social networking on platforms such as Facebook, Instagram, and Twitter.⁸ The fact that issues related to health services are often considered private increases the use of social media, especially in the stage of obtaining information. A study by Mano involving 1406 participants revealed that 43% of respondents used the internet and social media to acquire health-related information.⁹ A study on adolescent and young adult use of social media for health found that social media allows users to "obtain health information, connecting with others with similar conditions, and joining online support groups, which can enhance patient empowerment and may improve outcomes.¹⁰ This trend has prompted healthcare organizations and medical professionals to place an emphasis on utilizing social media for information dissemination. In a study conducted by Sivrikaya et al. in 2016, the impact of communication between dentists and patients on dental anxiety was investigated. The researchers found that engaging in communication on Instagram prior to a dental procedure led to a reduction in anxiety levels.¹¹ As the usage of Facebook, the oldest among these platforms, is observed to be on a decline, particularly among younger demographics, we investigated the correlation between age and the preferred social media platform in our study. Our analysis revealed a statistically significant relationship (p=0.001). Among individuals aged 18-24, a substantial 88.64% exclusively used Instagram, while none solely utilized Facebook, with 11.36% utilizing both platforms. As age increased, the percentage of individuals solely using Instagram decreased, while those opting for only Facebook or utilizing both platforms also declined. This data suggests a potential waning influence of Facebook in the upcoming years, highlighting the importance for healthcare providers to shift their focus towards alternative platforms such as Instagram, TikTok, and Twitter for effective communication and engagement with audiences.

Social media usage is pervasive in the dental field, similar to other healthcare sectors. With the rise of dental implant procedures as a popular and frequently sought-after treatment option in recent years, they have gained a notable presence in social media content. When patients are deciding on dental implant treatment, they are often influenced by their social circles and content on social media platforms. According to a study by Aldhaheri et al., 66.2% of participants look for dental information on social media, and 45% are influenced by their family and friends' dental treatment experiences.¹² Hence, there is a wealth of information on dental implants easily accessible to the public.¹³ In a study conducted by Özçakır et al., it was revealed that among 527 participants, 27.7% were knowledgeable about dental implant treatment. Within this group, 45.5% received information from their dentist, 31.6% from print media, and 17.3% from relatives and friends. ¹⁴ This highlights the various sources from which individuals gather information about dental implant treatment, with dentists playing a prominent role in patient education and awareness.¹⁵ The variety of sources through which individuals obtain information about dental implants is noteworthy. In a study, some participants reported their initial exposure to information about dental implants during visits to dental clinics, while others cited billboards, relatives, and friends as sources of information on the subject. This diversity underscores the various channels through which individuals acquire awareness and

knowledge of dental implant treatments, emphasizing the importance of disseminating accurate and easily accessible information through diverse platforms to effectively reach and educate a broad audience. In a study involving 401 participants, inquiries were conducted to determine the primary sources from which individuals obtained information about dental implants. The results revealed that 41.1% of participants gained knowledge from dentists, 34.9% from relatives or friends, and 23.9% from social media platforms. These findings emphasize the significant impact of social media in enhancing awareness of dental implant treatments.¹⁵

In a study involving 246 patients, it was observed that knowledge levels relating to dental implants were notably higher among younger individuals and those with advanced levels of education.¹⁵ Examining the influence of age on the primary sources of information on dental implants revealed a lack of statistically significant correlation (p=0.139). However, it was noted that as individuals' age increased, the percentage obtaining information from dentists decreased, while the proportion obtaining information from relatives and friends increased. Interestingly, the rate of learning from social media remained relatively consistent across different age groups.

Furthermore, the study analyzed the influence of education level on the sources of information about dental implants, revealing a statistically significant relationship (p=0.044). This highlights the importance of considering educational background when evaluating how individuals acquire knowledge about dental implant treatments. With the increase in education level, there was a corresponding increase in learning from dentists, a decrease in learning from relatives and friends, while learning from social media remained steady. Notably, the highest proportion of high school graduates, at 36.76%, reported social media as a source of learning about dental implants.

