An Evaluation of a Brief Mindfulness and Values Training on Cyber Bullying Behavior in College Students

Emily M. Boduch

Minnesota State University, Mankato

Follow this and additional works at: https://cornerstone.lib.mnsu.edu/etds

Part of the Clinical Psychology Commons, and the Higher Education Commons

Recommended Citation

An Evaluation of a Brief Mindfulness and Values Training on Cyber Bullying Behavior in College Students

By

Emily M. Boduch

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Arts In Clinical Psychology

Minnesota State University, Mankato

Mankato, Minnesota

6/22/2020
An Evaluation of a Brief Mindfulness and Values Training on Cyber Bullying Behavior in College Students

Emily M. Boduch

This thesis has been examined and approved by the following members of the student’s committee.

____________________________________________________________________
Angelica Aguirre: Advisor

____________________________________________________________________
Kristie Campana: Committee Member

____________________________________________________________________
Dan Houlihan: Committee Member
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract</td>
<td>iii</td>
</tr>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>References</td>
<td>36</td>
</tr>
<tr>
<td>Figure 1</td>
<td>41</td>
</tr>
<tr>
<td>Figure 2</td>
<td>42</td>
</tr>
<tr>
<td>Figure 3</td>
<td>43</td>
</tr>
<tr>
<td>Figure 4</td>
<td>44</td>
</tr>
<tr>
<td>Appendix A: Experimental Script</td>
<td>45</td>
</tr>
<tr>
<td>Appendix B: Worksheets and Activities</td>
<td>59</td>
</tr>
<tr>
<td>Values Worksheet</td>
<td>59</td>
</tr>
<tr>
<td>Values in Action Worksheet</td>
<td>61</td>
</tr>
<tr>
<td>Control Group Session 1 Activity</td>
<td>62</td>
</tr>
<tr>
<td>Control Group Session 2 Video</td>
<td>63</td>
</tr>
<tr>
<td>Control Group Session 3 Activity</td>
<td>64</td>
</tr>
<tr>
<td>Control Group Session 4 Videos</td>
<td>65</td>
</tr>
<tr>
<td>Appendix C: Questionnaires</td>
<td>66</td>
</tr>
<tr>
<td>Cyber-Aggression Typology Questionnaire (CATQ)</td>
<td>66</td>
</tr>
<tr>
<td>Mindfulness Attention Awareness Scale (MAAS)</td>
<td>67</td>
</tr>
<tr>
<td>Appendix D: Informed Consent</td>
<td>69</td>
</tr>
<tr>
<td>Appendix E: Campus Resources</td>
<td>72</td>
</tr>
</tbody>
</table>
Abstract

Cyber bullying is associated with many negative outcomes for both the bully and the victim (Fahy et al., 2016; Kowalski et al., 2014; Merrell et al., 2008; Quintana-Orts & Rey, 2018). There has been a large research focus on the causes (Barlett & Gentile, 2012; Mehari & Farrell, 2018) and consequences (Fahy et al., 2016) of cyber aggression, but there has not been as much focus on the evaluation of prevention and intervention strategies (Gaffney et al., 2018). While cyber bullying is primarily targeted in adolescence, Tynes, Rose, and Markoe (2013) showed that online aggression occurs amongst university students as well, resulting in a decreased sense of belonging to the campus community. One intervention that shows promise for the reduction of cyber bullying behavior is Acceptance and Commitment Therapy (ACT), which uses several techniques, including mindfulness and values techniques, to increase psychological flexibility (Christie, Atkins, & Donald, 2017; Villatte et al., 2016; Zarling, Lawrence, and Marchman, 2015). The current study aimed to evaluate the effectiveness of a brief mindfulness and values training for reducing the frequency of cyber bullying behavior in college students. Focusing primarily on the mindfulness and values components of the ACT package to determine whether they will be enough to effectively reduce cyber bullying behavior through increased awareness, compassion, and goal-directed behavior. A preliminary analysis of the data showed a decrease in cyber bullying behaviors from pre-test to post-test which continued into the follow-up. No changes in mindfulness were observed.
Introduction

Cyber bullying is most commonly defined as the repeated use of an electronic device to intentionally harm another individual lower on a power hierarchy (Kowalski et al., 2014; Merrell et al., 2008; Patchin & Hinduja, 2015). In cases of in-person bullying this could be someone physically smaller or weaker, but online it is more commonly referred to someone who is less able to defend themselves (Gaffney et al., 2018; Kowalski et al., 2014). The victim may not have the popularity, confidence, or competence to stand up to the bully and there is also the possibility of the bully possessing knowledge or media that could potentially harm the victim if disclosed to others (Patchin & Hinduja, 2015). Harm can include a wide range of behaviors such as threats, insults, embarrassment, social isolation, guilt, blackmail, and degradation (Kowalski et al., 2014; Mehari & Farrell, 2018; Patchin & Hinduja, 2015). The prevalence rates of cyber bullying have varied greatly, with a majority of research agreeing on a prevalence of about 10-40% (Kowalski et al., 2014). The wide range can be attributed to many factors including the populations studied (e.g., their age and whether the study focused on the bully, the victim, or a combination of the two), the measurement timeframe (e.g., whether bullying was assessed over a life-time, the past year, past two weeks, etc.), and the definition of ‘cyber bully’ used in the study (Kowalski et al., 2014).

There are four components present in most definitions of cyber bullying and they are largely reflective of what makes an in-person bully. The components include intent to harm the other individual, repeated harassment, a power difference between the bully and victim, and the use of an electronic device (Kowalski et al., 2014; Merrell et al.,
But not all research on cyber bullying includes the same definition, nor the same four components as listed above. For example, in a study by Espelage et al. (2015), cyber bullying was defined more simply as someone who engages in ‘mean’ behaviors online. Patchin and Hinduja (2015) explain that, although easily defined, cyber bullying can be complicated to measure. Bullying online isn’t as straightforward as bullying in-person. Pettalia, Levin, and Dickenson (2013) excluded the repetition criteria from their definition of cyber bully because online, harmful messages have the ability to spread quickly to a large audience. One act of cyber aggression could cause repeated damage to the victim over many days. When considering intent, it is important to remember that interactions online lack context and emotional reactivity (Kowalski et al., 2014; Patchin & Hinduja, 2015). Perpetrators may be unaware of the direct effects of their behaviors on the ‘victim’ and ‘victims’ could also misinterpret messages as being more aggressive than the ‘bully’ had intended. The possibility for misinterpretation can make it difficult to determine intent. In a study conducted by Ybarra, Espelage, and Mitchell (2014), less than half (42%) of youth who had been victims of bullying online reported a difference in power between them and the bully. Regardless of the definition, however, the act of cyber aggression can have some serious consequences for both the bully and the victim.

**Outcomes of Cyber Bullying**

Involvement in cyber bullying has been linked with many negative behavioral, mental- and physical-health outcomes for both the bully and the victim. Additionally, cyber bullying victimization increases the likelihood of perpetration (Kowalski et al., 2014; Quintana-Orts & Rey, 2018). Runions, Bak, and Shaw (2017) found that
controlled-appetitive cyber aggression, or aggression that is both intentional and aimed at increasing the positive emotional state of the aggressor, had the strongest correlation with cyber victimization \( r = .24, p < .001 \). The impulsive-aversive typology, or aggression that occurs automatically as a result of perceived provocation, had a much lower correlation \( r = .16, p = .05 \) and the controlled-aversive and impulsive-appetitive typologies were not correlated at all. This data suggests that some victims may be engaging in cyber bullying behaviors as a means of retaliation, or to get back at someone who had bullied them, thus perpetuating a cycle of victim to bully. Some of the negative effects of cyber bullying engagement include absenteeism from work or school, drug use, self-injury, suicide, violence, decreased self-esteem, anxiety, depression, reduced self-control, and poorer physical-health (Fahy et al., 2016; Kowalski et al., 2014; Merrell et al., 2008; Quintana-Orts & Rey, 2018). It is also important to note that, even when not meeting criteria for bullying victimization, youth who are victims of online aggression have demonstrated elevated rates of psychological problems when compared to their non-victimized peers (Ybarra, Espelage, & Mitchell, 2014). The potential outcomes of bullying can be severe and life threatening. It is a problem that needs to be addressed for the safety and well-being of all who are involved, making the evaluation of cyber bulling interventions an important research target.

**Intervention Research for the Reduction of Cyber Bullying**

Research thus far has focused primarily on the causes (Barlett & Gentile, 2012; Mehari & Farrell, 2018) and consequences (Fahy et al., 2016) of cyber aggression. While this information is necessary for the development of prevention and intervention
strategies, it is also important to consider whether these strategies are effective at reducing the behavior. The evaluation of current anti-bullying interventions can provide information on what techniques work best and under what circumstances. Additionally, we can fine tune strategies, making them easier to implement in various settings.

