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USING SOCIAL MEDIA APPLICATIONS FOR ACCESSING HEALTH-RELATED INFORMATION: EVIDENCE FROM JORDAN

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ABSTRACT

Aim/Purpose	This study examined the use of Social Media Applications (SMAs) for accessing health-related information within a heterogeneous population in Jordan. The objective of this study was therefore threefold: (i) to investigate the usage of SMAs, including WhatsApp, Twitter, YouTube, Snapchat, Instagram, and Facebook, for accessing health-related information; (ii) to examine potential variations in the use of SMAs based on demographic and behavioral characteristics; and (iii) to identify the factors that can predict the use of SMAs.
Background	There has been limited focus on investigating the behavior of laypeople in Jordan when it comes to seeking health information from SMAs.
Methodology	A cross-sectional study was conducted among the general population in Jordan using an online questionnaire administered to 207 users. A purposive sampling technique was employed, wherein all the participants actively sought online health information. Descriptive statistics, t-tests, and regression analyses were utilized to analyze the collected data.
Contribution	This study adds to the existing body of research on health information seeking from SMAs in developing countries, with a specific focus on Jordan. Moreover, laypeople, often disregarded by researchers and health information providers, are the most vulnerable individuals who warrant greater attention.
Findings	The findings indicated that individuals often utilized YouTube as a platform to acquire health-related information, whereas their usage of Facebook for this purpose was less frequent. Participants rarely utilized Instagram and WhatsApp to obtain health information, while Twitter and Snapchat were very seldom used for this purpose. The variable of sex demonstrated a notable positive

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	correlation with the utilization of YouTube and Twitter for the purpose of finding health-related information. Conversely, the variable of nationality exhibited a substantial positive correlation with the utilization of Facebook, Instagram, and Twitter. Consulting medical professionals regarding information obtained from the Internet was a strong indicator of using Instagram to search for health-related information.
Recommendations for Practitioners	Based on the empirical results, this study provides feasible recommendations for the government, healthcare providers, and developers of SMAs.
Recommendations for Researchers	Researchers should conduct separate investigations for each application specifically pertaining to the acquisition of health-related information. Additionally, it is advisable to investigate additional variables that may serve as predictors for the utilization of SMAs.
Impact on Society	The objective of this study is to enhance the inclination of the general public in Jordan to utilize SMAs for health-related information while also maximizing the societal benefits of these applications.
Future Research	Additional research is required to examine social media's usability (regarding ease of use) and utility (comparing advantages to risks) in facilitating effective positive change and impact in healthcare.

Keywords	social media, health information, seeking, Internet, Jordan

INTRODUCTION

Health consumers (e.g., patients, family, carers, nurses, health professionals, and laypeople) are increasingly turning to SMAs (e.g., Facebook, Twitter, YouTube, and Instagram) to access health information. This has gained equal popularity with the practice of obtaining health information from the Internet (Zhao & Zhang, 2017). SMAs are defined as "a group of web-based and mobile applications that allow users to share and create knowledge in a real time social interaction. It is user-centric, multi-purpose and it is not time and location bound" (Jain, 2013, p. 3). SMAs have emerged as new avenues for individuals to seek and exchange health information (Alhaddad, 2018; Gupta et al., 2022; Y.-J. Li et al., 2019; Zhao & Zhang, 2017). They enable two-way communication between patients and healthcare professionals (Alhaddad, 2018), granting convenient access to a wide range of health information (Jaafar et al., 2017) in various formats such as text, images, and videos (Y. Li et al., 2018). Additionally, SMAs also allow users to seek advice and assistance from others (Zhao & Zhang, 2017). SMAs offer instant access to a vast array of health information on many health subjects (Gupta et al., 2022). Healthcare consumers utilize SMAs for a diverse range of objectives, including emotional assistance and the control of health disorders (Zhao & Zhang, 2017). Patients have the ability to acquire information and exchange their healthcare expertise, personal encounters, and symptoms. The individuals can publish evaluations about health products, medications, and physicians (Gupta et al., 2022). Individuals with similar medical conditions can establish connections and create health-focused groups and communities (Y. Li et al., 2018). Social media facilitates social interactions that offer patients informational, emotional, and social support, hence aiding their ability to manage their condition (Zhao & Zhang, 2017).

In the literature, there has been limited focus on investigating the behavior of laypeople in Jordan when it comes to seeking health information from SMAs. Therefore, this study examined the use of SMAs for accessing health-related information within a heterogeneous population in Jordan. It aims to address the following research questions:

1. How do laypeople in Jordan use various SMAs (i.e., WhatsApp, Twitter, YouTube, Snapchat, Instagram, and Facebook) to access health-related information?
2. How do their demographic and behavioral characteristics (i.e., sex, age, marital status, nationality, education level, occupation, device used to access the Internet, and duration and frequency of Internet use) influence the use of these SMAs?

Thus, the objective of this study is to achieve three main goals:

1. To investigate the usage of SMAs, including WhatsApp, Twitter, YouTube, Snapchat, Instagram, and Facebook, for accessing health-related information,
2. To examine potential variations in the use of SMAs based on demographic and behavioral characteristics, and
3. To identify the factors that can predict the use of SMAs.

