Use of mobile phones and social media by healthcare professionals in the ER hospital departments in Dammam, Saudi Arabia: benefits and risks

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Abstract— The objective of this study was to investigate the use of social media and mobile phones by healthcare professionals in the ER hospital departments in Dammam, Saudi Arabia, considering benefits and risks. An online survey was carried out to get information about the use of mobile phones and social media among 200 healthcare professionals in the ER hospital departments in Dammam, Saudi Arabia. More than half of the participants were females, and the majority was more than 27 years old. Also, half of them were health technicians, emergency specialists, and clinical nursing specialists. Regarding the utilization of social media, almost half of the respondents used Facebook, MySpace, GooglePlus, and Twitter. The majority of the respondents accessed websites and mobile phones apps at work, expressed that they sent or received phone calls from patients or colleagues, and used mobile phones and social media for sending and receiving text messages and e-mails from coworkers or patients.

Keywords— healthcare professionals, ER hospital departments, social media, mobile phones, Saudi Arabia

I. INTRODUCTION

Every day the use of social media and mobile phones grows around the world facilitating the practice of medicine and healthcare [1]. In these circumstances, several authors have considered that the mentioned communicational tools are useful for the education of patients and the professional training of healthcare professionals [2,3].

In addition, the use of these technologies facilitates interaction and communication between doctors and patients and contributes to online support for people with health problems [4]. Furthermore, knowing the potential of the benefits provided by the use of social media and mobile phones in the field of health, some recent studies have also considered the possibility of using these technologies to improve cardiovascular emergency care and the prevention and management of chronic diseases [5].

Regarding the use of social media in the emergency departments of hospitals, only 4 studies were detected in our literature review [6]. In one of them, carried out in the United States, it was observed an increasing incorporation of computers, social media, mobile phones and other technologies in the emergency departments of the hospitals

of this country. In another study conducted in Iran, it was found that internal doctors and residents regularly used mobiles phones in medical practices. The other two remaining studies suggested the employment of mobile devices in emergency nursing and the utilization of some apps in emergency departments [6].

In relation to Saudi Arabia, no study has been conducted on the use of these technologies in the emergency departments of the hospitals of this country. Therefore, the aim of this study was to investigate the use of social media and mobile phones by healthcare professionals in the ER hospital departments in Dammam, Saudi Arabia, considering benefits and risks.

II. METHODS

An online survey was carried out to obtain information about the use of mobile phones and social media among 200 healthcare professionals in the ER hospital departments in Dammam, Saudi Arabia. All healthcare professionals working in the ER departments were included and there was no exclusion criterion. The response rate in this cross-sectional study was 25%. The online survey was created by Google Forms and the participants were invited to the study using the following link [7]. The survey was designed by the research team and it was distributed to the participants through WhatsApp. The survey consisted of 3 sections. The first section was aimed at gathering the personal data of the respondents. The second section had 4 questions and was planned to get information about the use of mobile phones and social media at work.Finally, the third section was designed to know the opinion of the respondents on different issues related to the use of social media including benefits and risks.

III. RESULTS

The demographic information of the respondents of this study is shown in Table 1 where we can detect that more than half of the participants (72%) were females, and the majority (68%) was more than 27 years old. Also, half of them were health technicians, emergency specialists, and clinical nursing specialists.

TABLE I.   DEMOGRAPHIC INFORMATION OF THE RESPONDENTS (N=50)

	n	%
Gender		
Female	36	72
Male	14	28
Age		
21-27 years	16	32
28-34 years	23	46
35 years or more	11	22
Specialty		
Medicine	18	36
Health technicians and emergency and emergency specialist	13	26
Clinical nursing specialists	12	24
Other	7	14

In relation to the utilization of social media platforms, 48% of the respondents used Facebook, MySpace, GooglePlus, and Twitter. 22% of them employed LinkedIn and Google Scholar. 20% used YouTube and Flickr, and 8 % utilized Wikipedia. The rest of the participants used Tumblr and Blogger. Regarding the benefits gained by joining online communities, Figure 1 shows some of the beneficial activities carried out by the survey participants using mobile phones and social media.
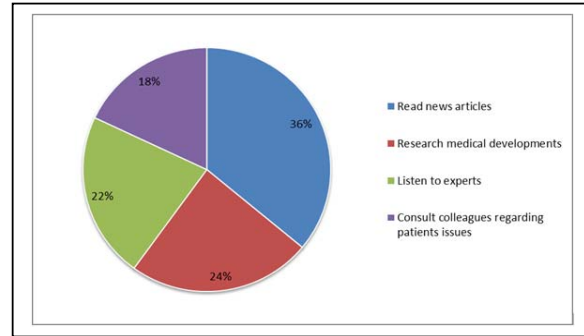

Fig. 1.   Benefits gained by joining online communities (n=50)

On the other hand, Table 2 illustrates the use of mobile phones and social media at work. In this table, we can observe that 72% of the respondents used social media for personal activities and 28% for professional purposes. Also, 88% of the participants accessed websites or mobile phones apps related to healthcare or medical/clinical practice at work. Similarly, 76 % of the respondents expressed that they called or received phone calls from patients or their colleagues, and   80% of the participants pointed out that they used mobile phones and social media for sending and receiving text messages and e-mails from their healthcare colleagues or patients.

