

## RESEARCH

# Graduating Pharmacy Students' Perspectives on E-Professionalism and Social Media

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**Objective.** To determine the use patterns of social media among graduating pharmacy students, characterize students' views and opinions of professionalism on popular social media sites, and compare responses about social media behavior among students seeking different types of employment.

**Methods.** All graduating pharmacy students (n=516) at Purdue University, The University of Findlay, Butler University, and Midwestern University were invited to complete a survey instrument during the fall semester of 2011.

**Results.** Of 212 (41%) students who responded to the survey, 93% (194/209) had a social media profile. Seventy-four percent (120/162) of participants felt they should edit their social media profiles prior to applying for a job.

**Conclusions.** Many graduating pharmacy students use social media; however, there appears to be a growing awareness of the importance of presenting a more professional image online as they near graduation and begin seeking employment as pharmacists.

**Keywords:** social media, pharmacy students, e-professionalism, social networking

## INTRODUCTION

Social media has become a trendy source of communication and personalization. The use of social media sites by individuals to establish a profile and keep in touch with other users has resulted in a social networking boom. MySpace was created in 2003 and by 2008 became the most visited Internet Web site, with over 200 million users.<sup>1</sup> Originally created for college students, Facebook has grown to include 1 billion users from many different age groups and professions who access their sites at least monthly.<sup>2</sup> Eighty percent of 413 graduating healthcare professionals surveyed in 2011 had an active Facebook profile.<sup>3</sup> Professional organizations such as the American

Pharmacist Association, the American Association of Colleges of Pharmacy, and the American Society of Health-System Pharmacists (ASHP) have also used Facebook to connect with pharmacists all over the country and attract new members.<sup>4-6</sup> Twitter has become popular with over 200 million users following each other's daily activities and comments.<sup>7</sup> Among other issues, the expansion of these sites raises the question of how professionalism among healthcare students should be maintained when engaging in social media activities. Professional social media sites, such as LinkedIn and the pharmacist-specific ASHP Connect, have assisted with this issue by creating profiles strictly for professional and corporate relationships; however, the effectiveness of these specific sites in maintaining professionalism remains unknown. Characteristics associated with professionalism include altruism, respect, honesty, integrity, excellence, and accountability.<sup>8</sup>

The healthcare system relies on professionalism to maintain the public's trust in medicine. This highlights

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the importance of e-professionalism, especially in the healthcare setting. E-professionalism has been defined as “the attitudes and behaviors (some of which may occur in private settings) reflecting traditional professionalism paradigms that are manifested through digital media.”<sup>8</sup>

Many studies report the e-professionalism struggles of healthcare students.<sup>9-12</sup> For example, student physicians in New Zealand were found to have inappropriate photos (eg, waving their middle finger, excessive drunkenness, pictures with patients), wall comments (eg, offensive language, complaints about employers or coworkers, plans to drink alcohol excessively), and links to unprofessional groups (eg, ‘Perverts united’) on their Facebook pages.<sup>9</sup> Thirty-six percent of first-year pharmacy students reported having something on their Facebook profile they would not want a potential employer to view.<sup>10</sup> In the case of *Yoder v. University of Louisville*, a nursing student was expelled for posting inappropriate comments on MySpace about patients she assisted on her clinical practice experiences.<sup>11</sup> Among pharmacy students at Queen’s University Belfast, located in the United Kingdom, 45.2% reported posting content on their social media sites that they would not want a university administrator or prospective employer to view.<sup>12</sup> In addition, 68.5% of these students felt that if members of the public were to view their social media sites, the reputation of pharmacy students would be compromised. These occurrences suggest that some healthcare students exhibit poor judgment regarding their use of social media.<sup>13</sup>

A study analyzing first-year pharmacy students revealed that these students believed the behaviors and attitudes their online profiles portrayed should not be used to determine their level of professionalism.<sup>10,14</sup> In spite of this, 13% of residency directors reported that they planned to use social media sites to assist in their decision making.<sup>14</sup> A survey conducted in 2009 reported that 45% of employers used social media to research candidates.<sup>15</sup> Many pharmacy students may respond by simply deleting their online profiles; however, in doing so the student may miss out on valuable information and opportunities to connect with other professionals.<sup>4</sup> Research assessing pharmacy students’ attitudes about social media just prior to graduation, when they are beginning to explore employment opportunities, had not been conducted. The objectives of this study were to (1) determine the use patterns of social media among pharmacy students completing their advanced pharmacy practice experiences (APPEs), (2) characterize students’ views and opinions of professionalism on popular social media sites, and (3) compare responses about social media behavior among students seeking different types of employment.

