Original Article

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Quick Response Code:

Website: www.jfcmonline.com

DOI: 10.4103/jfcm.jfcm_105_21

Bridging the gap: Engagement of family and community physicians in digital networks for health issues

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Abstract:

BACKGROUND: The use of social media (SM) is unlocking infinite opportunities for healthcare disciplines and is fast becoming the preferred medium of communication. This underlines the importance of meeting the challenges of this new era. The aim of this study was to assess the readiness of Saudi family medicine physicians to the use of SM in health promotion and to explore their prospective attitudes toward its use professionally.

MATERIALS AND METHODS: The two largest hospital-based primary care centers in the Eastern Province of Saudi Arabia were used for the quantitative analysis. All known physician bloggers in Saudi Arabia from seven different cities were invited to participate in the qualitative aspect of this study. The quantitative component of this study was conducted in the Eastern Province at two main hospitals. A 37-item questionnaire was distributed to all family physicians practising at these hospitals. The qualitative component of this study covered all of Saudi Arabia, and 11 in-depth interviews were held with family physician bloggers, followed by verbatim transcription, content analysis, and coding of the results. Chi-squared and independent t-tests were used. All physicians at the two largest hospitals in the Eastern Province were invited to participate in the quantitative aspect of the study. The response rate was 86.2% (n = 159).

RESULTS: Study included 136 primary care physicians; majority were <50 years old (96.3%) with 58.8% females. About 60% were residents and 27.2 % consultants, and 76.5% were were family medicine physicians. Ninety-six percent physicians had SM accounts, the mean use of 3 h per day, 46.3% of the family physicians had good knowledge of SM ethics, and 69.9% used SM professionally for medical issues. Most of the responses showed a strong positive attitude; more than 60% of the participants responded as "agree" or "strongly agree" to the positive statements.

CONCLUSION: Organizations urgently need to design their own bioethical guidelines and rules on the safe use of SM by healthcare professionals.

Keywords:

E-professionalism, medical practice, social media

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Received: 02-03-2021
Revised: 30-07-2021
Accepted: 10-08-2021
Published: 07-09-2021

Introduction

The recent social media (SM) revolution has created countless opportunities to promote individual and community health, foster fast communication between healthcare providers, and increase knowledge-sharing among physicians. However, SM technology enables people to share information for undefined and indefinite periods. This tool enables both true and false information to spread wide and become entrenched. This is important since the annual growth rate of the use of the Internet by citizens in Saudi Arabia is rising exponentially.[1]

How to cite this article: Alqarni AM, Almuraisel MA, Alsheikh RH, Almansour RS, Abdelwahab MM. Bridging the gap: Engagement of family and community physicians in digital networks for health issues. J Fam Community Med 2021;28:181-8.

Klee *et al*., found that 90% of family physicians used SM.[2] A systematic review in 2015 concluded that SM may be promising in the advancement of public health.[3] A study from the United States of America found that most hospitals employed SM for the following purposes: to promote public health, share experiences, provide institutional insight information, and for medical services.[4]

SM usage has a number of limitations such as unreliable security and privacy, uncertainty about who are behind large websites and major blogs, and concerns about the quality of medical advice offered and the associated risks. Therefore, it is necessary to explore how useful SM is.[5]

A qualitative study concluded that the roles and responsibilities of physicians providing medical information through SM are unclear. Furthermore, few physicians used these platforms for their maximum benefit using it mostly as a one-way communication forum.[6] Denecke *et al*., also concluded that clear roles and responsibilities are needed to avoid the misuse of medical SM by healthcare providers.[7]

In sum, although many international studies have addressed health and SM,[1-18] to our knowledge, no study in the Middle East has explored SM use as it relates to health promotion by family physicians or studied in-depth the readiness and restrictions of adopting this practice. Therefore, our study aimed at assessing the engagement of family physicians in SM for health promotion and exploring the attitudes of physicians currently using SM professionally.

