

**EXAMINING BUSINESS STUDENT VICTIMS OF CYBERBULLYING:  
A COMPARISON OF GRADUATES AND UNDERGRADUATES**

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## EXAMINING BUSINESS STUDENT VICTIMS OF CYBERBULLYING: A COMPARISON OF GRADUATES AND UNDERGRADUATES

*This study examined differences in the cyberbullying experienced by undergraduate and graduate business students. Results from 350 respondents show that promiscuous friending, self-disclosure, and having friends who post provocative content are all significant predictors of cyberbullying victimization. Although there was no significant difference in the overall amount of cyberbullying experienced by graduate versus undergraduate students, undergraduates were more likely than graduates to be bullied by classmates. Surprisingly, cyberbullying among graduate students was more than an isolated event as over a third (35.4%) reported experiencing cyberbullying from a classmate at least one or more times in the past year. Implications are discussed.*

### INTRODUCTION

*“That Chinese chick in our group is so lame. She is just freeloading on us coz she can’t speak English. Stupid b\*\*\*\*\*, aaaaargh!!! Go back to China!”*

--comment posted on Facebook by undergraduate student about a classmate (Rowe, 2014)

Generally referred to as cyberbullying or cyber harassment, social networking sites are increasingly being used by college students to intentionally harass, humiliate, or cause harm to others. While early research on this issue tended to focus on adolescents and teens, studies show that one in five college students experience cyberbullying while in college (Selkie, Kota, Chan, & Moreno, 2015; Slovak, Crabbs & Stryffeler, 2015). Recent reviews have reported that over 30 percent of college students have their first experience with cyberbullying while in college, and prevalence rates in universities are as high as 62 percent (Faucher, Jackson & Cassidy, 2014; Lund & Ross, 2016). These statistics clearly demonstrate that cyberbullying is occurring among young adults and is more than an isolated phenomenon.

However, of even greater concern than the high prevalence of cyberbullying, is its impact on victims. Existing research on cyberbullying among college students shows there are serious consequences for victims including increased feelings of anxiety and depression, decreased ability to focus in classes, eating disorders, illegal drug use, and even suicide (Crosslin & Crosslin, 2014; Kraft & Wang, 2010; Selkie, et al., 2015). Furthermore, other studies show that victims of cyberbullying often contribute to their own victimization through their own risky behaviors (Dredge, Gleeson & Garcia, 2014; Kokkinos & Saripandis, 2017; Peluchette, Karl, Wood & Williams, 2015). Since much of the research on cyberbullying victimization of university students has focused on undergraduate students, the purpose of this study is to extend existing research by examining differences between undergraduate and graduate students in the types of cyberbullying experienced and the extent to which they engage in risky social networking behaviors. Given recent evidence that cyberbullying is becoming an increasing problem in the workplace (Wright, 2016), examining graduate students is important as those who engage in risky social networking behaviors are likely to be cyberbullied by coworkers as well as classmates. In this study, we focus specifically on cyberbullying via Facebook as past research

has shown that the most common media used for cyberbullying among students was Facebook (Peluchette et al, 2015; Walker, Sockman, & Koehn, 2011).

## **Victimization Theories**

The criminology literature has long acknowledged that victimization is not a random process in that not everyone is equally likely to be a victim. Instead some victims, either consciously or unconsciously, contribute to their own victimization by behaving in ways that elicit the hostility of potential perpetrators (Curtis, 1974). According to the Victim Precipitation Model, individuals perceived as *submissive* (anxious, quiet, sensitive, too accommodating, “too nice”) are considered safe targets by bullies because of their inability to defend themselves. In contrast, *provocative* individuals (aggressive, threatening, or irritating) prompt aggression in others because they either knowingly or unknowingly exhibit attitudes, emotions or behaviors that are considered threatening, hostile, annoying, or inappropriate (Aquino & Byron, 2002; Wolfgang, 1957). Several cyberbullying studies have applied this framework and found that victims’ online behavior and posting of negative content was associated with their victimization (Dredge, et al., 2014; Peluchette, et al., 2015). More recently, another criminology theory, Lifestyle Exposure Theory, has been applied in cyberbullying victimization research, proposing that demographic characteristics and situational factors influence individual differences in lifestyle behaviors which are related to the risk of victimization (Kokkinos & Saripandis, 2017; Meier & Miethe, 1993). For example, friending strangers may increase a Facebook user’s exposure to motivated offenders and posting inappropriate or indiscreet Facebook content might increase their target attractiveness.

