

TRENDS AND PERCEPTIONS OF SOCIAL MEDIA AS A LEARNING TOOL IN HEALTHCARE PROFESSIONALS

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ABSTRACT

Introduction: Social media is an excellent platform both for sharing knowledge, information exchange and communication for the healthcare professionals. The new trends in social media have created a variety of opportunity for them both for learning and professional purposes.

Objectives: To conduct a survey regarding proportion of healthcare professionals utilizing social media for their academic and professional purposes

Material and Methods: This was a questionnaire based survey. In this study, 750 healthcare professionals were approached through different social media platforms as well as in hard form. The healthcare professionals were categorized into medical students, house officers, medical officers, post graduate residents and consultants. Out of these 750 healthcare professional, 512 filled the questionnaire, response rate was 68.3%.

Results: Among 512 participants, 309 (60.4%) were males and 203 (39.6%) were females. Post graduate residents contributed as the maximum participants 199 (38.9%) followed by medical students 93(18.2%). Among them, 125 (24.4%), 214 (41.8%), 101 (19.7%), 34 (6.6%) and 38 (7.4%) were using social media for 1-2 hours, 3-4 hours, 5-6 hours, 7-8 hours and >8 hours respectively. Maximum participants 369 (71.7%) were using WhatsApp along with other apps, followed by YouTube which was the most preferred App. Among them, 350 (68.4%) participants agreed that using social media was helpful for professional purposes, 335 (65.4%) recommended using social media for the professional purposes.

Conclusion: Majority of healthcare professionals utilize social media as professional and learning tool in their academic activities. WhatsApp and YouTube are the two most common modalities of social media utilized by healthcare professionals in this study. Majority of participants recommended using social media for professional purposes.

Abbreviation: HCPs: Healthcare professionals, PMDC: Pakistan Medical and Dental Council.

Key words: Healthcare professionals (HCPs), social media, social media apps

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INTRODUCTION

The use of social media is not a new concept. The development of World Wide Web created a lot of opportunities for sharing and updating knowledge. Social media have the potential to effect medical education in a variety of ways. Social media which is referred to as web 2.0 or "social media networking" gives a wider opportunity of active participation to individuals¹.

Different individuals have different purpose of using social media. Social media keeps variety of features which serves the individuals and community in different ways. It includes social networks, videos and photos sharing sites, wikis, blogs and other networking apps like WhatsApp^{2, 3}.

Studies show that in the United States, adults proportion using social media has increased from 8% to 72% since 2005^{4,1}. Between 2015 and 2016, both internet and social media users increased by 46% and 31% respectively. However, there are significant regional differences as well. It was concluded in 2012 that face book users exceeded one billion people across the globe^{5,6}. In 2016, face book was declared as dominating social sphere with 1590 million active accounts, users were gravitating towards apps for networking like WhatsApp (one billion) and face book messenger (800 millions) apps while among

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other platforms, Instagram, Twitter and LinkedIn continued to experience growth^{7,8}. It was also estimated in 2013 that each day 100 million active twitter users sent approximately 65 million tweets and two billion videos were shared on YouTube⁵. The use of social media is prevalent among all ages and all professions. Pakistan is a country with low internet penetration having internet penetration of lower than the World average (23.8%)⁹.

According to many studies, professional social networks are not widely disseminated among health care environment especially doctors and the reason seems to be the established pattern of their decision-making in patient care^{10,11}. Literature review of four papers concluded that by 2011 among 1559 Korean emergency physicians, 13.07% (209) had joined face book, while 1.6% of US and 1.7% of Australian emergency physicians had joined twitter^{12,13}. A study found that among the limited number of doctors utilizing social media, 44.1% were using it for professional networking and 29.1% for professional development by obtaining or disseminating research evidence¹⁴. A survey conducted on 40,000 physicians by social media site Quantia MD concluded that more than 90% of the physicians were using social media for personal activities while 65% were using it for professional activities¹⁵. However it is worth noted that the use of social media is increasing among healthcare professionals. A study conducted by Jadoon NA et al. concluded that in Lahore Pakistan, about 61% of the medical students were using the internet for academic and professional activities while 55.1% of them were using healthcare websites for flourishing their medical knowledge⁹.