Materials and Methods

A cross-sectional study was conducted from April 2018 to March 2019 using a web-based self-administered 37-item questionnaire. The link to the questionnaire was sent through WhatsApp or through data collectors. All physicians at the largest two hospitals in the Eastern Province (the university hospital and the military hospital) were invited to participate. The response rate was 86.2% (n = 159). The web-based questionnaire was administered through data collectors to minimize the selection bias as a result of not being technology savvy. Physicians were asked to complete the questionnaires independently and return them to the data collector. Ethical approval was obtained from the Institutional Review Board (IRB) vide letter No. IRB-2017-01-226 dated 21/12/2017, and informed written consent was taken from all participants.

We assessed family physicians' engagement with SM and explored their ideas and concerns. We conducted 11 in-depth semi-structured interviews and used a snowballing technique for sampling. Before each interview, the interviewer showed a formal letter with the name of the study, researchers, the aim of the study, and IRB approval, and obtained the consent to audiotape as necessary. Interviewees were from four main cities where most of the main hospitals are based: Riyadh, Jeddah, Dammam, and El Hasa. Most interviewees were invited to participate through their SM accounts, although, a few were also invited through a data collector who visited their workplace. Aside from one participant who was interviewed through telephone, all other participants were interviewed individually at their workplace.

Researchers constructed the questionnaire after reviewing the relevant literature.[1,2,11] A pilot study was conducted to validate the questionnaire which was in four parts: demographic, questions about professional usage of SM,[11] 11 items on the physicians' knowledge about SM ethics, and 11 items assessing attitudes on the use of SM. A 5-point Likert scale from *strongly agree* (five) to *strongly disagree* (one) for both the knowledge and attitude scales was used. Responses of "strongly agree" or "agree" were merged into one category (agree/strongly agree), and responses of "disagree" or "strongly disagree" were also merged into one category (disagree/strongly disagree). Three points were given to" agree" responses, two points to "neutral" answers, and 1 point to disagree responses (range = 11–33).

The interview questions for the qualitative component of this study were self-designed and the interviews lasted from 40 to 60 min. Audiotaping and verbatim transcription was done by interviewers by hand or computer-typed notes. Researchers conducted an initial evaluation of transcripts after five interviews to assess data saturation and repetition. After completing ten transcripts, researchers revised the qualitative data and performed color coding and inductive content analysis.

All the collected data were extracted and tabulated in an Excel spreadsheet. Suspicious data were validated and cleaned; the data were excluded if doubts remained.

Upon data completion and validation, they were transferred from Excel to SPSS version 21; for analysis. Both descriptive and analytic inferential statistics were conducted. $P \leq 0.05$ was accepted as statistically significant for all tests. The categorical variables were presented as counts and proportions (%), whereas numerical variables were displayed as range and median. The analyses assessed associations between sociodemographic and other survey variables using the Chi-square and Mann–Whitney test.

Participants' SM network knowledge, scored a minimum of 4 (33.3%) and a maximum of 12 (100%) (mean = 8.4 [70.0%]). We used the mean as a cutoff to categorize the knowledge level as either good or poor, i.e., 4–8 was poor and 9–12 was good knowledge. The attitude minimum score was 12 (36.3%) and the maximum was 33 (100%) (mean = 30.9 [93.6%]). We used the mean as a cutoff to categorize two groups of participants as having either negative or positive attitudes; that is, a mean of 30 or less indicated a negative, while a higher mean (>30) was a positive attitude. Multiple logistic regression analysis was also conducted for knowledge and attitude separately.

Results

Table 1 presents the sociodemographic characteristics and pattern of SM usage of the participating family and community medicine physicians. Most of the participants were <50 years old (96.3%). Male participants comprised 41.2% and female participants were 58.8%. Position of the participants was categorized into residents = 82 (60.3%), junior physicians = 37 (27.2%), and senior physicians (consultants) =17 (12.5%). Most of the participants were family medicine physicians = 104 (76.5%). More than half of them were involved in clinical training 54.4%. The majority (130, 95.6%) had an SM network account, most of which was Instagram (79.2%), Snapchat (79.2%), Twitter (77.7%), or Facebook (68.5%). The average social networking usage was 3.2 ± 2.4 h daily. Ninety-five (69.9%) used SM professionally for medical issues. Figure 1 shows the main reasons for using SM networks which were to update medical knowledge (72.9%), communicate with colleagues (68.8%), promote health (49.0%), receive health promotion (49.0%), receive medical education/training (44.8%), research (38.5%), professional development (34.4%), provide medical education/training (30.2%), consult a physician about patient case (28.8%), and communicate with authorities (22.9%). The main limitations were concerns for privacy 49 (59.0) and lack of clear ethical guidelines 27 (32.5). Only 24 (17.6%) had the proper training in the use of digital media for medicine. Seventy participants (51.5%) were familiar with the use of SM.