## **VICTIMIZATION RISK FACTORS**

### **Promiscuous Friending**

College students have been found to have many Facebook friends. For example, Manago, Taylor and Greenfield (2012) found that the mean network size was 440, and the median was 370; however, some college students reported as many as 1,200 Facebook friends. In some cases, so-called “friends” may be complete strangers or someone with whom the individual has never met face to face. Miller, Parsons, and Lifer (2010) found that a surprising percentage (21.2 percent) of students did not screen people before accepting friend requests and that, like trading cards, students seemed to have fun ‘collecting’ Facebook friends where the goal was not the highest quality of contacts but the greatest number. Some studies have examined the impact of the number of Facebook friends on others’ impressions. For example, Utz (2010) found that the number of friends is positively related to other’s impressions of the target’s popularity and likability. However, having too many Facebook friends can lead to negative judgments about the profile owner as being too focused on Facebook and superficial in their relationships with others (Tong, Van der Hiede, Langwell, & Walther, 2008).

With regard to cyberbullying, studies have found that the number of Facebook friends is positively associated with cyberbullying victimization (Dredge et al, 2014; Peluchette et al., 2015). This increases risk because there are more potential perpetrators with access to the victim’s site. Recent research shows that the presence of many connections with those who are

not “real” friends elevates the likelihood of cyber harassment or cyberbullying (Wegge, Vandebosch, Eggermont & Walrave, 2015).

### **Self-Disclosure**

Self-disclosure, or the voluntary sharing of personal information about oneself with others, is the primary mission of Facebook. Studies show that the frequency of Facebook use, time spent on Facebook, and number of Facebook friends are all associated with a greater tendency to self-disclose (Ljepava, Orr, Locke, & Ross, 2013). While self-disclosure is widely recognized as playing a critical role in building interpersonal relationships (Jourard, 1971), research indicates that disclosure leads to favorable relational outcomes only when observers perceive that the one doing the disclosing is like themselves (Baruh & Cemalcilar, 2015). Sharing of personal information, especially that which is perceived by observers as inappropriate, can also result in negative consequences including damage to one’s reputation, employment termination, bullying and meanness, misunderstandings, and unwanted contact or harassment (Christofides, Muise, & Desmarais, 2012).

Additional research has examined the impact of victim self-disclosure on bystander reactions to cyberbullying. One study found that, when study participants viewed a high disclosure profile (i.e., many personal postings by victim), regardless of whether the content was positive or negative, they tended to blame the victim more and feel less empathy for the victim (Schacter, Greenberg & Juvonen, 2016). Likewise, Weber, Ziegele and Schnauber (2013) found their participants attributed more responsibility for a cyberbullying incident to the victim when the victim was very open in revealing personal information. Together, these studies suggest that the volume or amount of information shared (e.g., total photos posted, total comments posted) increases the chances that the victim will be noticed by a cyberbully and that the bully will take offense and respond negatively to what was been posted.

### **Provocative Profile Content**

The content of postings on one’s social media profile can also contribute to a greater risk of cyberbullying victimization. For example, Dredge et al. (2014) reported that the higher the frequency of wall posts containing negative affect, the greater the likelihood of being a victim of cyberbullying. Likewise, Peluchette et al. (2015) reported that posting indiscreet or negative content (e.g., profanity, negative comments about others, comments or photos of intoxication or substance abuse, sexually suggestive photos or comments, and negative work-related comments) and having Facebook friends who post such content were strong predictors of cyberbullying victimization. Additionally, Muscanell, Ewell and Wingate (2016) found more negative psychological reactions and behavioral intentions toward social media content that was risky or offensive (e.g., profanity, alcohol or other substance related, sexual content) than that which was mundane (e.g., everyday activities or hobbies). These findings are all consistent with Victim Precipitation Theory in that provocative content appears to trigger a negative response in others.

