CYBERBULLYING IN HIGHER EDUCATION: A SYSTEMATIC REVIEW ON CYBERBULLYING AMONG STUDENTS IN AMERICAN AND CANADIAN COLLEGES AND UNIVERSITIES

by

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Abstract

Recent studies have defined cyberbullying as an anonymous repeated or non-repeated aggressive intentional electronic act carried out by an individual or individuals to embarrass or harm victims (Barr & Lugus, 2011; Cunningham et al., 2015; Walk, 2014). Research also suggests that cyberbullying occurs in higher education settings and there is a strong need to develop policies, programs, and interventions for cyberbullying in the sphere of higher education (Chatters, 2014 & Watts et al, 2017). Limited evidence about anti-cyberbullying programs in university settings is available in the literature examining the U.S. and Canada’s higher education settings. The purpose of this systematic review is to examine and systematically compile literature methodologies and findings of cyberbullying among students, to explore the evidentiary basis for future research on cyberbullying in higher education. This systematic review included 102 research articles in a wide variety of journals published in the U.S and Canada between 2008 and 2018, and investigated cyberbullying of students in contexts of higher education. The review explored empirical research about the prevalence of cyberbullying among college and university students, the content of cyberbullying, and the research methodology. Studies focused on victims of cyberbullying, while the content of cyberbullying was indicated as being a combination of offensive texts and pictures/videos. Reviewed studies were generally quantitative in nature that accumulated data through the years 2008 to 2018, with a noticeable lack in research about the Canadian context of higher education.

Key Words: Cyberbullying, Higher Education, Teaching, Learning, Internet
Acknowledgements

This paper is dedicated to all those individuals who helped me to accomplish this step in my academic life. I sincerely dedicate this paper to my husband for the endless support and encouragement, this would not have been possible without you. To my parents: thank you for giving me the foundation for success and for all the years of love. I dedicate this paper to the soul of Prof. John Freeman who was present whenever I needed him, and for the time he offered to help me become a Queen’s student. He will always be part of my lovely memories at Queen’s University. I would like also to thank Prof. Jordan Shurr and Prof. Ian Matheson my supervisors who inspired me to be better despite all the challenges and all the obstacles. Thank you for your tolerance, guidance, and moreover for your endless kindness. Also, I would like to thank Marlene Sayers, Brenda Reed and Christopher DeLuca who have been always there when I needed assistance. Everything I am is because of you all.

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Chapter 1
Introduction

1.1 Cyberbullying in Higher Education

Post-secondary students and educators are increasingly using technology as a learning tool for various educational activities as well as for social communication. The impact of technology on both teachers and students can be positive in various ways such as sharing educational resources, exam tips, class websites, virtual labs and many more. This impact may also vary if we consider some factors such as the cost of providing educational material, the level of the course and the nature of users (Eynon, 2005). Despite the benefits of the Internet and the role that it plays in providing students with access to educational resources within the field of higher education (Selwen, 2008), often the students' technical know-how can become a gateway to a variety of unpleasant practices (Aricak, 2009). Although the “Bullying” term most of the times might refer to younger age groups (elementary or secondary stages), but recent studies have suggested that cyberbullying occurs in higher education settings (Finn, 2004; Lindsay & Krysik, 2012; Smith & Yoon, 2013; Zalaquett & Chatters, 2014; Zhang, Land, & Dick, 2012), with a prevalence rate that ranges from 10% to 28% among college students (Zalaquett & Chatters, 2014).

For the purposes of this review, cyberbullying was defined as an anonymous repeated or non-repeated aggressive intentional electronic act carried out by an individual or individuals to embarrass or harm victims (Barr & Lugus, 2011; Cunningham et al., 2015; Walk, 2014). The content of cyberbullying can be defined as the degrading input/components that perpetrators use online to target their victims. This content may include online threats and the electronic
circulation of embarrassing videos, images, or personal information (Cunningham et al., 2015), and can be shared through text messages, emails, and chat rooms (Zalaquett & Chatters, 2014).

Finn (2004) was one of the first to discuss cyberbullying in a university context in the US. The study revealed that ten percent of a sample of 339 students experienced online threats or harassment, with only 6.8% of the incidents reported. Subsequent studies revealed the reasons behind cyberbullying in universities, including the stress associated with attending university and being away from home, creating a new social life, the exposure to cultural differences, and the academic workload (Cismaru & Cismaru, 2018). Furthermore, sexual and political issues have been found to influence cyberbullying behavior among university students (Finn, 2004; Yubero et al., 2017). Living on campus has also been correlated to cyberbullying behaviors (Kraft & Wang, 2010). Older students may have family responsibilities and may not live on campus, and at the same time, they may not spend as much time on social media networks as younger students, which means that they are at a lower risk of being cyberbullied than younger students who live on campus (Kraft & Wang, 2010).

