

Evaluation of Internet, Social Networks, and Social Media Usage of Assistant Physicians Using Smartphones

Akıllı Telefon Kullanan Asistan Hekimlerin İnternet, Sosyal Ağlar ve Sosyal Medya Kullanımlarının Değerlendirilmesi

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Öz

Amaç	Tüm dünyada internet kullanımının yaygın hale gelmesindeki ana etkenlerden biri de kuşkusuz akıllı telefonlardır. Sağlık çalışanları arasında da yaygın şekilde kullanılan akıllı telefonlar ile özellikle de doktorlar arasında anlık iletişim programları klinik pratikte kendine önemli bir yer edinmiştir. Biz bu çalışmada akıllı telefon kullanan hekimler arasında internetin, sosyal ağların ve sosyal medyanın kullanım yaygınlığını ve bu platformların hekimler arasında mesleki açıdan kullanım şekillerini belirlemeyi amaçladık.
Yöntem ve Gereçler	Tanımlayıcı ve kesitsel özellikte olan bu araştırma için görüşme tekniklerinden anket yöntemi kullanıldı. Çalışmada kullanılan anket formu araştırmacılar tarafından hazırlanmış olup toplamda beş bölümden oluştu. (1) sosyodemografik özellikler, (2) internet kullanım amaçları, (3) mobil uygulama kullanım amaçları, (4) anlık mesajlaşma uygulamalarının kullanım amaçları ve (5) sosyal medya uygulamalarının kullanım amaçları sorgulandı. Elde edilen verilerin analizinde; tanımlayıcı istatistikler ortalamaya, standart sapma, frekans ve yüzde değerleri ile sunuldu. Kategorik değişkenlerin karşılaştırılmasında Pearson ki-kare testi kullanıldı. İstatistiksel önemlilik düzeyi $p \leq 0.05$ olarak kabul edildi.
Bulgular	Kırk farklı uzmanlık alanından, hepsi araştırma görevlisi (asistan) doktor; toplamda 203 kişi çalışmaya dahil edildi. Katılımcıların hepsi akıllı telefon kullanmaktaydı. Yaş ortalaması 28.77 ± 3.3 idi. Katılımcıların %56.2'si erkek cinsiyette idi. Katılımcıların %52.7'si ($n=107$) en fazla 3 yıllık hekimlik tecrübesine sahipti. Hekimlik mesleğindeki tecrübesi 3 yıl ve altında olanların makale okumak amacıyla interneti kullanım oranları 4 yıl ve üzerinde hekimlik tecrübesi olanlara göre anlamlı derecede daha düşüktü ($p < 0.001$). Katılımcıların %73.9'u ($n=150$) tıbbi bilgi kaynağı olarak dijital ortamı tercih etmekte olup kalan %26.1 ($n=53$)'lük kesim de tıbbi bilgi kaynağı olarak kitap ya da broşürleri tercih etmekteydi. Hekimlerin %86.2'si ($n=175$) mobil uygulamaları iletişim veya anlık haberleşme amaçlı kullanmaktaydı. Akademik veya mesleki amaçlı mobil uygulama kullanım oranı ise %22.7 ($n=46$) idi. Hekimlerin %98'inin anlık iletişim programı olarak WhatsApp kullandığı; mesleki açıdan WhatsApp uygulamasını %70.4 oranında telekonsültasyon işlemlerinde kullandığı ve en sık telekonsültasyonun acil servis hekimleri ile (%43.3) yapıldığı görüldü. Hekimlerin %48.8'i hastaların tıbbi amaçlı olarak görüntülerini paylaşırken hastalardan izin almadıklarını bildirdi. Hekimlerin %92.1'inin en az bir sosyal medya hesabına sahip olduğu ve sosyal medya hesaplarını tıbbi amaçlı en sık vaka paylaşımı yapan hekimleri takip etmek için kullandıkları görüldü.
Sonuç	Hekimlik mesleği için akıllı telefon, internet ve sosyal medya platformlarının kullanımı günümüzde yadsınamaz bir gerçektir. Hekimler için de dijital ortamdaki okuma oranları artık daha ön plana çıkmaktadır. Hekimler anlık mesajlaşma uygulamalarını telekonsültasyon için sıklıkla tercih ederken en sık iletişim kurulan birim ise acil servislerdir.