TABLE II.   USE OF MOBILE PHONES AND SOCIAL MEDIA AT WORK (N=50)

	n	%
For what purpose do you use social media?		
Personal activities	36	72
Professional reasons	14	28
Do you access any medical related social media or mobile phones applications?		
Yes	44	88
No	6	12
Do you make or receive phone calls from healthcare colleagues or patients?		
Yes	38	76
No	12	24
Do you send or receive text messages /emails from healthcare colleagues or patients?		
Yes	40	80
No	10	20

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In Table 3, the opinions of healthcare professionals towards the use of mobile phones and social media at work were documented in terms of 9 statements.

Statement	Agree %	Neutral %	Disagree %	No answer %
I doubt that a patient would trust my advice if I obtained the information from medically related mobile phone applications or websites	28	42	30	0
It is distracting to use medically related mobile phone applications or websites when attending to patients	40	36	24	0
I have confidentially concerns in regard to recording patient information via a secure website or mobile phone application.	48	35	17	0
Using media-sharing sites can be an important resource.	66	30	4	0
Social media would affect the patient choice of healthcare provider.	62	27	10	2
Using social media can enhance communication with patients.	63	28	8	1
Electronic communication with patients can improve their care and health outcomes.	66	26	8	0
The use of social media sites can attract new patients through it.	57	36	6	1
The use of social media can enhance the image and visibility of your hospital	70	26	4	0

The degree of agreement with the statements described in the table was expressed in terms of the following scale: 0=no answer, 1= disagree, 2= neutral and 3= agree. As an example, we can appreciate that 63.3% of the participants agreed that "using social media can enhance the communication with patients", while 8.2% disagreed with this statement, and 28.6 % had a neutral opinion on this issue.

IV. DISCUSSION

The findings of this research showed that healthcare professionals in the ER hospital departments in Dammam, Saudi Arabia, used mobile phones and social media for personal and professional purposes. The most common social media platforms employed by the participants were Facebook, MySpace, GooglePlus, and Twitter. In this regard, Facebook and Twitter are also widely used by the people in the Arab world [8].

More than half of the participants agreed that social media can improve communication with patients, can attract new patients through it, and can be an important tool for sharing experiences. Also, the majority of the respondents thought that mobile phones communications with patients can enhance their care and health outcomes. Alike, most of the surveyed respondents believed that social media can enhance the image and visibility of the hospital. Smartphones were found to be used both for making calls and access other functions such as email, the Internet, and apps which could not be accessed using the phone with keypads. Regarding smartphones and apps, many healthcare providers and researchers are employing these tools in their daily work, seeing them as a useful medical device to improve and facilitate patient care [9].

On the other hand, almost half of the respondents agreed to have concerns about patient confidentiality when using social media or mobile phones. In relation to this issue, a previous study found a similar result and the authors suggested that when mobile phones were used, it is possible that patient privacy could be broken when, unintentionally, the patient information was mixed with the private information from the healthcare professional [10]. For instance, it is likely that the image of a patient's wound could be accidentally or involuntarily shown to friends or family of the healthcare professional when they used their phones in private life [10]. In this sense, the participants were deeply concerned about the use of private mobile phones to record information about their patients because it is very difficult to control the use of these telephones in the private activities of health professionals. In addition, allowing health professionals to use their private mobile phones at work would face the difficulty of controlling how they should use these phones for private activities without creating confidentiality problems.

As a possible solution to the use of private mobile phones, it would be convenient for all health workers who wish to use mobile phones to have mobile phones belonging to the hospital, which should be used exclusively in professional practice [10]. Although, this alternative may not completely solve this problem because some workers can still use telephones provided by the hospital for private activities, the provision of smartphones to health workers can act as a positive step to encourage the workers of the hospital to use the smartphones provided by the hospital in their functions and avoid the use of private mobile phones [10].

Also, we detected that almost one-third of the participants doubted the medical advice when they used information obtained from social media or from mobile phone applications. Alike, almost half of the respondents agreed that it is distracting to use mobile phones applications or social media sites when attending to patients. Additionally, it was found that browsing medical sites on a desktop are less disturbing as compared to browsing using apps on the smartphone. Moreover, the use of internet on computers was thought to have high acceptability and perceived to be professional as compared to using smartphone apps. Similar attitudes towards the use of the Internet and mobile phones were found by Kohler et al. [10].

It is pertinent to point out that some of the discussed issues related to benefits and risks about the utilization of social media and mobile phones by healthcare providers coincide generally with Ventola opinions [2,3].

In another context, it is interesting to mention that the use of mobile phones in the clinical environment also raised the concern of cross-infection among patients which may arise when mobile phones were used by healthcare staff in - between attending to different patients [10,11].

V. Conclusion

The results of this research on the use of social media and mobile phones by healthcare professionals in the ER hospital departments in Dammam, Saudi Arabia, indicated that these communication tools were useful for professional and private purposes. However, the users of these technologies considered that there were risks such as the breaking of the confidentiality of patients, and the use of inaccurate information in social media or in the apps of mobile phones. Lastly, the most used social media platforms by the surveyed healthcare professionals were Facebook, MySpace, GooglePlus, and Twitter.

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