AN INVESTIGATION INTO BULLYING AND CYBERBULLYING: THE EFFECTS OF ANONYMITY AND FORM OF BULLYING ON SEVERITY OF VICTIM IMPACT

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AN INVESTIGATION INTO BULLYING AND CYBERBULLYING: THE EFFECTS OF ANONYMITY AND FORM OF BULLYING ON SEVERITY OF VICTIM IMPACT

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ABSTRACT

AN INVESTIGATION INTO BULLYING AND CYBERBULLYING: THE EFFECTS OF ANONYMITY AND FORM OF BULLYING ON SEVERITY OF VICTIM IMPACT

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Previous research suggests that cyberbullying may have a greater negative impact on victims than traditional bullying (Gilroy, 2013; Walker, Sockman, & Koehen, 2011), causing impaired mental health and psychological distress (Zalaquett & Chatters, 2014). The present study investigates why cyberbullying is found to have a greater negative impact, by examining perpetrator anonymity, perceived control, and frequency of bullying as possible mediating variables. Mediation analyses indicated that a reduction in perceived control significantly mediates the association between cyberbullying and depression. Mediation analyses also revealed that frequency of bullying significantly mediates the association between cyberbullying and anxiety. These findings suggest that cyberbullying is associated with higher levels of anxiety and depression through reduced levels of perceived control and increased frequency of bullying victimization.
ACKNOWLEDGEMENTS

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CHAPTER 1
INTRODUCTION

Bullying has been a problem for many years, but due to the development of electronic communication cyberbullying in particular has recently become a widespread problem (Boulton, Hardcastle, Down, Fowles, & Simmonds, 2014). It is estimated that over 6% of college students experience traditional bullying and between 8.6% to 28.7% experience cyberbullying (Chapell et al., 2004; Schenk & Fremouw, 2012; Kraft & Wang, 2010; Hinduja & Patchin, 2010). Bullying is defined as an aggressive, intentional behavior that is carried out by a group or an individual repeatedly and over time against a victim who cannot easily defend him or herself (Olweus, 1993). In extension, cyberbullying is defined as a form of bullying that uses electronic communications which can include email, mobile phone calls, text messages, instant messenger, photos, social networking sites, and personal web pages, with the purpose of causing harm to another person through repeated hostile or aggressive acts (Ortega, Elipe, Mora-Merchán, Genta, Brighi, Guarini, & Tippett, 2012).

Although research findings suggest that cyberbullying may have a greater negative impact for victims than traditional bullying, including increased symptoms of anger, sadness, and an increase in emotional damage (Gilroy, 2013; Walker, Sockman, & Koehnen, 2011), additional research is needed to understand why this would be true. The majority of research on cyberbullying has focused on children from kindergarten through
twelfth grade; there is a lack of research involving cyberbullying at the college level. The goal of the present research is to extend research on cyberbullying at the college level. Specifically, the present research will test the hypothesis that cyberbullying is associated with greater emotional problems than traditional bullying. In addition, the present study will examine whether this hypothesized difference is mediated by increased perceived anonymity (whether the victim is aware of the identity of the perpetrator) for cyberbullying, which in turn could increase frequency of bullying acts (how often the victim experiences cyberbullying) and reduce victims’ perceived control over the bullying.

**Traditional Bullying versus Cyberbullying**

Previous research has been inconsistent in its conclusions regarding the relationship between traditional bullying and cyberbullying. Some researchers claim that cyberbullying is a logical extension of traditional bullying and that researchers can apply knowledge of traditional bullying to cyberbullying (Kowalski & Limber, 2013). Others believe that bullying has been transformed with the development of new communication technologies (Boulton et al., 2014), and that cyberbullying and traditional bullying are somewhat unique forms of bullying despite sharing similarities (Breguet, 2007).

Kowalski and Limber (2013) found evidence for overlap between individuals’ involvement in traditional forms of bullying and cyberbullying. This overlap in involvement is seen when cyberbullying is used as another method for the bully, when cyberbullying is used in retaliation against a previous bullying encounter, or when cyberbullying is a method to do something the bully or previous victim of bullying would not be willing to do face-to-face (Kowalski & Limber, 2013). In addition, Erdur-Baker
(2010) found evidence for an overlap between cyberbullying and traditional bullying, finding that 32% of the victims of traditional bullying are victims of cyberbullying and 26% of the perpetrators of traditional bullying also engage in cyberbullying. Waasdorp and Bradshaw (2015) also found that less than five percent of people experience cyberbullying without also experiencing traditional bullying. Although the literature on traditional bullying is helpful to understand cyberbullying, the results of past research suggest a need for more research to clarify the degree to which cyberbullying differs from traditional bullying (Erdur-Baker, 2010; Kowalski & Limber, 2013; Waasdorp & Bradshaw, 2015).

There are notable differences between cyberbullying and traditional bullying. Gilroy (2013) discussed how cyberbullying is different from traditional bullying due to the wider audience and impact of the internet. Cyberbullying also allows for a sense of anonymity and a lack of accountability that traditional bullying does not (Eastwick & Gardner, 2009; Sticca & Perren, 2013; Dredge, Gleeson, & Piedad Garcia, 2014). Another major difference is in the way teachers respond to the type of bullying. With traditional bullying, teachers are quick to respond because they feel it is their responsibility (Boulton, 1997; Boulton et al., 2014). In contrast, Stauffer, Heath, Coyne, and Ferrin (2012) found that teachers reported being apprehensive about intervening in cases of cyberbullying and usually did not intervene. When they do not intervene, teachers were relying on parents to intervene (Staffer, Heath, Coyne, & Ferrin, 2012). If parents are relying on teachers and teachers are relying on parents, then no one is monitoring cyberspace where the bullying is occurring. These differences could have an impact on the perpetrators as well as a lasting impact on the victims of cyberbullying.
because the perpetrators gain more control over the situation when not held accountable for his or her actions.

