USE OF SOCIAL MEDIA FOR MEDICAL EDUCATION; PERSPECTIVE OF MEDICAL FACULTY FROM SIALKOT, PAKISTAN

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ABSTRACT

Objective: To study the perspective of faculty members about the use of social media in medical education.

Material and Methods: Across sectional descriptive study was conducted among the faculty of three medical colleges from Sialkot. After ethical approval and informed consent, a structured, pretested questionnaire was used for data collection. Data was entered in IBM SPSS version 23 and analyzed by the use of statistical tools.

Results: Out of the total of 123 participants of this study, 65 (52.8%) were males and 58 (47.2%) were females. Mean age of the males was 41.43±10.91years and females were of 32.84±7.83years.Faculty members' use of Social Media in teaching was more in private colleges than public college (P-value 0.018). Benefits score was higher in private institution (p-value 0.300). Barriers score was higher in public institutions but difference was not statistically significant (p-value 0.638).Use of social media score was higher in females but the difference was not statistically significant (p-value 0.965).

Conclusion: Majority of the medical faculty in private sector use social media for education whereas the public-sector faculty is also engaged in the process of education through social media tools.

Keywords: Social media, Medical, Faculty, Education, Smart phones, Students.

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INTRODUCTION

Social media has been established as a life style and is also considered as an important platform for interaction, communication and collaboration among peers, students and teachers[1]. The improved interactions are thought to be among the important factors for the enhancement of traditional class teaching. It has been described that interactions through the group activity and collaboration for learning can be achieved with the use of social media. During the last decade, culture, communication and education has been altered in many aspects due to the use of different gadgets like smart phones[2]. There is an increasing trend to use these hand held devices in educational activities but a little evidence is available regarding the facilitation for learning[3]. Faculty members are the major users and can play a significant role for educational use of smart phones and social media[4].Similarly, Facebook has been used as the most popular social networking site by the students[5].

The faculty members commonly use social media for sharing of information, professional connections and personal communication[6,7]. There is a gradual increasing pattern about the use of social media tools among the faculty members within and outside the class room[1,8]. However, the required time is a major concern of faculty members associated with the use of social media[4]. Similarly, the adoption by the faculty has serious concerns including privacy, constraint of time, integrity and distraction. The

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use of this technology is supposed to enhance the learning but there are various associated potential threats[2]. The findings of a relevant study concluded that social media was used either for academic, research, professional or personal purposes[6]. Facebook was used for individual communication and LinkedIn for professional interactions by majority of the faculty members. Similarly, workload of faculty, issues related to privacy, constraints of time, strategies of assessment and cyber bullying were recognized as the main concerns. However the technology of social media is an important tool to involve students and develop their skills and competencies[8]. Academicians are the key stakeholder in educational organizations having vital role to initiate technological innovations. They are generally concerned about the utilization of social media for educational purposes among college students[9]. On the other hand, the faculty should be equipped with emerging innovations of technology. They should be skilled enough to operate the technological gadgets for the enhancement of learning activities in an efficient and meaningful way. This study is intended to establish that which types of mobile devices and social media are being used by medical faculty and to which extent they are using it for teaching. This study will also find out the advantages and barriers in the social media use for learning and teaching as perceived by the medical faculty. The results will assist the management, faculty and policy makers to guide the faculty members about the use of social media in teaching for improvement of academic achievements in future. The research will also investigate the benefits and barriers in the use of social media for educational activities.

MATERIAL AND METHODS

After the approval of institutional Ethical committee, this quantitative, cross sectional descriptive study was carried out during the period of July 2017 to September 2017. The medical faculty of Khawaja Muhammad Safdar Medical College Sialkot (Public Sector), Islam Medical College Sialkot and Sialkot Medical College Sialkot (Private Sector) were included. All the Professors, Associate Professor, Assistant Professors of basic and clinical departments and demonstrators of basic departments were invited for the study. Faculty members having teaching experience of less than 6 months and those teaching non-medical subjects like Islamic and Pakistan studies were excluded. Census sampling technique was opted[10]. A structured pre tested validated questionnaire consisting of 52 close ended questions was used [11]. After the formal permission, this questionnaire was briefed, modified and edited according to the local context. Questionnaire was discussed individually with one senior teacher from each institution and then reviewed by two medical educationists. The expert opinion was obtained for face validation and suggestions were incorporated. The pre-test of the instrument was carried out on 24 medical faculty members at a medical college of Lahore and reliability coefficient, Cronbach alpha was found to be 0.89. Informed consent was obtained and questionnaire was directly administered to the study participants. Average time to fill this questionnaire was around eight to ten minutes. The collected data was organized and entered into version 23 of IBM SPSS. It was analyzed by the use of statistical tools.