Some researchers have suggested that the anonymity of the online environment encourages students to do things that they would not do in person (Kraft & Wang, 2010). A study by Aricak (2009) on undergraduate students showed that there were more cyber victims than cyberbullies due to the fact that individuals can stay anonymous while engaging in cyberbullying behaviors. The findings of this study were supported by Mehri, Farrell, and Le (2014), who indicated that the anonymity of cyberbullying behaviors reduces the risk of passive repercussions such as punishment from authorities, which means that perpetrators are less likely to be caught suggesting that they are more likely to repeat the behavior.
1.2 Victims and Perpetrators of Cyberbullying

Several risk factors are associated with being a victim of cyberbullying. The first factor is related to the amount of technology use. Research suggests that the chances of being a victim of cyberbullying are expected to be positively correlated with the amount of time spent online (Kim, Boyle, & Georgiades, 2017). Second, past victimization is perceived as a risk factor for future victimization (Young-Jones et al., 2015); this is supported by the fact that the long-term negative consequences of childhood and youth victimization may develop in adulthood (Chapell et al., 2004). Third, victims of offline bullying are likely to be bullied online (England & Muldowney, 2007).

On the other hand, certain personal factors and individual traits have been linked to people becoming perpetrators of bullying in cyberspace. These factors and traits include having low self-esteem; feelings of loneliness, frustration, and anger that are associated with the lack of social acceptance (Yubero et al., 2017); or the perception of unfair treatment by others (Keashly & Neuman, 2010). In addition, moral disengagement and low levels of empathy could encourage bullying behaviors in cyberspace (Mehri et al., 2014).

1.3 Consequences of Cyberbullying

It is important to address the consequences of cyberbullying. Cyberbullying behaviors can spread very quickly and can affect a huge population in a short time. This rapid spread can be due to the fact that the content used in cyberbullying can be easily copied or forwarded by individuals other than the bullies (Baldasare et al., 2012; Yubero et al., 2017), which leaves victims incapable of identifying the perpetrator/s and defending. Cyberbullying behaviors can affect learning and life among college/university students and can lead to low self-esteem,
depression, and poor academic performance (Smith & Yoon, 2013). These behaviors have also been found to be associated with mental health issues and substance use such as drug and alcohol abuse (Kim et al., 2017). Furthermore, if the bully and the victim know each other, then cyberbullying can go beyond emotional and psychological harm to take on the shape of in-person physical abuse – the bully can use information about the victims posted online against them (Barr & Lugus, 2011).

1.4 Policies and Anti-Cyberbullying Programs

There is a strong need to develop policies, programs, and interventions for cyberbullying in the sphere of higher education. Anti-cyberbullying programs in university settings require attention that is different from the approaches used for younger students due to variances in the age and social maturity of college and university students (Cunningham et al., 2015). Literature has outlined cyberbullying research conducted in a K-12 school and workplace contexts, with a limited focus on cyberbullying in higher education settings. Knowing the kind of cyberbullying behaviors that are common among a higher education population and the manner in which students handle cyberbullying practices could help in developing college and university anti-cyberbullying programs.

1.5 The Current Study

Throughout secondary education, cyberbullying has been extensively studied among both, pre-teens and teenagers (Smith & Yoon, 2013). Despite the global attention to such behavior, the research on cyberbullying phenomena and characteristics among post-secondary students are mostly unknown (Smith & Yoon, 2013; Zalaquett & Chatters, 2014). Moreover, most of the students who reported bullying were not satisfied with the outcome of their report
Accordingly, there is a need to consolidate the current research on cyberbullying in higher education contexts to inform more effective and proactive responses.

The purpose of this review is to examine and systematically compile literature methodologies and findings of cyberbullying among students, to explore the evidentiary basis for future research on cyberbullying in higher education. This review focused on college and university students and their roles as victims or perpetrators, in the context of cyberbullying (e.g., insulting postings or comments), research methods and data collection sources, and the frequency of research conducted in the U.S. and Canada. To gain a better understanding of the literature, the following questions were introduced as the research questions:

1. What are the current research methods and instruments used to provide an evidentiary base of cyberbullying research in the US and Canadian higher education institutions?
   a. How is the research distributed over the years?
   b. Where is the research published?
   c. What methodology and data collection/strategies (e.g., survey, focus group, interview or mixed) are used?

2. What is the main content (e.g., text messages, pictures or video) of cyberbullying among students at college/university?

3. What type of research (e.g., quantitative, qualitative or mixed) is used to provide an evidence base for research on cyberbullying in the context of higher education?

The outcomes of this review can aid further research in enhancing the quality of anti-cyberbullying programs and interventions, and how to reduce the prevalence of cyberbullying and deal with individual cases in this context.
This project will start by exploring the different cyberbullying research methodologies by introducing the source of data used, inclusion and exclusion criteria followed then the method of data analysis and research instruments (Chapter 2). Then, it will be followed by reporting the results and findings from 102 articles and stating the effect of each research tool to help future researchers and to set the guidelines of future studies in the cyberbullying research area (Chapter 3). Finally, a discussion, future research recommendations, and conclusion are included in the last chapter (Chapter 4).
Chapter 2

Method

The articles included in this review were selected from previously published research papers addressing the prevalence of cyberbullying among college and university students in the U.S. and Canada. The aim of this systematic review is to compile literature findings (as described in Grant, 2009) on cyberbullying among college and university students to provide recommendations for future research in this area. The importance of the systematic literature review method used in this project (see Figure 1) is to provide an overview of the field and its critical directions such as information on the participants of the studies, the content of cyberbullying, and the research methods, number, and years of publications of studies conducted in the U.S. and Canada. This will be accomplished by stating, tabulating and graphing, what has been achieved, what remains unknown and giving plausible recommendations for future research. This method of systematic review has been followed in many articles such as (Jenaro, 2018).