In a meta-analysis on school bullying interventions conducted by Merrell et al. (2008), current interventions were found to increase positive behavior in students, but a majority of these interventions were not shown to be effective at reducing bullying itself. In total, 31 effect sizes were computed over 4 bullying domains (bullying others, being bullied, teacher’s report of emotional/behavioral problems, and peer reports of bullying participation). The results of this analysis showed that 11 of the 31 calculated bullying outcomes were significant and considered to have a positive effect on the reduction of bullying behaviors; 6 were significant and demonstrated negative effects, or worsened bullying behaviors; and 14 outcomes were below the threshold to be considered to have had an effect ($Cohen's~d~<~.20$), in other words, bullying was not impacted by these interventions. When looking at cyber bullying interventions specifically, there is less research available. Gaffney et al. (2018) conducted a recent meta-analysis on the effectiveness of anti cyber bullying programs. Of the 24 studies included in their analysis, only three had been conducted in the United States. It is clear that more research is needed in this area.

Some of the strategies being used currently have shown mixed results. Roberto et al. (2014) conducted a study evaluating the efficacy of an in-school program for promoting cyber safety and reducing students’ willingness to engage in cyber bullying.
This study evaluated the Arizona Attorney General’s Social Networking Safety Promotion and Cyberbullying Prevention program which was designed to target students’ perception of the consequences and threats, as well as their attitudes and intentions regarding cyber safety and cyber bullying perpetration (Roberto et al., 2014). Cyber bullying susceptibility, or risk of getting into trouble, and severity, the degree of trouble the perpetrator believed they would be in, if caught, was measured using an adapted version of the Risk Behavior Diagnostic Scale (RBD). Participants responded using a five-point Likert scale ranging from strongly disagree to strongly agree to three statements assessing susceptibility (e.g., “I am at risk of getting into trouble if I use a cell phone or the internet to hurt or embarrass someone”) and severity (e.g., “I believe that getting into trouble for using a cell phone or the internet to hurt or embarrass someone would lead to very bad problems”). Intention to engage in cyber bullying behaviors was measured using the same five-point Likert scale and included three questions such as, “It is likely that I will use a cell phone or the internet to hurt or embarrass someone in the future.” Additionally, attitudes towards cyber bullying were assessed using the following statement: “For me, using a cell phone or the internet to hurt or embarrass someone is: bad-good, boring-fun, harmful-helpful.” The results of this study showed that the perceived severity of consequences for cyber bullying, but not the likelihood of getting into trouble, significantly predicted attitudes towards, and intent to engage in, bullying. A comparison between the experimental and control groups revealed that students’ who participated in the intervention reported significantly less intention to retaliate when bullied online (Roberto et al., 2014). It is important to note that this study did not directly
measure cyber bullying engagement, but rather, intent to engage in the behavior. It is unclear, based on these results, whether cyber bullying was actually reduced through the implementation of this program.

Another study evaluated the Second Step: Student Success Through Prevention program. This program was designed to be a weekly (or bi-weekly) intervention, delivered in grades 6 through 8, to target aggression, violence, and drug use through the promotion of social skills, empathy, and school connectedness (Espelage et al., 2015). A clinical trial by Espelage et al. (2015) evaluated the Second Step program’s efficacy at reducing aggressive behaviors in a sample of 3,651 students across 36 schools. The aggressive behaviors measured in this study included homophobic name calling, bullying in-person, cyber bullying, and sexual harassment. The researchers also collected data on self-reported delinquent behaviors from the students being studied. Interestingly, no significant main effects of the intervention on bullying were found. The researchers did, however, identify a significant relationship between changes in self-reported delinquency and bullying perpetration in that self-reported delinquency mediated the relationship between treatment conditions and outcomes (Espelage et al., 2015). Although not directly targeted by this intervention, bullying was reduced when other delinquent behaviors decreased.

An evaluation of student perspectives on cyber bully prevention techniques, conducted by Kraft and Wang (2009), asked a nation-wide sample of 713 middle- and high school students to complete a survey and rate, on a scale of 1 very ineffective to 5 very effective, fourteen different cyber bullying prevention strategies. The goal was to
determine which techniques students thought would be most effective at preventing cyber bullying engagement. Some of the strategies included in the survey were loss of internet privileges or required netiquette classes for the offender; student education on bullying; setting and enforcing clear rules and penalties regarding cyber bullying; and ongoing cyber bullying prevention programs. Results from this survey indicated that students who had reported participating in cyber bullying, compared to those who had reported not being involved or being victimized only, had different opinions regarding which strategies would be effective. However, regardless of bullying status, students did agree on what they thought would be the top three most effective strategies: 1) no access to social networking sites for the offender, 2) parents restricting the offender’s access to their phone and computer, and 3) no computer use in school or at home for the offender (Kraft & Wang, 2009). More importantly, the use of ongoing cyber bullying prevention programs was generally rated as slightly higher than 3 (neither effective nor ineffective) across all participants; the average scores ranged from 3.43 for pure-offenders to 3.68 for pure-victims (Kraft & Wang, 2009). It should also be noted that these prevention programs were evaluated more highly by the victims and those who were uninvolved in cyber bullying than by the bullies themselves. If cyber bullying is to be reduced, these programs need to be more effective at deterring the bullies and bully-victims, rather than the pure-victims or those who are uninvolved.

As demonstrated above, data on intervention effectiveness is scarce, indicating a need for continued research in this area. Merrell et al.’s research (2008) demonstrates that anti-bullying interventions can be effective in some cases, we just need to determine
which ones and under what circumstances. Evaluating the effectiveness of programs designed to reduce cyber bullying behaviors is important for minimizing the harmful effects cause by engagement in these behaviors.

**Mindfulness and Values Components of ACT**

A technique that may be helpful in reducing cyber bullying behavior is Acceptance and Commitment Therapy (ACT). ACT is an intervention which aims to decrease automatic behaviors, such as impulses or habits, through increased psychological flexibility. Psychological flexibility is the ability to focus awareness on the details of the present moment and to change or persist in behavior that is in line with an individual’s chosen values (Hayes, 2017; Zhang et al., 2018). ACT uses several techniques to develop psychological flexibility including mindfulness, or present moment awareness; acceptance of difficult thoughts and/or emotions; cognitive diffusion, or distancing from and deliteralization of thoughts; perspective taking; values identification; and committed action towards valued behavior (Zarling, Lawrence, & Marchman, 2015), but two key targets of all ACT interventions are awareness and intention (Villatte et al., 2016). Awareness and intention are important components in behavior modification. A lack of awareness makes it easy for an individual to slip into a pattern of automatic responding that is based primarily on immediate relief/gratification rather than their values. ACT has been shown to be successful at improving caregiver interactions (Castro et al., 2016; Chancey et al., 2019); decreasing psychological distress, increasing self-compassion (Yadavaia, Hayes, & Vilardaga 2014); and reducing both physical and psychological acts of partner aggression (Zarling, Lawrence, & Marchman, 2015).
However, to our knowledge, ACT has not been tested for efficacy in the reduction of cyber bullying behaviors.

The main targets of the ACT package (awareness and intention) could be useful in the reduction of cyber bullying behavior, as will be explained in the next two sections on mindfulness and values, but the entire ACT package may not be necessary to teach these skills. Mindfulness practices can be used to increase an individual’s awareness of their own thoughts and emotions, as well as the unintentional behavior patterns that can result from responding automatically (based on judgements or expectations) to these thoughts and emotions (Brown & Ryan, 2003; Christie, Atkins, & Donald, 2017). Values trainings can help increase intention by providing direction towards behavioral choices congruent with what really matters to the individual (Castro, Rehfeldt, & Root, 2016; Christie, Atkins, & Donald, 2017).

**Mindfulness**

Mindfulness is a practice that has been used, in various forms of meditation, for hundreds of years (Brown & Ryan, 2003; Gunaratanana, 2011). It has been described as the ability to focus attention on the present moment, as it is, without the influence of judgements or expectations (Gunaratanana, 2011; Hayes & Smith, 2005). Present-moment awareness is a key component of psychological flexibility which is important for self-regulated behavior. Mindfulness-based interventions have been successful at reducing stress, anger, anxiety, and depression, as well as increasing well-being (Brown & Ryan, 2003; Fish, Brimson, & Lynch, 2016). Research on mindfulness has supported its effectiveness at increasing both emotion regulation as well as engagement in intentional
behavior (Brown & Ryan, 2003; Christie, Atkins, & Donald, 2017). By developing present moment awareness, individuals will be better equipped to act on thoughts and emotions in a way that is more in line with chosen values.