RESULTS

Out of the total 123 respondents from three different medical colleges of Sialkot, 65 (52.8%) were males, 58(47.2%) were females, 64(52%) were teaching in public college and 59(48%) were working in private institutions. The mean age of the male and female teachers was 41.43±10.91years and 32.84±7.83years respectively. The mean teaching experience of professors was 27.17±5.92 years,associate professors 9.61±3.77 years, of assistant professors 4.02±2.92 years, of senior demonstrators 4.67± 2.31 year and for demonstrators it was 3.05±2.09 years. The number of particpnats from basic medical sciences was 84(68.3%) whereas 39 (31.7%) belonged to clinical sciences. The results of faculty members about personal use of social media showed that almost all the faculty members (96.7%) own smart phone and 95.9% of them have internet packages as well. The access to internet at home was available to 94.3% of the teachers. Google was most frequently(88.6%)used application and less than half (46.3%) of faculty members attended a basic course to learn the computer technology. The overall responses of the study participants about the use of social media in teaching were studied between agree and strongly agree. Faculty expressed from the results that faculty use social media in teaching to attract the students' attention(mean=3.28),present lesson material(mean=3.23),enhance understanding by searching for the updated information(mean=3.23) and motivate students for technology use in educational process(mean=3.12).Benefits of the social media use in education as viewed by the members of faculty are presented in table 2. Faculty members concluded the five items of high benefit, including presenting instructional material, communicating with colleagues about past understanding, increasing the attention of learners, motivating students for the use of technological tools in instructional processes, and encouraging students to share information. The answer of question “what are the barriers facing social media use in teaching as viewed by faculty members” is presented in table 2. “Lack of high-speed internet”, “Lack of student seriousness in dealing with these technologies for academic purposes” and “lack of teachers training” was the major hurdles for social media use in education as stated by the faculty. Regarding the comparison between public and private sectors, the results are presented in table 3. The use of social media for medical education by the faculty of private institutions was significantly higher than the public institution (P-value 0.018). Benefits score was higher in private institution but the difference was statistically non-significant(p-value 0.300). Barriers score was higher in public institutions but this difference was not statistically significant (p-value 0.638).The gender-based comparison about the use of social media by the participants is presented in table

Table 1: Responses of the faculty member regarding use of Social Media in teaching.

	Mean	Std. Deviation
Illustrate basic concepts briefly	2.95	0.73
Diversify teaching methods	3.00	0.64
Attract students' attention	3.28	0.71
Communicate with my students	3.10	0.70
Exchange discussions and dialogues with my students	2.91	0.79
Enrich the subject of the lesson	3.00	0.67
Respond to students' questions	2.96	0.75
Present lesson materials e.g., posters, slides, and videos	3.23	0.60
Benefit from students' comments on the lesson and teaching	2.97	0.65
Communicate with colleagues and staff to benefit from their previous experiences	3.07	0.62
Observe and assess student progress	2.72	0.77
Strengthen the academic relationship between students through information interchange	2.91	0.69
Instill responsibility and self-confidence through free writing expression	2.84	0.73
Increase technical understanding by searching for the latest information	3.23	0.67
Assist students to understand the lesson through their discussions	3.02	0.66
Give students more time to meditate and reflect on the lesson	2.87	0.70
Encourage students to use technology in the instruction process	3.12	0.64

Table 1: Benefits & barrier for using social media in teaching and learning.

		Mean	SD
Benefits	Communicating with colleagues and staff to benefit from their previous experiences	3.21	0.56
	Encouraging students to use technology in instruction processes	3.17	0.64
	Assisting students to understand the lesson through their discussions	3.02	0.66
	Encouraging students to share information	3.11	0.59
	Responding to students' questions	3.08	0.65
	Instilling responsibility and self-confidence through free writing expression	2.93	0.67
	Attracting students' attention	3.13	0.71
	Summarizing the main important ideas in the lesson and supporting academic writing skills	3.08	0.65
	Diversifying teaching methods	3.04	0.65
	Deepening the academic relationship between students through information interchange	2.96	0.64
	Giving students more time to meditate and reflect on the lesson	2.97	0.68
	Communicating with students	3.02	0.62
	Benefitting from students' comments on the lesson and teaching	3.01	0.67
	Presenting instructional materials e.g., posters, slides, and videos	3.22	0.54
	Exchanging discussions and dialogues with students	3.02	0.65
	Illustrating basic concepts briefly	3.00	0.68
	Observing and assessing students' progress	2.86	0.73
Barrier	Lack of high-speed Internet	3.16	0.83
	Smart phones required for rapid access may not be available to most students	2.63	0.80
	Lack of teacher confidence in their instructional role	2.62	0.74
	Small screen spaces do not provide an adequate opportunity for writing expression	2.83	0.69
	Lack of student seriousness in dealing with these technologies for academic purposes	3.09	0.68
	Difficulty in assessing student work	2.75	0.68
	Invasion of teacher privacy	2.75	0.71
	Invasion of student privacy	2.64	0.68
	Lack of teacher training	3.04	0.69

Table 3: Comparison according to public/private sector medical colleges.