The initial sample of abstracts included 743 articles. After examining the abstracts, we found that 113 were relevant, 4 possibly relevant, and 626 irrelevant references. Full texts of abstracts that met the criteria were retrieved for further review and assessment. Eleven articles were excluded later for the following reasons: the studies were either conducted outside the U.S. and Canada (except for international studies that included the U.S./Canada or both in the study; \( n=3 \)), or the researcher could not access the full text (\( n=8 \)). The remaining 102 articles were all included in the final analysis.
Figure 1. Flow chart for the research methodology showing the data sources used and the number of articles remaining after each filtering process.
2.1 Data Sources

To foster physical and mental well-being among students, educational efforts need to focus on teaching students how to cope in the online world by increasing their awareness of cyberbullying. For this reason, the researcher selected databases that were closely related to the fields of education, humanities, and psychology. Articles for the current review were located through three electronic databases: PsychINFO, ERIC, and Web of Science Core Collection. Articles published on the database Web of Science Core Collection are all peer-reviewed, which is one of the inclusion criteria established for this review. The search was restricted to include peer-reviewed English articles published between 2008 and 2018 and set in the U.S. and Canada only to focus on publications during the last decade because the electronically mediated communication tools have evolved and initiated a new variation in cyber-harassment.

Following initial search efforts to determine the range of terminology used within this narrow field of focus, the researcher identified a collection of terms for each variable that is of importance to the present study: “cyber OR online OR electronic OR techno* OR mobile” was used to capture electronic device-related activities such as the use of the internet, AND “bully* OR aggress* OR harass* OR victim*” to detect harmful, abusive, and violent behaviors and attitudes, AND “university* OR college* OR “post-secondary” OR “postsecondary” OR “higher education” OR tertiary” to locate highest levels of educational qualification beyond high school.

Within each database, the researcher elected to search all abstracts and titles for the terms outlined above. The PsychINFO database search identified 243 articles, the ERIC database identified 80 articles, and Web of Science Core Collection database identified 654 articles—altogether providing a total of 977 articles. The articles were entered into Covidence, a software that screens abstracts/full articles and reduces effort by managing duplicated articles.
(Kellermeyer, Harnke, & Knight, 2018). A total of 743 non-duplicate articles remained following the initial screening by Covidence.

2.2 Inclusion and Exclusion Criteria

Papers selected for the initial review had to meet the following inclusion criteria: conducted in a context or setting of higher education; involved college and university students as participants; and examined cyberbullying behaviors (e.g., stalking, aggression, harassment, victimization, abuse, exclusion, sexual violence, trolling, racialism, despotism, humiliation, and hostility) that were carried out using electronic devices (e.g., cell phones, computers) to send content (e.g., photos, videos, posts, comments, and messages) through internet websites or emails.

Since the focus of the study is on the U.S. and Canadian higher education, international studies were excluded from the review, unless the U.S. or Canada, or both were part of the study. Workplace cyberbullying studies were excluded if college/university students were not addressed as victims, bullies, bully-victims, or bystanders in the study. Full texts of the articles that met the criteria were retrieved to determine further eligibility.

Given these inclusion and exclusion criteria, a final sample of 102 studies was included in this systematic review.

2.3 Data Analysis

To gain a deeper understanding of the current phenomenon in this context, several elements of the 102 articles were reviewed. These elements included the participants of the studies, research methodology and data collection method, role of participants, the content of cyberbullying, and country, year, and Journal of the study. Below are the elements for data analysis:
2.3.1 Participants. Participants for each study were described as the following: college/university students, and non-college/university (school students, adults, faculty and/or administrative and/or staff).

2.3.2 Research methodology and data collection method. Articles were categorized as quantitative, qualitative, mixed-method, systematic review, literature review, or other. Articles were also classified based on the data collection method employed, including survey, focus group, interview, and mixed if more than one of the previous methods were combined in the study, and other for non-data-based studies (e.g., examining documents).

2.3.3 Role of participants. One element of analysis was the role of participants in instances of bullying: victims, perpetrators, or both, and others (e.g., bystanders). Victims’ and perpetrators’ roles were identified in each study based on the instrument used to capture the perception of the sample of the study.

2.3.4 Content of cyberbullying. The content of cyberbullying behaviors included the following: offensive texts such as threats and humiliating comments, and pictures/videos. Offensive texts include chat room messages, messenger messages and text posts on social networks. While pictures and videos include posting an embarrassing or any personal appearance of the victims without consent or knowledge. Studies with content combining the aforementioned two types were coded by a third description called mixed, and they were coded as other or not specified if different or no details were provided in the study.

2.3.5 Country of the study. Articles were categorized based on the country of study as the following: USA, Canada, USA & Canada, international studies that included the USA and/or Canada, or as not specified.
2.3.6 Year and journal of the study. The year of each study and the journal of publication were also presented in the table of categories.