## METHODS

A previously published survey instrument developed by Cain and colleagues was modified to include questions concerning students’ attitudes on e-professionalism during their search for employment and additional demographic information such as prior degrees and immediate plans after graduation.<sup>10</sup> The survey instrument was pilot tested on paper with 85 second-year Purdue University pharmacy students. Following minor revisions, all graduating pharmacy students at Purdue University (n=147), The University of Findlay (n=60), Butler University (n=117), and Midwestern University (Illinois campus, n=192) were contacted via e-mail and invited to anonymously complete a 39-item electronic survey instrument using Qualtrics Research Suite software (Qualtrics, Provo, Utah) in November of 2011, just prior to the Residency Showcase and Personal Placement Service (PPS) interviews for fellowship programs held at the ASHP Midyear Clinical Meeting. This timing was significant because the Residency Showcase and PPS interviews are forums for pharmacy students to meet with program directors from residency and fellowship programs all over the country. The survey remained open for 3 weeks, and reminder e-mails were sent each week to encourage a high response rate. After submitting their completed survey instrument, students had the option of entering a drawing to receive a \$25 gift card. The project received institutional review board approval with exempt status for human subjects research.

Quantitative results were analyzed using SPSS, version 19 (SPSS, Inc, Chicago, IL). Descriptive statistics were computed for each item. A comparative analysis between subgroups based on type of employment, gender, age, degree prior to pharmacy school, type of social media site used most, and amount of time accessing social media was conducted (Table 1). Because of small sample sizes, comparisons based on type of employment were conducted by combining fellowship, hospital pharmacist, pharmaceutical industry, and consultant pharmacist positions in the “other” category. Comparisons between groups were analyzed using the Pearson chi-square test. The Bonferroni adjustment was used for post hoc pairwise tests to control for multiple comparisons. Open-ended responses were analyzed using qualitative methods with 2 investigators conducting data coding. These researchers independently read student responses and developed draft conceptual codes. Discussion and consensus among the investigators regarding the codes was established prior to each investigator independently applying the conceptual codes to responses. After independent conceptual coding, coding decisions were compared and discrepancies

Table 1. Questions Analyzed in Comparative Analysis

Have you ever provided any information on your social media sites that you would not want an employer, faculty member, or patient to view?
Should an employer of PharmD graduates consider an applicant's profile information when making a hiring decision?
Is it justified for a residency director or supervisor to research a candidate online and make decisions based on the information they find?
Is it important to edit your social media site prior to applying for a job?
Do you plan on making changes to your social media profiles prior to an upcoming career fair or the ASHP Midyear Clinical Meeting?

Abbreviations: PharmD = doctor of pharmacy, ASHP = American Society of Health-System Pharmacists.

resolved through discussion. This process was repeated for subcoding once conceptual coding decisions were finalized. Qualitative data were analyzed with the support of MAXQDA(VERBI GmbH, Berlin, Germany).<sup>10</sup>

## RESULTS

The survey yielded a response rate of 41% with the participation of 212 students. Seventy-two percent of the participants were female students (122/169) with a mean age of 25.2 ± 4.6 years. Thirty-one percent of participants (52/169) obtained a higher education degree prior to attending pharmacy school, with the majority of these students holding a bachelor of science or bachelor of arts degree (87%, 46/53). The majority of the students planned to obtain community pharmacy or residency positions after graduation (Table 2).

Ninety-three percent (194/209) of students had a social media profile at the time of the survey. The most common reasons for not having a social media site included lack of time because of personal and professional activities, general preferences (ie, preferring to talk with

Table 2. Pharmacy Students' Plans After Graduation (n=170)<sup>a</sup>

Position	No. (%)
Community pharmacist	71 (42)
Residency	63 (37)
Hospital pharmacist	15 (9)
Other	12 (7)
Fellowship	5 (3)
Consultant pharmacists	3 (2)
Pharmaceutical industry	1 (1)

<sup>a</sup> Not all participants responded to all survey items.

friends by phone), privacy concerns, and professionalism concerns. Facebook was the most popular social media site the students used. Students logged on to their account often with 43% (80/187) accessing it multiple times per day and 28% (53/187) accessing it daily. Students accessed their social media site an average of 35.6 minutes per day (range 1-120 minutes).