The use of the internet and social media are increasing among healthcare professionals in Pakistan. As most of the medical students, doctors use social media for their professional purposes. There are new trends among them to use social media for research purposes, challenges in their medical practice, listen to experts on social media, engage with the public, develop a professional network, augment personal awareness and medical news and discoveries, consult colleagues regarding patient care, promote health behavior and search new opportunities and jobs. However, there is limited local data available regarding the use of social media as a learning tool in our healthcare professionals.

This study will provide a base for the future research projects on social media as a learning tool in healthcare professionals. Therefore this study was conducted to determine the proportion of healthcare professionals utilizing

social media for their academic and professional purposes in our setup.

MATERIAL AND METHODS

A questionnaire based study was conducted in Khyber Teaching Hospital Peshawar from February 2020 to April 2020. In this study, 750 doctors of different cadres and categories were approached. All those doctors and medical students currently enrolled/registered with KTH/KMC were included in the study. While the allied health staff like nurses and paramedics were not included in this study. Data was collected on a pre-designed questionnaire, which was validated after interviewing 30 HCPs on a pilot questionnaire. For effective analysis, HCPs were stratified into five groups' i.e. medical students, house officers, medical officers, post-graduate residents and consultants. Seven hundred and fifty HCPs were approached through different social media platforms as well as in hard form. Among them, 512 (68.3%) responded and filled the questionnaire. Data was collected on Microsoft Excel and then analyzed through SPSS 22. Mean and standard deviation were calculated for numerical variables. Frequencies and percentages were calculated for categorical variables.

RESULTS

Among 750 HCPs, 512 (68.3%) aged 18-60 years responded. Mean age was 28.69 years (\pm 5.96 SD). Among 512 participants, 309 (60.4%) were males and 203 (39.6%) were females.

These 512 participants were further divided into five groups on the basis of their designations. Among them medical students were 93 (18.2%), house officers 87 (17%), medical officers 74 (14.5%), post-graduate residents 199 (38.9%) and consultants were 59 (11.5%). In medical students 40 (43%) were males and 53 (57%) were females. Among house officers, 50 (57.4%) were males and remaining 37 (42.6%) were female professionals. In the medical officer stratum 45 (60%) were males and 29 (40%) were females. Among post-graduate residents (TMOs), 132 (66.3%) were males and 67 (33.7%) were females. Fifty nine consultants participated in this study. Among them 42 (71.2%) were males and remaining 17(28.8%) were females (Table 1).

Among 512 HCPs, 125 (24.4%) were using social media for 1 to 2 hours, 214 (41.8%) for 3-4 hours, 101 (19.7%) for 5-6 hours, 34 (6.6%) for 7-8 hours and 38 (7.4%) of the healthcare professionals were using it for more than 8 hours daily (in 24 hours). Majority of medical students (39.8%), house officers (33.4%), medical officers

(40.5%), PGR's (47.3%) and consultants (40.7%) were using social media for 3 to 4 hours daily (in 24 hours) while the majority of the healthcare professionals were minimally using social media for >8 hours in 24 hours (Table 2).

One hundred and twenty four (24.3%) healthcare professionals were using a single app, 143 (28%) were using two social media apps, 170 (33.2%) three social media apps and 75 (14.65%) four social media apps for professionals purposes. YouTube was mostly used (8.8%), followed by WhatsApp (7%) and then followed by face book (6.3%) as a single App. While using more than two social media apps daily, 369 (71.7%) HCPs were using WhatsApp, 362 (70.2%) HCPs YouTube, 332 (64.5%) face book, 51 (9.9%) twitter, 17 (3.3%) LinkedIn, 17 (3.3%) Medscape and 14 (2.7%) were using Zoom webinar along with other apps (Table 3). YouTube was the most preferred App by health professionals 178 (34.8%), followed by WhatsApp 168 (32.8%), Face Book 132 (25.8%), Twitter 22 (4.3%) and then LinkedIn 12 (2.3%) see Table 4 for details.