	College	Mean	SD	p-value
Faculty members' use of Social Media in teaching	Public	49.672	7.404	0.018
	Private	54.132	11.839	
Benefits of social media use as viewed by faculty member	Public	51.117	7.388	0.300
	Private	52.593	7.745	
Barrier for using social media in teaching and learning	Public	25.678	3.622	0.638
	Private	25.315	4.551	

Table 3: Comparison according to gender.

	Gender	N	Mean	SD	p-value
Faculty members' use of Social Media in teaching	Male	59	51.76	12.30	0.965
	Female	52	51.85	6.56	
Benefits of social media use as viewed by faculty member	Male	59	51.71	8.32	0.880
	Female	55	51.93	6.73	
Barrier for using social media in teaching and learning	Male	62	25.66	4.24	0.654
	Female	51	25.31	3.91	

4. The score of female study subjects was higher but the difference was statistically non-significant(p-value 0.965). Similarly, the benefits score was more in female and it was not statistically significant(p-value 0.880). On the other hand, the perception about barriers was more frequent in males than females but this difference was not statistically significant (p-value 0.654).

DISCUSSION

There seems to be a gradual increase in the use of smart phones by the medical faculty due to various facilities like; availability of internet, multiple applications, portability and ease to use it. Lots of teachers are using smart phone as an educational tool through the social media practice and collaborative learning[11]. In this study, the use of social media for teaching by majority of medical faculty was in the range of agree and strongly agree and its major uses were to attract the students' attention, present lesson material, enhance procedural understanding by searching the updated knowledge and motivating learners for the use of technology in instructional process. Another study concluded that more than 90% of the faculty members have been using social media for teaching whereas a study done at a university of Sudan resulted in lower level of the social media use in education by faculty which was related to lack of digital infrastructures at Sudanese universities[4-11]). Another study concluded that the use of social media tools is relatively more in the members of faculty having required skills and convinced for the benefits of technology[12].

It was found that application of social media for teaching by the members of faculty is more in private medical institutes as compared to Public Sector College. There was a difference in the scores for male and female study subjects regarding the use of social media for education. This difference was in the support of females but it was not statically significant. These results corroborates the findings of a relevant study concluding that use of internet applications for study purpose is more common in females[12]. Correspondingly, the findings are in line with the results of a study mentioning that the numbers of females using Facebook accounts for 57% of the study participants. Similarly, another study concluded that the use of social media application is more common among females than males[13]. On the other hand a research concluded that there is no considerable gender based difference regarding social media use among the faculty members[12]. However, the same researcher reported that the trend for not integrating social media in class room was higher among the senior faculty with advanced qualifications. Different research articles are in the favor, that a gender difference exists in the use of social media and computer technology whereas there are research studies which did not agree regarding gender difference about the use of technology[12-15]. This research harmonizes with the findings of another study concluding no significant gender and designation based relationship about the use of social media[12].

It was found in the present study that benefits of social media use in education were considered as strongly agree by the faculty members on a Likert scale. The five items rated as of high benefit were presenting instructional material, benefit from their past experience, communication with colleagues, motivating students to use technology in teaching processes, attracting the attention of learners and encouraging students to share information. These results agree with the findings of other relevant studies concluding that social media promotes engagement, communication, and cooperation[14,16-18]. Faculty members rated the "observing and assessing students progress "as of little benefit. Majority of faculty members have their concern about the social media use for education. In our study, the major barrier in the use of social media use for education as mentioned by medical faculty were “Lack of high speed internet”, “Lack of student seriousness in dealing with these technologies for academic purposes” and “lack of teachers training” whereas in a study at Sudan university "lack of high speed internet "was also most important barrier mentioned by the faculty members. The other common barrier agreed between this and our study was "lack of teacher training". Some other major barriers concluded in another study include absence of smart phones, small size of screen, lacking the confidence of teacher, and technological issues[11]. Limitations inclusion of small num-

bers of medical institutes and the faculty members which can be addressed with large number of sample size and inclusion of more medical colleges across the country.

CONCLUSION

The faculty members strongly agree with the use of social media for medical education. Faculty of private medical colleges was more engaged in the application of social media for educational purposes. Moreover, gender-based difference in support of female teachers was concluded with no significant association. Lack of quality internet, attitudes of learners and issues related with training are the major barriers.

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Following authors have made substantial contributions to the manuscript as under

Hussain I: Principal investigator, Concept, Design and data analysis.

Khan RA: Data and critical analysis.

Mahboob U: Manuscript Drafting.

Latif MZ: Data analysis, Proof reading &critical analysis.

Nizami R: Data entry, Bibliography.

Ali S: 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.