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## Physicians in Cyberspace: Finding Boundaries

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### Abstract

*Social media particularly Facebook has become a popular platform amongst medical professionals for both social and professional interactions. However, given the nature of such platforms, their use raises ethical concerns including violation of patient privacy and blurring of classical professional and patient-physician relationship boundaries. In order to investigate the pattern of Facebook usage among medical professionals in Pakistan, a mixed method study was conducted at five medical institutions in three different cities including Karachi, Lahore and Islamabad. 806 participants, including 87 faculty members, 239 trainees and 350 medical students, responded to the quantitative survey. Results were analysed using Statistical Package for Social Sciences (SPSS). For the qualitative arm, focus group discussions and in-depth interviews were conducted among*

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*different groups, and analysed to draw out common themes. Results show that 44% of respondents found professional utility for Facebook. 36% of respondents had never changed their privacy settings and 44% indicated lack of confidence in current privacy settings of the medium. Respondents had posted identifiable patient content (7%) and non-identifiable patient content (10%), with students and trainees posting such content more frequently than faculty.*

*Keywords: Social media, Facebook, Privacy, Friending, Medical Professionalism*

## Introduction

Social media, particularly Facebook, is a popular tool among medical professionals all over the world and Pakistanis are no exception. Facebook originated as a social media application targeted at university students in Boston in 2004 but opened up to the general public in 2006.<sup>1</sup> With currently over 500 million users worldwide, there are over 23 million Facebook subscribers in Pakistan according to a report.<sup>2</sup> In addition to purely personal social interactions, such media is also being used for a variety of professional and educational interactions, so much so that the term “social” media seems like a misnomer.

There are no estimates available regarding healthcare professionals on Facebook in Pakistan. It can be reasonably hypothesised that doctors and medical students, being among the most well educated, would have access to and use Facebook and other social media in large numbers.

Social media exchanges are known to create a false perception of anonymity, encouraging unguarded exchanges that might not have been made in person. People become emboldened, less guarded and reflexive on instant posts on social media applications, which leads to unprofessional, thoughtless posts and comments that may later be regretted.<sup>3</sup> This kind of disinhibition raises concerns for healthcare professionals since they are held to a higher standard by the community than an average citizen, and are expected to maintain a certain level of professionalism. Several studies have highlighted ethical and professional concerns of healthcare workers and their students’ activities on Facebook.<sup>4, 5, 6, 7, 8, 9, 10</sup>

Ethical and legal issues arising from ill-conceived web posts include: violation of patient privacy and confidentiality, misrepresentation of credentials, misinterpretation of comments and posts outside of the context in which they were made, and so on.<sup>11</sup> Punitive actions against such offences have been reported.<sup>12, 13</sup> These actions have not been limited to the medical field. Recently, the University of Agriculture Faisalabad, Pakistan threatened to expel a PhD student because his Facebook comments were deemed inappropriate, a decision which was later withdrawn.<sup>14, 15</sup> This underlines the importance being ascribed to the maintenance

of certain norms on social media. In response to such concerns worldwide, institutions have started developing ethical guidelines for online conduct for faculty and students.<sup>16, 17, 18, 19, 20, 21, 22</sup> However, no such guidelines regulating medical professionals' use of social media exist in Pakistan.

The objectives of this study were to assess the pattern of Facebook usage among a cross section of physicians, trainees and medical students across three major Pakistani cities. In addition to looking at the basic demography of health professionals on Facebook, this study assessed their knowledge and practice regarding privacy and content control on Facebook, including patient-related content. The study also assessed professional behaviour among the different cohorts on Facebook, and whether it threatened classical professional boundaries. This study is the first of its kind in Pakistan, and to the best of the authors' knowledge, represents the largest mixed-method, quantitative and qualitative analysis of health professionals and their students' activities on Facebook to be presented in English-language literature. This data can prove useful for Pakistani medical institutions to develop relevant guidelines for social media use.

## **Methodology**

The study employed a mixed-method (quantitative and qualitative) approach at five medical institutions of Pakistan—three in Karachi and one each in Lahore and Islamabad—over a period of eight months from July 2013.