Mindfulness can be useful in the reduction of cyber bullying behaviors because it increases awareness to how our actions impact others and empathy towards what others might be going through. Mindfulness has been used in compassion trainings to increase emotional awareness and help individuals become more accepting of their thoughts and feelings (Gilbert, 2010; Jazaieri et al., 2018). Jazaieri et al. (2018) conducted a study evaluating the effects of compassion training on affect regulation and found that, while compassion training did increase participants’ ability to regulate affective states, their desire to do so had decreased. Participants in this study demonstrated higher levels of acceptance and decreased affective suppression. In other words, they had the ability, but no longer the need, to regulate affective states. Compassion trainings can also be useful in the reduction of cyber bulling behaviors through increased empathy, or the ability to understand another individual’s perspective (Gilbert, 2010). Kowalski et al. (2014) identified empathy as a protective factor against cyber bullying, with higher levels of empathy correlating with lower levels of cyber bullying perpetration. Additionally, the ability to forgive has been found to act as a protective factor against the cycle of cyber bully victim to perpetrator, reducing cyber aggression as a means of revenge (Quintana-Orts & Rey, 2018). In a study by Chancey et al. (2019), researchers found that the use of the mindfulness component of ACT, alone, was enough to improve caregiver interactions towards clients. Positive caregiver interactions are important for patient well-being but
can be difficult to maintain while dealing with profound behavioral problems. In their study, a multiple baseline approach was used to observe three direct care staff workers, over a series of five short mindfulness workshops, to evaluate changes in staff interactions with adult patients with developmental disabilities. Each workshop lasted approximately fifteen minutes and consisted of a brief mindfulness discussion and activity. Results revealed an increase in staff-initiated patient interactions after initiation of the mindfulness workshops which was maintained at follow-up (Chancey et al., 2019). The results of this study suggest that mindfulness could improve social interactions through increased engagement in the present-moment, resulting in a reduced influence of bias, as well as increased flexibility during difficult interactions (Chancey et al., 2019).

While awareness is important for recognizing maladaptive behavioral patterns, intention is also necessary to direct behavior towards more meaningful outcomes. One way to increase intentional behavior is through values identification.

**Values**

Values represent what is most meaningful to someone. They are not goals, because they are never truly accomplished, but rather, a way of living. Values have been commonly described as freely chosen principles that are actively created and help guide behavior (Christie, Atkins, & Donald, 2017; Hayes, ACBS; Wilson et al., 2010). Living in accordance with one’s values has been shown to be associated with decreased psychological distress, increased adjustment, and improved well-being (Christie, Atkins, & Donald 2017; Wilson et al., 2010). Additionally, value-driven behavior is known to be intrinsically reinforcing (Wilson et al., 2010). Therefore, acting in line with one’s values,
in itself, is enough to motivate increased value-driven behavior. Castro, Rehfeldt, and Root (2016) conducted a study on caregiver interactions and found a relationship between values clarification and committed action. In their study, three direct-care staff workers at a treatment facility for adults with developmental disabilities participated in two values-based workshops consisting of three sessions each. The first workshop focused on clarifying personal values and identifying committed actions towards these values. The second workshop was a replication of the first but with a focus on work-related values. Upon completion of the two workshops, caregiver interactions with clients increased from baseline by about 11 to 16 instances for each worker (Castro, Rehfeldt, & Root, 2016). In another study by Villatte et al. (2016), the values component of the ACT package alone was found to be enough to significantly improve psychiatric symptoms, quality of life, and values-based activation in adults seeking mental health treatment. Short-term values interventions have also been shown to be effective at reducing defensiveness against self-threatening information in college students (Crocker, Niiva, & Mischkowski, 2008). Together, these studies demonstrate the ability of values trainings to increase meaningful behavior change.

In summary, research suggests that a mindfulness and values training could be useful for the reduction of cyber bullying behaviors through increased awareness and understanding of our own thoughts and feelings, as well as the thoughts and feelings of others, and the development of greater control over emotionally driven behavior reactions. Although a majority of research has focused on middle school adolescents, cyber bullying occurs amongst university students as well. Tynes, Rose, and Markoe
(2013) evaluated survey data from a sample of 261 undergraduate university students and found that online victimization was associated with negative perceptions of campus racial climate. In other words, the more an individual was victimized online, regardless of race, the more negatively they viewed group relations and institutional practices on diversity. Tynes, Rose, and Markoe (2013) reported evidence that a student’s perception of campus racial climate has an impact on their sense of belonging as well as their academic performance. Cyber bullying in college populations is greatly understudied and further research is needed to identify ways to protect this population from the negative effects of online aggression.

The Current Study

In the present study, we aim to test the efficacy of a brief mindfulness and values intervention for the reduction of self-reported cyber bullying behavior in college students. Cyber bullying has been defined as a repetitive and intentional act (Kowalski et al., 2014; Merrell et al., 2008); however, these constructs can be difficult to measure, and cyber aggression alone has been demonstrated to be harmful and likely to increase the probability of retaliation from the victim (Runions et al., 2017; Ybarra, Espelage, & Mitchell, 2014). It is for this reason that the current intervention was designed to target the broader category of cyber bullying behaviors, or more simply stated, cyber aggression. A brief mindfulness and values training will be used to reduce cyber bullying behavior through:
(1) **Increase moment-to-moment awareness of the external and internal environments, without judgement.** Paying attention in-the-moment is beneficial because it requires a constant re-evaluation of both experience and emotion. Evaluating each moment without the influence of judgement or expectation allows more conscious and intentional behavioral decisions to be made. The benefit is a reduction in habitual behavior patterns and automatic emotional reactions (Shapiro et al., 2006).

(2) **Identify personal values.** Automatic behaviors are typically not congruent with an individual’s values. For example, many individuals engaging in cyber bullying behavior probably don’t actually want to be viewed as a bully. These individuals may have reacted strongly to an emotion or could have been engaging in a behavior that they considered playful or harmless such as trolling. Values are important because they act as a guide for our behavior, once identified, we can choose to act in a way that is in congruence with these values (Hayes, 2017).

(3) **Cultivate compassion towards the self and others.** Emotions can become strong determinants of behavior and how they are interpreted can be the difference between the calming or worsening of an emotional state. Compassion training is designed to increase mindfulness of one’s own emotional state as well as the emotions of others (Gilbert, 2010), leading to increased acceptance of our experiences and the ability to self-regulate (Jazaieri et al., 2018).

(4) **Put values into action.** Living in accordance with one’s values is both intrinsically reinforcing and it motivates continued value-based behavior (Christie, Atkins, &
Donald, 2017). By asking participants to identify ways in which they can behave in accordance with their values, they will be more likely to persist in these behaviors long-term.

Data will be collected from two groups (a control and an experimental) to answer four primary research questions (1) will the training be effective at reducing self-reported cyber bullying behaviors in college students?; (2) does higher engagement in self-reported cyber bullying behavior predict lower mindfulness scores?; (3) Will the training be effective at increasing dispositional mindfulness in college students?; and (4) are changes in participant’s mindfulness scores related to changes in self-reported cyber bullying behavior?

**Methods**

**Participants and Settings**

Participants were twenty-three college students from a public university in Southern Minnesota. Of these students, one did not show up to the first session, six did not meet criteria to continue in the study, and seven had to be dismissed due to the COVID-19 pandemic. In total, nine participants were selected for participation in this study. Recruitment was done using Sona Systems, a research participation website for students. All participants were required to be at least 18 years of age to participate in the study. The Cyber Aggression Typology Questionnaire (CATQ) was administered during the first session to assess for current participation in cyber bullying behavior. A minimum score of two or higher on at least three questions was requited to continue participation in
This cutoff score was set to reduce the chances of a ceiling effect. In other words, participants who did not currently participate in cyber bullying behaviors could not have been expected to show much improvement as a result of the intervention. All training sessions were conducted in an empty conference room at a university in Southern Minnesota. The room was furnished with a couch, chairs, a table, and three lamps. A sound machine was placed outside the door for privacy and to minimize distractions from outside noises.

Materials

The materials required for this experiment included the Cyber Aggression Typology Questionnaire (CATQ) and the Mindful Attention Awareness Scale (MAAS), which were administered to all participants at three timepoints during the course of the study (pre-test, post-test, and at a one-month follow-up). Other required materials included two values worksheets (a Values Worksheet and a Values in Action Worksheet). The values worksheets were used in sessions two and four to help participants in the experimental group identify their values and find ways to put them into action.