## Student Opinions Regarding E-Professionalism

The majority of pharmacy students felt that they should be held accountable for illegal or unprofessional behavior discovered on social media sites (Table 3). Fifty-five percent of students indicated that employers of doctor of pharmacy (PharmD) graduates should consider an applicant's social media profile when making a hiring decision; however, students' responses were equally divided with regard to whether it is acceptable for a residency director or supervisor to research a candidate online and make decisions based on the information they find. The majority of students planned on making changes to their social media site prior to applying for a job; however, only 32% of students planned on editing their profiles prior to the ASHP Midyear meeting or upcoming career fair. Most of the students agreed that their online profile could affect the public's opinion of them as healthcare professionals and believed that healthcare professional students should be held to higher standards in regards to their behavior online. In addition, 53% of students believed that it was important to be cautious about the information they disclosed on their social media sites.

Regarding their online profiles, more of the students felt their online image accurately represented who they were as a person (85%) compared to representing who they were as a professional (51%) (Table 4). More students reported having information on their social media site they would not want an employer (46%) to view compared to information they would not want a faculty member (36%) or a patient (32%) to view. In addition, more students reported not wanting a supervisor to "friend" them compared to a faculty member.

The overarching themes identified through analysis of the open-ended questions included an emphasis on the separation between personal and professional lives in social media use, discussion regarding how accountability for actions on social media should vary by severity, and the representation or incomplete representation of the student's character on social media.

## Comparative Analysis

When comparing all groups, students planning to obtain a residency position were more likely to make

Table 3. Graduating Pharmacy Students' Opinions Regarding E-Professionalism and Social Media Sites<sup>a</sup>

Survey Item	Yes, No. (%)	No, No. (%)
<b>Accountability</b>		
Should a student pharmacist be accountable for an illegal act discovered through social media site postings?	134 (78)	37 (22)
Should a student pharmacist be accountable for unprofessional behavior discovered through social media site postings?	96 (57)	71 (43)
<b>Hiring decisions</b>		
If an employer of PharmD graduates chose to review a prospective employee's social media sites, should the profile information be considered when making a hiring decision?	91 (55)	74 (45)
Do you feel it is justified for a residency director or supervisor to research a candidate online and make decisions based on the information they find?	80 (50)	79 (50)
<b>Profile edits</b>		
Do you feel it is important to edit your social media site prior to applying for a job?	120 (74)	42 (26)
Do you plan on making changes to your social media profiles prior to an upcoming career fair or the ASHP Midyear Clinical Meeting?	52 (32)	110 (68)
<b>Professionalism</b>		
Do you feel that photos, groups, postings, comments, and other information posted on your social media sites affect people's opinion of you as a professional healthcare provider?	111 (69)	51 (31)
Should professional students be held to higher standards than others regarding the image they portray on social media sites?	85 (54)	73 (46)
<b>Privacy settings</b>		
Are you aware of the privacy settings on your social media sites?	163 (98)	3 (2)
Do you use the privacy settings available in your social media sites to limit public access to your information?	160 (96)	7 (4)

Abbreviations: PharmD = doctor of pharmacy, ASHP = American Society of Health-System Pharmacists.

<sup>a</sup> Not all participants responded to all survey items so the n for each item varied from 158 to 171.

changes to their social media site prior to an upcoming career fair or the ASHP Midyear Clinical Meeting compared to students planning to obtain a career in community pharmacy or other employment avenue (residency: 47%, community: 22%, other: 24%,  $p=0.006$ ). Post hoc, pairwise, chi-square tests using the Bonferroni adjustment, with significance set at 0.017, revealed a significant difference between students planning to obtain residency

positions compared to students planning to obtain community pharmacy positions ( $p=0.003$ ). More male than female students felt it was justified for a residency director or supervisor to research a candidate online and make decisions based on the information they find (male students, 67%; female students, 44%;  $p=0.009$ ). Students younger than 25 years of age were more likely to make changes to their social media site prior to an upcoming

Table 4. Graduating Pharmacy Students' Opinions About What Their Online Profile Conveyed to Others (N = 166)

Survey Item	Responded Yes, No. (%)
Number of students who feel that their online profile is an accurate view of them as a person or a professional.	
Person	141 (85)
Professional	83 (51)
Number of students who have information on their social media sites that they would NOT want a potential employer, faculty member, or patient to view.	
Employer	74 (46)
Faculty	58 (36)
Patient	51 (32)
Number of students who would NOT want a faculty member or supervisor to "friend" them.	
Faculty	96 (60)
Supervisor	106 (67)

career fair or the ASHP Midyear Clinical Meeting than older students (younger, 37%; older, 19%;  $p=0.03$ ). Comparisons between other subgroups did not produce significant results.