Abstract

Introduction	One of the main factors in the widespread use of the internet all over the world is undoubtedly smartphones. With smartphones, which are also widely used among healthcare professionals, instant communication programs have gained an important place in clinical practice, especially among doctors. In this study, we aimed to determine the prevalence of the internet, social networks, and social media usage among physicians using smartphones and the professional use of these platforms among physicians.
Materials and Methods	The questionnaire method, one of the interview techniques, was used for this descriptive and cross-sectional study. The questionnaire form used in the study was prepared by the researchers and consisted of five parts in total. (1) sociodemographic characteristics, (2) internet usage purposes, (3) mobile application usage purposes, (4) instant messaging applications usage purposes, and (5) social media applications usage purposes were questioned. In the analysis of the obtained data; descriptive statistics were presented with mean, standard deviation, frequency, and percentage values. Pearson chi-square test was used to compare categorical variables. The statistical significance level was accepted as $p \leq 0.05$.
Results	Doctors from forty different specialties, all research assistants (assistant doctors); A total of 203 people were included in the study. All of the participants were using smartphones. The mean age was 28.77 ± 3.3 years. 56.2% of the participants were male. 52.7% ($n=107$) of the participants had a medical experience of at most 3 years. The rate of using the internet to read articles was significantly lower in those with 3 years or less of experience in the medical profession than those with 4 years or more of medical experience ($p < 0.001$). 73.9% ($n=150$) of the participants preferred digital media as a source of medical information, and the remaining 26.1% ($n=53$) preferred books or brochures as a source of medical information. 86.2% ($n=175$) of the physicians used mobile applications for communication or instant communication. The rate of using mobile applications for academic or professional purposes was 22.7% ($n=46$). 98% of physicians use WhatsApp as an instant communication program; Professionally, it was seen that 70.4% used WhatsApp applications in teleconsultation processes and the most frequent teleconsultation was done with emergency physicians (43.3%). 48.8% of the physicians reported that they did not get permission from the patients while sharing the images of the patients for medical purposes. It was observed that 92.1% of the physicians had at least one social media account and they used their social media accounts to follow the physicians who shared the most frequent cases for medical purposes.
Conclusion	The use of smartphones, the internet, and social media platforms for the medical profession is an undeniable reality today. For physicians, reading rates from digital media is now more prominent. While physicians frequently prefer instant messaging applications for teleconsultation, the most frequently contacted unit is the emergency services.



INTRODUCTION

It is known that today, among the world population of nearly eight billion, the rate of internet usage is 69% based on June 30, 2022, while this rate is 84.5% in Turkey, and almost one-tenth (9.7%) of all European internet users are in Turkey.¹

Undoubtedly, smartphones are one of the main factors in the widespread use of the internet, not only in Turkey but all over the world. Smartphones, which are also widely used among healthcare professionals, and instant communication programs, especially among doctors, have gained an important place in clinical practice.² Increases in internet speed, improvements in internet access, improved processor speeds of smartphones, improved battery times, and wide screens that provide ease of reading, contribute to this process by providing the opportunity to benefit from smartphones under all conditions and at any time.³

In addition to newspapers, radio, and television, which are defined as traditional media, the use of social media platforms has progressed in parallel with the use of the internet. The use of social media has increased significantly all over the world in the last few years, with nearly three billion active Facebook users, close to one and a half billion active Instagram users, and more than 400 million active Twitter users; It is known that the use of WhatsApp, an instant messaging and communication application, where the use of Youtube exceeds two and a half billion, is also at the level of two billion.⁴

The use of social media and social networks in health services has increased, and this has allowed efficient communication between physicians in clinical practice for the management of patients.⁵ This system, which seems to be advantageous, can sometimes lead to disadvantageous results due to the inability of physicians to balance their professional and private lives.

In this study, we aimed to determine the prevalence of the

internet, social networks, and social media usage among physicians using smartphones and the professional use of these platforms among physicians.

The primary aim of the study; To determine the deficiencies in the correct use of the medical profession by researching the use of the internet, social networks, and social media among assistant doctors working in a tertiary health institution and to create resources for the health managers to plan the correct use of these platforms for the physicians.

MATERIALS and METHODS

This descriptive and cross-sectional study was conducted among the residents of Karadeniz Technical University Faculty of Medicine Hospital. For the study, a signed informed consent form was obtained from the participants, in accordance with the Declaration of Helsinki, with the approval of the Karadeniz Technical University Faculty of Medicine Non-Interventional Research Ethics Committee (Date: 17.09.2018, protocol number: 2018/157). The questionnaire method, one of the research interview techniques, was used.