Negative content generated by one’s Facebook friends can also negatively affect others’ perceptions of the profile owner. For example, researchers experimentally manipulated the content of friends’ messages on otherwise neutral Facebook profiles to suggest either antisocial

(drunken and promiscuous) or prosocial (popular and inclusive) behavior on the part of the profile owner (Walther, Van der Heide, Kim, Westerman, & Tong, 2008). These messages were found to significantly impact observers' ratings of the profile owner's likeability and physical attractiveness even though they made up only a small part of the overall profile information. Similarly, Utz (2010) found that observers' ratings of the profile owners' honesty, reliability, and social attractiveness were significantly affected by friends' postings. In addition, postings and comments generated by Facebook friends were found to have greater impression weight than user-generated postings (Walther, Van der Heide, Mamel & Shulman, 2009). Together, these findings suggest that we are indeed "known by the company we keep" (Walther et al., 2008) and that inappropriate content posted by a profile owner's friends is likely to provoke a negative response from cyberbullies.

### **Student Level: Undergraduate versus Graduate**

Because cyberbullying research on college campuses tends to utilize samples of undergraduate students and the interventions proposed focus primarily on freshmen (e.g. Faucher et al., 2014; Walker, et al., 2011), one might conclude that cyberbullying is only a problem among undergraduate students. However, studies have reported trends in cyberbullying such that previous experience with cyberbullying (either as perpetrator or victim) was a significant predictor of experiencing cyberbullying while in college (Dilmac, 2009; Kraft & Wang, 2010; Zalaquett & Chatters, 2014). For example, Chapell, Hasselman, Kitchin, Lomon, MacIver, and Sarullo (2006) found 40 percent of victims, and over 50 percent of bullies in elementary and high school, repeated the same pattern as undergraduate students. Given this trend and the fact that some graduate students enter graduate school soon after completion of their undergraduate education, we believe that cyberbullying is also likely to be occurring among graduate students.

However, given that many graduate students may also tend to be older and more mature than undergraduate students, as well as more focused on their professional careers, it is possible that the incidence of cyberbullying is significantly less for graduate students. In support of this notion, Zalaquett and Chatters (2014) found that incidences of cyberbullying declined with age, such that 58 percent of participants between the ages of 20 and 25 reported being cyberbullied, 37 percent of those between the ages of 26 and 29, and only 5 percent of those 30 and over. Gibb and Devereux (2014) also found a significant effect for age indicating that, for each one-year increase in mean age reported, cyberbullying decreased by approximately 10 percent. It should also be noted that Gibb and Devereux (2014) found that freshmen reported a significantly higher rate of cyberbullying than graduate students but they found no significant difference was found between graduate students and any other group (i.e., sophomores, juniors, seniors). However, this insignificant effect for student level is likely due to the small number of graduate students (N=21, 6.8 percent) included in their study. Thus, given that graduate students tend to be older than undergraduates, and age has been found to be related to cyberbullying victimization, we predict:

*H1: Graduate students will be less likely than undergraduate students to engage in promiscuous friending.*

*H2: Graduate students will have a lower level of self-disclosure on Facebook than undergraduates.*

- H3: Graduate students will be less likely than undergraduate students to post provocative content.*
- H4: Graduate students will be less likely than undergraduate students to have Facebook friends who post provocative content.*
- H5: Graduate students will be less likely to be victims of cyberbullying than undergraduate students.*
- H6: Graduate students will be less likely to be cyberbullied by a classmate than undergraduates.*

## **METHODOLOGY**

### **Sample**

For this study, we sampled both undergraduate and graduate business students at a medium-sized private university in the Midwest and a medium-sized public university located in the Southeastern part of the United States. Participation was voluntary and adhered to IRB guidelines. For minimal extra credit, students were given the option of participating in the survey or completing an alternate assignment. Of the 205 undergraduate surveys distributed, 193 were returned for a response rate of 94 percent. Of the 211 graduate student surveys distributed, 197 were returned for a response rate of 93 percent. However, given that our purpose was to examine the impact of inappropriate Facebook content on cyberbullying victimization, we eliminated the four undergraduate participants and 34 graduate students who indicated they did not participate in Facebook. The remaining sample (N=350) consisted of 189 undergraduates (54 percent) and 161 graduates (46 percent).

### **Survey Instrument**

The survey instrument consisted of six sections: (1) demographic, (2) Facebook usage, (3) promiscuous friending, (4) self-disclosure, (5) provocative Facebook content, and (6) cyberbullying victimization.