**Prevalence of Bullying in College**

There is very little research on the prevalence of traditional bullying in college. Chapell, Casey, De la Cruz, and Ferrell (2004) conducted a study of 1,025 undergraduate college students in the United States. They found that over 60% of undergraduates had witnessed a bullying incident where another student was the perpetrator (Chapell et al., 2004). The study further reported that over 6% of the undergraduates disclosed being the victim of bullying at college either occasionally or frequently (Chapell et al., 2004).

Cyberbullying is prevalent at the college level as well. Research on cyberbullying has found that just as many individuals experience their first episode of cyberbullying in college as experience their first incident during middle school (Kowalski, Giumetti, Schroeder, & Reese, 2012). Schenk and Fremouw (2012) found that 8.6% of college students were experiencing cyberbullying, which was comparable to Kraft and Wang’s (2010) finding that 10% of college students were experiencing cyberbullying. In contrast, Hinduja and Patchin (2010), who have established a website dedicated to raising awareness about cyberbullying, estimate as many as 28.7% of college students experience cyberbullying.

**Consequences of Bullying**

Studies show that there are negative consequences associated with being a victim to traditional bullying (Campbell, Spears, Slee, Butler, & Kift, 2012; Slonje & Smith, 2008; Kowalski & Limber, 2013). These consequences include difficulties associated with health, emotional well-being, and academic work (Kowalski & Limber, 2013).
Children who experience traditional bullying are more likely than children who are not bullied to report feelings of anxiety, depression, and low self-esteem (Kowalski & Limber, 2013).

The majority of research regarding the consequences of cyberbullying investigates victim impact among students from kindergarten through twelfth grade with few studies investigating the negative impacts of cyberbullying among college students. Walker, Sockman, and Koehn (2011) found that college students who experienced cyberbullying reported feeling angry, sad, and hurt, and reported having difficulties with concentration and low school achievement. In another study college students reported that cyberbullying caused them sadness, anger or to be upset, and caused an increase in stress in their lives (Zalaquett & Chatters, 2014). These findings also indicate that cyberbullying can be a cause of impaired mental health, psychological distress, and fear, and can increase risk factors of suicide among college students (Zalaquett & Chatters, 2014).

Although victims of traditional bullying have reported that traditional bullying is worse (Campbell et al., 2012; Slonje & Smith, 2008), there are many consequences associated with cyberbullying that suggest it may have greater negative consequences for victims. Gilroy (2013) found that the psychological outcomes of cyberbullying cause more emotional damage than traditional bullying, perhaps due to the wider audience and impact of the internet. Schenk and Fremouw (2012) found that cyberbullying victims reported more suicidal planning, attempts, and frequency of suicidal ideations than control participants who had not experienced cyberbullying in college at least four times or more (Schenk & Fremouw, 2012). Research conducted on cyberbullying in high
school also suggests lasting negative results for victims of cyberbullying. Perren, Dooley, Shaw, and Cross (2010) found that even when controlling for the effects of traditional bullying, cyberbullying predicted depressive symptoms. Kowalski and Limber (2013) found that rates of anxiety and depression were particularly high among high school age students who experienced cyberbullying as compared to those experiencing traditional bullying or no bullying. Further, Kowalski and Limber (2013) found that cyberbullying victims reported more depression, anxiety, self-esteem problems, self-reported health problems, absences from school, and dropping out of school than those experiencing traditional bullying or no bullying.

**Anonymity and Bullying**

Anonymity is not knowing the identity of the perpetrator, whether anonymity is desired by the perpetrator or perceived by the victim. Within traditional bullying there are specific types of anonymous bullying which are known as indirect or psychological forms of bullying (Atlas & Pepler, 1998). Indirect or anonymous forms of bullying involve telling lies about someone, talking behind someone's back, telling others not to be an individual's friend, and/or trying to convince others to disapprove of a particular person (Atlas & Pepler, 1998). In these cases, the bully can achieve anonymity by influencing others to hurt the victim (Atlas & Pepler, 1998). Low, Frey, and Brockman (2010) found that a student or students would speak negatively about another student, laughing, gesturing, or looking in the other student's direction when the other student was not among the listeners. This would allow students to remain unknown or anonymous to the victim during traditional bullying.
During cyberbullying, victims are often unaware of the identity of the perpetrator, they do not face the perpetrator, and there may be no way for the victim to learn the perpetrator’s identity. Sticca and Parren (2013) discussed anonymity by evaluating whether the victim had the perception that the bully was anonymous, or if the victim thought he or she could identify the bully. When the victim does not know the identity of the perpetrator, it decreases the level of control the victim perceives having over the bullying situation (Sticca & Parren, 2013). In contrast, when the victim has the perception that he or she could identify the bully, it increases the victim’s perception of having some control over the situation (Sticca & Parren, 2013). Symptoms of anxiety and depression increase as the victim’s perception of his or her control decreases (Wang, Nansel, & Iannotti, 2011).

The introduction of smartphone applications featuring anonymity has made anonymous cyberbullying more achievable than ever before. The application “YikYak” allows for users to post comments in an open forum to be read by other users of the app in the vicinity and previously allowed comments to be posted anonymously (YikYak, 2016). Although anonymous commenting has been disabled in YikYak, (YikYak, 2016), an application called “Jodel” was released that allowed anonymous commenting. This application was designed specifically for university students and allows for users to post anything they would like on an open forum for nearby users to read (Jodel, 2016).

**Effects of Anonymity and Victim Impact**

One way to analyze the possible outcomes of anonymity is to examine how perpetrator behavior becomes more aggressive due to anonymity. Sticca and Parren (2013) found that anonymity affects the severity of bullying felt by the victim, with
severity being defined as the degree of aggression expressed in the bullying behavior. Zimbardo (1969) studied the effects of anonymity on aggressive behavior by observing that participants who wore large hooded clothing to conceal their identity administered longer shocks to confederates compared to those who wore clothing that made their identity easily recognizable. Zimbardo (1969) believed that certain circumstances decrease an individual’s self-awareness and fear of the evaluation of others, therefore allowing the individual to express the undesirable behavior with greater ease. This indicates that people who are unrecognizable would participate in more frequent aggressive acts because they would be less likely to face negative consequences for their behaviors. This has also been extended to the internet where individuals can act in ways that contradict their normal behaviors if the individuals do not identify with the specific online group they are interacting with (Eastwick & Gardner, 2009).

