RESEARCH ARTICLE

Visible Facebook profiles and e-professionalism in undergraduate medical students in India

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Abstract

Purpose: This study aimed to assess medical students' presence on Facebook and the extent of their visible activity, with particular reference to online professionalism. **Methods:** This was a cross-sectional study including all medical students enrolled in the University College of Medical Sciences, University of Delhi, India during the period of the study, which was conducted from 2011 to 2012. After approval by the Institutional Ethical Committee, the full names of all students were obtained from our institution. After creating a fictitious profile, Facebook was searched for students' profiles, and those found were examined for visible content and unprofessional behaviour. **Results:** Of 611 students, 477 (78.1%) had detectable Facebook profiles. Out of 477 profiles, date of birth, address, email, phone number, religion, and political views were rarely shared; sexual orientation and relationship status were displayed on approximately one third of the profiles; and an identifiable profile picture (80.3%), field of study (51.6%), and institution (86.2%) were commonly shared . The visible content included friend lists (88.7%), photo albums (36.1%), and associations with diverse groups and pages (97.1%). Five profiles (1.05%) displayed unprofessional content, including one profile photograph depicting alcohol consumption, one association with groups relating to excessive alcohol consumption, two profiles containing sexually explicit language, and one association with a sexist page. **Conclusion:** Most of our students use Facebook's privacy settings to hide some content from others. Unprofessional content was rarely visible from a stranger's profile. However, even when hidden from strangers, unprofessional behaviour is still unprofessional behaviour. As Facebook is an integral part of life, it is important for medical educators and students to understand the implications and importance of e-professionalism. Professionalism curricula should address e-professionalism.

Key Words: Cross-sectional studies; Electronic mail; Friends; India; Privacy

INTRODUCTION

While students join social networking sites for entertainment, their online behaviour must be appropriate even though it is outside the clinical environment; unbeknownst to them, teachers, future employers, colleagues, and patients may access their information and use it to make professional judgments [1,2]. Medical students, who are new to the concept of professionalism, may not realize that publicly available online posts directly reflect on their professionalism. We have noticed that the profiles of students who we have friended contain identifiable patient photographs, objectionable poses with cadavers, and derogatory comments directed at teachers and peers. We were concerned about the possibility that such content might also be visible to strangers. The aim of this study was to assess medical students' social networking presence and the degree of visible activity on their profiles, with particular reference to unprofessional content. For this purpose, 'unprofessional' was defined as any content that could be interpreted as illustrating substance abuse, sexism, racism, or lack of respect for patients or others [1,3,4].

METHODS

This was a cross-sectional study performed from 2011 to 2012. All medical students enrolled at our institution at that time were eligible. After Institutional Ethical Board approval (approval number UCMS/IEC-HR/2010/9/12), the full names of students were obtained from the institution. Duplicate entries of the same student in two or more cohort lists due to examination failure and drop years were deleted. Facebook was chosen as the prototype of a social networking site, since it is the most popular social network [5]. Prior to searching for students' online profiles, the authors, each of whom had a personal Facebook account, registered a new account using a fictitious name. This was an essential prerequisite to avoid confounding the data, since many students were on the friend list of one or the other author, and it would have been difficult to determine what details were visible only to strangers.

The following search algorithm was used to determine if a student had a Facebook profile. Both the first and the last names of the student were entered into the Facebook search box. If fewer than 30 profiles were found with this search string, then all of the profiles were examined for a possible match. If more than 30 results were displayed, a manual search was not made. Instead, the friend lists of students whose Facebook profiles had been found were examined in an attempt to locate the profiles of the remaining students. Profiles not found by either of the methods described above were considered not to exist. A profile was considered to be that of the student under consideration when both the first and last names matched and either the profile picture was identifiable or the institution of study was stated.

In order to determine the degree of visible activity, with particular reference to unprofessional conduct, once a profile was found, it was scrutinized for whether details were visible to the wider public or not. The visibility of the following items were recorded on a yes-or-no basis: personal information, including age, gender, religion, political views, sexual orientation, and relationship status; identifying information, such as address, an identifiable profile picture, email address, and phone number; and professional information, such as field and institution of study. Where available, the number of Facebook friends, the number of photo albums, and the number and types of social groups joined were also noted. The profiles were qualitatively examined for possible unprofessional content. For this purpose, 'unprofessional' was defined as online behaviour that all three authors agreed to be offensive or derogatory in our particular socio-cultural context, including substance abuse, sexism, racism, and lack of respect for patients or others [1,3,4].

The outcome measures were Facebook membership and the extent and nature of visible material. The data were analysed using Epi Info ver. 7 (Centers for Disease Control and Prevention, Atlanta, GA, USA). The chi-square test was used for comparison between cohort groups. P-values < 0.05 were considered to indicate statistical significance.