Cyber-Aggression Typology Questionnaire. The Cyber-Aggression Typology Questionnaire (CATQ) is a 29-item self-report questionnaire assessing cyber aggression driven by both appetitive and aversive motives (Runions et al., 2017). The questionnaire also assesses the degree of impulsivity or control the individual has over their actions. Items are broken up into four categories; rage (impulsive-aversive), revenge (controlled-aversive), reward (controlled appetitive), and recreation (impulsive-appetitive). Sample items from the questionnaire include; “If I get teased or threatened, I get angry easily and
strike back online right away” (rage), “If someone tries to hurt me, I will use electronic device(s) to get back at them in my own time” (revenge), “Sometimes I’ll team up with my friends to bring someone down online” (reward), and “I repeatedly annoy people online because I think it’s funny” (recreation). The CATQ asks participants to rate, on a scale of 1 (Very Unlike Me) to 4 (Very Like Me), the degree to which each statement is descriptive of themselves. For the purposes of this study, the questionnaire was modified to specify that participants rate their behaviors occurring over the past two weeks. The CATQ has been validated against other well-established measures of cyber bullying and aggression including the Berlin Cyberbullying- Cybe rvictimization Questionnaire, the Reactive-Proactive Questionnaire, and the BIS/BAS scales of behavioral inhibition and activation (Runions et al., 2017). The CATQ fits the needs of the current study because of its ability to assess for participation in a wide variety of cyber bullying behaviors, making it possible for us to assess increases or decreases in the behaviors.

**Mindful Attention Awareness Scale.** The Mindful Attention Awareness Scale (MAAS) is a 15-item self-report questionnaire that assesses dispositional mindfulness; open and receptive awareness and attention to the present moment. The MAAS asks participants to rate, on scale of 1 (Almost Always) to 6 (Almost Never), how often they engage in mindless activity, e.g., “I could experience some emotion and not be conscious of it until sometime later” and “I do jobs or tasks automatically, without being aware of what I am doing.” Individuals who score higher on the MAAS have been shown to demonstrate increased awareness and acceptance of their inner experiences and tend to be more cognizant of their behavior (Brown & Ryan, 2003). The MAAS is able to assess
changes in the frequency of mindful states over time, making it the ideal scale to use for this study. The MAAS also demonstrates strong psychometric properties including strong test-retest reliability, \( t(59)=.11, p = n.s. \) (Brown & Ryan, 2003). In other words, no significant differences were found between the first and second administrations of this questionnaire. The results are stable and reliable.

**Dependent Measures**

Self-reported participation in cyber bullying behavior, as measured by the CATQ, will be the primary dependent variable in this study. The participants’ mindfulness score, measured with the MAAS, will serve as a secondary dependent variable.

**Experimental Design**

The MAAS and the CATQ were administered to all participants at three time points throughout the study; once at pre-test, once at post-test, and again one-month post-intervention for a follow-up. Participants were assigned to either the control or experimental group based on the order in which they signed up for the study (odd numbered participants were assigned to the experimental group and even numbered participants to the control group). A brief mindfulness and values training was the primary independent variable in this study. The experimental group participated in four training sessions (twice a week for two weeks), each lasting approximately 15-20 minutes. The control group participated in an equal number of sessions, which lasted approximately the same amount of time, and engaged in a series of psycho-educational activities. This study aimed to answer four questions (1) will a brief mindfulness and values training reduce self-reported cyber bullying behaviors (as measured by the CATQ)
in college students?; (2) At pre-test, across all participants, does self-reported cyber bullying behavior (as measured by the CATQ) predict lower scores on the MAAS?; (3) Will a brief mindfulness and values training increase dispositional mindfulness in college students (as measured by the MAAS)?; and (4) are changes in participant scores on the MAAS correlated with changes on the CATQ?

**Experimental session one.** Upon arrival to the first session, participants in the experimental group were given a brief introduction to the concept of mindfulness (see Appendix A for a copy of the intervention script). Following this introduction, participants were guided through a series of two mindfulness exercises. The first exercise, *5 Things*, was designed to teach participants how to pause, center themselves, and pay attention in the present moment (Chancey et al., 2018). Present moment awareness is a key component of psychological flexibility; the ability to continue a certain behavior or consciously change it to be more in line with one’s personal values (Zhang et al., 2018). The *5 things* exercise teaches participants to develop a mindful attention of their external environment. The next exercise, *Deep Breathing*, was designed teach participants how to cultivate that same awareness towards their internal environment. *Deep Breathing* helps individuals focus their attention on their own experiences, in the moment, without judgement (Mirgain, 2016).

**Experimental session two.** Session two began with a recap of what was learned in the first session. Following this recap, participants were guided through a values exercise. The values exercise began with an introduction to values and how they help to guide meaningful behavior. Values are what is important to an individual, they represent
who we want to be. Behaviors that are in-line with one’s values are intrinsically reinforcing (Wilson et al., 2010). Living in accordance with one’s values has been shown to be associated with decreases in psychological distress and increased adjustment, as well as improved well-being (Christie, Atkins, & Donald, 2017; Wilson et al., 2010). Participants were provided with a values worksheet which included a semi-completed values diagram as an example. The worksheet presented 10 value categories (e.g., “Family,” “Friends/Peers,” “Employment,” etc.) for to the participant to fill in with their own personal values. Photographs were taken of the completed worksheets and stored in an electronic database; the paper copies were returned to participants to take home. The second session concluded with a mindfulness exercise called the body scan (Chancey et al., 2018). The body scan exercise is good for practicing mindful attention as well as non-judgmental acceptance of one’s own experience, in the moment. Mindfulness plays an important role in value-based action by helping to reduce habitual and automatic behaviors and judgements. Increased awareness of the present moment allows an individual to make conscious behavior-decisions that are more likely to be in line with their own personal values (Christie, Atkins, & Donald, 2017). For this exercise participants were instructed to find a comfortable position, either in their seat or laying down on a mat. The experimenter then instructed them to close their eyes and listen to their voice as they guided the participants through a brief meditative practice designed to bring attention to the physical body and internal experiences.

**Experimental session three.** The third session focused on mindfulness and compassion. When stressed or upset it can become automatic for individuals to react out
of anger, sadness, or other negative emotions. Compassionate thinking involves emotional awareness and increased control over how one responds to these thoughts (Gilbert, 2010). The third session began with an exercise that teaches participants how to cultivate mindful compassion within themselves and it concluded with an exercise for cultivating mindful compassion in their relationships with others. In the first exercise, *mindfulness and compassion towards self*, participants were asked to get into a comfortable position in their seats, relax, and bring their attention to their breath. The experimenter then guided them through a brief visualization exercise about a time someone was kind to them. The second exercise, *mindfulness and compassion towards others*, was conducted in the same manner as the first exercise but involved a time the participant was kind or caring towards someone else. Together, these two exercises help to develop better control over emotional reactions in social situations (Gilbert, 2010), allowing the individual to act in ways that are more in-line with their chosen values.

**Experimental session four.** The final session of the mindfulness training was devoted to teaching participants how to put the skills they had acquired throughout the training into action. This session involved the completion of a *values in action worksheet*. The *values in action* worksheet was explained by the experimenter and included four responses for participants to fill in; “*Here are some ways I will act differently*”, “*Here are some ways I will treat myself differently*”, “*Here are some ways I will treat others differently*”, and “*Here are some personal qualities and character strengths I will develop and demonstrate to others*.” Session four concluded with a repetition of the deep breathing exercise practiced in session one, since the development of mindfulness
requires repeated practice (Gunaratana, 2011) and this is the easiest exercise to use at any time throughout the day.

**Control group.** To maintain internal validity, the control group was asked to participate in a series of activities that resembled the experimental group as closely as possible without having therapeutic effects. Some common threats to internal validity that were of concern in this experiment included history, or events outside of the intervention that could have caused a reduction in cyber bullying behaviors; testing effects, or changes in responding as a result of participation and evaluation; and regression towards the mean, where participants who initially scored very high on a scale naturally score lower upon retesting. The therapeutic effects of the intervention can be measured as changes in the experimental group that are over and above what was demonstrated by the control group, all else being equal.

Participants in this group watched three short (10-15 minute) general psycho-educational videos, one in Session 2 and two in Session 4, and completed two general psycho-educational worksheets, one in Sessions 1 and one in Session 3 (see Appendix B for a copy of the worksheets and links to videos used in this study). Activities were chosen that did not directly relate to the intervention protocol to avoid accidentally modifying behavior or drawing awareness to individual bullying involvement. All videos had closed caption ability for any students who were hard-of-hearing. An iPad was set up during Sessions 2 and 4 with videos already prepared for participants when they arrived. The MAAS and the CATQ were administered at the beginning of the first session and again at the end of session 4 (two-weeks later).
Follow up. The Mindful Attention Awareness Scale and the Cyber Aggression Typology Questionnaire were re-administered to both groups one-month after the completion of Session 4. Follow-up questionnaires were administered via Sona Systems using a link to Qualtrics Survey Systems.

Results

As a result of the COVID-19 pandemic, data was not collected on enough participants to run significance tests. Instead, results in the following sections will be discussed using descriptive statistics.