For the quantitative arm, a questionnaire was used which also contained a few open-ended options. The questionnaire was administered to medical students, medical trainees (interns, residents and fellows) and the clinical faculty of participating institutions using the survey website [surveymonkey.com](http://surveymonkey.com) and also through face-to-face interactions by the co-investigators. The relevant email addresses were obtained from the concerned administrative offices of participating institutions after due process.

Since there are no previous estimates concerning knowledge and practices of Facebook users in Pakistan, calculations of sample size were based on an assumption that 30% of medical professionals were using Facebook within ethical parameters (e.g. using privacy options and so on). Assuming a relative precision of 10% and a confidence level of 95%, a sample of 897 medical professionals (cumulatively across all sites) was arrived at using the WHO sample size calculator software for survey-based studies (version 2.0). A better response rate than the usual 30% response for online surveys was predicted for this study.

Respondents were deemed to have consented to participate if they responded to the survey. An Ethical Review Committee clearance and necessary permission

from concerned departments was obtained from all five institutions prior to the survey. The survey took four months to complete with three reminders being sent.

The qualitative arm employed both in-depth interviews (IDIs) and focus group discussions (FGDs). Purposive sampling was used to select potential participants for the IDIs and they were contacted through email. Those agreeing to participate were interviewed privately at mutually convenient times while the online survey was progressing. In all, 10 IDIs were conducted from among faculty, trainees and medical students. A template was used to direct the interviews, which took 30 to 45 minutes each. All the interviews were conducted and digitally recorded by the Principal Investigator (PI) with the permission of the participants and later transcribed.

Three focus group discussions were held by the PI with groups of residents and students. These were recorded and transcribed. All identifiers were removed from the transcripts.

The quantitative data was entered into and analysed using Statistical Package for the Social Sciences (SPSS) Version 20.0. Categorical variables such as demographic and baseline characteristics were summarised using frequencies and percentages. Analysis for statistical significance was done using chi square test and expressed as p values. A thematic analysis was performed on the qualitative data. Both the quantitative and qualitative data were blended together for the final analysis.

## Characteristics of Participants

A total of 806 respondents belonging to the 5 institutions responded to the questionnaire. There were 87 faculty members, 239 trainees and 350 medical students. Table 1 shows anonymised institution-wise data distribution. 50% of the respondents were women, with 87% under 40 years of age. Previous studies have indicated that professionals of a younger age tend to use Facebook more often than senior professionals.<sup>23</sup>

The pervasiveness of social media in modern lives is reflected by the presence of 90% respondents on some form of social media (Table 2), with Facebook in this cohort, as in other studies, being the most popular platform.<sup>24, 25</sup> 57% of respondents in this study accessed Facebook through different modes, including handheld devices, laptops and desktop computers, a majority accessing it multiple times a day.

**TABLE 1**  
**INSTITUTIONAL DISTRIBUTION**

	Frequency	Percent
Karachi 1	263	33
Islamabad	114	14
Karachi 2	109	14
Lahore	57	7
Karachi 3	263	33
Total	806	

**TABLE 2**  
**SOCIAL MEDIA PRESENCE**

Facebook	87%
Twitter	25%
YouTube	25%
Instagram	15%
Linkedin	5%
Flickr	3.5%
FourSquare	1%
Other	5%

The few who were not using social media applications said it was “a waste of time” and “an addiction”. The 84 respondents (10%) who did not have a presence on social media were eliminated from the study at the initial stage.

Of the 701 survey respondents who had social media presence, 9 respondents did not have a Facebook account at the time of the survey and were excluded from the analysis. The results in this study are based on the responses of the 692 respondents (86%) who had an active Facebook profile. 70% of the respondents had Facebook profiles for more than three years, with most having one for an average of five to six years, which closely corresponds to the exponential increase in Facebook profiles across the world.<sup>26</sup>

### **Reasons for Having a Facebook Profile**

The majority of the respondents in this study used Facebook primarily to connect with friends (87%) and family (64%). 44% of respondents indicated that they also used Facebook for professional purposes.