2.4 Interrater Reliability

Following the establishment of inclusionary and exclusionary criteria for the present systematic review, two researchers independently applied the criteria to 32% ($n=238$) of the included articles. Interrater reliability was calculated by Prof. Jordan Shurr and Prof Ian Matheson. The independent review resulted in an interrater agreement 91% indicating acceptable reliability for application of the inclusion/exclusion criteria (e.g. Hancock, 2017, Leisring, 2014 and Melander, 2018).
Chapter 3

Results

This chapter compiles the findings from the articles understudy to characterize the quantity of research performed. It also represents a tool that can be utilized to identify the need for a primary or secondary research area. The sections in this chapter are designed to facilitate the data extraction and to provide findings for a better understanding of the variables in each study.

The first section of this chapter focuses on the participant’s role as one of the variables and tabulates the various reported forms (content) of cyberbullying. The second section provides information about the participants involved in these studies and the third one tabulates the data collection methodology followed. Section 3.4, focuses on the country at which the studies were performed and the following section shows the number of relevant publications each year. The last section of this chapter, section 3.6, investigates the relationship between the different variables and provides a cross-tabulated data to further study relationships between different variables.

3.1 Role of Participants and the Content of Cyberbullying

The roles of participants involved in cyberbullying were identified as victims, perpetrators, or others. The number of participants and the corresponding role is summarized in Table 1 below, where the remaining (3%) discussed either bystanders’ perceptions or college and university students’ perceptions of cyberbullying in their social environments.
Table 1  
*Role of Study Participants*

<table>
<thead>
<tr>
<th>Participant Role</th>
<th>N</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Victims’ Perspective</td>
<td>45</td>
<td>44%</td>
</tr>
<tr>
<td>Perpetrators’ Perspective</td>
<td>17</td>
<td>17%</td>
</tr>
<tr>
<td>Both (Victim &amp; Perpetrator)</td>
<td>37</td>
<td>36%</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>3%</td>
</tr>
</tbody>
</table>

*Note.* N = number of studies; Percentage = N divided by total number of studies.

This data shows a clear trend, that mainly cyberbullying victims tend to participate in studies related to what they have experienced. This is considered as a positive attitude and one step forward towards expressing their feelings and trying to end such behavior.

The largest portion of the 102 studies specified the content of cyberbullying behavior as being a mixture of offensive texts and pictures/videos, followed by offensive text only then pictures and videos as quantified in Table 2.
Table 2. 

Content of Cyberbullying

<table>
<thead>
<tr>
<th>Content Type</th>
<th>N</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Offensive Text</td>
<td>13</td>
<td>13%</td>
</tr>
<tr>
<td>Pictures/ Videos</td>
<td>7</td>
<td>7%</td>
</tr>
<tr>
<td>Mixed</td>
<td>46</td>
<td>45%</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>4%</td>
</tr>
<tr>
<td>Not Specified</td>
<td>32</td>
<td>31%</td>
</tr>
</tbody>
</table>

*Note. N = number of studies; Percentage = N divided by total number of studies.*

By looking at the ratio of cyberbullying content for the articles under study, we can conclude that the ease in obtaining offensive text, photos and videos then, sharing such material though social media forms a major factor in increasing cyberbullying among college and university students.

3.2 Participants

In all 102 articles, students remained the primary participants while other populations (e.g., middle school students or adults from the community of the study) were also used in some of the studies. Of the studies included in this review, 5% (n=5) included additional participants from faculty and staff in addition to the sample of students, and one study included faculty and adult individuals from the community in addition to college and university students. Middle and high school students were also part of the sample in two studies, and one study examined middle and high school students, community adults, and college/university students. Among the 102 studies, only one included a variety of participants (general public) in the final sample differing
from the categories of participants mentioned earlier. A full list of articles and included participants are tabulated in the Appendix. A.

3.3 Research Methodology and Data Collection Method

The method of data collection for the 102 articles understudy has included quantitative, qualitative, mixed, literature and systematic reviews. The number and percentage of each of those methods included in this study are summarized in Table 3, and the full list of articles with the corresponding research method is listed in Appendix B.

Table 3

Data collection Methodology

<table>
<thead>
<tr>
<th>Study Methodology</th>
<th>N</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantitative Studies</td>
<td>79</td>
<td>77%</td>
</tr>
<tr>
<td>Qualitative Studies</td>
<td>6</td>
<td>6%</td>
</tr>
<tr>
<td>Mixed Method Studies</td>
<td>4</td>
<td>4%</td>
</tr>
<tr>
<td>Literature Review Studies</td>
<td>2</td>
<td>2%</td>
</tr>
<tr>
<td>Systematic Review Studies</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Other</td>
<td>10</td>
<td>10%</td>
</tr>
</tbody>
</table>

Note. N = number of studies; Percentage = N divided by total number of studies.
3.4 Country, Year, and Journal of the Articles Reviewed

Articles for this review were published between 2008 and 2018. This review indicated that 58 studies (57%) were conducted between 2016 and 2018 as follows: 16 studies in 2016, 23 in 2017, and 19 in 2018. The remaining 44 studies were moderately distributed over the years 2015 (25%), 2014 (23%), and 2013 (20%), with lesser numbers in the years of 2012 (11%), 2011 (9%), and 2010 (7%). Only one study was conducted in 2009 and one in 2008.

