

THE ROLE OF SOCIAL MEDIA IN HEALTH SEEKING BEHAVIOR OF PATIENTS ATTENDING PRIMARY HEALTH CARE SETTING AT NATIONAL GUARD, DAMMAM, SAUDI ARABIA



Community Medicine

Alanood Althukair*	Department of Family medicine, Ministry of National Guard-Health Affairs, Dammam, Saudi Arabia. *Corresponding Author
Hawra Al Johi	Department of Family medicine, Ministry of National Guard-Health Affairs, Dammam, Saudi Arabia.
Nasser Alkhalidi	Department of Family medicine, Ministry of National Guard-Health Affairs, Dammam, Saudi Arabia.
Jamal Al Zahrani	Department of Family medicine, Ministry of National Guard-Health Affairs, Dammam, Saudi Arabia.

ABSTRACT

The trend of utilizing social media (SM) is growing continuously, as are its uses. Around 2.31 billion people globally are SM users, delivering a penetration of 31%. The aim of this study is to focus on the use of SM as a source of health information seeking behavior, its various implications on the attitude of patients attending Primary Health Care (PHC) settings at National Guard, Dammam, Saudi Arabia, toward health, and the level of trust in the medical information derived from SM networks. This cross-sectional study was conducted at PHC clinics under the Ministry of National Guard Health Affairs from June to August 2019; a self-administered questionnaire was utilized to collect patients' responses. Of 383 completed questionnaires, over 97% indicated patients utilized SM. Patient demographics such as age, gender, and education were significantly related to SM use for accessing health-related information. Younger participants utilized SM more ($P=0.002$), while those who were university graduates spent more time on SM ($P<0.0021$). Furthermore, females were more likely to get in touch with their physicians through SM ($P=0.006$). SM use was high among the participants and their demographics significantly influenced their behavior. Health care providers should provide their patients with the appropriate methods of accessing health information through SM.

KEYWORDS

social media, health-seeking behavior, primary health care

INTRODUCTION

The environment in which patients consume medical and health information has changed dramatically during the past decade.[1] One of the most powerful communication tools of the 21st century is social media (SM).[2] SM is defined as "A group of Internet-based applications that build on the ideological and technological foundations of Web 2.0 and that allow the creation and exchange of user-generated content." [3] SM includes web-based tools and applications designed to facilitate online interaction and instant information sharing; users interact through sharing texts, photos, audio, and video messages.[2]

Around 2.31 billion persons are SM users, delivering 31% global penetration.[4] Increasingly, people use social networking sites for health-related purposes. Large healthcare organizations like hospitals promote the use of SM to improve healthcare and be more cost effective.[5,6] Research shows that an increasing number of patients are utilizing social networking sites to share their experiences with healthcare personnel or institutions.[7]

Since the introduction of SM in health care, many studies have evaluated the impact and acceptability of SM use for health-related concerns toward patients and the general population.[8] A Dutch study found the Internet to be the leading source for health-related information (82.7%), closely followed by information provided by health care professionals (71.1%).[3] A US study found that 32% of study participants utilized SM for their health concerns.[9]

Studies from the Arab world showed that an increasing number of people are likewise seeking online health-related information.[10,11] Information on medication was mostly sought, many respondents utilizing Google, Twitter, Snapchat, WhatsApp, Instagram, and Facebook.[11] This study aims to focus on the use of SM as a source of health-information seeking behavior, its implications for health attitudes, and the level of trust in the medical information derived from SM networks.

METHODOLOGY

A cross-sectional study was conducted between June and August 2019 at primary healthcare (PHC) clinics in Dammam, Ministry of National Guard Health Affairs (MNGHA), Saudi Arabia. Convenience sampling was utilized to recruit regular patients attending the PHC

aged 20 to 60 years, both males and females, excluding those who were not using SM. The sample size for participants was calculated based on the average number of patients who visited the PHC in 2018, approximately 7700 per month. Therefore, assuming $P<0.05$ as maximum variability with 95% confidence interval and 5% precision, the sample size required was calculated as 383. Data collection was carried out using a questionnaire which was designed and modified based on two previously validated questionnaires.[3,12] and used multiple choices and close-ended questions. It was translated into English by two certified translators who also back-translated from English into Arabic to ensure reliability of the translation. The questions were designed to be non-intrusive, with simple wording to ensure a clear focus of the statements. To test the validity and reliability of the questions and to ensure that the objectives of the study were met, two experts in the field reviewed the first draft of the questionnaire through discussion and careful revision before data collection commenced.