The population of the research consisted of assistant physicians working at Karadeniz Technical University Faculty of Medicine Hospital. The sample size to be reached for the research was determined as 201 using the sample size formula used in cases where the number of individuals in the population is known in the estimation of population ratios, with a confidence interval of 95%.⁶

Data collection form

The questionnaire form used in the study was prepared by the researchers and consisted of five parts in total. The first part consists of questions about the sociodemographic characteristics of the participants such as age, gender, specialty, duration of practice, daily time spent with a smartphone, and smartphone features, the second part consists of questions about internet usage purposes and the third

part questions about mobile application usage purposes. , the fourth part consisted of questions about the purposes of use of instant messaging applications and the fifth part consisted of questions about the purposes of use of social media applications.

Statistical analysis

Statistical analysis of the data was performed using the “Statistical Package for the Social Sciences-SPSS 24.0 for Windows” package program. In the analysis of data; descriptive statistics were presented with mean, standard deviation, frequency, and percentage values. Pearson chi-square test was used to compare categorical variables. The statistical significance level was accepted as $p \leq 0.05$.

RESULTS

Questionnaires were filled face-to-face by 203 people, all of whom were research assistants (assistant doctors). All of these 203 doctors who participated in the survey were using smartphones. The demographic characteristics of the participants are presented in Table 1. It was observed that the mean age was 28.77 ± 3.38 years, and those who participated in the survey were mostly male (56.2%). Among the questionnaires filled out by doctors from 40 different specialties, the clinical branches with the highest participation rate were internal medicine, emergency medicine, family medicine, and pediatrics; it was seen that more than half of the participants (52.7%, $n=107$) had a maximum of 3 years of practice as a physician. It was determined that 84.2% ($n=171$) of the participants spent at least one hour with phone applications, either medically or non-medically.

Table 1. Demographic Characteristics of Participants	
Demographic characteristics	n (%)
Age*	28.77±3.38
Gender	
Female	89 (43.8)
Male	114 (56.2)
Profession	
Emergency medicine	23 (11.3)
Pediatrics	16 (7.9)
Cardiology	10 (4.9)
Internal medicine	33 (16.3)
Anesthesia and reanimation	11 (5.4)
Family medicine	16 (7.9)
Medical experience (years)	
0-3	107 (52.7)
4-6	65 (32)
7-10	24 (11.8)
>10	7 (3.4)
Time spent with phone apps (hour)	
<1	32 (15.8)
1-3	123 (60.6)
4-6	31 (15.3)
>6	17 (3.4)
Smartphone operating system	
IOS	101 (49.8)
Android	102 (50.2)
* mean ± standard deviation	

Internet usage features

Categorized data regarding the academic, social and recreational use of the internet by physicians are presented in Table 2. Accordingly, among physicians, the internet was most frequently used for reading articles academically, for banking and shopping transactions socially, and for watching movies or videos for entertainment purposes. The rate of using the internet to read articles was significantly lower in those with 3 years or less of experience in the medical profession than those with 4 years or more of medical experience ($p < 0.001$).

93.1% ($n=189$) of the participants reported that they used the phone or social media professionally. UpToDate® was

	n (%)	Medical experience (years)		p
		≤3 (n=107)	≥4 (n=96)	
Academic				
Article reading	137 (67.5)	60 (43.8)	77 (56.2)	<0.001
Literature follow-up	111 (54.7)	52 (46.8)	59 (53.2)	0.066
Watching video-lessons	80 (39.4)	41 (51.3)	39 (48.8)	0.737
File sharing	26 (12.8)	12 (46.2)	14 (53.8)	0.612
reading ebooks	22 (10.8)	13 (59.1)	9 (40.9)	0.683
Social				
Make friends	33 (16.3)	14 (42.4)	19 (57.6)	0.270
Picture-video sharing	98 (48.3)	54 (55.1)	44 (44.9)	0.509
Language learning	11 (5.4)	6 (54.5)	5 (45.5)	0.900
Acquiring new hobbies	34 (16.7)	17 (50)	17 (50)	0.874
Banking-shopping	134 (66)	69 (51.5)	65 (48.5)	0.484
Reading a blog	32 (15.8)	14 (43.8)	18 (56.3)	0.361
Follow popular accounts	51 (25.1)	27 (52.9)	24 (47.1)	0.969
Fun				
Online game	35 (17.2)	16 (45.7)	19 (54.3)	0.468
Betting	0 (0)	-	-	-
Watching sports	35 (17.2)	23 (65.7)	12 (34.3)	0.132
Listen to music	102 (50.2)	57 (55.9)	45 (44.1)	0.442
Watching movies-videos	144 (70.9)	79 (54.9)	65 (45.1)	0.337

in first place with a rate of 76.8% as the source of the most professional information. Google® (70%) and PubMed® (66%) were second and third (Table 3).