The internet allows for an increased ability to achieve anonymity and preserve confidentiality in ways that face-to-face interaction cannot, because the individual can leave cyberspace at any time by logging off the website and never having to return (Eastwick & Gardner, 2009). Barlett, Gentile, and Chew, (2016) found that the more participants believe they are anonymous, the more they are likely to cyberbully others. They also found that anonymity is one of the possible risk factors associated with the initiation of cyberbullying (Barlett, Gentile, & Chew, 2016). Dredge, Gleeson, and Piedad Garcia (2014) found that participants who were unable to remove material posted on their pages by a cyberbully consistently reported feelings of hopelessness and helplessness, especially if the cyberbully’s identity was unknown to the victim. Wang, Nansel, and Iannotti (2011) found that victims of cyberbullying are likely to feel isolated,
dehumanized, or helpless at the time of the attack because of the anonymity and lack of control the victim has over the situation.

**Frequency of Incidents of Bullying**

There are very few studies examining the incident frequency of cyberbullying and even fewer studies that report the consequences the frequency of cyberbullying has on the victim. In a review by Tokunaga (2010), severity of the cyberbullying incident was defined as being reliant on the frequency and length of the incidents. Tokunaga (2010) discussed that an increase in frequency of cyberbullying has a high potential to cause long-term problems. The review continued by explaining that harsh forms of cyberbullying have the potential to increase the occurrence of mental health and social problems compared to traditional forms of bullying (Tokunaga, 2010).

Cyberbullying itself can increase the frequency of bullying based solely on the medium through which it is expressed (Slonje & Smith, 2008). Within the medium of cyberspace, anonymity strongly predicts an increase in the frequency of cyberbullying; as anonymity increases, so does cyberbullying (Barlett, 2014). The cyberbully maintains control over the victim because the victim can be bullied anytime and anywhere, often leaving the victim with little control over the situation (Slonje & Smith, 2008). Also, when a victim is bullied in cyberspace, the victim may under some circumstances be repeatedly exposed to the bullying act, potentially leading to repeated traumatization (Slonje & Smith, 2008).

The frequency of incidents can greatly impact a victim. Wang, Nansel, and Iannotti (2011) found that victims of frequent cyberbullying (defined as more than 3 times a month) reported higher levels of depression than bullies, or bully-victims of
cyberbullying. Wang, Nansel, and Iannotti (2011) noted that these types of results were not found in traditional bullying which could be because of the distinct characteristic of cyberbullying. They stated that more research needs to be conducted before it can be concluded that the association between depression and cyberbullying is distinct from what it is for traditional bullying.

**Audience of the Bullying**

Sticca and Parren (2013) noted that one of the distinct differences between traditional bullying and cyberbullying was that cyberbullying had a distinct characteristic of being able to contact a larger audience. Festl, Scharkow, and Quandt (2013) studied German adolescents and found that perpetrators would seek out online mediums to cyberbully others based on how large the audience was that could witness the bullying. If the cyberbullying could reach a very large audience, it increased the likelihood that the bully would use that medium (Festl, Scharkow, & Quandt, 2013). A study by Barlińska, Szuster, and Winiewski (2013) proposed that a large audience impacts the victim because this allows for bystanders to also become cyberbullies by sharing the information, allowing the cyberbullying to reach more people than it could originally. The larger the audience is, the greater the chance is that at least one of the bystanders will share the content of the cyberbullying (Barlińska, Szuster, & Winiewski, 2013).

Slonje and Smith (2008) found that victims of cyberbullying reported one of the reasons cyberbullying had such an impact on them was because of the large audience that would be able to view the material posted by the cyberbully. Having a large audience can have lasting negative effects on the victim because the victim of cyberbullying can feel worse due to greater feelings of embarrassment and shame related to the incident(s).
(Slonje, Smith, & Frisén, 2013). Price and Dalgleish (2010) added to this by stating the invading nature of cyberbullying on a large audience leads to more humiliation and embarrassment.

**Gender and Cyberbullying**

The research on gender and cyberbullying has been inconsistent, with the results varying from gender having a significant effect to gender not having a significant effect on cyberbullying. A study by Huffman, Whetten, and Huffman (2013) found gender differences within cyberbullying among university students. They found that males’ use of technology was to enhance self-efficacy due to their masculinity. This lead to the significant effect of gender roles because males were more likely to be using cyberbullying as a method to increase self-efficacy than females. A meta-analysis by Barlett and Coyne (2014) found that there were significant gender differences, in which males were more likely to cyberbully than females. However, these results were found to be moderated by age (Barlett & Coyne, 2014). Kowalski, Giumetti, Schroeder, and Reese (2012) further found that there were no gender differences among the college population in reference to the victimization or perpetration of cyberbullying, except with online gaming, in which males reported a higher frequency of victimization of cyberbullying than females.

**The Present Study**

Previous research on the effects of traditional bullying and cyberbullying on symptoms of anxiety and depression have shown that the victims of bullying experience symptoms of anxiety, depression, and an increase in suicidal thoughts and planning (Kowalski & Limber, 2013; Zalaquett & Chatters, 2014; Schenk & Fremouw, 2012).
Some have investigated why cyberbullying may have a greater negative impact, including suggesting that differences in anonymity, perceived control, and incident frequency may contribute. These variables will be explored as mediators of associations between cyberbullying and symptoms of anxiety and depression. There is mixed evidence regarding the link between gender and bullying victimization (Huffman, Whetten, & Huffman, 2013; Kowalski, Giumetti, Schroeder, & Reese, 2012). Therefore, the present study conducted supplemental analyses controlling for gender.