In analyzing responses to the question "Where did you get information about dental implants?", a clear trend emerged in the median values associated with information from different sources across age groups. The median value for knowledge obtained from acquaintances and peers increased with age, showing statistical significance between age groups (p=.039). However, the median value for information from social media remained consistent across age brackets. Dental professionals consistently ranked as the most significant source of information across all ages. Patients' knowledge of dental implants is low, with friends and acquaintances being the main source of information, and it is necessary to improve their understanding and correct information sources.¹⁵ This indicates that as individuals grow older, their decision-making regarding dental implants may be increasingly influenced by health-related stories within their immediate social circles. Additionally, our study found that previous experiences of relatives and friends with implant treatment had a more substantial influence on preferences for dental implant treatment among older individuals, with a statistically significant difference observed between different age groups (p<.001).

Dental implant treatment is often perceived as a daunting procedure, as evidenced by the findings of Al-Johany et al., where 68% of participants reported refusing implant treatment due to fear.¹⁶ Additionally, a separate study conducted in 2017 discovered that watching surgical videos online prior to dental implant treatment resulted in increased patient anxiety.¹⁷ Prompted by these observations, participants were asked about their concerns and fears regarding dental implant treatment. Interestingly, there was a statistically significant difference found between negative comments on social media platforms and different age groups (p=.018). This suggests that older individuals, who are typically the target demographic for dental implant treatment, are more susceptible to being influenced by negative comments on social media.

Another study concluded that one of the primary reasons why dental practices utilize social media is for marketing purposes.⁵ Furthermore, patients tend to be confused by the variety of dental implant brands available for use during their treatment process. In our research on this particular topic, we found that the brand recommended by dentists was considered the most important factor according to participant responses, with a median value of 5. The price of the implant is the second most important factor influencing individuals' brand choice. In a study conducted on 625 patients, it was determined that the competence of the dentist as well as the cost of dental implants influenced individuals' choice of selecting a dentist for implant treatment.¹⁸ The influence of the country where the implant is manufactured on brand choice is accepted as an important parameter for older people. While the brand awareness degree of the implant on social media was considered insignificant among young individuals, brand awareness on social media became more important in implant brand selection with increasing age. Similar to the results, the brand recommended by relatives and friends was considered important in the brand choice of older individuals.

Tengilimoğlu et al., in their investigation of the use of social media in selecting healthcare providers, found that 34.1% of participants reported using social media when choosing a dentist.¹⁹ Additionally, a study conducted in 2023 examined the influence of social media on individuals changing dental clinics and found that 41.4% of those who changed dental clinics in the last 2-5 years discovered their new clinic through social media.²⁰ In our study, participants were asked about the influence of social media posts and comments on dentists offering dental implant treatment. The results revealed that the effect of these posts on choosing a dentist was deemed important with a median value of 3.50. Similarly, it was concluded that comments about doctors on social media also significantly influenced patients' choice of doctor; however, when comparing responses based on age groups and educational status, no significant difference was found. These findings indicate that patients are increasingly turning to social media to inform their decisions regarding healthcare providers such as dentists and doctors, highlighting the importance for these professionals to consider their online presence and reputation when attracting potential patients.

Conclusion

In conclusion, the study findings suggest that as individuals' education levels increase, they tend to rely more on information from dental professionals and place less emphasis on inputs from family and friends regarding dental implants. This indicates a growing reliance on authoritative, evidence-based sources as education levels rise. However, social media remains a consistent and influential source of information across all age groups. Notably, older individuals appear more susceptible to being swayed by negative social media comments about dental implant treatments, potentially due to a greater tendency to trust anecdotal accounts within their immediate social circles. Additionally, the brand recommended by dentists and the cost of the implant emerge as the primary factors influencing individuals' choices regarding dental implant brands. This highlights the importance of dentists' recommendations and the financial considerations that patients weigh when selecting implant treatment options. Overall, the research underscores the growing prominence of social media in patients' decision-making process when selecting healthcare providers, emphasizing the critical need for dental professionals to maintain a strong online presence and positive reputation to effectively attract and retain patients.

Author Contributions

G.A: and K.A. contributed equally to this work. G.A., K.A. designed the research. G.A. collected and analyzed the data. G.A. wrote the paper. G.A., K.A. have read and approved the final version to be published.

Conflict of Interest

The authors declare that they have no conflict of interest.