RESULTS

Of the 611 students, 477 (78.1%) students had identifiable Facebook profiles. The prevalence of identifiable profiles was comparable among students in different semesters of study, except for those in the fourth semester (Table 1). Table 2 presents the information retrieved from the 477 profiles. Besides Table 2, friend lists were visible on 423 profiles (88.7%), and the number of friends varied from four to 1,410 (average, 178.1 ± 161.13). Photo albums were publicly available on 172 profiles (36.1%), and the number of albums ranged from one to 64 (average, 4.3 ± 7.72). Associations with various Facebook groups or pages were visible on 463 profiles (97.1%), and only four pages included content that fit the definition of unprofessional. Overall, five profiles (1.1%) displayed unprofessional content: one profile photograph depicting alcohol consumption, one association with a group relating to excessive alcohol consumption, two instances of sexually explicit language, and one association with a sexist page.

DISCUSSION

The above results indicate that a very small amount of un-

Table 1. The proportion of medical students with publicly visible Facebook profiles by semester of study in the University College of Medical Sciences, University of Delhi, Delhi, India

Semester	No. of students enrolled	No. of Facebook profiles found (%)	Statistically significant differences from other groups based on the chi-square test (P-value)
Intern	108	84 (77.8)	
Eighth semester	99	81 (81.8)	
Sixth semester	94	68 (72.3)	Sixth semester versus fourth semester (0.022)
Fourth semester	160	136 (85.0)	Fourth semester versus second semester (0.008)
Second semester	150	108 (72.0)	Second semester versus fourth semester (0.008)
Total	611	477 (78.1)	

Table 2. Personal, identifying, and professional details visible on the 477 Facebook profiles of medical students in the University College of Medical Sciences, University of Delhi, Delhi, India

Specific profile information	No. of profiles with specific information visible (%) by semester					P-value by chi-square test	Total profiles with specific information visible (%)
	Intern (n = 84)	Eighth (n = 81)	Sixth (n = 68)	Fourth (n = 136)	Second (n = 108)		
Personal information							
Date of birth	10 (11.9)	2 (2.5)	16 (23.5)	25 (18.4)	23 (21.3)	0.001	76 (15.9)
Gender	81 (96.4)	70 (86.4)	54 (73.5)	119 (87.5)	102 (94.4)	0.045	426 (89.3)
Religion	3 (3.6)	0	26 (38.2)	7 (5.1)	14 (12.9)	< 0.001	50 (10.5)
Political views	1 (1.2)	1 (1.2)	14 (20.6)	7 (5.1)	7 (6.5)	< 0.001	30 (6.3)
Sexual orientation	28 (33.3)	28 (34.6)	20 (29.4)	15 (11.0)	51 (47.2)	< 0.001	142 (29.8)
Relationship status	32 (38.1)	14 (17.3)	16 (23.5)	15 (11.0)	48 (44.4)	< 0.001	125 (26.2)
Identifying information							
Address	6 (7.1)	0	2 (2.9)	15 (11.0)	11 (10.2)	0.003	34 (7.1)
Identifiable profile picture	72 (85.7)	60 (74.1)	55 (80.9)	115 (84.5)	82 (75.9)	0.020	383 (80.3)
Email address	5 (5.9)	3 (3.7)	2 (2.9)	3 (2.2)	7 (6.5)	0.580	20 (4.2)
Phone no.	1 (1.2)	1 (1.2)	0	1 (0.7)	5 (4.6)	0.222	8 (1.7)
Professional information							
Field of study	70 (83.3)	56 (69.1)	28 (41.2)	35 (25.7)	57 (52.8)	< 0.001	246 (51.6)
Institution of study	72 (84.5)	66 (81.5)	51 (75.0)	123 (90.4)	100 (92.6)	0.007	411 (86.2)

professional content was visible on Facebook. Some other findings were also notable. A difference was observed in Facebook visibility among students in their fourth semester of study. Except for this group, all other cohorts had comparable levels of visibility, suggesting that social networking was equally prevalent regardless of seniority (Table 1). The quantitative data could not explain why more fourth semester students were found. Specific aspects of the profiles showed interesting trends depending on the semester of study. Interns were significantly more likely to make their field of study public, perhaps due to excitement about their imminent graduation. However, eighth-semester students were relatively secretive, being the least likely to share their date of birth, religion, address, or an identifiable profile picture. It is possible that as students approach graduation, they are more guarded about being visible on social media [1].

Regarding the sharing of personal details, when all groups of students were considered, students had a marked inclination to display gender, but were less open to sharing their sexual orientation or relationship status (Table 2). This is not surprising considering the cultural taboo in our country with regard to these topics. Only approximately 10% of students displayed their political or religious views. Some studies have shown a similar trend [2], while others have found a greater propensity for students to share religious and political affiliations [1]. This disparity may be attributed to cultural differences, but may also be related to the time gap among different studies, during which Facebook privacy defaults may have changed. We speculate that students either ascribe no impor-

tance to religious and political affiliations or are concerned with the ramifications of such affiliations and therefore selectively hide them. Students seemed to have no hesitation in sharing their field of study and institution of study with strangers. This might be related to the pride they feel in studying in a competitive medical institution in Delhi.