**Hypotheses.** The present study extends research on cyberbullying by focusing on the experiences of college students. Previous research has shown that more than 6% of college students experience traditional bullying and between 8.6% and 28.7% experience cyberbullying (Schenk & Fremouw, 2012; Hinduja & Patchin, 2010; Chapell et al., 2004). The current study hypothesizes that relative to traditional bullying, cyberbullying will be associated with greater anonymity, reduced perceived control by the victim, greater incident frequency of bullying, and an increase in symptoms of anxiety and depression.

The present study further focuses on the consequences of perceived anonymity on frequency and perceptions of control of bullying, which would affect an individual’s anxiety and depression. Past research has shown the preference of anonymity among bullies, but there is a lack of research showing the consequences of anonymity on the incident frequency, reduction in perceived control, and the severity of victim impact. Thus, the second aim of the present research is to investigate whether the anonymity of cyberbullying is associated with greater incident frequency, a decrease in perceived control, and, in turn, greater severity of impact than traditional bullying in college. The
second hypothesis is that perceived anonymity will be associated with reduced perceived control by the victim, greater incident frequency of bullying, and an increase in symptoms of anxiety and depression. The current study further hypothesizes that reduced perceived control by the victim and greater incident frequency will be associated with an increase in symptoms of anxiety and depression. Finally, the present study hypothesizes that anonymity of bullying will mediate the association between cyberbullying and reduced perceived control and greater incident frequency; and reduced perceived control and greater incident frequency will mediate the association between anonymity and increased symptoms of anxiety and depression.

![Diagram of Hypotheses]

Figure 1. Figure of Hypotheses.
Participants

Ninety students (57 females, 33 males) from a Midwestern Catholic University participated in the study. They received course credit for their participation. The mean age of sample was 19.84 years ($SD = .86$). The sample composition was 77% Caucasian, 9% Hispanic, 1% Asian, and 3% multiracial.

Participants were originally grouped into four categories, those who only experienced cyberbullying ($n = 1$), those who only experienced traditional bullying ($n = 11$), those who experienced both kinds of bullying ($n = 74$), and those who experienced neither type of bullying ($n = 4$). It was found that there were not enough students who experienced cyberbullying alone to compare to the students who experienced traditional bullying alone. Therefore, it was decided to compare the group of both cyberbullying and traditional bullying to those only experiencing traditional bullying to investigate whether the addition of cyberbullying was associated with differences in the hypothesized the mediating and outcome variables. The new groups were composed of participants who experienced bullying or cyberbullying about once a month or less (participants who responded to frequency of traditional and cyberbullying as 0 “Never,” 1 “Less than once a month,” or 2 “About once a month;” $n = 25$), those who experienced traditional bullying more than once a month (participants who responded to frequency of traditional
bullying as 3 “2-3 times a month,” 4 “Once a week,” 5 “2-3 times a week” or 6 “Almost every day,” and responded to cyberbullying as 0 “Never,” 1 “Less than once a month,” or 2 “About once a month;” n = 20), and those who experienced both traditional bullying and cyberbullying more than once a month (participants who responded on the frequency of traditional and cyberbullying as 3 “2-3 times a month,” 4 “Once a week,” 5 “2-3 times a week” or 6 “Almost every day;” n = 45).

Materials and Procedure

After obtaining IRB approval, participants were recruited through Sona Systems, an online platform for advertising and scheduling research studies. Participants provided informed consent before they completed the questionnaires in person. Participants reported their age, gender, ethnicity, and year in school, which were collected using the demographic questionnaire in Appendix A. The following questionnaires were also completed to assess frequency of bullying, perceived anonymity of bullying, level of perceived control by the victim, and symptoms of depression and anxiety. Upon completion, participants were debriefed.

Bullying and cyberbullying. A modified version of the Bullying Scale (Doğruer & Yaratan, 2014) was created to examine the frequency, anonymity, control, and severity of traditional bullying and cyberbullying. This measure examines cyberbullying from the perspective of the bullying victim. The measure was modified to include scales to rate each question on the incident frequency, the amount of anonymity perceived by the participant, and the control the perpetrator has over the situation. The scale is a 39-item scale, in which participants will rate each item’s frequency on a scale from 0 “Never” to 6 “Almost Every Day,” rate each item’s anonymity from 1 “Never” to 5 “Always,” and
rate the control the victim felt he or she had during the bullying act from 1 “No control” to 5 “Complete Control.” Some examples of the statements that were presented to the participants include, “Other students tell lies and stories about me in person to make me look bad,” “Some students send malicious text messages via their cell phone,” and “Some students tease me online to make me angry.” The reliability for this measure was obtained by performing exploratory and confirmatory factor analyses and the internal consistency coefficients ranged from .71 to .87 (Doğruer & Yaratan, 2014). For the present sample the internal consistency for the average frequency was .88. The average frequency was reported rather than the sum in order to capture the average frequency per incident of bullying. Internal consistencies for anonymity and perceived control could not be computed because students did not respond to those questions if they were not applicable. See Appendix B.

**Anxiety.** Generalized Anxiety Disorder-7 (GAD-7) (Löwe, Decker, Müller, Brähler, Schellberg, Herzog, & Herzberg, 2008) was used to measure anxiety. Participants rated the frequency with which they experienced seven symptoms of anxiety over the last two weeks on a scale from 0 “Not at all” to 3 “Nearly every day.” Examples of the problems that were presented include, “Feeling nervous, anxious, or on edge,” “Trouble relaxing,” and “Becoming easily annoyed or irritated.” The internal consistency coefficients of this measure ranged from .51 to .87 (Löwe et al., 2008). For the present sample the internal consistency for the GAD-7 was .88. See Appendix C.