This study adds to the existing body of research on health information seeking from SMAs in developing countries, with a specific focus on Jordan. Moreover, laypeople, often disregarded by researchers and health information providers, are the most vulnerable individuals who warrant greater attention.

LITERATURE REVIEW

SMAs are widespread, constantly changing, and exerting a growing impact on individuals' everyday lives and their health-related actions (Zhao & Zhang, 2017). SMAs have thus altered the methods individuals employ to search for and disseminate information (Y. Li et al., 2018). Nevertheless, it is imperative to closely evaluate the quality and reliability of information on SMAs in order to provide efficient and prompt channels for the distribution of critical information (Chan et al., 2020). The utilization of SMAs has jeopardized the confidentiality and privacy of users, necessitating the implementation of protective measures (Benetoli et al., 2017; Zhao & Zhang, 2017). The smartphone was the primary device utilized to access SMAs for the purpose of finding health information online (Alhuwail & Abdulsalam, 2019; Alzougool, 2022; Ghahramani & Wang, 2020).

According to Lee et al. (2021), the increased availability of technological gadgets such as smartphones, computers, or tablets was linked to a higher inclination to search for health information. The study conducted by Zhao and Zhang (2017) provides a comprehensive overview of the existing research on how consumers actively search for health information through SMAs. These encompassed a variety of topics, ranging from online debates about particular ailments such as diabetes to broader public health issues like pesticide residues. Consumers have different information requirements based on their specific health concerns. The advantages of accessing health information on SMAs extend beyond fulfilling the demand for medical knowledge. They also encompass the social and emotional support that health consumers derive from engaging in peer-to-peer interactions. Nevertheless, these advantages are mitigated by worries regarding the quality and credibility of information, resulting in reduced consumer involvement.

In their study, Alshareef and Alotiby (2021) discovered that, among the general population in Saudi Arabia, WhatsApp was the most favored social media application for both receiving and distributing information. Twitter and Snapchat were the next most popular choices. Alhaddad (2018) assessed the utilization of SMAs for acquiring health-related information among the population of Saudi Arabia. Among responders, WhatsApp was the predominant application utilized. Friends serve as the primary conduit of medical information on SMAs. The majority of participants prefer obtaining medical information from reliable, authoritative sources. According to Alhaddad (2018), women and those with a university education were more inclined to utilize SMAs for obtaining health-related information compared to other groups.

According to Cordoş et al. (2017) and Bahkali et al. (2016), women and higher-educated patients were more likely to utilize SMAs for obtaining health-related information. Roselina et al. (2021) discovered that the most frequently utilized SMAs are Instagram, Line, Twitter, and YouTube. The time required to access the information was under one hour. In their study, Wijayanti et al. (2022) observed contrasting outcomes between males and females, with only women being influenced by the perceived risk when seeking health information on SMAs. Furthermore, the inclination to search for health information using SMAs was influenced by perceived benefits, health self-efficacy, and subjective norms.

Recently, Gupta et al. (2022) conducted a literature review to investigate the utilization of SMAs by patients for health-related purposes. It was discovered that patients commonly use Facebook, Twitter, YouTube, blogs, and online health networks to seek and share information. Patients are also utilizing health-related social media platforms such as PatientsLikeMe, Netwellness, and MDTalks. Facebook facilitated healthcare communications (Gupta et al., 2022) and enabled patients to subscribe to health-related pages. Patients can also engage in disease-specific group discussions (Benetoli et al., 2017). YouTube has facilitated the dissemination of videos that have aided patients in acquiring knowledge about medical procedures. Additionally, Twitter has transformed patients from passive recipients of health information into active participants (Gupta et al., 2022). Blogs have benefited patients in acquiring knowledge from the experiences of other patients (Gupta et al., 2022). Gupta et al. (2022) additionally identified the main uses and advantages of social media for patients, which include (i) the accessibility of information at any time, (ii) the ability to engage with other patients who have the same illness, (iii) emotional support and a sense of companionship, (iv) the opportunity to interact and share personal experiences, (v) the ability to conduct more informed research and ask more insightful questions to physicians, (vi) the ability to seek information about medications, diseases, and their treatments, and so forth.

METHOD

RESEARCH INSTRUMENT

In order to accomplish the study objectives, a cross-sectional survey was conducted among the general population in Jordan using an online questionnaire. This is a component of a broader study project that investigates e-health literacy and the behavior of laypeople in Jordan when accessing health information online. This work serves as a valuable addition to another recently published paper by the author (Alzougool, 2022) that is relevant to this endeavor. The online questionnaire was self-administered, voluntary, and anonymous. It consisted of multiple sections, including (i) gathering demographic information such as sex, age, marital status, nationality, education level, occupation, the device used to access the Internet, and duration and frequency of Internet use; (ii) collecting information about participants' health status, discussions of health information with doctors, and the individuals for whom the information was sought (adapted from Wong & Cheung, 2019); and (iii) assessing the frequency of using SMAs (i.e., WhatsApp, Twitter, YouTube, Snapchat, Instagram, and Facebook) as a means of seeking health information (adopted from Alhuwail & Abdulsalam, 2019), measured on a scale of 1 to 5. Participants were given a range of five options for each tool, from never to always.