To ensure consistency, the questionnaire was printed in Arabic. It comprised of 22 questions in total, under four different headings labeled from A to D. Part A collected demographic data and whether first-degree family members had a physician. Part B inquired about health status. Parts C and D included health-related information commonly utilized in SM networks and sought to determine the influence of these networks on the patient's health-seeking behavior. Data was collected in person by recruiting patients in the waiting areas at the PHC. The questionnaire was distributed with a consent form and a brief explanation of the questionnaire and statement on study confidentiality. Questionnaires were distributed and collected on the same day. With elderly or illiterate participants who could not complete the survey themselves, data were collected either through their companions or by asking them directly in a secluded area to ensure their confidentiality.

The data were analyzed using SPSS version 22. Descriptive statistics were computed for all variables. Findings were expressed as counts and percentages for categorical and nominal variables, whereas continuous variables were presented as means and standard deviations. For two nominal variables with two or three categories, the chi-square test was utilized to study the relation. If there were more than three categories, Spearman's correlation was utilized. The independent t-test was utilized to compare two means, and one-way ANOVA for more

than two means. A test with $P < 0.05$ was considered statistically significant. The local Ethical Committee approved this study, and permission was also obtained from the PHC clinics.

RESULTS

A. Characteristics of the study population:

Of 412 patients who completed the survey, 12 (2.9%) of them did not use SM. Most users were between 20–29 years old (51.7%). Females were the majority of the sample (62.8%). Approximately 46% had a university education, with 45% at the high school level. Around 196 (49.5%) individuals had a physician relative in their family, while (40.4%) were healthcare workers.

B. Medical status:

Only 72 (18%) participants had chronic diseases. Additionally, self-reported compliance to medication was high, at 89.1%.

C. Social media use:

WhatsApp, Snapchat, and Instagram were the main SM applications participants used (49.1%, 41.4%, and 31.1%, respectively). Seventy-six percent of participants constantly utilized their favorite SM websites. Among 412 participants, 266 (64.7%) received health-related information through the Internet, while 205 (49.9%) received information from their physicians. Patient-information leaflets or books were the least-utilized source for health-information seeking behavior ($n=30$, 7.3%) (Figure 1). Over 45% of participants replied that they never or rarely searched online before or after visiting their physician, while 32.9% occasionally did. When participants were asked what health subjects they usually sought on the Internet, 51.1% searched for medication use and side effects; 38.2% searched for symptoms they experienced, and 31.1% studied other patients' experiences.

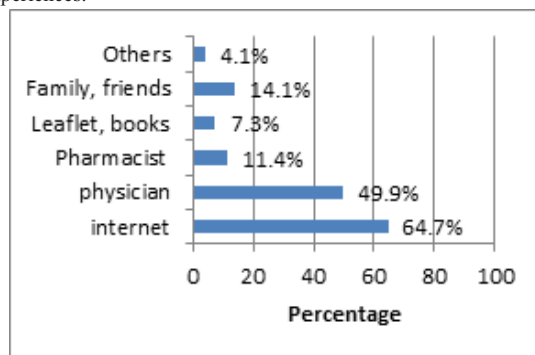


Figure 1: Patients' sources of health information

D. Social media use for health-seeking information:

Patients' demographic variables (age, gender, marital status) were analyzed regarding the frequency with which SM was utilized and the type of information usually sought. Frequency and duration of SM use was significantly correlated with level of education. University graduates and elementary and intermediate school students logged into their SM accounts once or twice per day (98%, 81%, 84%, respectively). Hence, a negative and weak (but statistically significant) correlation was found (Table 1). Similarly, duration of SM use, looking for health information before and after visiting their physician, and utilizing SM to contact their physician were also significantly correlated with education levels (Table 1). Age was significantly correlated with certain questions. Participants aged 20–29 years most frequently utilized SM (79.7%), and approximately half of them utilized it for over three hours a day. Additionally, 84% of them sought health information on the Internet every month and 34.1% occasionally sought health information before seeing their physician (Table 2).