**Depression.** Center for Epidemiological Studies Depression Scale (CES-D) (Herge, Landoll, & La Greca, 2013) was used to measure depression. Participants rated the frequency with which they experienced 20 symptoms over the last week on a scale
from 0 “Less than 1 day” to 3 “5 to 7 days.” Examples of the symptoms include, “Did not feel like eating; my appetite was gone,” “Felt like everything I did was an effort,” and “Felt that people dislike me.” Reliability tested by the method of test-retest was $r = .45$ to .67 (Radloff, 1977). For the present sample the internal consistency for the CES-D was .76. See Appendix D.
CHAPTER 3
RESULTS

Preliminary Analyses

Means and standard deviations were calculated for the averages of the following variables: anonymity, perceived control, incident frequency of bullying, anxiety, and depression. The results are presented in Table 1. Correlations were also calculated between the continuous variables. These are reported in Table 2. Finally, t-tests were computed comparing the bullying groups (traditional bullying versus traditional bullying plus cyberbullying) on the frequency of bullying, as well as comparing male and female participants on frequency of bullying to test whether there was a significant difference in experiencing bullying. Results indicated that students who experienced cyberbullying plus traditional bullying reported experiencing significantly more cyberbullying ($t$(64) = -4.78, $p < .0001$) and significantly more traditional bullying ($t$(64) = -8.10, $p < .0001$) than students experiencing traditional bullying only. Results also indicated that male participants reported experiencing significantly more cyberbullying ($t$(89) = 5.82, $p < .0001$) and significantly more traditional bullying ($t$(89) = 2.57, $p = .012$) than female participants.
Table 1

*Descriptive Statistics of Variables Means.*

<table>
<thead>
<tr>
<th>Measure</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anonymity</td>
<td>4.04</td>
<td>.91</td>
<td>4.00</td>
</tr>
<tr>
<td>Perceived Control</td>
<td>3.24</td>
<td>1.00</td>
<td>3.69</td>
</tr>
<tr>
<td>Incident Frequency</td>
<td>.59</td>
<td>.47</td>
<td>1.87</td>
</tr>
<tr>
<td>Anxiety</td>
<td>1.01</td>
<td>.69</td>
<td>2.71</td>
</tr>
<tr>
<td>Depression</td>
<td>.79</td>
<td>.52</td>
<td>2.15</td>
</tr>
</tbody>
</table>

Table 2

*Correlations of the Continuous Variables*

<table>
<thead>
<tr>
<th>Measure</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Depression</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Anxiety</td>
<td>.67**</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Frequency</td>
<td>.35**</td>
<td>.26*</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Anonymity</td>
<td>.19</td>
<td>.11</td>
<td>.30**</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>5. Control</td>
<td>-.24*</td>
<td>-.24*</td>
<td>-.30**</td>
<td>-.79**</td>
<td>--</td>
</tr>
</tbody>
</table>

*Note:* ** $p < .01$; * $p < .05$

**Primary Analyses**

Results of the current study will be presented in five major sections: 1) the association between cyberbullying and the continuous variables, 2) the associations between the three proposed mediators, 3) the association of the proposed mediators with depression and anxiety, 4) tests of mediation, and 5) the effects of gender.

Analyses were conducted using path analysis. To test for mediation, the data were analyzed using the bootstrap resampling procedure with multiple mediators (Preacher & Hayes, 2008). The method applies resampling of the data in order to produce percentile-based confidence intervals. Evidence for mediation is found when the confidence intervals do not cross zero.
Associations between cyberbullying and continuous variables. Three hypotheses were made regarding the associations between cyberbullying and the three proposed mediators. The first stated cyberbullying would be associated with greater anonymity. The second was that cyberbullying would be associated with a reduction in perceived control by the victim. The third stated cyberbullying would be associated with greater incident frequency of bullying. No hypotheses were made for whether the direct effect between cyberbullying and depression and anxiety would be present after mediating variables were considered. Unstandardized coefficients are reported in the test; standardized coefficients are presented in Figure 2.

Inconsistent with the first hypothesis, cyberbullying was not significantly associated \((b = .04, p = .83)\) with perceived anonymity. In contrast, hypotheses regarding reduction in perceived control and greater incident frequency were supported by analyses. Cyberbullying was significantly associated \((b = -.62, p = .015)\) with a reduction in perceived control, such that victims of cyberbullying plus traditional bullying reported lower levels of control than victims of traditional bullying only. Cyberbullying was significantly associated \((b = .38, p < .001)\) with a greater incident frequency, meaning that victims of cyberbullying plus traditional bullying reported greater average incidents per situation than victims of traditional bullying only. The direct effects of cyberbullying on anxiety \((b = .17, p = .386)\) and depression \((b = .18, p = .179)\) were both nonsignificant.

Association between proposed mediators. Two hypotheses were made regarding the associations between mediators. First, it was hypothesized that perceived anonymity would be associated with a reduction in perceived control. The second
hypothesis stated that perceived anonymity would be associated with greater incident frequency.

Consistent with my first hypothesis, perceived anonymity was significantly associated \((b = -.58, p = .001)\) with a reduction in perceived control, such that as perceived anonymity increased, there was a reduction perceived control. Inconsistent with my second hypothesis, perceived anonymity was not significantly associated \((b = .13, p = .15)\) with greater incident frequency. See Figure 2 below.

**Association between proposed mediators and symptoms of anxiety and depression.** It was hypothesized that reduced perceived control and incident frequency of bullying would each be associated with greater symptoms of anxiety and depression.

Inconsistent with my hypotheses, reduced perceived control \((b = -.11, p = .27)\), and incident frequency \((b = .002, p = .99)\) were not significantly associated with symptoms of anxiety. Also inconsistent with my hypothesis, incident frequency was not significantly associated \((b = .13, p = .47)\) with symptoms of depression. In contrast, the hypothesis regarding reduced perceived control and symptoms of depression was supported. A reduction in perceived control was associated \((b = -.15, p = .044)\) with symptoms of depression, such that as perceived control decreased, symptoms of depression increased. See Figure 2 below.