Medical students were more interested in using YouTube 32 (34.4%) followed by Face book 29 (31.2%) and WhatsApp 26 (28%). The most preferred App for house of-

ficers was YouTube 37 (42.5%), face book 23 (26.4%) and WhatsApp 19 (22%). Twenty five (33.8%) medical officers preferred WhatsApp, 24 (32.4%) YouTube, 20 (27%) preferred Face book. Among PGR, 74 (37.2%), 70 (35.2%), 43 (21.6%) and 9 (4.5%) preferred WhatsApp, YouTube, Face book and Twitter respectively. Twenty four (40.7%) consultants preferred WhatsApp, 17 (29%) preferred Facebook, 15 (25.4%) YouTube and 2 (3.4%) preferred usage of LinkedIn for professional purposes (Table 5). The perception of healthcare professionals regarding use of social media is presented in Table 7.

DISCUSSION

In this study, most of the participants 389 (76%) had ages between 25-45 years, which is consistent with the study conducted by Hazzam J, in which 71% of the participants had ages between 25-45 years.¹⁷ He also concluded that WhatsApp was the common app used by 65% of the healthcare professionals while in our study WhatsApp was the common one used by 71% of the participants along with other apps. These results are consistent with the results of our study.

In our study 70% of healthcare professionals were using YouTube for professional purposes. Similar results were also reported by Donzalez DDJ from Spain reported that 73% of the physicians were using YouTube for professional purposes¹⁸. This statement is further supported by similar results in a study conducted by Macdonald J from New Zealand¹⁹. In this study, 12.7 (65%) of the healthcare professionals recommended the use of social media for professional purposes which is consistent with the results reported by Wheeler CK²⁰. Wheeler et al. concluded that majority of the physicians recommended use of social media for professional purposes. Our study is documenting that HCPs were preferably using at least one favorite app daily for learning and professional purposes. Same results were reported by Wallace S and Marfin M^{21, 22}. Another study conducted by Wagner JP concluded that the male participants were more (62%) in comparison to females and this finding is also consistent with our study²³. Our

Table 1: Designation-wise distribution of participants.

Designation of participants	Gender Wise Distribution	Frequency (%)
Medical students	Male 40 (43%)	93 (18.2)
	Female 53 (57%)	
House officers	Male 50 (57.4%)	87 (17.0)
	Female 37 (42.6%)	
Medical officers	Male 45 (60%)	74 (14.5)
	Female 29 (40%)	
Post-graduate Residents	Male 132 (66.3%)	199 (38.9)
	Female 67 (33.7%)	
Consultants	Male 42 (71.2%)	59 (11.5)
	Female 17 (28.8%)	
Total		512 (100)

Table 2: Time spent on social media by the respondents.

Time spent on social media in 24 hours	Status of the Respondents						Total
	Healthcare Professionals (As a whole)	Medical students	House officers	Medical officers	PGR's	Consultants	
	Freq (%)	Freq (%)	Freq (%)	Freq (%)	Freq (%)	Freq (%)	
1-2 Hours	125 (24.4)	12 (12.9)	14 (16)	21 (28.4)	55 (27.6)	23 (39)	125
3-4 Hours	214 (41.8)	37 (39.8)	29 (33.4)	30 (40.5)	94 (47.3)	24 (40.7)	214
5-6 Hours	101 (19.7)	20 (21.5)	27 (31)	13 (17.6)	32 (16)	9 (15.3)	101
7-8 Hours	34 (6.6)	10 (10.7)	9 (10.4)	4 (5.4)	9 (4.5)	2 (3.4)	34
>8 Hours	38 (7.4)	14 (15.1)	8 (9.2)	6 (8.1)	9 4.6	1 (1.6)	38
Total	512 (100)	93 (100)	87 (100)	74 (100)	199 (100)	59 (100)	512

Table 3: Proportion of HCPs utilizing commonly used social media apps.

Type of social media	Percentages %
WhatsApp	71.7%
YouTube	70.2%
Face book	64.5%
Twitter	9.9%
LinkedIn	3.3%
Medscape	3.3%

Table 4: Social media App's preference by Healthcare professionals.