Table 1 – Correlation Between Educational Status With Questions

Educational Status	Elementary	Intermediate	High School	University & above
Frequency of SM use				
Constantly logged in	8(2.6)	14(4.5)	137(44.3)	150(48.5)
1-2 times per day	5(6.2)	8(9.9)	36(44.4)	32(39.5)
Once in a few days	1(16.7)	0(0)	4(66.7)	1(16.7)
Occasionally	2(20)	4(40)	2(20)	2(20)
Duration of SM use				

Less than 30 mins	4(6.5)	9(14.5)	30(48.4)	19(30.6)
1-2 hrs	10(58.8)	11(6.1)	86(47.5)	74(40.9)
More than 3 hrs	3(1.8)	5(3.0)	65(39.4)	92(55.8)
Look for health information before seeing doctor				
Never	6(7.1)	6(7.1)	47(55.3)	26(30.6)
Rarely	5(4.7)	8(7.5)	55(51.9)	38(35.8)
Sometimes	3(2.2)	6(4.4)	52(38.5)	74(54.8)
Often	3(6.0)	3(6.0)	15(30.0)	29(58.0)
Very often	0(0)	2(6.3)	12(37.5)	18(56.3)
Look for health information after seeing doctor				
Never	9(7.6)	11(9.2)	58(48.7)	41(34.5)
Rarely	4(4.2)	5(5.3)	47(49.5)	39(41.1)
Sometimes	2(1.5)	4(3.0)	51(38.6)	75(56.8)
Often	2(5.9)	1(2.9)	17(50)	14(41.2)
Very often	0(0)	5(19.2)	6(23.1)	15(57.7)
Use of SM to contact doctor				
Yes	7(2.7)	14(5.3)	111(42.2)	131(49.8)
No	8(7.9)	11(10.9)	48(47.5)	34(33.7)
No opinion	2(4.9)	1(2.4)	20(48.8)	18(43.9)

Table 2 – Correlation Between Age With Questions

Age	20-29	30-39	40-49	50-60	Correlation coefficient	P-value
Frequency of SM use						
Constantly logged in	165 (79.7)	91(75.9)	41(73.2)	9(47.4)	0.156	0.002*
1-2 times per day	38(18.4)	23(19.2)	12(21.4)	8(42.1)		
Once in a few days	3(1.4)	1(0.8)	0(0)	1(5.3)		
Occasionally	1(0.5)	5(4.2)	3(5.4)	1(5.3)		
Duration of SM use						
Less than 30 mins	19(9.1)	18(15.0)	15(26.8)	9(45.0)	-0.278	0.000*
1-2 hrs	85(40.9)	60(50.0)	25(44.6)	9(45.0)		
More than 3 hrs	104(50.0)	42(35.0)	16(45.0)	2(10.0)		
How often do you look for health information via the Internet?						
Daily	14(6.8)	11(9.2)	7(13.0)	0(0)	0.115	0.021*
Weekly	80(38.6)	32(26.7)	11(20.4)	6(30.0)		
Monthly	84(40.6)	51(42.5)	24(44.4)	8(40.0)		
Annually	15(7.2)	21(17.5)	6(11.1)	2(10.0)		
Never	14(6.8)	5(4.2)	6(11.1)	4(20.0)		
Look for health information before seeing doctor						
Never	36(17.3)	22(18.2)	19(33.9)	6(31.6)	-0.143	0.004*
Rarely	53(25.5)	32(26.4)	14(25.0)	5(26.3)		
Sometimes	71(34.1)	39(32.2)	16(28.6)	8(42.1)		
Often	31(14.9)	15(12.4)	4(7.1)	0(0)		
Verv often	17(8.2)	13(10.7)	3(5.4)	0(0)		

Analysis of gender-related behavior revealed that 62.1% of females searched for health-related information monthly, compared to 37.9% for males (Table 3). Looking for health information before and after visiting the doctor was positively correlated with gender; female participants prefer to search for information before and after visiting the doctor. Additionally, 66.4% of female patients preferred to contact their physician through SM versus 33.6% of males, with a statistically significant ($P=0.006$) difference in proportion. The average score for the level of trust of online health information was significantly high in females (5.91 ± 2.2) compared to males (5.18 ± 2.39) ($P=0.002$). Female patients significantly relied upon advice from family and friends, with an average score of 5.23 (2.57) for females and 4.57 (2.43) for males ($P=0.012$).