Table 2 shows participants' knowledge of SM ethics in reference to the Federation of State Medical Board's guidelines.[11] Almost half of the participants had six incorrect responses to 12 statements. The three highest incorrect responses were: 71 participants (52.6%) to the statement "discuss and critique latest treatment guidelines with colleagues on his/her open twitter account", 69 participants (51.1%) to the statement "a physician can postpatient photo on a social network for clinical interest after taking consent," 64 (47.4%) to the

Table 1: Sociodemographic characteristics and pattern of social media usage by family and community medicine physicians (*n*=136)

Characteristics	*N* (%)
Age group (years)	
<35	106 (77.9)
35-49	25 (18.4)
≥50	5 (03.7)
Mean±SD	32.2±06.6
Gender	
Male	56 (41.2)
Female	80 (58.8)
Position	
Residents	82 (60.3)
Junior physicians	37 (27.2)
Senior physicians (consultants)	17 (12.5)
Specialty	
Family medicine	104 (76.5)
Community medicine	4 (2.9)
Occupational medicine	22 (16.2)
Other public health specialty	6 (4.4)
Involvement in clinical training/teaching	
No	62 (45.6)
Yes	74 (54.4)
Undergraduate	6 (8.1)
Postgraduate	36 (48.6)
Both	32 (43.3)
Years of clinical experience	
Minimum–maximum	0.3-32
Median	5
Average number of patient visits per day	
Minimum–maximum	2-50
Median	15
Does your hospital have a profile on a social media network?	
Yes	36 (26.5)
No	39 (28.7)
I don't know	61 (44.8)
Hospital social media network (*n*=36)	
Twitter	34 (94.4)
Facebook	9 (25.0)
LinkedIn	8 (22.2)
Snapchat	3 (8.3)
Instagram	3 (8.3)
YouTube	3 (8.3)
Personal profile on social media network	
Yes	130 (95.6)
No	6 (04.4)
Type of personal SM profile[a]	
Instagram	103 (79.2)
Snapchat	103 (79.2)
Twitter	101 (77.7)
Facebook	89 (68.5)
Average daily hours spent in social networking	
Minimum–maximum	1-18
Median	3
Mean	3.2±2.4

Contd...

Table 1: Contd...

Characteristics	*N* (%)
Used SM professionally	
Yes	95 (69.9)
No	41 (30.1)
Limitations to use of social media (*n*=83)[b]	
Privacy concerns	49 (59.0)
No clear ethical guidelines	27 (32.5)
Lack of skills	24 (28.9)
Legal grounds	20 (24.1)
No benefit	6 (7.2)
Training in digital media use in medicine	
Yes	24 (17.6)
No	112 (82.4)
Level of familiarity in using social media networks	
Familiar	70 (51.5)
Somewhat familiar	63 (46.3)
Not familiar	3 (2.2)

[a]The percentages are calculated from the 130 who have an SM profile and a hospital may have more than one response, [b]Only 83 answered this question and the respondents may have more than one answer. SD=Standard deviation, SM=Social media

statement "report witnessed unprofessional behaviour to supervisory and/or regulatory authorities". No significant difference was found between residents, junior and senior staff on knowledge except for the statement "a physician can post patients" photo on a social network for clinical interest after taking consent" to which 100% of the junior staff and 63.6% of the senior staff responded incorrectly.

Participants' responses to items indicating their attitude toward the use of SM are presented in Table 3. Most of the responses showed a strong positive attitude; more than 60% of the participants responded as "agree" or "strongly agree" to the positive statements as shown in Table 3.