The analysis revealed significant attention paid to cyberbullying in contexts of higher education in the U.S. compared to Canada. Of the total studies reviewed, 85% \((n=87)\) were conducted in the U.S., while only 8% \((n=8)\) investigated cyberbullying in the Canadian higher education setting. One study combined both the U.S. and the Canadian context, and 4% \((n=4)\) were international studies that included both U.S. and Canada’s college and university students in the sample.

Articles included in the review were published in 62 journals. Of the articles examined, 11% \((n = 11)\) were published in *Computers in Human Behavior*, 5% \((n=5)\) of the articles were published in *The Journal of Interpersonal Violence* and in *The Partner Abuse* each, 12% \((n=12)\) were published in *The International Journal of Cyber Criminology, Cyberpsychology, Behavior, and Social Networking*, and in *Aggressive Behavior* (4 in each), and 9% \((n=9)\) in *the American Journal of Criminal Justice, Deviant Behavior*, and *The Journal of School Violence* (3 in each). The remaining articles were published in 53 distinct journals including psychology journals and journals of violence and trauma.
3.5 Year of the Study and the Data Collection Methods Employed Through 2008–2018

The reviewed articles published in 2008, 2009, and 2011 used only quantitative methods to investigate cyberbullying in higher education. All these studies were based in the U.S. (e.g., Reyns, Henson, & Fisher, 2011). No data-based studies were published in 2012 through 2016 besides quantitative research, with a minimal focus on qualitative research (e.g., Watt et al., 2017). In 2017 and 2018, more quantitative, qualitative, and mixed-methods data collection measures were employed to investigate the phenomena in both the U.S. and Canada (e.g., Mishna et al., 2018).

![Figure 2. The number publications per year and the data collection method followed in the reviewed studies.](image-url)
3.6 Cross-tabulated Data

3.6.1 Evolution of cyberbullying content with time

From the content of cyberbullying over the year’s perspective, we are exploring the evolution and the change in offense type, as social media and communication tools evolve. In the first five years, there was no indication of any offense in a form of pictures or videos, while this type has slightly increased (on average) in the following years, as seen in Figure 3. It is evident that a mixture of text and pictures/videos has always existed as a major offense type, and a significant number of studies have not specified the type of offense.

![Figure 3](image.jpg)

*Figure 3.* A bar graph showing the evolution of cyberbullying content through the years 2008 – 2018.
This indicates that creative preventive measures need to be considered in order to limit
the ease of sharing offensive content. This could include – and not limited to – better filtering for
social media content, improving the privacy settings or maybe the use of Artificial Intelligence
technology to trace and block offensive content.

3.6.2 Content of cyberbullying as reported by participants

From a different perspective, we review the articles by collecting data on the content of
cyberbullying as stated by the participants as shown in Figure 4. This shows that the majority of
articles have included victims of cyberbullying, and all participants have reported that a mixture
of offensive text, pictures and videos were the major harassment content.

Figure 4. A bar graph showing the cyberbullying content as stated by the participants.
There is also a significant number of publications that did not specify the content of harassment, while the perpetrator’s most reported content was a mix of text and pictures or video.

3.6.3 Participant’s Role Over Time

By looking at the census of the participant’s role in Figure 5, we can clearly notice the significant increase in the number of publications where more cyberbullying victims have participated in surveys. Consequently, this could have several indications: the number of victims of cyberbullying victims has increased, more victims are willing to report their case, or maybe due to the increase in a number of studies, victims now have more opportunities to report abuse.

![Figure 5](image)

*Figure 5. A bar chart showing the categories of the participant’s overtime*

One finding out of compiling articles from participant role's perspective clearly shows that most participants who are willing to undertake the survey are victims of cyberbullying. This
could be a result of the psychological impact of cyberbullying and they might find that participating in surveys could help in the prevention of such acts. Another interesting finding is that in Canada, none of the participants of the eight surveys was categorized as the perpetrator.
Chapter 4
Discussion

This systematic review included research articles that were published in a wide variety of journals between 2008 and 2018 in the U.S. and Canada, and investigated cyberbullying of students in contexts of higher education. The review explored the research about the prevalence of cyberbullying among college/university students (e.g., Lee, 2017; Lindsay & Krysik, 2012; O’Connor et al., 2018; Schenk & Fremouw, 2012), the content of cyberbullying, and the research methodology in the literature reviewed. The main focus of the studies was on victims of cyberbullying, while the content of cyberbullying was indicated as being a combination of offensive texts and pictures/videos. Reviewed studies were generally quantitative-based examinations that accumulated data through the years 2016 to 2018, with a noticeable lack in research about the Canadian context of higher education.