Cyber Bullying Behavior

See Figure 1 for a side by side comparison of CATQ data from pre-test to follow-up. Responses on the CATQ range from 1 (very unlike me) to 4 (very like me). Scores were calculated by totaling the participants’ responses across all bullying behaviors, these scores can range from 28 (little to no engagement in self-reported cyber bullying behaviors) to 112 (high engagement in self-reported cyber bullying behaviors). A descriptive analysis on these results indicated a continuing decrease in self-reported cyber bullying behavior from pre-test ($M = 36.67$) to post-test ($M = 32.67$) for the experimental group ($n = 6$). Five participants from this group completed the one-month follow-up administration of the CATQ. Follow-up results indicated a continued decrease in self-reported cyber bullying behaviors ($M = 30.60$). Overall, scores on the CATQ decreased by 6.07 points from pre-test to follow-up for the experimental group. In comparison, participants in the control group ($n = 3$) demonstrated little change from pre-test ($M = 43.33$) to post-test ($M = 43.00$). Two participants in the control group completed a
follow-up administration of the CATQ and, again, little change was observed ($M = 43.50$). In total, from pre-test to the one-month follow up, participants in the control group’s scores increased by an average of .17 points.

Based on individual data, we can see that scores on the CATQ decreased from pre-test to post-test for all participants (ranging from 1 to 12 points for the experimental group and 4 to 10 points for control). As described above, lower scores on the CATQ represent lower levels of engagement in self-reported cyber bullying behavior. Not every participant completed the follow-up measure but, of the ones who did, all who were in the experimental group maintained a decrease from baseline measures at follow-up. Three of the five participants in the experimental group who had completed the follow-up questionnaire showed noteworthy decreases in self-reported cyber bullying behaviors. Participant 7 had a 12-point reduction from pre-test to post-test on the CATQ and their score remained low at the one-month follow-up. In total, from pre-test to the follow-up, Participant 7 demonstrated a 10-point decrease on the CATQ. Participant 11 showed slightly less improvement from pre-test to post-test but continued to improve from post-test to follow-up. Overall, Participant 11 demonstrated a 2-point decrease in on the CATQ from pre-test to follow-up and their score decreased by 11 points from pre-test to the one-month follow-up. Finally, Participant 17 showed a 6-point reduction from pre-test to post-test which maintained at the one-month follow-up. From pre-test to follow-up, Participant 17 demonstrated a total reduction of 9 points on their CATQ score. The two participants in the control group who had completed the follow-up were split evenly,
one increased by 7 points and one decreased by 7 points, from pre-test to the follow-up measure.

**Cyber Aggression Typology**

The CATQ divides cyber bullying behaviors into four categories: rage, revenge, reward, and recreation. Averages were used instead of total scores when evaluating changes in cyber aggression typology because it allows for comparison across categories with uneven numbers of questions. Responses in the revenge category did not differ greatly between the two groups (see Figures 2 and 3). In the experimental group, pre-test scores in the revenge category \( M = 1.31 \) decreased at post-test \( M = 1.14 \) but returned to near baseline at follow-up \( M = 1.33 \). In the control group, scores in the revenge category went from \( M = 1.83 \) at pre-test to \( M = 1.55 \) at post-test and then back up to \( M = 1.75 \) at follow-up. Overall, from pre-test to follow-up, the experimental group decreased their engagement in revenge related cyber bullying behaviors by an average of .02 points while the control group showed an average decrease of .08 points. The other three categories (rage, reward, and recreation) demonstrated more pronounced differences between the two groups. The difference between groups in these categories might imply that the intervention was effective at increasing value-based behaviors and empathy towards others. In the experimental group, scores in the rage category decreased from \( M = 1.46 \) at pre-test to \( M = 1.24 \) at post-test and then further decreased to \( M = 1.15 \) at follow-up. In the control group, rage related scores went from \( M = 1.42 \) at pre-test to \( M = 1.36 \) at post-test then further decreased to \( M = 1.25 \) at follow-up.
Although both groups experienced a decrease in this category, the experimental group experienced a greater decrease (average of .31 points) than the control group (average of .17 points). In the reward and recreation categories the experimental and control groups displayed opposite effects. For reward, the experimental group’s scores decreased from pre-test ($M = 1.14$) to post-test ($M = 1.01$) to follow-up ($M = 1$). The control group’s scores increased in the reward category from $M = 1.44$ at pre-test, to $M = 1.67$ at post-test, and $M = 1.75$ at follow-up. Overall, from pre-test to follow-up, the experimental group’s score decreased by an average of .14 points and the control group’s score increased by an average of .31 points in the reward category. In the recreation category, the experimental group’s scores slightly increased from pre-test ($M = 1.13$) to post-test ($M = 1.17$) but then dropped below baseline at follow-up ($M = 1$). In the control group, recreation scores continued to increase from pre-test ($M = 1.67$) to post-test ($M = 1.83$) to follow-up ($M = 1.88$). Overall, the experimental group’s recreation score decreased by an average of .13 points and the control group’s recreation score increased by an average of .21 points.

**Mindfulness**

See Figure 4 for a side by side comparison of MAAS data from pre-test to follow-up. Scores on the MAAS range from 1 to 6, with higher scores representing more mindfulness. The experimental group ($n = 6$) showed a slight decrease in mindfulness from pre-test ($M = 3.67$) to post-test ($M = 3.26$). Five participants in the experimental group completed the follow-up administration of this survey and the results indicated a near return to baseline levels at one-month post intervention, ($M = 3.65$). The control
group \((n = 3)\) reported a slight decrease in mindfulness from pre-test \((M = 3.82)\) to post-test \((M = 3.30)\). Two participants from the control group completed the follow-up survey which, unlike the experimental group, indicated a continued decrease in mindfulness at one-month post intervention, \(M = 3.07\) (see Figure 4).

Looking at individual data for the MAAS showed that most participants decreased in mindfulness from pre-test to post-test (scores ranged from -0.20 to -1.53 points for the experimental group and -0.50 to -1.07 points for the control), with only one participant in each group demonstrating an initial increase on this measure (+0.08 for the participant in the experimental group and +0.06 for the participant in the control group). Of the five participants in the experimental group who completed the one-month follow-up, three showed an increase from baseline on this measure. One of the participants in the experimental group, Participant 7, demonstrated a larger than average increase in mindfulness from pre-test to the one-month follow-up. This participant initially showed a reduction from pre-test to post test of -0.20 points on the MAAS but from post-test to the follow-up the score increased by +1.20 points, overall, this participant increased their mindfulness score by 1 point from baseline to the one-month follow-up. Participants in the control group did not demonstrate any increases in mindfulness from baseline to follow-up. One participant in the control group, Participant 14, did show an increase of +0.80 from post-test to the follow-up but their total change from baseline was -0.27 points.

**Discussion**

*Mindfulness and Values Training for the Reduction of Cyber Bullying Behavior*
The mindfulness and values training appeared to be effective at reducing the amount of self-reported cyber bullying behaviors in the experimental group from pre-test to post-test (see Figure 1). The effects of the training demonstrated a continued decrease on CATQ scores at one-month post-intervention. The observed results of the CATQ lend support to hypothesis one, which predicted the effectiveness of a brief mindfulness and values training for the reduction of cyber bullying behaviors. Changes in self-reported cyber bullying behavior did not appear to be related to increases in mindfulness, as predicted in hypothesis four. The experimental group demonstrated an average decrease of 6.07 points from pre-test to follow-up on the CATQ while their mindfulness scores stayed relatively the same (see Figure 4).

The relative stability of the MAAS scores did not lend support to the prediction that a brief mindfulness and values intervention would increase mindfulness scores as described in hypothesis three. Both groups showed slight decreases in mindfulness from pre-test to post-test which may have been a result of increased present-moment awareness. In other words, after taking the first mindfulness questionnaire, participants might have paid more attention in their day-to-day lives and took greater notice of the things they do automatically. At follow up, five participants from the experimental group responded to the questionnaires and showed a near return to baseline levels on the MAAS. Chancey et al. (2019) obtained similar results when studying the efficacy of a brief mindfulness training for increasing positive caregiver-client interactions. Although the researchers did not measure mindfulness directly, the results of the study demonstrated an increase in positive behavior change upon initiation of the intervention.
but psychological flexibility, as measured by the Acceptance and Action Questionnaire (AAQ-II), remained the same or decreased for all three participants.

In the current study, all but one of the participants in the experimental group showed positive changes on the MAAS, however, the improvements were small (ranging between +.07 to +1-point increase from pre-test to follow-up). Mindfulness is a skill that is strengthened with practice (Gunaratana, 2011) and it is possible that more sessions are necessary in order to see greater increases in this skill directly. Although self-reported cyber bullying behaviors, as measured by the CATQ, did decrease for the experimental group, they may have shown a greater decrease with increased mindfulness scores. It is interesting to note that, while mindfulness scores stayed relatively stable for the experimental group, they showed a continual decrease for the control group (see Figure 4). It is unclear why the control group might have experienced this decrease in mindfulness, but the differences might be attributable to the small sample size. There were only three participants in the control group who completed the intervention, compared to six in the experimental, and only two of them completed the follow-up questionnaires.