Table 4 shows associations between sociodemographic variables and the knowledge of SM networking. Of all sociodemographics, statistically significant difference in knowledge was observed only for position (*P*=0.045). Table 4 also shows the results of logistic regression analyses predicting knowledge level (good or poor) per participants' sociodemographic characteristics. Sociodemographic factors controlled in the model included age, sex, position, specialty, years of clinical experience, average numbers of patients per day, and level of familiarity with the use of SM. Analysis revealed that physicians were two times more likely to have good knowledge than residents.

Table 5 shows relationships between sociodemographic variables and the attitude toward SM. For the positive attitude (n = 96) and the negative attitude (n = 40), there were significant results for the average number of patients per day (P = 0.009), for the average number

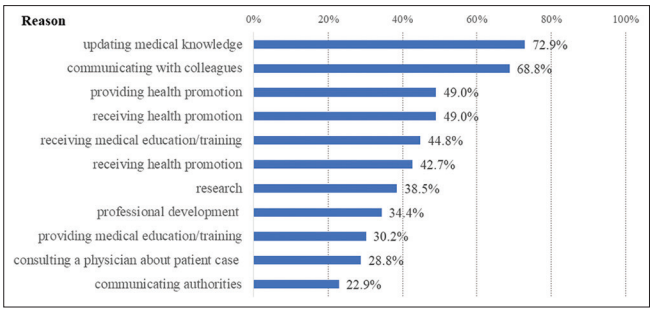

Figure 1.: Distribution of physicians according to purpose of using social media networks professionally

of patients per day for the participants with a negative attitude was 20, and those with a positive attitude was 10. Furthermore, familiarity with the use of SM networks revealed significant results (P = 0.042), in which 52 (78.8%) of those with a positive attitude were less familiar.

Table 5 also shows the logistic regression analyses predicting the attitude based on participants' sociodemographic characteristics. Sociodemographic factors controlled in the model included age, sex, position, specialty, years of clinical experience, average numbers of patients per day, and the level of familiarity with the use of SM. A higher average number of patients per day and more familiarity with SM usage were associated with poor attitude toward SM usage.

Demographic data of the 11 family physician bloggers interviewed showed that they owned multiple SM platform accounts with at least one favorite/major platform dedicated to the healthcare profession. Snapchat was the most frequently used. We pinpointed the following 7 main patterns: physicians' engagement, support group, motivations, privacy, reliability and validity of posts, barriers, and rules/general ethics.

Physicians' engagement: Engagement of doctors in SM can enhance health promotion. The majority agreed with several positive impacts of this engagement, since a large number of people can be reached fast. In the interviewees' words, "SM creates priceless opportunities in health education, and awareness; a post can spread to a large number of people instantaneously." A consultant described her experience: "I created a Facebook page with 20,000 subscribers dedicated to the discussion of different health issues by family physicians. I found that SM was a very effective tool to communicate with my colleagues"

Support group: Some interviewees emphasized the role of SM in providing solutions in medical practice, such as in a support group: "…it may increase exposure to diverse people around the world." "Patients might benefit from

Table 2: Family physicians' knowledge of social media ethics with reference to the federation of state medical board's guidelines[11]

Statement	Incorrect answers *N* (%)	Correct answers *N* (%)
Physicians can accept friendship requests on his/her personal Facebook account from their patients (f)	58 (43.0)	77 (57.0)
A physician can answer his/her patient's medical questions using his professional email (t)	30 (22.2)	105 (77.8)
Discuss and critique latest treatment guidelines with colleagues on his/her open twitter account (f)	71 (52.6)	64 (47.4)
Share newly received ambiguous medical information on his/her open twitter account (f)	61 (45.2)	74 (54.8)
Report unprofessional behavior that is witnessed to supervisory and/or regulatory authorities (t)	64 (47.4)	71 (52.6)
Share new medical information from credible sources that is reliable and evidence-based (t)	5 (3.7)	130 (96.3)
A resident films another doctor performing surgical wound suturing on a patient. The patient's face is clearly visible. The resident posts the film on YouTube for other 1st-year residents to see how to perform the procedure properly (t)	11 (8.1)	124 (91.9)
A physician can postpatient photo on a social network for clinical interest after taking consent (f)	69 (51.1)	66 (48.9)
A physician recommends a new hypoglycemic medication by mentioning the specific trade name and the image of that medication in his tweet to the public (f)	23 (17.0)	112 (83.0)
A physician's blog used descriptive words of "lazy" and "ignorant" for a patient who visited the emergency department multiple times because of failure to monitor her sugar levels (f)	13 (9.6)	122 (90.4)
A physician described "partying", which is accompanied by images of himself intoxicated on his Facebook page (f)	11 (8.1)	124 (91.9)
Stroke incidence is higher among the black population than white people (t)	63 (46.7)	72 (53.3)