Social media app	HCPs Freq (%)	HCPs (Gender wise)	
		Male	Females
		Freq (%)	Freq (%)
Face book	132 (25.8)	95 (30.7)	37 (18.3)
YouTube	178 (34.8)	91 (29.5)	87 (42.8)
WhatsApp	168 (32.8)	96 (31.0)	72 (35.5)
Linked-in	12(2.3)	10 (3.2)	2 (1.0)
Twitter	22 (4.3)	17 (5.6)	5 (2.4)
Total	512 (100)	309 (100)	203 (100)

Table 5: Social media App's preference and designation-wise response by the Respondents.

Status of the responders	Social media App					Total
	Face book	YouTube	WhatsApp	Linked-in	Twitter	
Medical students	29 (31.2%)	32 (34.4%)	26 (28%)	01 (0.12%)	05 (6.28%)	93 (100%)
House officers	23 (26.4%)	37 (42.5%)	19 (22%)	02 (2.3%)	06 (6.8%)	87 (100%)
Medical officers	20 (27%)	24 (32.4%)	25 (33.8%)	04 (5.4%)	01 (1.4%)	74 (100%)
PGR's	43 (21.6%)	70 (35.2%)	74 (37.2%)	03 (1.5%)	09 (4.5%)	199 (100%)
Consultants	17 (29%)	15 (25.4%)	24 (40.7%)	02 (3.4%)	01 (1.5%)	59 (100%)
Total	132 (25.8%)	178 (34.8%)	168 (32.8%)	12 (2.3%)	22 (4.3%)	512 (100%)

Table 6: Perceptions of healthcare professionals regarding use of social media.

Perceptions of healthcare professionals	Responses of healthcare professionals				TOTAL
	Strongly Disagree	Disagree	Agree	Strongly Agree	
	Freq (%)	Freq (%)	Freq (%)	Freq (%)	
Use of social media helped Healthcare professionals a lot in their last examination	41 (8)	137 (26.8)	236 (46.1)	98 (19.1)	512 (100)
Social media is preferred over books for learning purposes by Healthcare professionals	128 (25)	192 (37.5)	167 (32.6)	25 (4.9)	512 (100)
Using social media is helpful for professional purposes	30 (5.9)	71 (13.9)	350 (68.4)	61 (11.9)	512 (100)
Use of social media is recommended for learning and professional purposes	28 (5.1)	86 (16.8)	335 (65.4)	65 (12.7)	512 (100)

study had more resident as participants among all HCPs while 9.9% and 3% of the participants were using twitter and LinkedIn respectively which are also consistent with Wagner JP²³. The main limitations of this study were that only medical students and doctors of various categories from same institute were recruited. Pharmacists and allied health staff like nurses, paramedics were not included in this study. Another limitation was the exclusion of doctors aged >60 years. Health professionals were not asked whether they were using social media for personal uses or professional purposes. Most social media sites and apps like Wikipedia, mails, blogs, vlogs etc. were not included in options. Questions on patients and medical professional relation were not asked. A multicenter large scale validated study is required to overcome these shortcomings. On the basis of this study, it is recommended to conduct studies on the same topic in future with large sample size

and to include allied health staff as well. Evaluation of communication of patients with Health care professionals is also recommended.

CONCLUSION

HCPs need new knowledge and experience for their career development and professional purposes. They need up-to-date knowledge and interaction with the colleagues and seniors to resolve problems related to their medical practice. Social media is an excellent platform for the HCPs both for learning and professional purposes. The efficient use of social media gives better and alternative ways of both learning and communication for the HCPs. This study concisely describes the trends and perceptions of HCPs by using social media as a learning tool.

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AUTHOR'S CONTRIBUTION

Following authors have made substantial contributions to the manuscript as under

Afridi I: Study idea, concept, design and drafting
Haider I: Study supervision, questionnaire development and critical revision
Khan D: Statistical Analysis
Ahmad W: Data collection, Bibliography
Khan OS: Data collection, Bibliography

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.