**Tests of mediation.** The current study hypothesized that anonymity of bullying would mediate the consequences of cyberbullying on both reduced perceived control and on greater incident frequency. It was also hypothesized that perceived control by the victim and greater incident frequency would mediate the consequences of anonymity on symptoms of anxiety and depression.
Contrary to my first hypotheses, anonymity was not found to mediate the association between cyberbullying and reduced perceived control ($b = -0.02, 95\% \text{ CI} [-0.19, 0.24]$) or incident frequency ($b = 0.01, 95\% \text{ CI} [-0.09, 0.03]$). Contrary to my second hypotheses, greater incident frequency was not found to mediate the consequences of anonymity on symptoms anxiety ($b = 0.00, 95\% \text{ CI} [-0.08, 0.50]$) and depression ($b = 0.01, 95\% \text{ CI} = -0.12, 0.01$). Also contrary to my second hypotheses, reduced perceived control was not found to mediate the consequences of anonymity on symptoms of anxiety ($b = 0.07, 95\% \text{ CI} [-0.20, 0.05]$). Consistent with my hypothesis, anonymity was significantly associated with reduced perceived control and reduced perceived control was associated with depression. Therefore, reduced perceived control was tested as a mediator between anonymity and symptoms of depression. Mediation analyses showed that reduced perceived control significantly mediated the association ($b = 0.08, 95\% \text{ CI} [0.01, 0.20]$) between anonymity and symptoms of depression, meaning that the association between anonymity and an increase in symptoms of depression was, in part, accounted for by reduced perceived control. Due to cyberbullying being significantly associated with reduced perceived control and reduced perceived control being significantly associated with symptoms of depression, reduced perceived control was tested as a mediator between cyberbullying and symptoms of depression. Mediation analyses showed that reduced perceived control significantly mediated the association ($b = 0.09, 95\% \text{ CI} [0.01, 0.25]$) between cyberbullying and symptoms of depression, such that the association between cyberbullying and increased symptoms of depression was, in part, accounted for by reduced perceived control.
Contrary to my hypotheses, none of the tests of serial mediation were significant. Serial mediation from cyberbullying, to anonymity, to perceived control, to anxiety was not significant ($b = .003, 95\% \text{ CI } [-.05, .02]$). Serial mediation from cyberbullying, to anonymity, to incident frequency, to anxiety was not significant ($b = .000, 95\% \text{ CI } [-.02, .01]$). Serial mediation from cyberbullying, to anonymity, to perceived control, to depression was not significant ($b = .003, 95\% \text{ CI } [-.05, .03]$). Serial mediation from cyberbullying, to anonymity, to incident frequency, to depression was not significant ($b = .001, 95\% \text{ CI } [-.03, .00]$).

**Gender differences.** The analyses reported above were conducted again while controlling for gender. Results indicate that gender is significantly associated ($b = -.39, p < .001$) with incident frequency, such that males have an increased incident frequency compared to females. Results also indicated that reduced perceived control is not significantly associated ($b = -.14, p = .077$) with depression after controlling for gender. No other substantive differences were found in analyses controlling for gender.
Figure 2. Comprehensive Figure of Results (results for anxiety are reported on the left side of the line and results for depression are noted on the right side of each line).
CHAPTER 4
DISCUSSION

The present study sought to explain the relationship between cyberbullying and symptoms of depression and anxiety. It was hypothesized that cyberbullying, relative to traditional bullying, would be associated with greater perpetrator anonymity, reduced perceived control by the victim, greater incident frequency of bullying, and an increase in symptoms of anxiety and depression. It was further predicted that perceived anonymity would be associated with reduced perceived control by the victim, greater incident frequency of bullying, and increased symptoms of anxiety and depression. I further hypothesized that reduced perceived control by the victim and greater incident frequency would be associated with increased symptoms of anxiety and depression.

Anonymity and Bullying

First, the present study hypothesized that there would be an association between cyberbullying and an increase in perceived anonymity. Results revealed cyberbullying did not predict an increase in anonymity perceived by the victim. These findings are inconsistent with the findings by Wang, Nansel, and Iannotti (2011), which showed how victims of cyberbullying are likely to feel isolated, dehumanized, or helpless because of anonymity and lack of control they have over the situation. One possible explanation for this discrepancy could be the age group being studied. The aforementioned study investigated bullying in adolescence, whereas the current study investigated these effects
in college-aged participants. Therefore, the experience and maturity of college-aged students versus adolescents may affect how victims of cyberbullying perceive anonymity. It is also possible that the difference is attributable to the groups being compared in the present study, cyberbullying plus traditional bullying versus traditional bullying only, as compared to the eight mutually exclusive groups compared by Wang and colleagues’ (2011): noninvolved, occasional bullies, occasional victims, occasional bully-victims, frequent bullies, frequent victims, frequent bully-victims, and mixed frequency (individuals reporting both bullying and victimization but with different frequency levels).

Second, the current study hypothesized that anonymity would be associated with a reduction in perceived control. Analyses confirmed this prediction, such that as anonymity increased, perceived control decreases. There could be an alternate interpretation that a reduction in perceived control leads to a victim perceiving the bully as more anonymous. The initial interpretation is consistent with previous research. Specifically, Sticca and Parren (2013) found that anonymity decreases the perceived victim control over bullying. Furthermore, these findings support Eastwick and Gardner’s (2009) findings that the internet allows for an increased ability to achieve anonymity.

Third, the present study hypothesized that anonymity would be associated with an increase in incident frequency. This hypothesis was not supported by the results, as there was no association between anonymity and incident frequency. As discussed above, it is possible that the age of the participants may affect how individuals in this study respond differently to anonymity, or that differences in groups being compared between the present and past studies could be responsible. Another possible explanation is the relative
lack of research on the frequency of bullying and cyberbullying. There are some studies (Slonje & Smith, 2008; Barlett, 2014) that have shown that cyberbullying is associated with an increase in frequency based on the medium through which it is expressed. Therefore, in late adolescence or early adulthood, factors other than anonymity may have a greater impact on victims of cyberbullying than anonymity.

**Reduced Perceived Control**

The current study hypothesized that reduced perceived control would be associated with an increase in symptoms of anxiety and depression. The results partially supported this prediction. A reduction in perceived control was associated with an increase in symptoms of depression, but not symptoms of anxiety. Alternatively, this study could be interpreted as indicating that an individual experiencing depression may be less likely to perceive they have control over a bullying situation. Owing to the cross-sectional design of the study, it is not possible to determine direction of effect between depression and perceived control. Nevertheless, the first analysis is partially consistent with previous findings by Wang, Nansel, and Iannotti (2011), who found that symptoms of anxiety and depression increased as the victim’s perception of his or her control decreased.