f=False statement, t=True statement

creating a WhatsApp or Instagram support group if doctors are involved."

Motivations: Most interviewees thought about the perceived benefit of effective communication with colleagues: "It is a useful way of exchanging knowledge and experience with our peers." "Self-development and improvement of my profession by getting exposed to a variety of people in the community." Some mentioned that the presence of healthcare professionals on these platforms increases knowledge about evidence-based information: "SM is an open space that allows me to help people and increase their knowledge". "…SM is a new means of maximizing our efforts in spreading the awareness and knowledge." Some interviewees disclosed unexpected impacts of their postings as advertisement and a means of making money, and that SM provides an open space to reach funds and drug companies.

Privacy: Social media puts patients' privacy/confidentiality at risk, i.e., against bioethical regulations. Most interviewees believed that SM platforms have no privacy, even private accounts: "Privacy terms are misleading on SM platforms settings, because they do not disclose their real intentions. Besides, the protection from information leakage cannot be guaranteed." "For bloggers, distinguished people, and known figures, there is no such thing as privacy or protection of their posts and there is almost no ability to withdraw a post."

Reliability and validity of posts: With the huge exchange of information, postings need to be more valid and reliable to ensure safety and evidence-based practice. "Attaching references to posts will make them more reliable; doctors should adopt this practice." "Reliable posts should be taken from known dependable medical sources, never based on people's personal perspective or even personal experience."

Barriers: Interviewees mentioned several obstacles such as time: "Time is the main barrier." …I think this can be solved if institutions support and encourage doctors to engage by giving them some time to dedicate to health promotion on SM." Many seemed to agree on the lack of bioethical rules and guidelines as a barrier: "I try to weigh things in my mind, although I'm afraid of doing something unacceptable or wrong." Some interviewees mentioned the lack of training/skills and the unlimited number of platforms as a barrier: "Training healthcare professionals to use SM effectively will help a lot in promoting community health." Patients' demands and so many consultations were also identified as obstacles: "If they present themselves as doctors in their biography, they might receive so many consultations beyond their expertise/their field." Another obstacle mentioned by a few doctors was followers' mistrust: "When I post something, I receive so many controversial and misleading comments."

Rules/general ethics: Interviewees as physician bloggers and early adopters of SM usage recommended tips and rules for safe and effective use of SM with regard to copyrights, simple language, posts, conflict of interest, online consultations, and consent. "It is vital to respect copyrights in SM contexts." "For effective health promotion, we need to use an appropriate tone,

Table 3: Attitudes of family physicians toward social media networks

Statement	Residents (*n*=82)			Junior physicians (*n*=37)			Senior physicians (*n*=17)		
	SD/D %	N %	SA/A %	SD/D %	N %	SA/A %	SD/D %	N %	SA/A %
SM is an important source for, medical updates	17.1	7.3	75.6	10.8	5.4	83.8	0.0	11.8	88.2
SM is helpful in providing health equity	4.9	9.8	85.4	8.1	5.4	86.5	11.8	11.8	76.5
There is a need for institutional rules guidelines to direct me for proper use of SM	2.4	13.4	84.1	2.7	5.4	91.9	0.0	11.8	88.2
Medical students should be trained in professional use of SM	3.7	6.1	90.2	2.7	5.4	91.9	0.0	0.0	100
Physicians should be trained in professional use of SM	3.7	6.1	90.2	0.0	5.4	94.6	0.0	5.9	94.1
Training of medical staff in use of SM will increase patient safety by decreasing misuses in using SM	4.9	9.8	85.4	2.7	5.4	91.9	0.0	11.8	88.2
Providing a policy of using SM will increase patient safety	6.1	8.5	85.4	08.1	0.0	91.9	0.0	11.8	88.2
It is beneficial to use SM to disseminate medical information	3.7	11.0	85.4	0.0	2.7	97.3	11.8	5.9	82.4
It is beneficial to use SM in professional development	3.7	15.9	80.5	5.4	2.7	91.9	11.8	5.9	82.4
This survey has changed my view on the relationship between health promotion and SM networks	6.1	29.3	64.6	8.1	24.3	67.6	0.0	35.3	64.7
SM engagement by doctors will increase health promotion	2.4	2.4	95.1	2.7	0.0	97.3	0.0	5.9	94.1