*Demographic items.* Gender, age, and hours worked per week were included on the survey for descriptive purposes to provide a better understanding of the participants.

*Facebook usage.* Three questions were included in this section including: (1) whether they participated in Facebook, (2) minutes spent per day on Facebook, and (3) whether or not they used privacy settings.

*Promiscuous Friending.* Research shows that humans tend to have a finite number of people (friends, relations, acquaintances) with which they have regular contact. For example, Dunbar (2008) reported that, on average, the human social network consists of 150 people; although, there is some variation in this number (the range is around 100-300). Therefore, regardless of the number of Facebook friends one claims to have, individuals who report more than 300 Facebook friends are likely to have friended people that they barely know or do not know at all and that the more friends they have, the more promiscuous they are in their friending behavior. Thus, the total number of Facebook friends was used as a measure of promiscuous friending.

*Self-disclosure.* This measure consisted of three items: (1) how often they posted comments or photos on their own wall; (2) how often they posted on their friends' wall; and (3) how often respondents clicked the "Like" button in response to others' postings. For all three questions, respondents were given six options: hourly, daily, weekly, monthly, one to six times per year, or never.

*Provocative Facebook Content.* The extent to which respondents posted inappropriate information on their Facebook site was measured using a modification of the ten-item "Facebook Faux Pas" Scale developed by Karl, Peluchette, and Schlaegel (2010). Respondents reported how likely (1 = Very Unlikely to 5 = Very Likely) they would post seven types of information on Facebook: (1) profanity, (2) discriminatory language, (3) negative comments about others, (4) comments or photos of alcohol, (5) comments or photos regarding drug use, (6) sexually suggestive photos or comments, and (7) negative comments about others. In addition, respondents were asked approximately how many of their Facebook friends had posted any of the same seven items on their Facebook site. The response scale included six options: (1) 0%, (2) 1-10%, (3) 11-25%, (4) 26-50%, (5) 51-75%, and (6) 76-100%.

*Cyberbullying Victimization.* Cyberbullying victimization was measured using a modification of the cyberbullying scale developed by Peluchette et al. (2015). The measure consisted of sixteen items (e.g., inappropriate use of profanity, unwanted sexual advances, and comments intended to humiliate or belittle you in front of your peers). For each item, respondents were asked (1) "How many times have you experienced this type of incident on Facebook?" (more than 20 times, 11-20 times, 4-10 times, 1-3 times, never), and (2) "Who sent the communication?" (romantic partner, personal acquaintance, classmate, someone I don't know, professional acquaintance, family member, coworker, or supervisor). Respondents were instructed to respond to each item in terms of what they had experienced in the past year. We then computed three measures of cyberbullying victimization. A total cyberbullying victimization score was computed by taking the average of participants' responses on the "How many times" questions for each of the sixteen items. A classmate cyberbullying victimization score was computed by summing up the different types of cyberbullying experienced by each participant from a classmate. Lastly, we computed a dichotomous classmate cyberbullying victimization variable which was scored as 0 if the student had not been cyberbullied by a classmate at all in the past year or 1 if the student had experienced any of the sixteen forms of cyberbullying from a classmate in the past year.

## RESULTS

An examination of our demographic variables revealed our sample (N=350) consisted of 178 males (50.9%) and 172 females (49.1%). Regarding age, 226 (64.6 %) were 20 to 24 years old, 63 (18%) were 25 to 29, 24 (6.9%) were 30 to 34, 13 (3.7%) were 35 to 39, 12 (3.4%) were 40 to 44, and the remaining 12 (3.4%) were 45 or older. The graduate student sample was found to be significantly older than the undergraduate sample [ $F(1, 347) = 78.83, p < .001$ ], such that the average response for undergraduates was 20 to 24 years old (mean = 1.23, std. dev. = .82) and the average response for graduate students was 25 to 29 years old (mean = 2.34, std. dev. = 1.47). The graduate sample also worked significantly more hours per week than the undergraduate sample [graduate mean = 36.9, std. dev. = 12.74 versus undergraduate mean =

19.69, std. dev. = 11.86, respectively;  $F(1, 341) = 167.26, p < .001$ ]. Means, standard deviations, reliability estimates, and correlations are shown in Table 1.