4.1 Role of Participants and the Content of Cyberbullying

4.1.1 Victims and perpetrators. Participants’ roles were investigated in this review. These roles included victims, perpetrators, and other groups such as bully-victims and bystanders. While both victims’ and perpetrators’ perspectives were investigated within the same study (e.g., Branch et al., 2017; Margolin et al., 2013), about half of the studies focused solely on victims of cyberbullying. Students who were victims of cyberbullying mainly suffered from visual assaults such as posted photos and aggressive text messages that were sent in different settings and according to different timings (e.g., McGinley, 2016; Perkins, 2013; Reed, Tolman, & Ward, 2016). On the whole, the results of these articles highlighted the posting of degrading comments, hate speech, and pornography and the prevalence of stalking through the internet as the most frequent cyberbullying behaviors among college/university students (e.g., Donner,
2016; Schroeder, 2013). Fewer studies focused on other contents of cyberbullying such as tracking victims electronically (electronic leash) (e.g., Marcum, Higgins, & Poff, 2016).

Another interesting point resulted from this review: It was not mentioned if people who share what others post are to be termed perpetrators or not. It was clear among all reviewed studies that the person to initiate such behavior is the perpetrator. There is no indication as to whether individuals who copy posts and share them should be called perpetrators or not. This group of people might not know the victims personally, so the motive could be just having fun. However, the actions of such people can still be considered as harmful.

4.1.2 Bully-victims. Aricak (2009), Chapell et al. (2004), and Warren (2011) found that poor interpersonal relationships and past victimization may affect individuals’ attitudes and prompt them to respond to being victims of cyberbullying by becoming perpetrators themselves. Such people are referred to as bully-victims. Although the bully-victims group is part of a higher education context, few studies in this review have examined this case (Cunningham, 2014). Literature indicated that bully-victims have been found to be at greater risk of having emotional and behavioral problems compared to bullies only and victims only and at risk of engaging in immoral and anti-social acts such carrying weapons (Dukes, Stein, & Zane, 2009; Menesini, Modena, & Tani, 2009; Ragatz et al., 2011). Menesini, Modena, and Tani (2009) showed that bully-victims tend to socialize through the internet because they feel socially rejected and excluded from peer groups, this was in agreement with Dilmac (2009) who indicated that affiliation through the internet predicts engaging in cyberbullying and victimization at the same time since this website satisfies the need of bully-victims for affiliation.

This limitation of the current research suggests that more research should examine the lack of knowledge about bully-victims. Although some of the included studies advocated
anonymous online prevention approaches to support victims and perpetrators of this group of bully-victims. Still, more research needs to look at factors contributing to becoming a bully-victim in this context.

4.2 Participants, Research Methodology, and Data Collection

4.2.1 Participants. Apart from college and university students, some studies employed faculty staff and/or adults from the community (e.g., Cassidy, Faucher, & Jackson, 2017; Wolfer, 2017) to measure differences and similarities in perceptions of online inappropriateness and cyberbullying among the hired groups with respect to age, culture, and social positions, and to examine the impact of cyberbullying on the mental and physical health and the personal life of the participants. The input from participants of different perspectives provides diverse feedback on cyberbullying, it can also lead to unveiling some behavioral trends that victims may have unconsciously engaged in, which could make them vulnerable to cyber harassment. Regardless of the outcome of cyberbullying among these diverse groups of participants, calls were made for the development of consistent research-based national regulations to assist authorities in handling cyberbullying; these regulations are currently not in high demand.

Many of the reviewed studies surveyed first-year undergraduate students and younger students. The findings suggested that younger students were more likely to be cyberbullied, which was in agreement with the findings of Kraft and Wang’s (2010) study. Unlike older students, first-year students usually remain attached to their families during their first year in college/university. Another reason is that students who were bullied or cyberbullied in high school may be at risk of being cyberbullied during their early adulthood in a college/university environment. One suggestion for future research is including parents/guardians in this area of research to examine in greater depth cyberbullying involvements in high school. If there are
mentoring programs for first-year students, then mentors could help in identifying issues related to the emotional and psychological states of their mentees, and their participation may contribute significantly to such research.

4.2.2 Quantitative and qualitative research designs. The research method designs employed to collect data from participants were explored in this review. Most of the reviewed studies used quantitative research to measure the prevalence of and examine the contents of cyberbullying in higher education. All quantitative designs utilized surveys as the primary data collection tool. Studies queried the occurrence of cyberbullying over different timeframes. For example, participants who were currently in a relationship (Leisring & Giumetti, 2014), or participants who had ever received threatening or aggressive e-mails or instant messages in the past five years (Kim et al., 2017) were studied. Self-report surveys with one-item or multi-item evaluations were used to measure the prevalence of cyberbullying. However, scholars have had difficulty in defining cyberbullying, one explanation being its rapid development, which makes conceptualizing its components challenging. In general, cyberbullying refers to any form of technology-related form of aggression. Moreover, scholars have shown that not all aggressive behaviors use technology, cyberbullies may also bully in more traditional ways (Chisholm & Day, 2013). A sample of the different cyberbullying definitions is listed in Table 5.