SD=Strongly disagree, D=Disagree, N=Neutral, SA=Strongly agree, A=Agree, SM=Social media

Table 4: Association between sociodemographics characteristics and family physicians' level of knowledge of social media networks (*n*=136)

Factor	Level of knowledge		*P*-value~	Adj OR	95% CI for Adj OR
	Good (*n*=63) *N* (%)	Poor (*n*=73) *N* (%)			
Age (Years) Mean±SD	33.1±07.8	31.4±05.2	0.275	0.959	0.908-1.012
Gender					
Male	21 (37.5)	35 (62.5)	0.084	1.842	0.918-3.697
Female	42 (52.5)	38 (47.5)			
Position					
Residents	32 (39.0)	50 (61.0)	0.045	2.038*	1.011-4.110
Physicians	31 (57.4)	23 (43.6)			
Specialty					
Family medicine	51 (49.0)	53 (51.0)	0.252	0.624	0.277-1.405
Nonfamily medicine	12 (37.5)	20 (62.5)			
Years of clinical experience (median)	6	5	0.248	0.954	0.900-1.011
Median number of patients/day	15	15	0.645	0.994	0.969-1.020
Median daily hours spent in social networking	3	3	0.664		
Used SM professionally					
Yes	44 (45.8)	51 (54.2)	0.998		
No	19 (46.3)	22 (53.7)			
Level of familiarity with using SM					
Familiar	36 (51.4)	34 (48.6)	0.219	0.654	0.332-1.289
Less familiar	27 (40.9)	39 (59.1)			

*Significant factor (*P*<0.05), ~*P*-value was calculated using Chi-square test and Mann–Whitney U-test, Adj OR: Adjusted odds ratio for being knowledgeable in reference to not being knowledgeable, NB: Only 7 variables were entered into logistic regression model using enter method. SM=Social media, CI=Confidence interval, OR: Odds ratio

simple language, and avoid jargon". "During online consultations never hesitate to say, 'I don't know' if you're in doubt". "When talking about drugs, avoid the use of brand names." "Sharing patients' photos or pictures of their body parts do not merely need the usual consent, but also involve a two-step written consent for taking and broadcasting a photo." Some believed that the boundaries of E-professionalism are not well-defined, and therefore, E-professionalism and social life were fragile and difficult to maintain. "Keeping appropriate boundaries between healthcare providers on SM and their followers is a challenge." "In general, reacting to followers should be done in a 100% professional way."

Discussion

By opening up diverse opportunities for healthcare disciplines, SM is fast becoming the preferred medium

Table 5: Associations between sociodemographics characteristics and family physicians' attitudes toward social media (*n*=136)