Resources	n (%)
Facebook	56 (27.6)
UpToDate	156 (76.8)
Twitter	19 (9.4)
Google	142 (70)
PubMed	134 (66)
WhatsApp	91 (44.8)
Medscape	68 (33.5)
Instagram	54 (26.6)
Wikipedia	37 (18.2)
Youtube	90 (44.3)
Clinical Key	4 (2)

Physicians use the internet most frequently (94.6%) to access information, and books are reported as the second

most common means of accessing information after the internet. 73.9% (n=150) of the participants preferred digital media as a source of medical information, and the remaining 26.1% (n=53) preferred books or brochures as a source of medical information. The data consisting of the answers given by the participants about the superiority of reading from a digital environment to reading from a book or reading from a book to reading from a digital environment are presented in Table 4. Ease of access was seen as the most common reason for the superiority of reading from the digital environment, while the most common reason for the superiority of reading from a book was that the book was seen as more suitable for writing and taking notes.

Table 4. The reasons why reading from digital media and books is superior to each other

	n (%)
What is the advantage of digital reading over book reading?	
Easy to carry, does not wear out	100 (49.3)
Easy to access	177 (87.2)
Cost less	83 (40.9)
Can be used in any environment, no space problem	124 (61.1)
What is the advantage of book reading over digital reading?	
Habit	47 (23.2)
No radiation effect	56 (27.6)
More permanent in terms of protection and storage	75 (35.9)
More convenient for writing and taking notes	167 (82.3)

Usage features of mobile applications

Physicians mostly used mobile applications for communication or instant communication (86.2%, n=175). The rate of using mobile applications for academic or professional purposes was 22.7% (n=46). While the rate of physicians using mobile applications for reading news was 30% (n=61), the rate of using mobile applications for entertainment or games was 28.1% (n=57).

73.4% (n=149) of the physicians reported that they started to use the applications that they thought to be professionally beneficial upon the advice of their teachers or colleagues. While the rate of physicians who declared that they started using these applications as a result of their research was 35% (n=71), the rate of physicians who stated that they started using these applications as a result of the information they obtained from symposiums or congresses was 10.3% (n=21). The effect of advertisements in this area was 5.4% (n=11).

The data obtained from the answers given to the question of which purpose mobile applications are most used in terms of the medical profession are presented in Table 5. Physicians mostly used mobile applications to increase the quality of bedside care and to search the literature.

Table 5. Professional usage purposes of mobile applications

	n (%)
For what purpose do you use mobile applications most professionally?	
Literature search	86 (42.4)
Providing quality of care at the bedside (drug doses, differential diagnosis)	92 (45.3)
Practice with apps that provide case examples	43 (21.2)
Measuring and updating information	77 (37.9)
Calculation and formulation	72 (35.5)
Teleconsultation	37 (18.2)

Usage features of instant messaging applications

It was determined that 82.8% (n=168) of the physicians always use instant messaging applications professionally, while 13.3% (n=27) use instant messaging applications occasionally. It was seen that the most preferred application as an instant messaging application was WhatsApp with a rate of 98%. When the medical purposes of the WhatsApp application were questioned, the most common purposes were to provide communication within the department, to consult patients by sharing lesion images, and to share radiology images (Table 6).

Table 6. Preferred instant messaging applications and WhatsApp usage purposes

	n (%)
Preferred apps for instant messaging	
WhatsApp	199 (98)
Messenger	21 (10.3)
Facebook	13 (6.4)
Instagram	34 (16.7)
Telegram	3 (1.5)
Medical purpose of WhatsApp application	
Ensuring intra-departmental communication coordination	186 (91.6)
Sharing new medical resources	57 (28.1)
Sharing the lesion images of patients with other physicians or consulting physicians, asking for consultation	143 (70.4)
Visually sharing a problem encountered during examination or surgery and getting ideas from seniors or faculty members	97 (47.8)
Sharing radiology images	127 (62.6)
Sharing ECG images	99 (48.8)
Communicate with patients about lesion images, laboratory results, and radiology results	87 (42.9)
To help other physician friends who want consultation about their patients	112 (55.2)

It was seen that physicians performed teleconsultation with instant messaging applications most frequently in emergency service (43.3%), internal medicine (14.3%), cardiology (8.4%), and pediatrics (7.4%) branches, respectively, apart from their branches. In addition to all these, almost half of the physicians (48.8%) reported that they did not get permission from the patients while sharing their images for medical purposes.