The CATQ breaks cyber bullying behaviors into four distinct categories; rage, revenge, reward, and recreation. Although cyber aggression typology was not part of the original research question, we decided to take an exploratory look at the data. The four categories of cyber aggression demonstrated unique responses to the intervention protocol. Scores in the rage category decreased from pre-test to post-test and showed a continued decrease at follow-up for both the experimental and the control groups. The
experimental group showed a greater decrease in rage related cyber bullying behavior than the control group with a mean decrease of .31 points compared to the .17-point decrease in the control group. The revenge category appeared to stay relatively the same for both the control and the experimental group, decreasing slightly at post-test and then returning to near baseline at follow-up. These two cyber aggression categories, rage and revenge, are both motivated by the removal of an aversive emotional experience (Runions et al., 2017). Mindfulness has been found to be correlated with higher levels of emotional awareness and the ability to self-regulate (Brown & Ryan, 2003), and it has also been shown to increase the acceptance of one’s own thoughts and feelings (Jazaieri et al., 2018). It is possible that the effects of the intervention did not have much impact on behaviors motivated by negative emotional experiences because these skills take more practice to develop. This thought is further supported by our failure to see increased scores on the mindfulness measure as a result of the training.

The reward and recreation categories demonstrated the greatest difference between groups. While reward scores decreased by an average of .14 points in the experimental group, the control group increased by an average of .31 points. Similarly, recreation decreased by an average of .13 points in the experimental group and increased by an average of .21 points in the control group. Unlike rage and revenge, reward and recreation are both motivated by the attainment if some sort of reward (Runions et al., 2017). These individuals are not responding to something negative that was done to them and so emotion regulation abilities are less likely to be required. It is possible that we saw the greatest between-groups differences in these two categories as a result of the
Compassion and values components of the intervention. Compassion trainings are designed to increase empathy (Gilbert, 2010) which was identified by Kowalski et al. (2014) as a protective factor against engagement in cyber bullying behaviors. Additionally, the identification of values has been shown to be associated with increased participation in meaningful behavior (Castro, Rehfeldt, & Root, 2016; Villatte et al., 2016).

An exploratory look at the participants’ identified values revealed many overlapping themes. Some of the most commonly identified values included spending time with friends and helping friends in need; helping others in the community; being kind and caring towards family; staying connected with family; making intimate partners feel loved, cared for, and happy; taking time to relax, maintain health, and personal fitness; being an approachable, fun, and understanding parent; being a leader and contributing to society; and being a timely and hard-working employee. Several of these identified values are directly related to kindness and caring in interpersonal relationships which could be useful against cyber bullying behavior. It is important to note that some of the participants listed goals rather than values in some of the categories. Increased researcher involvement in this portion of the intervention could potentially increase effectiveness of the values-clarification on cyber bullying behaviors.

The present study contributes useful information to the literature on mindfulness and values trainings in the context of cyber aggression. Information gathered from this study will contribute to current knowledge on the efficacy of cyber bullying interventions as well as providing useful information as to whether the mindfulness and values
components of the ACT package, alone, are enough to produce meaningful behavior change.

Limitations and Future Directions

Due to the COVID-19 pandemic, several participants had to be dropped from the study and further data collection was halted in order to institute a nation-wide self-quarantine. As a result, there was not enough data collected to run a statistical analysis on the effectiveness of the brief mindfulness and values training. Future research should focus on gathering a larger sample to determine the effect size of the changes in self-reported cyber bullying behaviors and mindfulness resulting from the intervention protocol. Due to the small number of participants, there was an imbalance between the control and experimental groups. The experimental group was twice the size as the control group, making it difficult to compare the two and draw conclusions from the results. Additionally, the control group tended to score much higher on measures of self-reported cyber bullying behaviors. More engagement in cyber bullying behaviors in this group may have contributed to a lower likelihood of change over the course of the study. It is also important to note that the changes in the environment as a result of the pandemic may have impacted the data. To better understand the effectiveness of this intervention protocol it would be important to replicate the study and gather a larger, more balanced, sample.

Another potential limitation of this study is the length of the intervention. Mindfulness did not show an increase from baseline and it is possible that a more in-depth training is required to observe these desired effects. Fish, Brimson, and Lynch
(2016) reported research on mindfulness which included a three-month follow-up, in this study, 50% of participants continued practicing mindfulness after the completion of the intervention. Providing participants with mindfulness materials to take home and evaluating continued practice after the completion of the study could provide necessary information regarding the need for extended instruction. Zarling et al. (2015) mentioned, in their study using ACT for emotion dysregulation, that the ability to accept unwanted emotions and engage in value-driven behaviors may become more effective as these skills are repeatedly used over time. It might be beneficial to conduct follow-up evaluations at two- or three-months post-intervention to determine whether the intervention effects are increased with time.

The values training could have benefitted from extended discussion and input on the part of the research assistant. In the present study, values were explained and then the participants were allowed some privacy in which to complete their worksheets. Upon evaluation of their responses it was clear that their comprehension of the values portion of the intervention may not have been completely on target. Many of the participants identified one or more goals on their worksheets and some even included traits they valued in other people. A more in-depth values training would be useful to help participants better understand the purpose of identifying values and a more collaborative approach to these worksheets could have helped them better implement their values in everyday life.

Future research should look into the feasibility of providing a mindfulness and values training in an online format. As cyber bullying behaviors take place online, an
online training may generalize more readily to targeted interactions. If an online intervention were found to be effective, it would be easier to use with larger numbers of students and it would require less resources to implement. The current study was conducted in one-on-one sessions and timeslots were restricted to instructor availability. It would also be worth-while to evaluate the effectiveness of incorporating additional ACT components into the trainings in order to determine whether they are able to produce greater reductions in cyber bullying behaviors.

A social validity measure was not used in this study but should be implemented in future research in order to determine participant views on the intervention protocol. It is important for the training to be acceptable to those participating in it as engagement is crucial to the effectiveness of mindfulness trainings. Although the intervention appeared to be acceptable, as no participants dropped out during the study, it could have been a result of the extra credit rewarded for participation.

According to previous research, cyber bullying involvement can have severe consequences for both the bully and the victim (Fahy et al., 2016; Kowalski et al., 2014; Merrell et al., 2008; Quintana-Orts & Rey, 2018). Due to the increased use of social media as a means to stay connected with peers, friends, and a number of other social groups, it is of growing importance to identify effective strategies for minimizing the harm that results from online aggression. It was made clear in the meta-analysis by Gaffney et al. (2018) that there is a lack of information regarding the effectiveness of cyber bullying interventions in the United States and the research that is available focuses primarily on adolescents (Espelage et al., 2015; Gaffney et al., 2018; Kraft & Wang,
2009; Roberto et al., 2014). The present study contributes to current research on the effectiveness of cyber bullying interventions in a particularly understudied population, college-students.
References


Figure 1

*CATQ Pre-Test, Post-Test, and Follow-Up Mean Scores*

*Figure 1.* Mean scores on the CATQ for the experimental group at pre-test (n = 6), post-test (n = 6), and follow-up (n = 5) and the control group at pre-test (n = 3), post-test (n = 3), and follow-up (n = 2).
Figure 2

*Experimental Group Changes in Mean Scores Across Aggression Categories*

![Bar chart showing changes in mean scores across aggression categories]
Figure 3

Control Group Changes in Mean Scores Across Aggression Categories

![Graph showing changes in mean scores across aggression categories.](image)
Figure 4

MAAS Pre-Test, Post-Test, and Follow-Up Mean Scores

Figure 4. Mean scores on the MAAS for the experimental group at pre-test (n = 6), post-test (n = 6), and follow-up (n = 5) and the control group at pre-test (n = 3), post-test (n = 3), and follow-up (n = 2).
Appendix A

Experimental Script

Session 1

**Introduction to mindfulness.** As humans, we have a tendency to get stuck in our thoughts. We spend a lot of time planning for the future, thinking about the past, and making judgements about our everyday experiences. We become wrapped up in concepts, ideas, plans, worries, fears, and fantasies that bring our attention away from what’s actually occurring in the present moment. By cultivating mindfulness, you will be better able to notice when you become stuck in these thought patterns and you will be able to develop greater control over your participation in them. Mindfulness has been practiced through various forms of mediation for hundreds of years, it is described as the ability to return attention to the present moment, as it is, without the influence of judgements or expectations (Gunaratana, 2011; Hayes & Smith, 2005).

Why is mindfulness important? By paying attention to what is going on moment-to-moment we can act more skillfully, communicate better, be more open, and avoid being controlled by our emotions. With mindfulness, we can learn to listen deeply, make decisions effectively, and better handle stress. (Benefits of Mindfulness, Financial Express). In social relationships, mindfulness increases our awareness of the impact our actions have on others. It also increases our awareness and empathy to what others might be going through (Kabat-Zinn, 2005).