According to one interviewee: "... we are able to stay in touch with people whom we generally don't talk to. To communicate and share photos."

Other studies have also indicated personal or social use as one of the biggest motivations for getting on Facebook. One large quantitative study found that 87% of 4,000 physicians surveyed used it for personal reasons, whereas 67% had professional reasons as well.<sup>27</sup>

Students (56%) and trainees (33%) outnumbered faculty (11%) among the respondents in this study who found a professional utility of Facebook. The students and trainees reported that Facebook provided a good discussion medium to share cases and seek opinions from peers and seniors, exchange notes, find out about class schedules and so on. Faculty members using Facebook for professional purposes also found it useful for discussion of challenging medical cases, a utility reported by other investigators too.<sup>28</sup>

Respondents' comments highlighted, however, a potential drawback in depending on Facebook feeds for gathering medical information. Reflecting on the "utility" of Facebook for enhancing medical knowledge, one respondent said: "If there are a lot of comments and if 40 people are saying the same thing, then you can assume that it is correct..." This points to a real potential of Facebook feeds being the vehicle of incorrect and potentially harmful information. Confirmation bias—people's tendency to seek information that confirms ideas they already hold—has been shown to be a hazard for the increasing number of Facebook users who turn to its newsfeeds as a major source of information.<sup>29</sup>

The overlapping of social and medical/professional utilities of Facebook by the same user can create potential challenges, especially since the vast majority of users started on Facebook because of its social utility and then adopted it for professional exchanges. This can lead to the blurring of boundaries between purely social and work-related exchanges, when the same profile is used.

## **Maintaining Content Privacy on Facebook**

Privacy of content on Facebook ought to be of great importance for all users, but even more so for health professionals. Concern regarding contents being disseminated without control and the blurring of professional boundaries have also been noted in other studies.<sup>30, 31</sup>

The mixing of personal with professional content is one hazard that has led to the recommendation that health professionals maintain a separate account with a different name.<sup>32</sup> The vast majority of the respondents, however, used

their own names in their profiles; only 14 respondents (2%) used a pseudonym on Facebook.

36% of the respondents had either never altered their default security settings or did so “once in blue moon”. Another 15% changed their privacy setting only when they encountered an online threat. 10% changed their settings monthly. Although it is technically possible to maintain a high level of privacy on Facebook, it is in practice difficult since Facebook, like other social medial applications, was designed to share information widely by manoeuvres such as “likes”, “comments” and “tagging”, which help to disseminate content.<sup>33</sup>

Exploring their knowledge regarding the possibilities of dissemination of Facebook content, 52% respondents knew correctly that their “likes” and “comments” on their friends’ Facebook posts may be visible to people beyond their own “Friends” list. Similarly, 62% correctly knew that an image/picture in which they were “tagged” may be visible to people beyond their own “Friends” list. This indicates that a majority of the respondents were correctly informed about the vulnerability of contents on Facebook.

When asked about their concerns regarding the privacy of their Facebook content, 44% of respondents in this study said that were not confident that access to their content was limited to their chosen Facebook friends and not beyond. Additionally, 39% respondents in this study had encountered their own pictures or pictures of their family members on other people’s Facebook pages, which they had neither shared nor wished to be shared.

Despite being aware of these vulnerabilities and personally experiencing their consequences, a majority chose not to do anything about it proactively. The reasons for this apparent disconnect between voiced concerns and a lack of any directed action to secure privacy is reflected in some of the narratives. Respondents believed that changing privacy settings was a tedious task, as one respondent said, “I don’t take the pains of doing that.” Others said that it was nearly impossible to keep content controlled on Facebook “because it’s on the Internet. They keep on watching and recording.” Even though respondents said they were putting nothing “inappropriate” on Facebook, they were still uncomfortable with open access to their content. “I only put things which aren’t that personal. I am not very satisfied.”

Another faculty member said, “Initially, I didn’t know about privacy settings. But still privacy settings aren’t exactly what I want them to be.” This highlights a lack confidence in her own ability to set an adequate level of privacy for herself.