Social media usage features

The vast majority of physicians (92.1%) reported that they have at least one social media account. 43.8% of those who do not have a social media account reported that they did not have a social media account because they saw social media as a waste of time. While 50.2% of the physicians answered “yes” to the question “Do you think every doctor should have a social media account?”, 15.8% answered

“no”. The rate of physicians who were undecided on this issue was 34%. While 36.9% of the physicians thought of acquiring a social media account or using existing accounts more actively in the later stages of the medical profession, the ratio of physicians who were undecided was 35%.

57.6% (117/187) of physicians who had a social media account were spending more than one hour daily on social media. The rate of those who spent more than four hours on social media platforms was 7% (13/187). Almost half of the physicians (49.7%) who have a social media account reported that they opened an account because they were curious about the social media environment. The data on the factors in physicians’ social media accounts and their social media usage purposes are presented in Table 7.

Table 7. Factors for physicians to acquire social media accounts and their social media usage purposes

	n (%)
Factors in acquiring a social media account	
Friend recommendation	56 (29.9)
Recommendation	14 (7.5)
Be curious	93 (49.7)
Advertisements	24 (12.8)
Social media usage purposes	
Introduce yourself	25 (13.4)
Make friends	36 (19.3)
Opportunity to organize	24 (12.8)
Video, audio recording, image sharing	65 (34.8)
Acquiring new hobbies	38 (20.3)
desire to learn	85 (45.5)
Developing communication skills	59 (31.6)
Communicating with patients	31 (15.3)

While 62.6% of the physicians who participated in the survey had social media accounts, the number of followers on social media was between 100 and 500, while the rate of physicians with more than 1000 followers was 2.1%, and 78.8% of the physicians reported that the number of followers was not important to them. Looking at the social media accounts of physicians, it was seen that Instagram,

Facebook, and Twitter were in the first three places. All three social media accounts were used to follow the physicians who shared the most frequent cases for medical purposes (Table 8).

Table 8. Social media accounts used and medical uses	
	n (%)
Social media account used and medical purpose	
Instagram	153 (81.8)
Follow the latest published articles and current practices	28 (13.8)
Sharing different and interesting case examples	34 (16.7)
Follow the physicians who share the case	74 (36.5)
Facebook	145 (77.5)
Follow the latest published articles and current practices	26 (12.8)
Sharing different and interesting case examples	32 (15.8)
Follow the physicians who share the case	88 (43.3)
Twitter	78 (41.7)
Follow the latest published articles and current practices	17 (8.4)
Sharing different and interesting case examples	7 (3.4)
Follow the physicians who share the case	38 (18.7)
LinkedIn	8 (4.3)
Periscope	6 (3.2)
Pinterest	4 (2.1)

When the participant physicians were asked whether they had a social media account belonging to the institution they worked for, it was concluded that the majority of them (44.2%) did not have any information.

DISCUSSION

Almost 70% of the world's population uses the internet.¹ In fact, in a review study examining its change over time, it was observed that the internet even became an addiction.⁷ Internet use with smartphones has also become more practical. Access to the internet and internet-requiring applications over the phone affects people in many occupational groups as well as physicians. When we look at the internet usage times among the physicians in our study, it was seen that the vast majority (84.2%) spent more than

one hour a day with phone applications. Almost one out of every five physicians (18.7%) in our study was spending at least 4 hours of their daily time on phone applications. Even this situation makes us think that there is internet addiction among physicians. In a study by Özsoy et al., the frequency of internet and mobile phone use among physicians was found to be much higher.⁸ Despite these data, we think that it is not possible to measure the daily real-time spent by physicians on smartphones.

Not only for social life and entertainment but also professional and academic purposes, people can get support from the internet. Especially the development of health literacy in the last 25 years suggests that people's research on health has also increased.⁹ It is a fact that especially physicians benefit from the advantages of the internet in a professional sense, while health literacy rates have increased so much even outside of healthcare professionals.