SAMPLING PROCEDURES AND SIZE

In order to gather data from individuals who actively look for health information online, a screening question was incorporated into the questionnaire to determine whether participants have previously conducted an online health search. Thus, a purposive sampling technique was employed, wherein all the participants actively sought online health information. Cohen (2013) recommends having a minimum sample size of 160 responses for accurate analysis. The calculations were performed using the G*Power 3 software, considering an effect size of 0.15, a significance level of 0.05, and a power of 0.95. A total of 262 participants took part in this investigation. Following the exclusion of 55 surveys

for various reasons, such as incompleteness or lack of online health information seeking, 207 questionnaires (with a response rate of 79%) were included in the study.

DATA COLLECTION AND PROCEDURE

A hyperlink to the questionnaire was created using Survey Monkey™ and remained accessible for approximately one month. Participants were enlisted via an email notification with a hyperlink to the web-based survey. This was achieved by utilizing Facebook ads manager to promote an advertisement of the questionnaire link, specifically targeting all active Facebook members in Jordan. Participants in this study had to be at least 18 years old to be eligible for the questionnaire. Prior to Facebook users accessing the questionnaire, the researcher provided a clear explanation of the study's nature and goal. The researcher emphasized the importance of selecting the response that best reflected their personal feelings. The directions for completing the questionnaire were provided on a cover sheet to prevent any potential confusion regarding the matter. Participants were guaranteed both anonymity and secrecy, and their involvement was entirely voluntary. The study entailed negligible risk since no personal data was gathered. Completing the online questionnaire implied informed consent. The completion of the questionnaire lasted around 6 minutes. Ethical approval for the study was given to the Arab Open University in Kuwait.

DATA ANALYSIS

The data were analyzed using the statistical package for social science (SPSS) software, specifically version 19.0. Descriptive statistics were utilized to summarize the data, including the calculation of means, standard deviations, frequencies, and percentages where appropriate. T-tests and regression analyses were used to examine the variations and predictors of SMAs usage based on demographic and behavioral characteristics, respectively.

FINDINGS

The study sample's demographic characteristics are presented in Table 1. The sample was about evenly split between males (49.8%) and females (50.2%). The participants encompassed individuals from all age cohorts. The average age of the participants in the study was 34.45 years. The majority of respondents were unmarried (52.2%) and held a bachelor's degree (54.1%). Around 66% of the participants were Jordanians, whereas 64.6% were non-students. The majority of participants assessed their health as either very good (42%) or excellent (24.2%), while a smaller percentage ranked their health as either good (25.6%) or poor (7.2%). Furthermore, 19.3% of individuals had chronic medical illnesses necessitating regular monitoring or therapy. Over one-third of the participants allocated their time on the Internet for a duration of 1-3 hours (39.1%) and 4-6 hours (34.3%) every day.

Table 1. Characteristics of the study sample (N=207)

Characteristics	Categories	Freq.	%	Missing Values
Sex	Male	103	49.8%	0
	Female	104	50.2%	
Age range	18 to 22 years	65	31.9%	3
	23 to 32 years	50	24.5%	
	33 to 45 years	40	19.6%	
	46 years older	49	24.0%	
Marital status	Single	107	52.2%	2
	Married	93	45.4%	
	Other	5	2.4%	

Characteristics	Categories	Freq.	%	Missing Values
Educational level	Below high school	5	2.4%	0
	High school	34	16.4%	
	Diploma	28	13.5%	
	Bachelor	112	54.1%	
	Master	20	9.7%	
	Doctorate	8	3.9%	
Occupation	Employed	91	44.2%	1
	Unemployed	18	8.7%	
	Student	73	35.4%	
	Retired	24	11.7%	
Nationality	Jordanian	136	66.0%	0
	Non-Jordanian	70	34.0%	
Internet use	Less than one hour per day	5	2.4%	0
	one to 3 hours per day	81	39.1%	
	4 to 6 hours per day	71	34.3%	
	More than 6 hours per day	50	24.2%	
Self-rated health status	Excellent	50	24.2%	0
	Very good	87	42.0%	
	Good	53	25.6%	
	Fair	15	7.2%	
	poor	2	1.0%	
Have chronic medical condition	Yes	40	19.3%	0
	No	167	80.7%	

As shown in Table 2, over one-third of the respondents (35.9%) utilized the Internet several times per week to search for health-related information. Additionally, 13.1% of the respondents reported using the Internet on a daily basis for this purpose, while 19.4% used it several times per month. Half of the respondents had inquired or engaged in discussions with their doctors on health information they discovered online. In addition to conducting searches for personal use (82.6%), a significant portion of individuals (68.6%) also perform searches on behalf of their family members, while a smaller percentage (30.0%) conduct searches for acquaintances and colleagues. The vast majority of participants (94.7%) utilized their smartphones to search for health information on the Internet.