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References

- Steehler KR, Steehler MK, Pierce ML, Harley EH. Social media's role in otolaryngology-head and neck surgery: informing clinicians, empowering patients. Otolaryngol Head Neck Surg. 2013;149(4):521–4. doi:10.1177/0194599813501463.
- Huang E, Dunbar CL. Connecting to patients via social media: A hype or a reality? Journal of medical marketing. 2013;13(1):14– 23.
- 3. Oakley M, Spallek H. Social media in dental education: a call for research and action. J Dent Educ. 2012;76(3):279–87.
- 4. Ebenezer S, Kumar VV, Thor A. Basics of dental implantology for the oral surgeon. Oral and Maxillofacial Surgery for the Clinician. 2021:385–405.
- Menziletoglu D, Guler AY, Isik BK. Are YouTube videos related to dental implant useful for patient education? J Stomatol Oral Maxillofac Surg. 2020;121(6):661–664. doi:10.1016/j.jormas.2019.12.022.
- 6. Wang G, Gao X, Lo EC. Public perceptions of dental implants: a qualitative study. J Dent. 2015;43(7):798–805. doi:10.1016/j.jdent.2015.04.012.
- Linkow LI. Implant dentistry today. A multidisciplinary approach. 1990;1:183–228.
- Eurostat. Digital economy and society statistics households and individuals [Web Page]; 2024. Available from: https://ec.europa.eu/eurostat/statistics-explained/ index.php?title=Digital_economy_and_society_statistics_ - households_and_individuals.
- 9. Mano RS. Social media and online health services: A health empowerment perspective to online health information. Computers in Human Behavior. 2014;39:404–412.
- 10. Hausmann JS, Touloumtzis C, White MT, Colbert JA, Gooding

HC. Adolescent and Young Adult Use of Social Media for Health and Its Implications. J Adolesc Health. 2017;60(6):714–719. doi:10.1016/j.jadohealth.2016.12.025.

- 11. Sivrikaya EC, Yilmaz O, Sivrikaya P. Dentist-patient communication on dental anxiety using the social media: A randomized controlled trial. Scand J Psychol. 2021;62(6):780–786. doi:10.1111/sjop.12769.
- 12. Al Awdah A, Ali B, Al Twaim S, Al Habdan A. The power of social media on esthetic dental treatment choices in Arabian Gulf Region. Int J Dent Oral Health. 2018;4(5):1–5.
- Mgbeokwere U, Okoye L, Ekwueme O. A Survey of the Knowledge of Dental Implants as a Choice in Treatment of Edentulous Jaws among Health Workers in Government Dental Clinics in Enugu. Ann Med Health Sci Res. 2011;1(1):91–5.
- Ozçakır Tomruk C, Ozkurt-Kayahan Z, Sençift K. Patients' knowledge and awareness of dental implants in a Turkish subpopulation. J Adv Prosthodont. 2014;6(2):133–7. doi:10.4047/jap.2014.6.2.133.
- Maybodi FR, Shayeghi M. Patients' knowledge and attitude regarding Dental Implants. Journal of Community Health Research. 2022.
- 16. Al-Johany S, Al Zoman HA, Al Juhaini M, Al Refeai M. Dental patients' awareness and knowledge in using dental implants as an option in replacing missing teeth: A survey in Riyadh, Saudi Arabia. Saudi Dent J. 2010;22(4):183–8. doi:10.1016/j.sdentj.2010.07.006.
- 17. Kazancioglu HO, Dahhan AS, Acar AH. How could multimedia information about dental implant surgery effects patients' anxiety level? Med Oral Patol Oral Cir Bucal. 2017;22(1):e102–e107. doi:10.4317/medoral.21254.
- Fatani B, Alrumayyan SF, Alsubaie RM, Alhussayen MS, Alharbi OA, Alsaleh RF, et al. Factors Affecting the Choice of Implant Specialists Among the Saudi Population: A Cross-Sectional Study. Cureus. 2023;15(5):e38419. doi:10.7759/cureus.38419.
- Tengilimoglu D, Sarp N, Yar CE, Bektaş M, Hidir MN, Korkmaz E. The consumers' social media use in choosing physicians and hospitals: the case study of the province of Izmir. Int J Health Plann Manage. 2017;32(1):19–35. doi:10.1002/hpm.2296.
- Freire Y, Sánchez MG, Suárez A, Joves G, Nowak M, Díaz-Flores García V. Influence of the use of social media on patients changing dental practice: a web-based questionnaire study. BMC Oral Health. 2023;23(1):365. doi:10.1186/s12903-023-03078-9.