In this study, in which we questioned the internet usage purposes of physicians, we can say that there is an intense use of the internet for academic, social, and entertainment purposes. We have determined that the rate of reading articles for academic purposes is higher in those with more medical experience in years. This situation makes us think that using the internet as a tool to reach the right information is learned through experience. In addition, considering that the participants in the study were assistant physicians and the time required to reach the thesis stage is more than three years for an assistant, this seems more logical. UpToDate®, Google®, and PubMed® were the sites that physicians most frequently used as internet-based professional information sources. According to our study data, it is relatively rare for physicians to consider social media platforms as a source of medical information. Although social media platforms are not seen as a source of medical information, we have determined that physicians use social media for medical purposes most frequently to follow the physicians who share cases.

According to a study conducted on patients and healthcare personnel, the most trusted social shares of people are; it was seen that physicians, nurses, and hospitals shared.¹⁰ However, misuse of the internet, social networks, and social media, which are widely used among physicians, may also cause some legal problems.^{11,12} Social media platforms can be used more easily by younger physicians.^{13,14} Nearly half of the physicians in our study reported that they did not get permission from the patients or their relatives while sharing the images of the patients. The fact that the physicians included in the study were young and did not have enough knowledge in terms of legal aspects may have caused this situation.

All of the physicians in our study were using smartphones and the internet. In addition, the rate of physicians using social media was 92.1%. In many studies, this rate was found to be similarly high. The fact that the participants in our study were assistant physicians can be seen as the reason for the low average age. As a matter of fact, in the study of Low et al., it was reported that the age of physicians who do not have a social media account is generally over 45.5. In the study of Brown et al., it was emphasized that age-related social media usage differences among physicians may also affect the interaction between physicians and patients in the same institution in different ways.¹⁴

Although the duration of social media use in the work environment of the participants in our study was not questioned, when the time they spent on social media platforms was examined, it was seen that more than half of them spent at least two hours a day on social media platforms. Studies are reporting that the duration of social media use by doctors in Australia and the United States is similarly high.^{14,15}

It is known that physicians mostly prefer WhatsApp as an instant messaging application in their working environments.¹⁶ The data in our study also supports this information. WhatsApp application is used for fast communica-

tion, quick solution of problems, sharing clinical images of patients' diseases, and management of diseases. In this way, consultation times are shortened, and the health services provided to patients are improved by creating a collaborative environment.¹⁷ Physicians in our study preferred the WhatsApp application most frequently in consultation procedures with emergency physicians, except for their branches. It reveals the importance of WhatsApp applications in the rapid and effective management of patients in countries with crowded emergency services such as Turkey. However, sharing the clinical information of patients with the WhatsApp application for the European Community was restricted by a contract in 2018.^{18,19} It was even recommended that physicians stop sharing patients' data via WhatsApp.¹⁶ Since the physicians in our study did not have sufficient knowledge on this subject, the center where the study was conducted is in Turkey, and all clinics especially crowded emergency services, want to speed up the management of patients, it can be thought that WhatsApp is the first application in sharing patient data among physicians.

Limitations

The fact that our study was conducted only in a tertiary hospital and only among residents did not provide the opportunity to make sufficient comparisons. Physicians in our study did not distinguish between smartphone, computer or tablet use as an internet tool for accessing the questioned areas. In addition, the fact that the study was conducted before the COVID-19 pandemic and the changes in the characteristics of the internet and social media usage that occurred during the pandemic period could not be evaluated. We think that multicenter and broad participation studies should be conducted on this subject.

CONCLUSION

The use of smartphones, the internet, and social media platforms for the medical profession is an undeniable reality today. For physicians, reading rates from digital media

is now more prominent. While physicians frequently prefer instant messaging applications for teleconsultation, the most frequently contacted unit is the emergency services.

Ethics Committee Approval: For the study, a signed informed consent form was obtained from the participants, in accordance with the Declaration of Helsinki. Our study was approved by the Karadeniz Technical University Faculty of Medicine Non-Interventional Research Ethics Committee (Date: 17.09.2018, protocol number: 2018/157).

Conflict of Interest

No conflict of interest was declared by the authors.

Author Contributions

Concept-MY, YK; Supervision-MY, YK, İY, SP; Materials-İY, Mİ, MÇ, NÖY; Data Collection and/or Processing-MY, YK, NÖY, MÇ; Analysis and/or Interpretation-MY, SP, Mİ, MÇ; Writing-MY, NÖY, BBY.

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