## DISCUSSION

This study reports the social media use patterns of graduating pharmacy students from 4 Midwestern institutions. Based on these results, students understand the importance of maintaining professionalism on their social media sites. The majority of students felt that pharmacy students should be held accountable for illegal or unprofessional acts discovered on social media. Interestingly, students felt their online image represented who they are as a person but not as a professional. This may be because social media sites are not viewed as a professional venue but used for personal expression and correspondence. Accordingly, the students did understand the importance of editing their profiles prior to applying for employment and the significance of being cautious about the information they present on their profiles. Students seeking a residency position and students younger than 25 years of age were more likely to make changes to their social media site prior to an upcoming career fair or the ASHP Midyear Clinical Meeting. This may be because younger students may have more information to change on their social media pages than older students and students planning to obtain a residency are more likely to attend the ASHP Midyear Clinical Meeting. More male than female students felt it was appropriate for a residency director or supervisor to research a candidate online and make decisions based on the information they find.

The present study results were similar to several outcomes reported by Cain and colleagues in assessing first-year pharmacy students' views of e-professionalism.<sup>10</sup> The majority of pharmacy students in their first and final year of study felt students should be held accountable for illegal and unprofessional behavior discovered through social media. Both groups reported that their online profile could potentially affect the public's opinion of them as healthcare professionals and were aware of the privacy settings available through social media sites. Additionally, the first-year and graduating pharmacy students had more information on their social media site that they would not want an employer to view compared to a faculty member or a patient. Finally, the students agreed that they would not want a faculty member to "friend" them on a social media page.

When comparing the studies, differences among responses were also discovered. The majority of first-year pharmacy students were of the opinion that their online

profile should not be considered when making hiring decisions (57%).<sup>10</sup> In contrast, fewer graduating pharmacy students felt it should not be considered (45%). This difference may be because more graduating pharmacy students used privacy settings compared to first-year pharmacy students. A larger percentage of first-year students felt that professional students should be held to higher standards online compared to the graduating pharmacy students. In addition, more first-year students felt the image they presented online represented who they were as a professional compared to graduating students. This difference may stem from lack of professional knowledge in students just beginning pharmacy school. The first-year student survey was conducted at the University of Kentucky and geographic differences between this survey and the graduating student survey should be considered. The time each survey was conducted may have also resulted in differences in responses.

The Cain and colleagues study conducted a comparative analysis assessing male and female student responses similar to the authors' study.<sup>10</sup> More male students were opposed to being held accountable for information presented on their social media sites. In this study, more female students did not feel it was justified for a residency director to make hiring decisions based on their online research of a candidate.

The authors' study had a few notable limitations. Despite the incentive, less than 50% of invited students participated in the survey. Some of the comparative analyses planned a priori could not be completed because of small sample sizes in the subgroups. In addition, responses to each question were not required; therefore, each question had a different response rate, making statistical analysis difficult to conduct. Demographic information questions did not require students to identify which college or school they were attending and did not collect data regarding any social media use policies at the college or school meaning that comparative analysis between institutions could not be conducted.

Future research comparing schools that actively enforce a social media policy and those that do not may produce differing views concerning e-professionalism. Some academic institutions use social media within classroom activities.<sup>16-19</sup> Comparing these students' views of e-professionalism to the views of students who only use social media for personal use, and making comparisons between schools that enforce professionalism within their curriculum through classes or mandatory sessions vs those who do not should also be considered. The implementation of an educational session to inform graduating students about the dangers of unprofessional behavior online may be beneficial to prepare the students for upcoming

recruitment processes. Assessing the effect of such a session on this population would be useful to determine its value.

## CONCLUSION

Many graduating pharmacy students use social media and plan to update their profiles before seeking employment. Younger students and those seeking residencies are the most likely to make changes to their profiles prior to seeking employment. This study's data support that the majority of graduating pharmacy students recognize the importance of maintaining a professional image.

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