An examination of the means shows that our sample engaged in a considerable amount of promiscuous friending as the average number of friends was 654.93 (median = 600). The average minutes spent per day was 73.4 (std. dev. = 76.68), and 92 percent used privacy settings. There was a moderate amount of self-disclosure, meaning most students made postings or clicked the “Like” button monthly or weekly. Very few students indicated that they would be likely to post any of the items included in our measure of provocative content, although most students in our sample reported that their Facebook friends had posted provocative content. While the overall mean for cyberbullying victimization was low, we found 67 percent had experienced at least one of the types of cyberbullying on at least one occasion during the past year (70.1% of undergraduates and 64% of graduate students). Similar to past research, we also found promiscuous friending, self-disclosure, posting provocative content oneself, and having friends who post provocative content were all significantly related to cyberbullying victimization.

**TABLE 1.**

**Means, Standard Deviations, Reliabilities, and Correlations Among All Variables**

Variables	Mean	SD	1	2	3	4	5	6
1. Promiscuous Friending (Number of Facebook Friends)	654.93	466.21	---					
2. Self-disclosure	3.43	.98	.21***	(.83)				
3. Posts Provocative Content	1.33	.48	.01	.21***	(.78)			
4. Friends Post Provocative content	2.77	.87	.19***	.14**	.30***	(.87)		
5. Cyberbullying Victimization (Total all sources)	1.4	.51	.26***	.20***	.16**	.30***	(.87)	
6. Cyberbullying Victimization from Classmate (Sum of all sixteen types)	1.78	2.72	.21***	.05	-.02	.22***	.48***	(.85)

Note: Coefficient alphas are in parentheses.

- \* p < .05
- \*\* p < .01
- \*\*\* p < .001



A comparison of means using ANOVA was used to test for differences between graduate and undergraduate students. However, we first tested for normality and homogeneity of variance. Because the normality assumption (time spent on Facebook, provocative content posted oneself, provocative content posted by one's friends, total cyberbullying received by one's classmates, and total cyberbullying from all sources) and the homogeneity of variance assumption (time spent on Facebook and provocative content posted by one's friends) was violated for many of the variables, we also reported the Welch Test. In support of Hypotheses 4 and 6, graduate students were less likely to have friends who posted provocative content and less likely to be cyberbullied by a classmate. However, contrary to what was predicted, graduate students had a higher level of self-disclosure on Facebook than undergraduates. Also, there was no significant difference in the amount of promiscuous friending, provocative content posted, or the overall cyberbullying experienced from all sources by undergraduates when compared to graduate students. Thus, hypotheses 1, 2, 3 and 5 were not supported. While we made no prediction on time spent on Facebook, undergraduates were found to spend more time on Facebook than graduate students (see Table 2).

To further test hypothesis 6, we examined the extent to which graduates and undergraduates experienced each of the sixteen types of cyberbullying. Several significant differences were found. Undergraduates were more likely than graduate students to experience each of the following types of cyberbullying from a classmate: inappropriate jokes about you, insulting or offensive remarks, persistent unwanted teasing, comments intended to humiliate or belittle you in front of your peers or coworkers, comments intended to ruin your personal reputation, physical threats, and comments that were intended to exclude you or isolate you from peers or coworkers (see Table 3).

**TABLE 2.**

**Mean Comparisons by Student Level**

Variables	Total		Undergraduate Students		Graduate Students		F (1, 349)	Welch Test
	M	SD	M	SD	M	SD		
Time spent on Facebook per day (Minutes)	73.40	76.68	82.20	84.59	63.07	64.94	5.48*	5.71*
Promiscuous Friending (Number of Facebook Friends)	654.93	466.21	622.24	377.04	693.30	551.65	2.03	1.91
Self-disclosure	3.43	.98	3.32	.97	3.56	.98	5.14*	5.13*
Posts Provocative Content Oneself	1.33	.48	1.36	.56	1.30	.38	1.42	1.49
Friends Post Provocative Content	2.77	.87	2.92	.93	2.61	.77	11.04***	11.32***
Cyberbullying Victimization (total all sources) <sup>1</sup>	1.4	.51	1.45	.52	1.35	.49	3.2	3.23
Cyberbullying Victimization from Classmate (Sum of all types)	1.78	2.72	2.27	3.0	1.22	2.24	13.32***	13.91***

<sup>1</sup>Means are the sum of all types of cyberbullying received from each perpetrator in the past year.