Medical students are reported to utilise privacy options quite meticulously.<sup>34</sup> In this study, students, who were able to view (perhaps unintended) Facebook



content of their faculty, believed that their seniors were not adept at handling Facebook security challenges. This is not unexpected since the younger generation is more tech-savvy than the faculty. In this sample too, students were more adept at ensuring the security of their profiles, and spoke about specific settings on Facebook that restrict certain items' visibility to selected "friends".

Despite these concerns, a majority of respondents were of the opinion that there was no reason for health professionals and students to avoid Facebook. As one said: "Privacy settings should be tight and sustainable." They also opined that it was up to the individual user to control his or her content. "My information is limited. I do not post pictures of myself, my work or anything that would compromise privacy. And privacy is in your own hands," said a faculty member.

A bolder medical student added, "A few actions are justified on Facebook. And you can put asterisk when you use bad words so no one says anything." This remark highlights the more relaxed attitude that Facebook users might readily adopt in virtual reality as compared to real-life encounters, an attitude change that can lead to grave ethical concerns for healthcare professionals.

While one or two faculty members in this study did mention the use of "obscene language" on Facebook, this did not emerge as a significant concern in this study. Others have reported the use of abusive language, posting sexually inappropriate material and pictures that depicted intoxication in other countries.<sup>35</sup>

American Medical Association advises medical professionals to weigh the risks associated with use of social media with its potential benefits.<sup>36</sup> Inability to restrict content may lead to an "irreversible online image", thus potentially damaging the professional image and undermining public trust.<sup>37, 38</sup>

## **Informed Consent and Patient-Related Content on Facebook**

There is consensus within the medical community that prior to acquiring any clinical photographs—identifiable or non-identifiable—appropriate informed consent must be obtained.<sup>39</sup> Appropriate informed and understood consent is also necessary before posting these on Facebook. This adds an entirely new dimension, since the ultimate fate of the shared information and images is entirely unpredictable. Furthermore, relaxation of professional norms in virtual reality is known to occur, thereby opening up possibilities of breach of appropriate conduct.<sup>40</sup>

Since respondents in this study opined that Facebook was a good medium to "share interesting cases" and to seek the "rapid" opinion of different "experts"

in forums, the possibility of patient-related information being released to unintended viewers, often in great numbers and at astounding speed, is very real. Various social media guidelines recommend that physicians refrain from posting any identifiable patient information online and that explicit permission be obtained at all times.<sup>41, 42</sup>

Half of the respondents in this study said that posting identifiable pictures or videos of a patient on Facebook was not justifiable under any circumstances, whereas the other half were not against it, believing that images are being posted to facilitate Facebook-based academic discussions and the sharing of medical information. 25% of the respondents had encountered an identifiable picture or video of a patient on Facebook.

Among the 48 respondents (7%) who had posted identifiable patient-related content, faculty were the least liable to do so (6%, or 3 individuals), followed by medical students (44%, or 21 individuals) and trainees (50%, or 24 individuals)—a statistically significant difference ( $p < 0.05$ ).

84% responded in the affirmative when asked whether informed consent would be required from the patient before uploading their identifiable images on Facebook. However, 4% (2 faculty members, 9 trainees and 10 students) opined that no consent was needed and 5% (2 faculty, 12 trainees and 20 students) said they were not sure, which was a statistically significant difference ( $p < 0.05$ ).

Another category of patient-related images are those in which the patient has been rendered non-identifiable. More of such images are in circulation on Facebook than those in which the patient is readily identifiable, indicating less of an inhibition in posting such pictures. Regarding non-identifiable patient pictures and videos, 38% of the respondents in this study said that they had encountered such content, of which students (49%, 133 individuals) and trainees (46%, 94 individuals) outnumbered faculty (32%, 33 individuals). Of the 71 respondents (10%) who had actually posed non-identifiable patient pictures on Facebook themselves, trainees (50%, 35 individuals) and students (42%, 29 individuals) formed the majority, as compared to faculty (6%, 6 individuals), a statistically significant difference ( $p < 0.05$ ).