Table 2. Prevalence and pattern of online health information seeking of participants (N=207)

Characteristics	Categories	Freq.	%	Missing Values
Frequency of online health information seeking	Daily	27	13.1%	1
	Several times a week	74	35.9%	
	Once a week	16	7.8%	
	Several times a month	40	19.4%	
	Once a month	14	6.8%	
	Every few months	34	16.5%	
	Once a year or less	1	0.5%	
Asking doctors about health information found online	Yes	101	50.0%	5
	No	101	50.0%	

Characteristics	Categories	Freq.	%	Missing Values
Finding information for:	Myself	171	82.6%	Participants selected more than one
	Family members	142	68.6%	
	Friends or co-workers	62	30.0%	
	Myself and family members	58	28.0%	
	Myself, family members, friends	54	26.1%	
Devices used:	Desktop	24	11.6%	Participants selected more than one
	Laptop	42	20.3%	
	Tablet	22	10.6%	
	Smartphone	196	94.7%	

Frequencies and means of using SMAs to search for health-related information are presented in Table 3. Approximately 74% of the individuals reported using YouTube and 56% of the individuals reported using Facebook always, often, or sometimes. Among the individuals who reported using the two sites always, often, or sometimes, 30.7% used Instagram, and 29.2% utilized WhatsApp. Twitter and Snapchat were the least utilized platforms for seeking health information, as 75% and 74.5% of the participants, respectively, reported never using these channels for this purpose. In order to elucidate the extent of SMA utilization, the subsequent scale was employed: (i) always used: calculated mean ($2.55 \geq M \leq 3.0$), (ii) frequently used: calculated mean ($2.05 \geq M < 2.55$), (iii) occasionally used: calculated mean ($1.70 \geq M < 2.05$), (iv) rarely used: calculated mean ($1.30 \geq M < 1.70$), and (v) very seldom used: calculated mean ($M < 1.30$). The data indicates that participants frequently utilized YouTube (M=2.09) as a primary source for seeking health information, while their use of Facebook (M=1.81) for this purpose was less frequent. Participants rarely utilized Instagram (M=1.42) and WhatsApp (M=1.41) to search for health-related information. Twitter (M=1.20) and Snapchat (M=1.20) were very seldom used for this purpose.

Table 3. Frequencies and means of using SMAs for seeking health information (n=192)

SMAs	Never Freq. (%)	Rarely Freq. (%)	Sometimes Freq. (%)	Often Freq. (%)	Always Freq. (%)	Mean	SD
YouTube	18 (9.4%)	32 (16.7%)	74 (38.5%)	39 (20.3%)	29 (15.1%)	2.09	0.780
Facebook	62 (32.3%)	24 (12.5%)	56 (29.2%)	30 (15.6%)	20 (10.4%)	1.81	0.823
Instagram	102 (53.1%)	31 (16.1%)	38 (19.8%)	11 (5.7%)	10 (5.2%)	1.42	0.681
WhatsApp	104 (54.2%)	32 (16.7%)	33 (17.2%)	10 (5.2%)	13 (6.8%)	1.41	0.696
Snapchat	143 (74.5%)	24 (12.5%)	11 (5.7%)	8 (4.2%)	6 (3.1%)	1.20	0.556
Twitter	144 (75.0%)	19 (9.9%)	19 (9.9%)	9 (4.7%)	1 (0.5%)	1.20	0.517

Table 4 presents variations in the use of SMAs based on the demographic and behavioral characteristics of the participants. YouTube usage showed notable disparities exclusively among male and female participants. Male participants (M=2.31, p=0.000) exhibited a high frequency of using YouTube to obtain health information, whereas females (M=1.90) showed a lower frequency of doing so. Facebook has shown notable disparities in its utilization across various age groups and nationalities. Individuals aged 33 years and above (M=2.0, p=0.011) or of Jordanian nationality (M=1.97, p=0.000) occasionally utilized Facebook to seek health information. Conversely, individuals aged 18 to 32 years (M=1.69) or of non-Jordanian nationality (M=1.53) rarely employed Facebook for this purpose. Instagram showed notable variations in its utilization across different age groups, marital statuses, nationalities, and inquiring about medical advice sourced from the Internet. Participants aged between 18 and 32 (M=1.51, p=0.012), who are single (M=1.55, p=0.006), non-Jordanian (M=1.69, p=0.000),

or consult their doctors about online information (M=1.54, p=0.012), exhibited infrequent use of Instagram for seeking health information. Conversely, participants aged 33 and older (M=1.26), married (M=1.27), Jordanian (M=1.27), or not consulting their doctors about online information (M=1.29) demonstrated very rare usage of Instagram for this purpose. Moreover, WhatsApp usage varied significantly based on age, marital status, occupation, and frequency of accessing health information online. Married participants (M=1.57, p=0.007), non-students (M=1.50, p=0.020), or those who seek online health information once a week to daily (M=1.51, p=0.010) exhibited infrequent use of WhatsApp for seeking health information. Conversely, singles (M=1.29), students (M=1.26), or those who seek online health information every few months to several times a month (M=1.26) showed very rare usage of WhatsApp for this purpose. Furthermore, individuals aged 33 years and above (M=1.54, p=0.031) exhibited a higher inclination to utilize WhatsApp for the purpose of obtaining health-related information compared to individuals aged 18 to 32 years (M=1.32). Nevertheless, both age cohorts infrequently utilized WhatsApp for this purpose.