Today we will practice 2 simple exercises to increase mindfulness. Remember that mindfulness is a skill, it may not come easy at first but with practice it can become
second nature. The first exercise we will practice is called “5 Things”, it is a quick and easy way to bring attention back to the present moment. The second exercise is called “deep breathing” and it can be used anytime throughout the day to help cultivate and strengthen attention.

5 Things (Chancey et al., 2018). The goal of this first exercise is to center yourself and connect with your environment. You can use this practice anytime during the day, especially any time you find yourself getting caught up in your thoughts and feelings. Let’s give it a try,

The first thing you are going to do is just to pause for a moment. Look around you and notice five things that you can see. This can be any five things that you can see anywhere within this room. Now, listen carefully and notice five things you can hear. These can be any sounds, big or small, that you currently hear within the environment such as creaks in the building, people in another room, or even your own breath. Now, notice five things you can feel in contact with your body; maybe your watch against your wrist, the feeling of your pants against your legs, the air upon your face, your back against the chair. Finally, try to do all three simultaneously; look, listen, and feel.

Now think to yourself. What types of things did you see? What type of things did you hear? What five things did you feel in contact with your body? Think about whether you were able to stop your thoughts in order to notice the five things in each phase of the activity. Wait.
**Deep Breathing** *(Mirgain, 2016)*. The next exercise is called deep breathing. For this exercise I invite you to get into a relaxed and comfortable position. Close your eyes, if you want to or you may keep them open with a softened gaze. We will begin by taking a couple of long slow deep breaths, breathing in fully and exhaling fully. Breathe in through your nose and out through your mouth. One more time in… and out.

Now allow your breath to find its own natural rhythm. Bring your full attention to each in-breath as it enters your nostrils, travels down into your lungs, and causes your belly to expand. Notice each out-breath as your belly contracts and air moves up through your lungs and back up through your nostrils or mouth. Allow your full attention to follow the flow of your breath. Wait.

Notice how your inhale is different from your exhale. You may experience the air as cool as it enters your nose and warm as you exhale. As you focus more deeply, begin to let go of the noises around you. If you are distracted by sounds in the room, simply notice them and then bring your intention back to your breath. Breathe as you breathe, don’t try to change or control your breath in any way. Observe and accept your experience in this moment without judgement, paying attention to each inhale… and each exhale.

If your mind wanders to thoughts, plans, or problems, simply notice your mind wandering. Watch the thought as it enters your awareness as neutrally as possible. Then practice letting go of the thought as if it were a leaf floating down a stream. In your mind, place each thought that arises on a leaf and watch as it floats out of sight down the
stream. Then bring your attention back to your breath. Your breath is an anchor you can return to over and over again when you become distracted by thoughts.

Notice when your mind has wandered. Observe the types of thoughts that hook or distract you. Noticing is the richest part of learning. With this knowledge you can strengthen your ability to detach from thoughts and mindfully focus your awareness.

Practice returning to your breath with full attention. Watching the gentle rise of your stomach on the in-breath and the relaxing, letting go on the out-breath.

You might be distracted by pain or discomfort in the body or twitching or itching sensations that draw your attention away from the breath. You may also notice feelings arising, perhaps sadness or happiness, frustration or contentment. Acknowledge whatever comes up. Simply notice where your mind goes without judging it, pushing it away, clinging to it, or wishing it were different. Simply refocus your mind and guide your attention back to your breath.

Breathe in… and breathe out. Follow the air all the way in… and all the way out. Mindfully be present moment by moment with your breath. If your mind wanders away just notice, without judging it, be it a thought, emotion, or sensation, gently guide your awareness back to your breathing.

As this practice comes to an end, slowly allow your attention to expand and begin to notice your entire body… and then beyond your body to the room you are in. When you are ready, open your eyes and come back fully alert and awake. The breath is always with you as a refocusing tool to bring you back to the present moment. Set your intention to use this practice throughout your day to help cultivate and strengthen mindful
attention. I want to thank you for taking the time to participate in these activities with me, that will conclude today’s session.

Session 2

Last session we introduced mindfulness and did a 5-things exercise and deep breathing. Today we will start by talking about personal values and conclude the session with a brief mindfulness exercise called the body-scan.

Present values worksheet (compass). Your values represent what is most meaningful to you. They are not goals, because they are never truly “accomplished”. Instead, values are a way of life (what you really want to be about). Values are something that we choose for ourselves. They are not based off of what others expect of us nor what we think we should be doing. They are like a compass; they help us make decisions based on the directions we want to go in life. Living a valued life can help us to make meaningful decisions even in the face of painful or difficult experiences.

On the worksheet provided is an empty compass, take a moment to look over these categories and briefly note what values you hold in each area. For each category, consider: What really matters to you? What sort of person do you want to be? How do you want others to see you? and What personal strengths or qualities do you want to have? Now we will wrap up the session with a brief mindfulness exercise called the body-scan.

Body scan (Hayes & Smith, 2005). We learned in previous sessions that mindfulness is the ability to return attention to the present moment, as it is, without the influence of judgements or expectations (Gunaratana, 2011). It is not a special state that
you “enter into” like a trance or a hypnosis, it is an effort of bringing your attention more completely to the many moments in your life. Part of the elusiveness of mindfulness is that it is done with intent, and thus we think about it and evaluate it. But the whole purpose of being mindful is to learn how to avoid judgement and evaluation. The best way to think about it is that there is neither a right nor a wrong way to be mindful. Simply be who you directly experience yourself to be in this moment. If evaluations show up, then observe the evaluations, but do not believe or disbelieve them. Remember not to be discouraged if you become distracted while doing this exercise. Gently bring your attention back to the present moment. People are sometimes tempted to use mindfulness practice as a time to relax. That is a mistake. If you are relaxed, that is fine, but if you are tense, that’s okay too. The point is to be aware of whatever is going on for you, without avoidance or judgement. As you practice, allow yourself to become more mindful of the sensations, thoughts, and feelings that are happening for you. Be gentle and non-judgmental (even with your judgements!).

Now, let’s try it. Find a comfortable position. Close your eyes and take a few deep breaths. Relax. Don’t let yourself drift off to sleep, but allow your body to rest.

Slowly bring your awareness to the tips of your fingers. Feel your fingers. Rub your fingertips together. How do they feel? Can you feel the small grooves on your fingertips that are your fingerprints? Take your time and try to feel them. What are they like? Are your fingertips rough from lots of work or are they smooth and silky? How does it feel to rub them together? Notice the feeling.
Now rest your fingers where they were before. What are they touching? Are they resting on your bed, or are they resting on the arm of your chair? What does that feel like? Is it soft or hard? Does it have any other distinguishing features? Is the blanket furry with cotton? Does the armrest have any markings or is it smooth? Take the time to completely absorb the way these objects feel to your fingertips.

Now bring your attention to your hands and arms. What do they feel like? Perhaps they are relaxed and heavy. Perhaps they are still tense from a long day’s work. Either way is okay. There is no need to judge, simply observe the feelings in your arms and hands. Are there any aches or pains? Take note of these, but do not fixate on them. Simply note the pain and move on.

Move your attention down to your toes. Wiggle them around a little. Are they in shoes or socks? Are they free to move about? Squish your toes back and forth feeling whatever is beneath them. How does it feel? Can you tell what it is just by feeling? Just notice the sensations as you bring your awareness to your feet.

How is your head positioned? Is it aligned with your spine or is it drooping? Without trying to change the position of your head, simply note where it is positioned. There is no right way for your head to be. Just let it be where it is. Now think about the sensations in your head. Do you have a headache? Is your head relaxed?

What about your face? How does your face feel? There are all kinds of sensations to explore in your face. Think about your brow. Is it smooth and flat or is it crinkled up with stress? Again, don’t try to change it, just notice it. Now bring your awareness to your nose. Can you breathe freely or are you plugged up? Take a few breaths in and out
through your nose. How does that feel? Can you feel cool air flowing in to your lungs or is the air warm? What about the air flowing out, is it different? Pay attention to this feeling for a moment.

Then think about your mouth. How is your mouth positioned? Is it pursed? Is it open? Is it closed? What about the inside of your mouth? Is it wet or dry? Can you feel your saliva coat the inside of your mouth and throat?

Explore all of the sensations throughout your face. Perhaps you can feel oil on your skin. Perhaps your skin is dry. Perhaps there is no feeling at all. Just note it and move on.

Now bring your attention to your chest and belly. Place one hand on your chest and one hand on your belly. Can you feel yourself breathing? What is that like? Are you breathing fast or slow? Are your breaths going into your abdomen or into your chest?

Breathe in through your nose and out through your mouth. How does that feel? Now invert the pattern, breathe in through your mouth and out through your nose. How does that feel? Spend some time with your breath, then place your hands wherever they were before.

Now think of your whole body. Where are you sitting? Can you feel the back side of your body touch the chair in various places? Be mindful of the way your body is positioned. There is no need to move, just observe.