The hypothesis that reduced perceived control would mediate the association between anonymity and symptoms depression was supported by the data. Results from mediation analyses indicated that anonymity was associated with elevated levels of depression owing to a reduced perception of control over the bullying situation. This finding is consistent with those of Sticca and Parren (2013), who found that anonymity is associated with decreased perceived control over their bullying, and those of Wang,
Nansel, and Iannotti (2011), who found that symptoms of anxiety and depression increase as a victim’s perception of control decreases.

It is perplexing that evidence of mediation was found when predicting depression, but not anxiety, as depression and anxiety are typically highly correlated (Löwe et al., 2008). One explanation of these results could be the location of the participants. Participants attended a university which has a strong emphasis on community and helping one-another. This possibly could have been a protective factor against symptoms of anxiety and depression, which may lead to participants reporting less anxiety and depression than they could have in a different environment.

Post hoc analyses were completed testing the association between cyberbullying and reduced perceived control. Results showed that cyberbullying is associated with a reduction in perceived control. Analyses also showed that a reduction in perceived control mediated the association between cyberbullying and symptoms of depression. This is consistent with past research by Wang, Nansel, and Iannotti (2011) who found that victims of cyberbullying tend to feel isolated, dehumanized, and helpless because of the anonymity and lack of control associated with cyberbullying. The finding is also consistent with Dredge, Gleeson, and Piedad Garcia (2014), who found that victims of cyberbullying who did not have control over bullying posts made online felt hopeless and helpless, especially if the cyberbully’s identity was unknown.

These results indicate that if students feel more perceived control over the bullying situation, they may report less symptoms of depression. This could disrupt both pathways from cyberbullying to depression and anonymity to depression. In order to increase a student’s perceived control over the bullying situation, colleges could offer
educational classes. These classes could teach students to be aware of their own situations, but also teach students the signs of cyberbullying so that they could intervene. This is an important implication because Barlińska, Szuster, and Winiewski (2013) found that the larger the audience is for cyberbullying, the greater the chance that at least one of the bystanders will share the content of cyberbullying. Increasing perceived control may be able to disrupt these patterns.

**Frequency of Bullying Incidents**

The first hypothesis regarding frequency was that it would lead to greater symptoms of anxiety and depression. This hypothesis was not supported by the data. One explanation is that there was little research found on frequency of cyberbullying. Another explanation is past research, in contrast to the present study, made comparisons between groups that included bullies as well as bully-victims. For example, one such study found that victims of frequent cyberbullying (more than 3 times a month) reported higher levels of depression than bullies or bully-victims of cyberbullying (Wang, Nansel, & Iannotti, 2011). Therefore, results from the present study and past studies are not directly comparable.

Post hoc analyses were conducted testing the association between cyberbullying and incident frequency of bullying. There was a significant association between increase in frequency per incident and cyberbullying, meaning that those who experience both cyberbullying and traditional bullying reported greater frequency per incident of being bullied than those experiencing only traditional bullying. This is consistent with previous research that indicates 28.7% of college students experience cyberbullying (Hinduja & Patchin, 2010). In this study 45 participants (50%) experienced cyberbullying plus
traditional bullying more than once a month. This indicates that 50% of the sample was being bullied frequently. This further demonstrates the importance of awareness and intervention programs in order to decrease the prevalence of cyberbullying.

**Gender Differences**

Analyses were conducted again including gender as a covariate. Analyses showed that gender was significantly associated with frequency per type of incident, such that males reported a greater frequency of incidents per bullying scenario. This is consistent with the research by Kowalski, Giumetti, Schroeder, and Reese (2012), who found that, in the context of online gaming, males reported a higher frequency of cyberbullying victimization than females.

**Limitations and Future Directions**

There are some limitations to the current study. The first limitation relates to the cross-sectional, correlational design. This creates some challenges when interpreting the findings of this study. First, causality cannot be inferred because it is possible that there are unmeasured variables that explain both bullying and the various mediator and outcome variables. Second, direction of the effects between variables cannot be inferred. For example, anxiety could have preceded the bullying. There also could be an alternate interpretation that a reduction in perceived control lead to a victim perceiving the bully as more anonymous. An additional limitation was the use of self-report for all variables, which could lead to an inflated correlation due to common method variance.

Another limitation is that there were not enough participants in the cyberbullying only and traditional bullying only groups in order to make comparisons between these two groups. This was the original plan. Sample size was restricted by the nature of the
measures. The participants were required to be on campus for a minimum of two months before they could participate in the present study. Therefore, data collection was restricted to a small portion of the semester, meaning students may not have had the opportunity to participate. The sample size also was not large enough to test gender as a moderator of the association between bullying and the mediators and outcomes. With more participants, analyses could be run to see if gender moderated the associations between bullying, the mediators, and the outcomes.

Finally, the lack of generalizability of the findings was another limitation. The sample was mainly Caucasian (85.6%) and contained more women (63.3%) than men. Furthermore, the sample was drawn from students from a private university. Therefore, range in income was likely restricted. For these reasons, the findings may not be widely generalizable.

Future directions might include conducting a longitudinal study to establish direction of effects between the variables. A longitudinal study might also allow researchers to collect observations from additional people in the participant’s lives in order to add additional measurement tools, rather than only have self-report measures. A longitudinal study would also allow researchers to consider the differences between bullying and cyberbullying at the high school and college level. This would inform understanding of the development of bullying as well as how individual perceptions of bullying changes. Future directions should also consider performing the longitudinal study within multiple schools in order to have a more diverse sample, including a variety of ethnicities and all levels of socioeconomic status.
Conclusions

The present study sought to explain the relationship between cyberbullying and risk for depression and anxiety. In many instances the findings of this study were consistent with previous research, showing that cyberbullying was associated with a reduction in perceived control and an increase in incident frequency. Further, findings were consistent with previous research, indicating that reduced perceived control was associated with greater anonymity and an increase in symptoms of depression. Interventions aimed at reducing cyberbullying and its effects in college could be beneficial in promoting awareness among students to increase perceived control. Bullying prevention programs may also be beneficial to reduce frequency of cyberbullying victimization in college.