Table 4. Variations in the use of SMAs based on the demographic and behavioral characteristics of the participants

Variables	Categories (n)	YouTube		Facebook		Instagram		WhatsApp		Snapchat		Twitter	
		M	P	M	P	M	P	M	P	M	P	M	P
Sex	Male (91)	2.31	0.000*	1.91	0.112	1.42	0.986	1.47	0.249	1.21	0.894	1.27	0.068
	Female (101)	1.90		1.72		1.42		1.36		1.20		1.14	
Age range	18 to 32 years (113)	2.10	0.786	1.69	.011*	1.51	0.012*	1.32	0.031*	1.25	0.110	1.22	0.633
	33 years & older (76)	2.07		2.00		1.26		1.54		1.12		1.18	
Marital Status	Single (106)	2.13	0.481	1.74	0.151	1.55	0.006*	1.29	0.007*	1.26	0.100	1.25	0.161
	Married (79)	2.05		1.91		1.27		1.57		1.13		1.14	
Educational level	Diploma & below (59)	2.02	0.365	1.76	0.578	1.42	0.924	1.41	0.951	1.14	0.264	1.25	0.363
	Bachelor & above (133)	2.13		1.83		1.41		1.41		1.23		1.18	
Occupation	Non-student (118)	2.04	0.245	1.85	0.445	1.37	0.238	1.50	0.020*	1.16	0.174	1.21	0.795
	Student (73)	2.18		1.75		1.49		1.26		1.27		1.19	
Nationality	Jordanian (123)	2.08	0.759	1.97	0.000*	1.27	0.000*	1.39	0.535	1.10	0.000*	1.13	0.008*
	Non-Jordanian (68)	2.12		1.53		1.69		1.46		1.40		1.34	
Internet use	3 hrs/day & less (72)	2.00	0.241	1.79	0.825	1.35	0.218	1.53	0.097	1.17	0.434	1.19	0.789
	4 hrs/day & more (116)	2.14		1.82		1.47		1.35		1.23		1.22	
Have chronic medical condition	Yes (34)	2.06	0.774	2.00	0.143	1.29	0.249	1.50	0.415	1.12	0.324	1.09	0.154
	No (158)	2.10		1.77		1.44		1.39		1.22		1.23	
Asking doctors about online info.	Yes (98)	2.15	0.209	1.76	0.296	1.54	0.012*	1.43	0.632	1.24	0.314	1.28	0.037*
	No (92)	2.01		1.88		1.29		1.38		1.16		1.12	
Freq. of online health info. seeking	Once a week to daily (109)	2.15		1.88		1.47		1.51		1.22		1.22	
	Every few months to several times a month (82)	2.01	0.239	1.72	0.182	1.33	0.160	1.26	0.010*	1.16	0.438	1.18	0.624
Self-rated health status	Excellent (50)	2.00		1.64		1.54		1.40		1.24		1.24	
	Very good (80)	2.13	0.512	1.83	0.237	1.38	0.326	1.36	0.677	1.18	0.812	1.20	0.846
	Good & fair (60)	2.17		1.90		1.37		1.47		1.20		1.18	

Note: *p<0.05, M=mean

Regarding Snapchat, there were notable disparities in its usage based just on nationality. Individuals who were not from Jordan (M=1.40, p=0.000) had a low frequency of using Snapchat to obtain health-related information. Although Jordanians (M=1.10) very seldom utilized it for such purpose. Regarding Twitter, there were notable disparities in its utilization based on both country and the act of consulting doctors about internet information. Non-Jordanian individuals (M=1.34, p=0.008) exhibited infrequent utilization of Twitter for the purpose of seeking health-related information. Conversely, Jordanian individuals (M=1.13) showed an even lower frequency of using Twitter for this purpose. Furthermore, individuals who inquire with their physicians regarding online information (M=1.28, p=0.037) exhibit a greater inclination to utilize Twitter as a means of accessing health-related information compared to those who do not consult their doctors (M=1.12).

Nevertheless, both factions very seldom utilized Twitter for this purpose. The usage of SMAs does not show any significant variations in relation to the other characteristics of participants.