- \* p < .05
- \*\* p < .01
- \*\*\* p < .001

**TABLE 3.**  
**Percentage of Students Who Experienced Cyberbullying from a Classmate by Type of Incident**

<b>Type of Cyberbullying Incident</b>	<b>Total Sample</b>	<b>Undergraduate Students</b>	<b>Graduate Students</b>	<b>Chi Square (df = 1, 349)</b>
1. Inappropriate use of profanity	22.6%	26.1%	18.6%	2.73
2. Inappropriate jokes about you	21.2%	29.3%	11.8%	15.81***
3. Insulting or offensive remarks	20.6%	27.7%	12.4%	12.30***
4. Inappropriate jokes or comments of a sexual nature	17.5%	19.7%	14.9%	1.37
5. Inappropriate racist/sexist comments	15.8%	18.1%	13.0%	1.66
6. Persistent unwanted teasing	13.2%	18.15%	7.55%	8.57**
7. Unwanted romantic or affectionate messages (e.g., poetry, songs, praise)	12.6%	14.9%	9.9%	1.93
8. Unwanted religious messages	10.3%	12.2%	8.1%	1.62
9. Unwanted sexual advances	8.3%	9.6%	6.8%	.86
10. Comments intended to humiliate or belittle you in front of your peers or coworkers	6%	9.6%	1.9%	9.11**
11. Comments intended to ruin your personal reputation	6%	9.0%	2.5%	6.60**
12. Personal information about you that should have been kept private	5.4%	6.9%	3.7%	1.71
13. Pornographic/obscene images or messages	5.2%	5.9%	4.3%	.40
14. Physical threats	4.9%	7.4%	1.9%	5.84*
15. Comments that were intended to exclude you or isolate you from peers or coworkers	4.3%	6.9%	1.2%	6.79**

16. Unjustified criticism of your work	4.3%	5.3%	3.1%	1.03
Percentage who experienced at least one of the above in the past year.	45%	53.2%	35.4%	11.09***

Additionally, when we examined the percentage of students who had experienced at least one of the sixteen types of cyberbullying from a classmate at least one or more times in the past year, we found a significantly higher percentage for undergraduates (53.2%) than for graduate students (35.4%; Chi Square = 11.09,  $p < .001$ ).

## DISCUSSION

Roughly 67 percent of our respondents indicated that they had experienced some type of cyberbullying during the past year. Consistent with victimization theories, we found that victims' own risky social media behaviors were significant contributors. For example, provocative content posted by one's Facebook friends was the strongest predictor of cyberbullying victimization. Like the well-known phrase "birds of a feather flock together," such content affects viewers' perceptions of the profile owner, such that the profile owner is believed to share their friends' beliefs and values and engage in similar behavior. A second risky behavior contributing to cyberbullying victimization was promiscuous friending. On average, students in our sample had over 650 Facebook friends suggesting most of their friends are not known very well, if at all. By engaging in promiscuous friending, students increase the size of the audience who views their profile and the number of people who might react to provocative content. Together, these findings confirm other research findings, demonstrating that Facebook users are known by the company they keep (Walther et al., 2008). A third significant predictor of cyberbullying victimization was self-disclosure. The more Facebook users post content or click the "Like" button, the more attention they draw to themselves, thereby increasing the risk that viewers might take offense and react negatively.

In addition to confirming that victims' own risky social media behaviors contribute to the problem, this study extends past research by examining cyberbullying among graduate students as well as undergraduates. Undergraduates were found to spend more time on Facebook than graduate students and were also more likely to have friends who posted provocative content. Thus, it appears that undergraduate students put themselves at greater risk of cyberbullying victimization. Our failure to find a difference between graduates and undergraduates in promiscuous friending may be due to the possibility that graduate students acquired many of their Facebook friends while they were undergraduate students and failed to unfriend them as they transitioned in graduate school. Research shows that many Facebook users are reluctant to unfriend anyone (Kramer, Hoffman, & Eimler, 2015), and that hiding a friend is often used as alternative to unfriending (Gashi & Knautz, 2016). This may also explain why we found no significant difference between graduate and undergraduate students in the amount of cyberbullying experienced overall from all sources. However, undergraduates were more likely than graduate students to be cyberbullied by classmates. Despite this difference, a considerable proportion (35 percent) of graduate students reported experiencing at least one type of

cyberbullying during the past year from a classmate. Clearly, cyberbullying is a problem among graduate students as well as undergraduates.