Table 5

<table>
<thead>
<tr>
<th>Article</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aricak, 2009</td>
<td>The harmful consequences of one type of misuse of online technology</td>
</tr>
<tr>
<td>Author</td>
<td>Definition</td>
</tr>
<tr>
<td>-----------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Barlett, 2017</td>
<td>A behavior performed through electronic or digital media by individuals or groups that repeatedly communicates hostile or aggressive messages intended to inflict harm or discomfort on others.</td>
</tr>
<tr>
<td>Bauman, 2015</td>
<td>Bullying perpetrated via digital technology.</td>
</tr>
<tr>
<td>Beran, 2012</td>
<td>It occurs through communication devices such as cell phones and the internet where threatening or excluding messages are sent as emails, text messages, or posted on social media or other websites.</td>
</tr>
<tr>
<td>Branch, 2017</td>
<td>Negative outcomes associated with using some type of digital media and/ or electronic device to harass, control, manipulate or habitually disparage an individual.</td>
</tr>
<tr>
<td>Burt, 2018</td>
<td>Digitally aggressive acts that involve an observed or perceived imbalance of power between the aggressor and the victim and repetition.</td>
</tr>
<tr>
<td>Doane, 2016</td>
<td>A form of aggression, involving the internet or related technologies.</td>
</tr>
<tr>
<td>Mishna, 2018</td>
<td>Intentional harm carried out through electronic means to an individual or a group of individuals of any age, who perceive(s) such acts as offensive, derogatory, harmful or unwanted.</td>
</tr>
<tr>
<td>Smith, 2013</td>
<td>Is repeated use of technology to harass, humiliate or threaten.</td>
</tr>
<tr>
<td>Washington, 2015</td>
<td>Mobile technologies such as wireless telephones, tablet devices, and personal computers accessing the Internet and communication systems provide the bully with the ability to contact the victim without having a face-to-face encounter.</td>
</tr>
</tbody>
</table>
On the other hand, qualitative studies used focus groups (Melander, 2010; White & Carmody, 2016) and interviews (Bonomi, 2018; Gin et al., 2017) to explore perceptions about prevalence and the experiences of cyberbullying. Cyberbullying victimization has been identified as being associated with mental and physical health issues such as sleeplessness, decreased well-being, fear, anxiety, and increased negative psychological states such as anger, loneliness, and suicidal thoughts, which affect both victims and perpetrators (Cassidy et al., 2017; Smith & Yoon, 2013; Warren, 2011; Watts et al., 2017; Zalaquett & Chatters, 2014). Furthermore, individuals with cyberbullying experiences (bullies, bully-victims, and victims) have increased chances of meeting the criteria for depression when compared to those with no cyberbullying experience (Selkie et al., 2015). These effects could be a motive for on-campus counselors and mental health promoters to inquire about cyberbullying experienced by college/university students diagnosed with depression. Their significant role needs to be considered in future research as their attentiveness could offer a new dimension in dealing with the consequences of cyberbullying. This finding also suggests that more in-depth qualitative research is required to study participants’ relationships, interactions and practices in the setting, as this cannot be completely investigated using quantitative research methods.

4.3 Country and Year of the Study

Based on the current review, the field of research regarding cyberbullying is still developing as indicated by the considerable number of studies conducted in the past three years. In addition, most of the reviewed articles examined cyberbullying in the context of the U.S. (e.g., Chapin, 2014; Selkie et al., 2015).
Since cyberbullying has been examined in the literature recently, very little empirical research exists about the cyberbullying of students in the Canadian higher education context. Cunningham et al. (2015) were the first to examine cyberbullying among Canadian university students. The variation in the number of students enrolled in colleges and universities in Canada and the U.S. may explain the difference in the amount of research dedicated to study cyberbullying in higher education in these two countries: 2 million studies (Duffin, 2019, Education in Canada) and 20 million studies ("Higher,” 2019, Higher education in the United States) in 2016/2017, respectively. Out of the eight studies conducted in Canada, seven studies were quantitative (e.g., Ramsey, DiLalla, & McCrary, 2016), while only one study employed a qualitative data collection method (Bonomi et al., 2018). More research is necessary to reveal in-depth the reality of cyberbullying among college/university students in the Canadian context given the potentially unique contexts of higher education in Canada versus the US.

Limitations and Implications for Future Research

The following are the limitations of this systematic review: Since the systematic review was restricted to investigating cyberbullying in the context of higher education in the U.S. and Canada, this could have limited the findings as cultural norms varying across countries could affect what is considered cyberbullying behavior and what is not (Craig, Henderson, & Murphy, 2000). A study conducted by Barlett et al. (2014) to test the relationship between cyberbullying behaviors and cultural norms of a sample of undergraduate students gathered from both the U.S. and Japan showed that learned cultural attitudes such as interdependent self-construal are related to the reduction of cyberbullying behaviors and may help in protecting students from being involved in such behaviors.
Furthermore, the different measurements used to evaluate the prevalence of cyberbullying were dependent on the researchers’ objectives, which may have impacted the results. In their study, Sargent et al. (2016) used Partner Cyber-Abuse Questionnaire (PCAQ), Center for Epidemiological Studies-Depression Scale (CES-D), and the Honest Conduct Scale (HCS) to measure the psychological and mental health outcomes of intimate partner violence among college students. However, Weingarten et al. (2018) used edited measures from Safe Dates (Foshee et al., 1996) and Zweig et al. (2013) to measure the same outcomes as those of the Sargent et al. study. Thus, standardizing measures are highly recommended in the near future.

Also, information about the items included in the quantitative-based research was not fully clear in terms of whether they were open-ended or closed questions, which may have affected the overall results in terms of the consistency of items and languages used to pose questions and provide answers regarding the cyberbullying experience.