To test the proposed hypotheses, a regression analysis was conducted to investigate the variables that predict the extent to which participants use SMAs for accessing health-related information. The variables encompass a range of demographic factors (such as sex, age, marital status, educational level, occupation, and nationality), health-related factors (such as having a chronic medical condition, consulting doctors about online information, self-rated health status), and digital-related factors (such as frequency of Internet use and frequency of seeking health information online). The results are presented in Table 5. The regression model for YouTube yielded statistically significant results, explaining 9.1% of the variance (R2=0.154, adjusted R2=0.091, F12, 159=2.421, P=0.007). The variable of sex shown a substantial positive correlation with the utilization of YouTube for the purpose of accessing health-related information. This suggests that 9.1% of the variability in YouTube usage can be accounted for by this specific variable. The regression model used for Facebook was found to be statistically significant, explaining 8.2% of the variance (R2=0.146, adjusted R2=0.082, F12, 159=2.265, P=0.011). One's nationality was a strong and favorable indicator of their use of Facebook to search for health-related information. This suggests that 8.2% of the variation in Facebook usage can be accounted for by this particular factor. The regression model used for Instagram yielded statistically significant results, explaining 8.7% of the variance (R2=0.151, adjusted R2=0.087, F12, 159=2.361, P=0.008). Both the factor of nationality and the act of consulting doctors on information obtained online were determined to be influential and positively correlated with the utilization of Instagram for the purpose of finding health-related information. This suggests that these two variables can account for 8.7% of the variation in Instagram usage. The regression model used for Twitter was found to be statistically significant, explaining 7.4% of the variance (R2=0.139, adjusted R2=.074, F12, 159=2.135, P=0.017). Both sex and nationality were significant positive predictors of the use of Twitter to search for health-related information. This suggests that 7.4% of the variation in Twitter usage may be accounted for by these two variables. No other demographic and behavioral characteristics showed a significant prediction (P>0.05) of the use of these SMAs. On the other hand, demographic and behavioral characteristics did not have a significant impact (P>0.05) on the use of WhatsApp and Snapchat platforms.

Table 5. Regression analysis for variables predicting SMAs use (n=192)

Variables	Unstandardized coefficients B (Std. Error)	Standardized coefficients Beta	T	Sig.
YouTube (R^2=0.154, adjusted R^2=0.091, $F_{12, 159}$=2.421, P=0.007)				
Sex	-0.565 (0.128)	-0.366	-4.413	0.000*
Facebook (R^2=0.146, adjusted R^2=0.082, $F_{12, 159}$=2.265, P=0.011)				
Nationality	-0.379 (0.138)	-0.221	-2.751	0.007*
Instagram (R^2=0.151, adjusted R^2=0.087, $F_{12, 159}$=2.361, P=0.008)				
Nationality	0.322 (0.114)	0.226	2.822	0.005*
Asking doctors about online information	-0.243 (0.104)	-0.178	-2.343	0.020*
Twitter (R^2=0.139, adjusted R^2=0.074, $F_{12, 159}$=2.135, P=0.017)				
Sex	-0.185 (0.087)	-0.177	-2.117	0.036*
Nationality	0.217 (0.088)	0.200	2.477	0.014*

Note: *p<0.05

DISCUSSION

The study's findings revealed that participants exhibited a strong inclination to actively seek health-related information online. Over one-third of individuals actively sought information many times per week, primarily for personal use and also for their family members, with a smaller portion seeking information for their friends and co-workers. The smartphone was the primary device utilized to access health-related information online. The findings align with previous research conducted by Wong and Cheung (2019), Alhuwail and Abdulsalam (2019), Ashkanani et al. (2019), and Nguyen et al. (2017). Fifty percent of the respondents consulted their physicians or engaged in dialogue with them regarding the health information they encountered on the Internet. This warrants additional scrutiny in order to comprehend the intricacies of communication between medical professionals and patients, as well as individuals in general.

The findings indicate that participants mostly utilized YouTube and Facebook as their preferred platforms for accessing health-related information online, while Twitter and Snapchat were the least utilized channels. Approximately one-third of the participants utilized Instagram and WhatsApp. The results align with prior research (e.g., Alhuwail & Abdulsalam, 2019; Hassan & Masoud, 2021), indicating a restricted utilization of SMAs for accessing health-related information. This outcome warrants additional scrutiny in order to comprehend the factors that may elucidate the constrained dependence on social media for the purpose of accessing health-related information. These factors may pertain to both health information providers and users.

At least one out of seven variables has an influence on one to four SMAs. Regarding this matter, sex has an impact on the utilization of YouTube. Specifically, male individuals commonly employ YouTube as a means to search for health-related material, whereas females occasionally do the same. Moreover, the utilization of WhatsApp is influenced solely by one's occupation and the frequency at which one seeks health information online.

Individuals who are not enrolled in educational institutions and individuals who use online health information on a regular basis, ranging from once a week to daily, seldom utilize WhatsApp as a platform to obtain health-related information. Conversely, students and individuals who access online health information less frequently, ranging from every few months to several times a month, almost never use WhatsApp for this purpose.

The marital status of individuals has an impact on their usage of WhatsApp and Instagram. Specifically, married individuals seldom utilize WhatsApp to search for health-related information, whereas single individuals hardly ever employ it for that purpose. Conversely, unmarried individuals exhibited minimal usage of Instagram for the purpose of seeking health-related information, whereas married individuals have shown even less usage for this purpose.