As compared to identifiable images, fewer respondents believed that informed consent was required prior to uploading non-identifiable images, with only 59% saying it was required, and 20% (13 faculty, 44 trainees, 78 students) declaring that patient consent was not necessary. 13% of the respondents (11 faculty, 36 trainees, 38 students) said they were not sure. This was also statistically significant ( $p < 0.05$ ), highlighting the differences across professional levels when it comes to online behavior. This lack of clarity was also demonstrated in the

FGDs and IDIs in this study, and more people reported being “unsure” about the necessity of informed consent for non-identifiable content as compared to identifiable content.

An even greater number (45%) of the respondents had seen images of organs or other human parts on other Facebook posts, but only 10% reported posting pictures/videos themselves. Of those who had encountered such content, students (54%, 170 individuals) and trainees (36%, 111 individuals) outnumbered faculty (9%, 28 individuals). Students (50%, 34 individuals) and trainees (40%, 27 individuals) formed the majority of those posting such content on their Facebook profiles, with 10% or 7 individuals from faculty doing so, a statistically significant difference ( $p < 0.05$ ).

The results indicate that respondents, especially the younger ones, do not make a distinction between de-identified pictures of patients and pictures of their organs and were more open to posting such images on Facebook. A faculty member stated in an interview, “I have seen a lot of breach of ethics on Facebook like pictures of patients or posing with removed organs or with cadavers. I always tell them that it is unethical.”

One reason for the ambiguity regarding the need for informed consent and the apparent disinhibition in posting de-identified pictures of patients, their organs and dismembered body parts may be because the perception is that patient confidentiality is not compromised by sharing such images. It is commonly believed that concealing the individual’s eyes behind a black band or cropping the image strategically is enough of a manoeuvre to de-identify a person. True de-identification, however, entails changes in the image such that the subject is unable to recognise himself or herself. Much of such content, therefore, actually consists of identifiable images of patients being put on Facebook.

It is significant to note that whereas respondents were concerned about privacy and the confidentiality of their patients, and the majority wished to maintain this, their online behavior was often contrary to their beliefs. It can be speculated that the respondents’ hitherto latent privacy concerns might have been awakened as a result of their participation in this study, hence their paradoxical responses.

Other studies have also alluded to the privacy issues of patient information on Facebook in cases where medical professionals put protected health information on social networking websites, leading to actions on the part of their respective institutions, including warnings, and in some cases, suspensions and other serious disciplinary actions.<sup>43,44</sup>

## **“Friending” on Facebook**

“Friending” someone on Facebook and being friends in real life are two different concepts. One may have numerous Facebook friends, many of whom are not friends in real life.<sup>45</sup> Respondents in their interviews also opined that being friends and “friending” are very different for them. On Facebook, one is less discriminating and more reflexive in accepting friend requests from individuals not considered as actual friends. That is perhaps why the average number of friends of a Facebook user is 400, which far exceeds actual friendships. Cognitive psychology has illustrated that individuals can manage around 150 social relationships.<sup>46</sup>

### *Friending Patients*

One manifestation of reduced discrimination induced by Facebook is when healthcare professionals cross an age-old barrier and open themselves to “friending” current patients. Traditionally, physicians have maintained a professional distance with their patients, with whom they might be friendly but not friends. This “therapeutic distance” can get blurred in cyberspace.<sup>47, 48</sup>

When asked regarding the utility of a Facebook association with current patients, 22% of respondents said interaction on Facebook with patients could help with medical management of their patients while 20% said this could be a means of educating their patients. The greatest number of respondents said that this interaction could be of a social nature (38%), which signifies a departure from the long-held norms of association of health professionals with patients.