## **IMPLICATIONS**

Although cyberbullying tends to be viewed as something that is happening on social media and outside the boundaries of the university, the fact that classmates were common perpetrators for many of our respondents, shows that the issue is spilling over into the classroom and university environment. Additionally, the problem is not limited to undergraduate students. Therefore, it is essential that faculty are made aware of the problem so that they can use strategies for managing cyberbullying in the classroom. For example, faculty should put relevant policies on their syllabi and discuss expectations regarding communication among those in the class (Washington, 2014; Watts, Wagner, Velasquez, & Behrens, 2017). Even though faculty may not be social media users themselves, they need to be knowledgeable enough to provide expectations and guidelines about how they expect their students to communicate with one another, both within the classroom, on university classroom support platforms (e.g. Blackboard, Canvas), and outside the classroom on social media (e.g. Facebook, GroupMe, etc.). In support, a recent study of students shows that, when asked what role the university should play in reducing cyberbullying problems, the most highly rated item was that faculty should have policies on their syllabus about respectful communication in online platforms (Bauman & Baldasare, 2015). This sets a tone for what is viewed as appropriate behavior and is especially important in classes that involve a lot of group work and projects. Faculty should also educate students about their university's cyberbullying policy, appropriate reporting mechanisms, and resources available on campus.

Our study also has potential implications for employers. Given evidence that virtual harassment occurs more frequently than face-to-face harassment (Ford, 2013), it is important that employers be proactive in protecting their employees from cyberbullying. For example, company policies regarding technology use should be linked to the firm's workplace bullying, harassment, and discrimination policies with clear indications of disciplinary consequences (Llewellyn, 2009). Companies should provide "cyber manners" training for all forms of technology use and standards for workplace friendships and romantic relationships should be explicit as these can be a source of cyberbullying (Liefoghe, 2012; Piotrowski, 2012). Firms should also provide a confidential and well-structured complaint process so that employees receive appropriate support and feel assured their employer is taking the matter seriously (Llewellyn, 2009; Piotrowski, 2012).

## **LIMITATIONS AND FUTURE RESEARCH**

As with any research, this study has some limitations. Students were asked to self-report their level of Facebook activity, what they posted on their profiles, as well as what their friends posted. The low correlation between self-posted provocative content and cyberbullying victimization, as well as the low variability on this measure, suggest that a social desirability bias influenced student responses. Future research should examine actual Facebook profiles to determine number of friends, level of self-disclosure, and provocative content. Additionally, this study focused exclusively on the most popular type of social networking platform (Facebook), but many other forms and sites exist. Future research should examine cyberbullying and its

prevalence on other social networking platforms that are growing in popularity (e.g. Twitter, Snapchat, Tumblr and Google+), as well as video and photo based social networking sites, such as Instagram, Pinterest, Facebook Live, Vine, and Flickr. Since many students use sites like GroupMe as a means of interacting with classmates about class projects, these sites should also be included in any future research.

Another avenue for future research is to investigate how this issue is being addressed on university campuses. For example, Faucher, Jackson, and Cassidy (2015) examined 465 policy statements at 74 Canadian universities, comparing similarities and differences in language, currency, and reporting mechanisms. A similar study is needed of policy statements at U.S. colleges and universities. In addition, we know little about the type, prevalence or effectiveness of the mechanisms being used for disseminating information to students or staff (e.g. orientation sessions, student handbooks, inclusion on syllabi) or how programs in place to help student victims are working (e.g. reporting procedures, counseling services, peer support groups).

## **CONCLUSION**

Cyberbullying among college students is all too common. This study extends past research by showing that it occurs among graduate students as well as undergraduates. It is recommended that faculty be more proactive in preventing its occurrence. It is hoped that our findings will enable educators to minimize the occurrence of cyberbullying on university campuses and stimulate future research.

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