Consulting physicians over online health information also impacts the utilization of Instagram and Twitter. Participants who inquired with their doctors regarding online information seldom utilized Instagram as a platform for seeking health-related information, whereas participants who did not consult their doctors about online information hardly ever employed Instagram for this purpose. Conversely, individuals who inquire with their physicians about internet material tend to utilize Twitter as a means to acquire health-related knowledge more frequently than those who do not consult their doctors. Nevertheless, both groups exhibited infrequent utilization of Twitter for this purpose.

Age has a significant role in determining the usage patterns of Facebook, Instagram, and WhatsApp. Individuals aged 33 and above occasionally utilized Facebook as a means to get health-related information, whereas individuals aged 18 to 32 seldom employed it for such purposes. Individuals aged 18 to 32 exhibited infrequent utilization of Instagram for the purpose of seeking health-related information, whereas individuals aged 33 and above showed an even lower level of engagement in this re-

gard. Participants aged 33 and above exhibited a higher inclination to utilize WhatsApp for the purpose of seeking health-related information compared to participants aged 18 to 32. Nevertheless, both age cohorts rarely utilized WhatsApp for this purpose.

One's nationality has an impact on one's usage of Facebook, Instagram, Twitter, and Snapchat. Jordanians occasionally utilized Facebook as a means to get health-related information, whereas non-Jordanians seldom employed it for such purposes. Conversely, those who are not from Jordan seldom utilize Instagram, Twitter, and Snapchat as a means to get health-related information, whilst Jordanians hardly employ these platforms for such purposes.

Sex was a strong and positive predictor of individuals using YouTube and Twitter to acquire health-related information. The individual's nationality was a strong and positive predictor of their usage of Facebook, Instagram, and Twitter for the purpose of accessing health-related information. Inquiring with medical professionals about material sourced from the Internet was a strong predictor of using Instagram to seek health-related information. Additional demographic and behavioral characteristics did not have a significant impact on the utilization of these SMEs. Demographic and behavioral characteristics, on the other hand, were not significant predictors of WhatsApp and Snapchat platform usage.

CONCLUSION, LIMITATION, AND FUTURE RESEARCH

This study investigated the utilization of SMAs for accessing health-related information among a diverse population in Jordan. The utilization of SMAs for health-related purposes by laypeople in Jordan shows great potential for the future. Nevertheless, its function in this capacity is continuously developing.

Although extensive attempts were made to conduct thorough research, this study has significant limitations that could not be addressed due to constraints in time and resources. Given the cross-sectional character of the study, a more comprehensive comprehension of the evolving nature of health information-seeking necessitates additional longitudinal investigations. Furthermore, the lack of information about nonparticipants and the small sample size of this study significantly restricts the generalizability of the results. Additional research is required to examine the usability (regarding ease of use) and utility (comparing advantages to risks) of social media in facilitating effective positive change and impact in healthcare (Gupta et al., 2022).

This study holds both theoretical and practical significance. For theory, this study adds to the existing body of research on health information seeking from SMAs in developing countries, with a specific focus on Jordan. For practice, the results generally indicate that health consumers require continuous assistance from both the government and healthcare providers. This support entails offering a more extensive perspective on SMAs, specifically by increasing the general public's knowledge of the possible advantages of these applications in the context of health information provision. YouTube and Facebook seemed to be the predominant platforms for accessing health-related information. Thus, this support entails promoting the ongoing utilization of these two applications for accessing health information at an equal level and enhancing people's understanding of the possible advantages of utilizing other applications for seeking health information. Furthermore, given the limited usage of Instagram, WhatsApp, Twitter, and Snapchat among health consumers in Jordan, health providers have the opportunity to educate these consumers about the potential advantages of utilizing these programs, specifically for health-related objectives. Furthermore, developers of SMAs have the potential to consistently enhance the functionality of the apps to ensure convenient access to essential health information.

REFERENCES

Alhaddad, M. S. (2018). The use of social media among Saudi residents for medicines related information. *Saudi Pharmaceutical Journal*, *26*(8), 1106–1111. https://doi.org/10.1016/j.jsps.2018.05.021

Alhuwail, D., & Abdulsalam, Y. (2019). Assessing electronic health literacy in the state of Kuwait: Survey of internet users from an Arab state. *Journal of Medical Internet Research*, *21*(5), e11174. https://doi.org/10.2196/11174

Alshareef, M., & Alotiby, A. (2021). Prevalence and perception among Saudi Arabian population about resharing of information on social media regarding natural remedies as protective measures against COVID-19. *International Journal of General Medicine*, *14*, 5127–5137. https://doi.org/10.2147/ijgm.s326767

Alzougool, B. (2022). eHealth literacy among online health consumers in Jordan. *Global Knowledge, Memory and Communication*. Advance online publication. https://doi.org/10.1108/gkmc-06-2022-0145

Ashkanani, H., Asery, R., Bokubar, F., AlAli, N., Mubarak, S., Buabbas, A., & Almajran, A. (2019). Web-based health information seeking among students at Kuwait University: Cross-sectional survey study. *JMIR Formative Research*, *3*(4), e14327. https://doi.org/10.2196/14327

Bahkali, S., Alfurih, S., Aldremly, M., Alzayyat, M., Alsurimi, K., & Househ, M. (2016). The prevalence of internet and social media based medication information seeking behavior in Saudi Arabia. *Studies in Health Technology and Informatics*, *226*, 275–278.