However, 70% respondents in this study felt that it was not acceptable to “friend” current patients, which was quite consistent with another study where 82%–84% did deem this kind of interaction inappropriate.<sup>49</sup> One hundred and fifty respondents in this study (22%) considered it acceptable to friend patients; trainees (31%) and students (62%) outnumbered faculty (5%), which was a statistically significant difference ( $p < 0.05$ ). This underlines the importance of emphasising boundaries for the younger cadres of this profession. The impact of age, gender and personality traits on online behaviour has been reported previously as well.<sup>50</sup>

Initiating a friend request towards a current patient is generally still a rare occurrence and only 2% of respondents in this study—with medical trainees (7) and medical students (5) outnumbering consultants (1)—had actually done so. This is similar to another study where 5% had initiated such friend re-

quests.<sup>51</sup> However, another study reports that none of the 182 residents surveyed had ever done so.<sup>52</sup> Initiation of such requests by physicians towards patients may pressurise patients to accept this friend request due to the power differential that exists between the two parties. This can potentially have a negative impact on the therapeutic alliance and may lead to boundary violations in the doctor-patient relationship.<sup>53</sup>

Seventy-one respondents (10%) had received a friend request from their patient, and 31% of them (9 trainees, 9 medical students and 4 consultants) accepted the request.

### *Friending across Professional Boundaries*

The medical profession has also traditionally maintained professional boundaries between its cadres.<sup>54</sup> Given the openness of Facebook, there is a real potential of professional circles being exposed to personal information, which may lead to a violation of boundaries. When asked if they found it appropriate to friend a current student, 49% of faculty found it inappropriate. Relating his reasons, a faculty member said, "I don't believe in having students on my Facebook. I don't want to share my private life with them. There should be a barrier between teachers and students." Expressing his discomfort in sharing too much information on Facebook, a faculty member said, "Everyone on my Facebook list knows things about me which they would have never known had I only interacted with them as a professional."

Only 18% of faculty said they had, or were willing to initiate a friend request towards their student, indicating that not everyone was averse to such linkages. One faculty member stated, "In this day and age, you should not be inhibited and you should be direct. There are some people who are stuck in that [old] framework that there should be a distance." The few faculty members who did support friending their students indicated that they considered it a good means of communication, for instance, in providing motivation for exams and sending educational items. Literature has also identified that social media can facilitate mentor-mentee relationship, leading to more effective communication with younger generations.<sup>55</sup> A faculty member also mentioned supporting through Facebook exchanges a student who was feeling homesick. This disinhibition in crossing professional boundaries on Facebook can foster positive outcomes. One faculty member spoke about how some students may find it useful to get solutions to their problems through this medium, as compared to a face-to-face interaction. A student also stated, "It makes it easier for people who don't talk face-to-face to interact with a large group of people."

Thirty-five faculty members had received a friend request from a current student, of which 54% had accepted—this high rate being due perhaps to the fact that they found it difficult to let the student down by ignoring their request.

Faculty expressed similar reservations to developing linkages on Facebook with their trainees. 37% of faculty members considered it inappropriate to friend their current trainee and 23% felt comfortable in initiating such a request. Forty-three faculty members (40%) had received a friend request from a current trainee, of which 72% accepted it as compared to 28% who ignored it. Though reservations were obvious, faculty was clearly more open towards developing Facebook linkages with their trainees, perhaps because of a long-standing and close interaction between faculty and their trainees.

In the absence of guidelines, or even precedents set by seniors to follow, the respondents in this study seemed to be following their instincts to differentiate between what is right and what is not. This led to a wide variation in their actions, which was reflected in their own rationalisations of their actions. A faculty member said, “A certain distance needs to be maintained in the student-teacher relationship.” This respondent also said he had students as his Facebook friends. When asked how he justified adding students to his Facebook friends, he said he may not necessarily be doing the right thing.

Concerns were also voiced by respondents. “Your private life is exposed,” said one faculty member. Some faculty members appeared to be deciding on a case-by-case basis: “I don’t [just] add everyone. If I remember their faces and if I have interaction with them, then only will I add them.” This is a trend reported by others too.<sup>56</sup> While commenting on initiating friend requests, one faculty respondent raised an interesting point, highlighting how power differentials might play out in cyberspace. “I would never initiate a friend request because it would put the students in an awkward position.” The same respondents, however, went on to say “but I would always accept it”, underlining the “obligation” that worked both ways. This sense of obligation has also been identified in another study.<sup>57</sup>