Sticca, F., & Perren, S. (2013). Is cyberbullying worse than traditional bullying? Examining the differential roles of medium, publicity, and anonymity for the


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APPENDIX A

Demographic Questions:

1. What is your age? _________
2. What is your gender? a. Female   b. Male
3. What year of college are you in at the university?
   a. 1
   b. 2
   c. 3
   d. 4
   e. 5
4. What is your racial group? Circle all that apply.
   a. Caucasian (White)
   b. African-American
   c. Hispanic
   d. Asian
   e. Native American
   f. Other _______________
APPENDIX B

The Bullying Scale

The questionnaire aims to find out about bullying* amongst students. For the validity of the study it is important that you read the items carefully and answer all the questions. As there is no right answer, please try to choose the most appropriate choice. Responses given to this questionnaire will be used for research purposes only. Your sincere answers will be appreciated.

*Definition of Bullying: Bullying is a repeated pattern of hurtful behavior involving intent to maintain an imbalance of power.

**Definition of Control: Control is the ability to respond effectively to the situation or stop the situation from continuing to occur.

Please rate how often each of the following experiences occurred in the past two months using the scale below.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>Less Than</td>
<td>About</td>
<td>2-3 Times</td>
<td>Once a Week</td>
<td>2-3 Times</td>
<td>Almost Every Day</td>
</tr>
<tr>
<td>Once a Month</td>
<td>Once a Month</td>
<td>a Week</td>
<td>a Month</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please rate your knowledge of the identity of the perpetrator using the scale below.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Applicable</td>
<td>Never</td>
<td>25% of the Time</td>
<td>50% of the Time</td>
<td>75% of the Time</td>
<td>Always</td>
</tr>
</tbody>
</table>

**Please rate how much you felt you were in control of the situation using the scale below.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Applicable</td>
<td>No Control</td>
<td>Little Control</td>
<td>Some Control</td>
<td>Much Control</td>
<td>Complete Control</td>
</tr>
</tbody>
</table>
1. My friends make fun of me in person by repeating something that I say because they think it is dumb.
2. My friends make fun of me online by repeating something that I say because they think it is dumb.
3. I am ridiculed in person front of my friends.
4. I am ridiculed online in front of my friends.
5. I am called bad names in person.
6. I am called bad names online.
7. Some students swear at me in person.
8. Some students swear at me online.
9. Some students try to affect my relationship with my friends in person.
10. Some students try to affect my relationship with my friends online.
11. I am prevented from becoming friends in person with others due to being disliked.
12. I am prevented from becoming friends online with others due to being disliked.
13. Other students tell lies and stories about me in person to make me look bad.
14. Other students tell lies and stories about me online to make me look bad.
15. Some students annoy me by staring at me.
16. Some students annoy me by constantly looking at my pages online.
17. They tease me in person to make me angry.
18. They tease me online to make me angry.
19. Some students spread rumors in person about me.
20. Some students spread rumors online about me.
21. They ridicule me by saying things about me in person.
22. They ridicule me by saying things about me online.
23. Some students send me malicious text messages via my cell phone.
24. Some students send anonymous emails to threaten me.
25. Some students send physical messages (i.e. letters, written notes, etc.) to threaten me.
26. I am not treated well in person because of my sexual preferences.
27. I am not treated well online because of my sexual preferences.
28. I am not treated well in person because of my race.
29. I am not treated well online because of my race.
30. I am not treated well in person because of skin color.
31. I am not treated well online because of my skin color.
32. Some students sign me up for something in person without getting my permission.
33. Some students sign me up for something online without getting my permission.
34. Some students do not treat me well in person because of my beliefs.
35. Some students do not treat me well online because of my beliefs.
36. Other students share my personal information with others in person without getting my permission.
37. Other students share my personal information on social websites without getting my permission.
38. Other situation or type of bullying in person: ____________________.
39. Other situation or type of bullying online: _________________.

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### Generalized Anxiety Disorder-7 (GAD-7)

Over the last two weeks, how often have you been bothered by the following problems?

<table>
<thead>
<tr>
<th>Problem</th>
<th>Not at all</th>
<th>Several days</th>
<th>Over half the days</th>
<th>Nearly every day</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Feeling nervous, anxious, or on edge</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2. Not being able to stop or control worrying</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3. Worrying too much about different things</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4. Trouble relaxing</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5. Being so restless that it’s hard to sit still</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>6. Becoming easily annoyed or irritable</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>7. Feeling afraid as if something awful might happen</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
APPENDIX D

Center for Epidemiological Studies Depression Scale (CES-D)

These questions ask how often you have had certain feelings or experiences over the last week.

<table>
<thead>
<tr>
<th>Question</th>
<th>Less than 1 Day</th>
<th>1-2 Days</th>
<th>3-4 Days</th>
<th>5-7 Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Was bothered by things that usually don’t bother me.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2. Did not feel like eating; my appetite was poor.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3. Felt that I could not shake off the blues even with help from my family and friends.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4. Felt that I was just as good as other people.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5. Had trouble keeping my mind on what I was doing.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>6. Felt depressed.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>7. Felt that everything I did was an effort.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>8. Felt hopeful about the future.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>9. Thought that my life has been a failure.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>10. Felt fearful.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>11. Had restless sleep.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>12. Felt happy.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>13. Talked less than usual.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
14. Felt lonely. 0   1   2   3
15. Felt that people were unfriendly. 0   1   2   3
16. Enjoyed life. 0   1   2   3
17. Had crying spells. 0   1   2   3
18. Felt sad. 0   1   2   3
19. Felt that people dislike me. 0   1   2   3
20. Felt that I could not “get going.” 0   1   2   3