Since cyberbullying is a new trend in the literature, many search terms were used to express the concept of “cyber” such as “electronic” and “techno”, which resulted in the evaluation of 102 articles; this may have altered the findings derived from the initial articles included in the current review.

The term “content” is used in the present review to refer to the form that is used for cyberbullying (e.g., text messages, pictures, videos), with no information included that details the nature of the information that is communicated (e.g., threats, insults). McGinley and colleagues (2016) referred to cyberbullying behaviors as cyberbullying experiences that are performed through e-mail, social media networks, and text messages, and then these experiences were described as offensive e-mail or offensive text messages. Therefore, no detailed description of the nature of cyberbullying was included in this study.
Although there have been some successful technological developments in terms of minimizing cyberbullying and online harassment, such as filtering software (e.g., Lindsay & Krysik, 2012), further studies need to consider some, if not all, of the following points:

- **Type of participants:** only 6% of the studies included faculty and staff. An increase to this percentage is a must because the more diverse the participants from higher education environments are, the faster we can understand what students are going through to eventually set the rules and regulation to prevent future incidents.

- **Content of cyberbullying:** table 2 of this study shows that almost 30% of the included studies did not specify the content of cyberbullying. So, future studies are advised to have a clear description and a range of content for survey participants to choose from to have better feedback on the existence or content of cyberbullying.

- **Methodology:** in the past decade, 7% of the surveys were based on the qualitative review. So, more work needs to be in this direction as it could provide vital information and a deeper understanding of the cyberbullying incidents.

- **Role of participants:** 17% of participants were perpetrators. This might be an indication that students are mostly cyberbullied by someone who is not in the education system. So, including participants from different environments and directing the survey towards cyberbullying in higher education, might increase the number of participants as the perpetrator. This might uncover some facts that could be helpful in designing future surveys.
• Cyberbully prevention: future surveys should be more consistent in categorizing and identifying cyberbullying content to help in developing some tools (software and applications) which in turn can protect possible targets from cyber harassment.

Location of the survey: 8% of the studies were performed in Canada only. So, more studies and research is required to better understand the aspects of cyberbullying at Canadian institutions.

Finally, most quantitative studies have focused on samples from one university; a collective sample from different universities in distinctive locations could be more representative of the issue discussed.

**Conclusion**

More research on developing anti-cyberbullying interventions and programs is strongly required. Colleges/universities currently handle cyberbullying incidents internally, and there is a need for evident on-campus anti-bullying policies and anonymous reporting systems, especially in Canada. More focus has been put on quantitative approaches to data collection in higher education research on cyberbullying. Further emphasis on qualitative methods, including focus groups and interviews, may supplant quantitative research results by contextualizing the interactions between victim and perpetrator and the form of cyberbullying.

Although studies of this review focused on victims of cyberbullying, significant groups of reference (e.g., LGTBQ communities, students with disabilities, racial groups) are also targets of cyberbullying, and the impact of cyberbullying on the involvement of these groups needs to be discovered. This systematic review demonstrates that there are high prevalence rates in the lack of awareness about cyberbullying and its definition. A more developed curriculum that educates
students regarding digital space is essential in such contexts. In addition, more in-depth qualitative research can help in identifying students’ specific opinions and needs about what helps in controlling cyberbullying prevalence in the higher education context.
Appendix A

Appendix A includes a list of articles used in this study and the corresponding participant type.

All surveys have included college or university students. Some other surveys also included faculty and staff as shown in Table. Appendix A.

Appendix A

*Types of participants in each of the 102 articles*

<table>
<thead>
<tr>
<th>Article</th>
<th>College/University Student</th>
<th>Other</th>
<th>Article</th>
<th>College/University Student</th>
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35
Note. Articles are in alphabetical order. To distinguish similar citations in this table, the title of similar ones is listed below:
1. Title: Fear of crime online? Examining the effect of risk, previous victimization, and exposure on fear of online interpersonal victimization.
2. Title: Does gender matter in the virtual world? Examining the effect of gender on the link between online social network activity, security, and interpersonal victimization.
3. Title: The relationship between offline and online stalking victimization: A gender-specific analysis.
4. Title: Explaining cyberbullying victimization against college women using a multi-theoretical approach: Self-control, opportunity, and control balance.
Appendix B

Appendix B includes a list of articles used in this study and the corresponding research methodology.

### The method of study in each of the 102 articles

<table>
<thead>
<tr>
<th>Article</th>
<th>Method</th>
<th>Article</th>
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*Note.* Articles are in alphabetical order. To distinguish similar citations in this table, the title of similar ones is listed below:

1. Title: Fear of crime online? Examining the effect of risk, previous victimization, and exposure on fear of online interpersonal victimization.
2. Title: Does gender matter in the virtual world? Examining the effect of gender on the link between online social network activity, security, and interpersonal victimization.
3. Title: The relationship between offline and online stalking victimization: A gender-specific analysis.
4. Title: Explaining cyberbullying victimization against college women using a multi-theoretical approach: Self-control, opportunity, and control balance.
References

Note: * indicates that the study was used in the systemic review.