Much identifying information was hidden; however, profile pictures were identifiable in a majority of cases (80%). This is an important finding; even if they hide other identifying content, such students would be easily recognized by patients or employers through their profile picture. In our experience, most accounts listed at least one identifying variable, which is consistent with the findings of other studies [1]. Did our students want to be identified? If so, that desire might have been prompted by vanity or narcissism, but it seems to be a sensible strategy. By sharing some identifiable information and hiding the rest, students can be found by people who know them while being able to hide their posts from strangers. This policy, if intentional, offers a measure of protection against casual observers accessing their profiles and making judgments about their professionalism or the lack thereof. Maintaining two profiles—the philosophy of 'dual citizenship'—has been suggested by some, in which medical students use one profile for professional contacts and another for personal contacts [6]. Female students are more likely to be concerned about safety and the potential of abuse, and have been found to be more likely to keep their accounts private [7]. We did not attempt to explore gender differences in our study, since very few female students are admitted to our institution.

Despite its reported disadvantages, Facebook provides an incomparable opportunity to reach out to family and to form professional alliances [3]. While many students use Facebook in a positive way, institutions have reported unprofessional content resulting in expulsion, medico-legal lawsuits, and other punishments [7,8]. We were motivated to design and carry out this study because we had noticed unprofessional content such as patient photographs on student profiles; however, when we revisited these profiles as strangers, very few students had unprofessional content viewable by a person who was not a friend. Whether to intervene in cases where only a few students have easily accessible unprofessional content is being debated in the West. While censorship may be an over-reaction, which students would be sure to resent [3], some degree of intervention is certainly merited. Students feel that the best way to deal with such issues is by raising awareness through discussions [4]. Our study forces us to think about the question of free speech versus ethical responsibility. Medical students feel that their online identity is separate from how they act professionally, and that their online footprint should not be the basis for judging their professional attitudes [7]. However, being in the healthcare profession, it is only reasonable that they be held to a higher standard, even online [9].

Many students use Facebook appropriately to stay in touch with their friends and families or to build up professional contacts. Nonetheless, the fact that even a few students share content that may be considered outrageous or provocative begs for some form of intervention. Sharing identifiable patient information without the patient's or guardian's consent is clearly unethical and unprofessional. The curriculum should include advice on how to maintain e-professionalism since, apparently, students in professional courses are unaware that they need to maintain professionalism even on social media [10].

Medical institutions should encourage their students to consider their online posts seriously; they should think through the content of their messages (text, images, and videos) and reflect on the impressions they might create on a viewer. Students are representatives of the medical profession and have a responsibility to project themselves appropriately [11]. In the meantime, until formal institutional guidelines are created, students and professionals can consider some safety measures to enable them to maintain the ethical integrity of the profession and to safeguard their own interests [12]. Basic steps might include not inviting patients to become online friends, choosing instead to discuss problems face-to-face during hospital visits; not sharing confidential patient information online; and not entering patient information obtained from social networking sites into a patient's records. Understanding and utilizing privacy settings, as well as showing restraint when disclosing personal information online, may prevent unforeseen breaches of professional boundaries and loss of reputation.

Comparing our results with international studies is challenging due to cultural differences. We do not know how Indian patients would view the online behaviour of doctors. Would they consider some types of behaviour unprofessional? Based on the outrage shown by sections of society to online posts in this country in the past [13], it would certainly be reasonable to believe that images of a doctor drinking with friends in his off-duty free time would not be approved of by some people.

In conclusion, most of our students use Facebook. This study was conceived as a result of unprofessional content noticed by the authors on the pages of students who they had friended on Facebook. However, privacy settings did not allow strangers to see many of the students' posts. Thus, when we visited their profiles as strangers, we found unprofessional content on very few profiles. However, unprofessional content, even if hidden from strangers, is still unprofessional content. Since Facebook is an integral part of our lives, it is important for medical educators and students to understand the implications and importance of e-professionalism. Students should be explicitly instructed that patients and others might judge them based on their Facebook profiles and that they need to be conscious that their online image can affect their professional standing. Professionalism curricula should be revised to include e-professionalism. As a continuation of this study, we plan to ask medical students and faculty about what, in their opinion, constitutes unprofessional behaviour in the Indian context. This will help in understanding what information about online behaviour needs to be introduced into professionalism curricula for doctors and medical students.

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CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

SUPPLEMENTARY MATERIAL

Audio recording of the abstract.

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