Table 3 – Correlation Between Gender With Questions

Gender	Male N(%)	Female N(%)	Correlation coefficient	P-value
How often do you look for health information on the Internet?				
Daily	8(25.8)	23(74.2)	-0.119	0.016*
Weekly	44(33.8)	86(66.2)		
Monthly	64(37.9)	105(62.1)		
Annually	17(38.6)	27(61.4)		
Never	19(59.4)	13(40.6)		

Look for health information before seeing doctor				
Never	43(50.6)	42(49.4)	0.20	0.000 ⁺
Rarely	47(44.3)	59(55.7)		
Sometimes	42(31.1)	93(68.9)		
Often	11(22.0)	39(78.0)		
Very often	9(27.3)	24(72.7)		
Look for health information after seeing doctor				
Never	57(47.9)	62(52.1)	0.135	0.007 ⁺
Rarely	34(35.8)	61(64.2)		
Sometimes	42(31.8)	90(68.2)		
often	12(43.3)	23(65.7)		
Very often	7(26.9)	19(73.1)		
Use of SM to contact doctor				
Yes	89(33.6)	176(66.4)	-	0.006 ⁺
No	50(50.0)	50(50.0)		
No opinion	11(26.8)	30(73.2)		

DISCUSSION

This study assessed the use of SM for seeking health information and its impact on patients' attitude. Results showed that a high percentage of participants utilize SM to search for health information. Over 97% of participants ordinarily utilized SM (per our inclusion criteria), and only those SM users were included in our final analysis. Furthermore, 64.7% of participants said that the Internet was their primary source of information regarding their health. A 2015 study in Saudi Arabia focused on SM use in seeking health information, reporting that 68.3% of participants sought health-related information through the Internet.[13] Other studies on the Saudi population reported that Instagram and Snapchat were becoming popular mediums to search for health information.[14,11] The present study revealed that both applications have become popular among the Saudis, with a high proportion of participants utilizing both these applications for their health concerns. A study on the Dutch population found that 82.7% of respondents primarily utilized the Internet for health information, with minimal utilization of leaflets or books,[3] consistent with these results (Figure 1).

The frequency of SM use and the seeking of health information was correlated with age. In our study, participants aged 20–40 years more frequently utilized SM compared to other age groups and the Internet was the leading source for their health concerns. Bahkali et al. found that SM was utilized significantly more by participants under age 30.[13] However, they reported that Google was the most frequently utilized source among the elderly for any information regarding medications, with SM not being prevalent. Likewise, people 35 years or older in the Dutch population searched for medication side effects more often compared to those younger.[3]

Using SM to search for health-related information was more frequent among females in our study. They more often sought information online regarding symptoms, causes, and other health-related information before and after visiting the doctor. Additionally, they trusted information from the Internet more compared with their counterparts. Hence, women are more likely to believe and follow health-related information via SM. Females also preferred to contact their physicians through SM. Bahkali et al. found the same trend, noting SM was favored among females more than among males.[13] Education levels were a key factor associated with seeking health-related information on SM. A significantly high proportion of university graduates sought health-related information on the Internet daily or weekly. Further, they browsed the Internet before and after visiting the doctor. A literature review revealed that some previously published studies report that age, gender, education, and income are important predictors of behavior toward SM use in seeking health-related information. Results from an online health survey conducted in the USA report that women, younger, and educated people searched online more.[1] Jung et al. also found that younger people and those with higher incomes were more active in searching online.[15]

This study evaluated the frequency and sources of health-related information. It also evaluated the trust levels in such information. However, our study is limited as it did not include the extent to which participants followed health information gained online.

CONCLUSION

The Internet was the main source of health information for our

participants. A high proportion of them utilized SM as a source of health-related information. Patients' demographics significantly influenced their behavior. Healthcare providers should explore new ways to communicate and provide health care information electronically to ensure that patients receive correct and valid information.

RECOMMENDATION

Further studies should evaluate how often patients follow the information they receive from SM and whether they initiate or discontinue medication based upon information derived from SM.

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