Benetoli, A., Chen, T. F., & Aslani, P. (2017). Consumer health-related activities on social media: Exploratory study. *Journal of Medical Internet Research*, *19*(10), e352. https://doi.org/10.2196/jmir.7656

Chan, A. K. M., Nickson, C. P., Rudolph, J. W., Lee, A., & Joynt, G. M. (2020). Social media for rapid knowledge dissemination: Early experience from the COVID-19 pandemic. *Anaesthesia*, *75*(12), 1579–1582. https://doi.org/10.1111/anae.15057

Cohen, J. (2013). *Statistical power analysis for the behavioral sciences*. Elsevier Science. https://doi.org/10.4324/9780203771587

Cordoș, A. A., Bolboacă, S., & Drugan, C. (2017). Social media usage for patients and healthcare consumers: A literature review. *Publications*, *5*(2), 9. https://doi.org/10.3390/publications5020009

Ghahramani, F., & Wang, J. (2020). Impact of smartphones on quality of life: A health information behavior perspective. *Information Systems Frontiers*, *22*(6), 1275–1290. https://doi.org/10.1007/s10796-019-09931-z

Gupta, P., Khan, A., & Kumar, A. (2022). Social media use by patients in health care: A scoping review. *International Journal of Healthcare Management*, *15*(2), 121–131. https://doi.org/10.1080/20479700.2020.1860563

Hassan, S., & Masoud, O. (2021). Online health information seeking and health literacy among non-medical college students: Gender differences. *Journal of Public Health*, *29*(6), 1267–1273. https://doi.org/10.1007/s10389-020-01243-w

Jaafar, N. I., Ainin, S., & Yeong, M. W. (2017). Why bother about health? A study on the factors that influence health information seeking behaviour among Malaysian healthcare consumers. *International Journal of Medical Informatics*, *104*, 38–44. https://doi.org/10.1016/j.ijmedinf.2017.05.002

Jain, P. (2013). Application of social media in marketing library and information services: A global perspective. *European Journal of Business, Economics, and Accountancy*, 1(1),1–13. https://www.idpublications.org/wp-content/uploads/2014/07/APPLICATION.pdf

Lee, H. Y., Jin, S. W., Henning-Smith, C., Lee, J., & Lee, J. (2021). Role of health literacy in health-related information-seeking behavior online: Cross-sectional study. *Journal of Medical Internet Research*, *23*(1), e14088. https://doi.org/10.2196/14088

Li, Y., Wang, X., Lin, X., & Hajli, M. (2018). Seeking and sharing health information on social media: A net valence model and cross-cultural comparison. *Technological Forecasting and Social Change*, *126*, 28–40. https://doi.org/10.1016/j.techfore.2016.07.021

Li, Y.-J., Cheung, C. M. K., Shen, X.-L., & Lee, M. K. O. (2019, July). Health misinformation on social media: A literature review. *Proceedings of the Pacific Asia Conference on Information Systems, Xi'an, China,* 194. https://aisel.aisnet.org/pacis2019/194

Nguyen, A., Mosadeghi, S., & Almario, C. V. (2017). Persistent digital divide in access to and use of the Internet as a resource for health information: Results from a California population-based study. *International Journal of Medical Informatics*, *103*, 49–54. https://doi.org/10.1016/j.ijmedinf.2017.04.008

Roselina, E., Asmiyanto, T., & Andriany, M. (2021). Health information-seeking behavior on the COVID-19 pandemic: Social media usage by Gen Z in Jakarta, Indonesia. *Library Philosophy and Practice*, 1-7. https://www.proquest.com/openview/45fbe52f9ad83ecb3f18f241f5c5a62a/1?pq-origsite=gscholar&cbl=54903

Wijayanti, R. P., Handayani, P. W., & Azzahro, F. (2022). Intention to seek health information on social media in Indonesia. *Procedia Computer Science*, *197*, 118–125. https://doi.org/10.1016/j.procs.2021.12.125

Wong, D. K. K., & Cheung, M. K. (2019). Online health information seeking and eHealth literacy among patients attending a primary care clinic in Hong Kong: A cross-sectional survey. *Journal of Medical Internet Research*, *21*(3), e10831. https://doi.org/10.2196/10831

Zhao, Y., & Zhang, J. (2017). Consumer health information seeking in social media: A literature review. *Health Information & Libraries Journal*, *34*(4), 268–283. https://doi.org/10.1111/hir.12192

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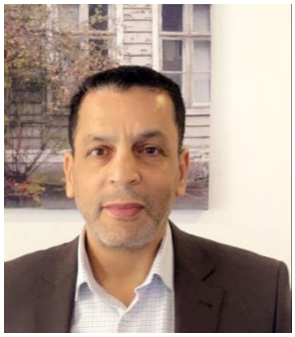

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