Factor	Attitude		*P*-value[∞]	Adj OR	95 % CI for Adj OR
	Positive (*n*=96) *N* (%)	Negative (*n*=40) *N* (%)			
Age (Years) Mean±SD	32.2±06.7	32.1±06.6	0.876	0.999	0.944-1.057
Gender					
Male	38 (67.9)	18 (32.1)	0.559	1.249	0.593-2.631
Female	58 (72.5)	22 (27.5)			
Position					
Residents	58 (70.7)	24 (29.3)	0.904	1.048	0.488-2.250
Physicians	38 (71.7)	15 (28.3)			
Specialty					
Family medicine	74 (71.2)	30 (28.8)	0.794	0.892	0.378-2.107
Nonfamily medicine	22 (68.8)	10 (31.2)			
Years of clinical experience	5	5	0.453	0.984	0.924-1.048
Average number of patients/day	10	20	0.009**	1.037*	1.009-1.067
Average daily of hours spend in social network	3	3	0.521	1.037*	1.009-1.067
Used of SM in profession					
Yes	65 (68.4)	30 (31.6)	0.398	1.158	0.555-2.415
No	31 (75.6)	10 (24.4)			
Level of familiarity with using SM					
Familiar	44 (62.9)	26 (37.1)	0.042**	2.195*	1.023-4.711
Less familiar	52 (78.8)	14 (21.2)			

[∞]*P* value was calculated using the Chi-square test and Mann–Whitney U-test, **Significant value, *Significant factor (*P*<0.05), Adj OR=Adjusted odds ratio for positive attitude in reference to negative attitude. SM=Social media, CI=Confidence interval, OR: Odds ratio

of communication. SM platforms help healthcare institutions by facilitating online interactions and eliminating communication barriers. Our study assessed family physicians' health-related engagement in using SM. Nearly all surveyed family physicians had SM accounts and used them daily. However, the majority were untrained in the professional use of SM.

We also examined physicians' knowledge and attitudes to SM networks and further investigated if there was any association with their sociodemographic characteristics. More than half of the physicians had poor knowledge of SM ethics, and only position was significantly related to knowledge of SM networks. This result contrasted with physicians' attitudes toward SM: most physicians had positive attitudes toward SM. Both the average number of patients seen per day, and the level of familiarity was significantly associated with their attitudes.

A study in Saudi Arabia that assessed healthcare professionals' knowledge, attitude, and practice in utilizing SM for patient care[13] found that 55.3% of healthcare professionals used SM for both professional and personal reasons. However, only 25.3% used it for patient care although they reported slightly less usage than we did. Another national study in Saudi Arabia showed that 96.5% of medical students actively used social networking sites, and more than 70% agreed that social networking was necessary.[17] This result accords with our findings, although this study surveyed students who used SM more for personal than professional purposes.

An earlier international study reported that both urologists and students used YouTube more frequently, then Facebook and Twitter.[14,16] However, our study showed slight differences in the choice of SM network, YouTube perceived as being the least popular. Moreover, only 8% of urologists used SM networks professionally on a regular basis.

Another paper reported that Chinese urologists significantly increased their online SM presence from 50.3% in 2014 to 82.7% in 2016.[18] It was reported that 30% used SM accounts to communicate with patients, which accords with our findings.

Facebook is a highly recognized SM platform in several studies.[10,12] Most respondents reported using SM for personal reasons. Doctors used SM on an average of 1 h/day. Most doctors agreed that accepting friendship requests should not be entertained on SM; only 2.6% disagreed, but 19.4% of the doctors accepted friendship requests from people they knew and interacted with them professionally. Our findings are more substantial than the previous studies. In our survey, only one third of the physicians used SM for personal reasons, and a negligible percentage were not familiar with SM. This difference could be due to the differences in the time of study, as the previous studies were conducted several years ago.

Furthermore, a study has reported that it was not ethical to be SM friends with patients.[2] In agreement with the findings of a study,[2] 95% of the participating physicians in our study had SM accounts.

Conclusion

Our conclusion was that family physicians were highly engaged in the SM and found it a useful and convenient means of obtaining and disseminating medical information. However, there are some pitfalls, and establishing bioethical rules that are culture sensitive is necessary to meet the demands of our society. Our recommendations are as follows: (1) establish rules/guidelines on patients' privacy/confidentiality in SM platforms, (2) update consent forms to fit SM features of broadcasting, (3) set up provider-follower relationship rules and definite boundaries, (4) review bioethical rules related to electronic consultations, (5) determine clear penalties for SM malpractice, (6) establish committees to electronically monitor SM accounts associated with healthcare, and (7) conduct workshops for physicians about safe engagement on SM platforms.

Financial support and sponsorship
Nil.

Conflicts of interest
There are no conflicts of interest.

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