It was noticeable that while faculty was reluctant in initiating friend requests, the few who did receive such invitations, seemed more open to accepting such requests when received from their trainees (72% acceptance) and students (54% acceptance). This was also voiced by respondents in the interviews and FGDs. This reflects an underlying openness towards such linkages even though faculty might be inhibited in initiating them. Others have reported a higher level of comfort in friending former trainees and students than current ones.<sup>58</sup>

When trainees were asked for their views towards friending faculty members, 62% opined that it was appropriate and 55% considered it acceptable to initiate such a request. This reflects a changed attitude towards cross-boundary relationships among younger respondents. Similarly, regarding friending students, 62% trainees found it appropriate while 35% felt comfortable in initiating such a friend request themselves. 46% (111 trainees out of 239) had received such a request, of which 85% accepted it. Trainees, in the middle of the professional ladder, were open to developing linkages with both ends of the academic ladder.

Medical students came out as the most open towards friending trainees or their faculty. 73% of medical students found it appropriate to friend a trainee, and 65% felt comfortable in initiating such a request. 29% (101 medical students out of 350) had received such a request from trainees, and of these, 81% had accepted it. A somewhat smaller but still significant number of students (57%) found it appropriate to friend a faculty member. 52% felt comfortable initiating such a request, whereas 40% were uncomfortable with the idea. One hundred and seven medical students (31%) had received a request from faculty members with 78% accepting the request.

Not all students were comfortable in accepting such requests by their seniors. Students noted that this would give their seniors a glimpse into their private lives, and the items that they post and share on their walls might be considered inappropriate. They felt that their faculty might be judging them based on their Facebook content, as one student mentioned, "Sometimes they judge their students, especially statuses, and they can't judge me based on one statement."

One medical student expressed similar sentiments: "I didn't accept their [teachers] request until I was studying under them. I should keep my relationship with my teacher limited to the classroom and not take it to Facebook."

Others, however, considered Facebook interaction as just an extension of classroom interaction. They used Facebook mainly as an instant communication tool, using its instant messaging service to reach their teachers, seek information about assignments and scheduling, and so forth. Others considered Facebook interaction harmless: "We don't interact with them. They are on our newsfeed and we just see their statuses."

## **Conclusion**

Physicians, their trainees and students are using Facebook for a variety of social and professional reasons, with contents of both kinds of discussions easily spilling over to those on their "Friends" list. With Facebook increasingly becoming a source of often unverified professional information, there is a real danger of

Facebook feeds from professionals spreading disinformation, especially to non-professional circles where people might lack the judgment to tell fact from fiction. Despite a clear level of discomfort with online privacy, there is little evidence that respondents wished to take more control over their posted content. This is especially troubling for medical professionals since their online content can often involve patient images and details. With a propensity, especially among the junior respondents, to post patient images, and the ambiguity around what is considered identifiable versus non-identifiable, the possibility of breach of patient privilege becomes even more likely.

Facebook and other social media have also blurred classical professional boundaries between patients and their caregivers, and those between different levels of professionals within the medical fraternity. These boundaries seemed even more fluid to the juniors in this study. Therefore, the findings of this study indicate the need to define norms of conduct in virtual reality for health professionals. This is important not only to maintain an acceptable level of professionalism online, but also to ensure that patients' dignity is not compromised.

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33. **Glossary of Terms**  
Newsfeed: A list of stories that appear on your main Facebook page containing updates from the individuals, groups or pages with which you are associated on Facebook.  
Liking: A feature that allows you to let people know that you enjoy a certain post such as a status update, photo or comment, or a fan page.  
Tagging: A tag allows you to link a page, a person or place to things you post, which can be a status update or a photo.  
Commenting: A feature that allows you to let other people know your thoughts about a certain post such as a status post or a photo.  
Friending: This is the act of adding someone to your list of friends on Facebook. Once someone is added to your "Friends" list, s/he can have the privilege of viewing your profile and activity on Facebook.  
Privacy Settings: This allows you to control the amount of information that you share on Facebook with people on your "Friends" list and those beyond this list.
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