Now think about the room you are in. Where are you positioned in this room? Do you have a sense of where the door is? What about the ceiling? Can you feel your body in the context of this larger space?
When you are ready, open your eyes and take a look around the room. You can move if you wish. Notice where the various pieces of furniture are. What do they look like? Spend some time investigating the different aspects of the room. Remember not to judge, just notice.

When you are ready, you can stop this exercise. Thank you for your participation today.

**Session 3**

Today’s session will focus on mindfulness in the context of social relationships. We will start by learning how to cultivate mindful compassion towards ourselves, and then we will do an exercise for cultivating mindful compassion in our relationships with others.

**Mindfulness and Compassion Towards Self** *(Gilbert, 2010).* Allow yourself to get comfortable, relax your shoulders, relax your eyes, relax your jaw. Bring your attention lightly to your breath and see if you can rest your awareness on the sensations of your breathing. Notice the rhythm of your breathing, the depth. Pay attention to it as it flows in… and out. There is no need to change it, just observe.

As you feel your body slowing down, allow your body posture to become compassionate. Create a compassionate expression on your facial expression. This might involve a slight smile or a relaxed posture, but it is a gentle facial expression.

Now bring to mind a time when someone was kind to you. This memory shouldn’t be of a time when you were very distressed, because you will then focus on the
distress. The point of the exercise is to focus on a desire to help and be kind. Create a 
compassionate expression on your face and a body posture which gives you the sense of 
kindness as you recall. 

Spend some time exploring the facial expressions of the person who was kind to you. 
Sometimes it helps if you see them moving towards you, or see their face breaking into a 
smile, or their head on one side. Focus on important sensory qualities of your memory in 
the following way:

- Just focus on the kinds of things this person said and the tone of their 
  voice.
- Now bring your focus to the feeling of emotion in the person, what 
  they really felt for you in that moment.
- Now, focus on the whole experience, maybe whether they touched you 
  or helped you in other ways, and notice your sense of gratitude and 
  pleasure at being helped. Allow that experience of gratitude and joy in 
  being helped to grow. Remember to keep your facial expression as 
  compassionate as you can. When you are ready, gently let that 
  memory fade. Bringing your attention back to your breath. Very good.

**Mindfulness and Compassion Towards Others (Gilbert, 2010).** A way to 
access and practice your compassionate self is by spending a moment and reminding 
yourself of a time when you felt compassionate; that is, calm and wise and wanting to 
help. You can imagine your compassionate self as “you at your best”, imagining that 
inner sense of calm and the supportive voice. Use a compassionate expression when you
recall this. Don’t focus on a time when someone was very distressed because that might focus you on the distress. The goal is to focus on your feelings of wanting to help and your kindness. This is called focusing the compassionate self.

In this exercise we are going to imagine kindness and compassion flowing outward from our self onto someone else. Allow yourself to get comfortable, relax your shoulders, relax your eyes, relax your jaw. Bring your attention lightly to your breath and see if you can rest your awareness on the sensations of your breathing. Notice the rhythm of your breathing, the depth. Pay attention to it as it flows in… and out. There is no need to change it, just observe.

Now try to recall a time when you felt very kind and caring towards another person (or, if you prefer, a pet). Try not to choose a time when that person (or animal) was very distressed because then you are more likely to focus on the distress. The idea is to focus on the desire to help and the feelings of kindness.

- Now, imagine yourself expanding as if you are becoming calmer, wiser, stronger and more mature, and able to help that person.
- Pay attention to the sensations of your body as you remember your feelings of kindness.
- Spend a moment expanding with warmth in your body. Note a real genuine desire for this other person to be free of suffering and to flourish.
- Think about your tone of voice in that moment, the kind of things you said, the kind of things you did, the kind of things you wanted to do.
- Think about the joy you felt from being kind.
Now, just focus on your desire to be helpful and kind; the sense of warmth; feelings of expansion; your tone of voice; the wisdom in your voice and your behavior.

Very good, these exercises can be used any time to help cultivate compassion towards yourself and others. Thank you for your participation today.

Session 4

Mindfulness in Action. Today we are going to start with the Turning Values into Action worksheet. Here I want you to consider ways in which you can put your values into action in everyday life. Throughout your mindfulness practice, the goal was to bring your attention to your values and behaviors in order to better notice when they don’t align and make corrections. Consider how you might put your values into action and write them down in the spaces provided.

We will conclude this session with the mindfulness exercise, deep breathing. Remember, practice is key for developing mindful attention.

Deep Breathing (Mirgain, 2016). I invite you to settle into a relaxed and comfortable position. Close your eyes, if you want to or you may keep them open with a softened gaze. We will begin by taking a couple of long slow deep breaths, breathing in fully and exhaling fully. Breathe in through your nose and out through your mouth. One more time in… and out.

Now allow your breath to find its own natural rhythm. Bring your full attention to each in-breath as it enters your nostrils, travels down into your lungs, and causes your
belly to expand. Notice each out-breath as your belly contracts and air moves up through your lungs and back up through your nostrils or mouth. Allow your full attention to follow the flow of your breath. Wait.

Notice how your inhale is different from your exhale. You may experience the air as cool as it enters your nose and warm as you exhale. As you focus more deeply, begin to let go of the noises around you. If you are distracted by sounds in the room, simply notice them and then bring your intention back to your breath. Breathe as you breathe, don’t try to change or control your breath in any way. Observe and accept your experience in this moment without judgement, paying attention to each inhale… and each exhale. Wait.

If your mind wanders to thoughts, plans, or problems, simply notice your mind wandering. Watch the thought as it enters your awareness as neutrally as possible. Then practice letting go of the thought as if it were a leaf floating down a stream. In your mind, place each thought that arises on a leaf and watch as it floats out of sight down the stream. Then bring your attention back to your breath. Your breath is an anchor you can return to over and over again when you become distracted by thoughts.

Notice when your mind has wandered. Observe the types of thoughts that hook or distract you. Noticing is the richest part of learning. With this knowledge you can strengthen your ability to detach from thoughts and mindfully focus your awareness. Practice returning to your breath with full attention. Watching the gentle rise of your stomach on the in-breath and the relaxing, letting go on the out breath.
You might be distracted by pain or discomfort in the body or twitching or itching sensations that draw your attention away from the breath. You may also notice feelings arising, perhaps sadness or happiness, frustration or contentment. Acknowledge whatever comes up. Simply notice where your mind goes without judging it, pushing it away, clinging to it, or wishing it were different. Simply refocus your mind and guide your attention back to your breath.

Breathe in… and breathe out. Follow the air all the way in… and all the way out. Mindfully be present moment by moment with your breath. If your mind wanders away just notice, without judging it, be it a thought, emotion, or sensation, gently guide your awareness back to your breathing.

As this practice comes to an end, slowly allow your attention to expand and begin to notice your entire body… and then beyond your body to the room you are in. When you are ready, open your eyes and come back fully alert and awake. The breath is always with you as a refocusing tool to bring you back to the present moment. Set your intention to use this practice throughout your day to help cultivate and strengthen mindful attention. I want to thank you for taking the time to participate in these activities with me, that will conclude today’s session.
Appendix B
Worksheets and Activities

Values Worksheet

Values are what is most meaningful to you. They are not goals because they are never truly “accomplished”; instead, values are ways of life (what you really want to be about). We choose our own values; they are not based off of what others expect of us nor what we think we should be doing. Values are like a compass, they help us make decisions based on the directions we want to go in life. Living a valued life can help us to make meaningful decisions even in the face of painful or difficult experiences.

Below are some examples of values a person might hold in various domains of their life.

**Employment**
*What kind of work is valuable to you? What qualities do you want to bring as an employee? What kind of relationships do you want to build?*

**Spirituality**
*What kind of relationship do you want with your God/gods/nature/the Earth?*

**Friends/Peers**
*What kind of friend do you want to be? How would you like to act towards your friends?*

**Education**
*How would you like to grow? What kind of skills would you like to develop? What would you like to know more about?*

**Citizenship/Community**
*How do you want to contribute to your community? What kind of environment do you want to be a part of?*

**Parenting**
*What sort of parent do you want to be? What qualities do you want your children to see in you?*

**Physical Wellbeing**
*What are your values regarding your physical wellbeing? How do you want to look after yourself?*

**Recreation/Leisure**
*What relaxes you? How would you like to enjoy yourself? When are you most playful?*

**Marriage/Couples/Intimate**
*What kind of husband/wife/partner do you want to be? What quality of relationship do you want to be a part of?*

**Family**
*What kind of relationship do you want to have with your family? What kind of brother/sister/uncle/aunt/son/daughter do you want to be?*
Values Worksheet

In the following boxes, write a quick summary of your values in each area (if applicable).
For each category, consider: What really matters to you? What sort of person do you want to be? How do you want others to see you? What personal strengths or qualities do you want to have?

- Spirituality
- Employment
- Parenting
- Friends/Peers
- Physical Wellbeing
- Education
- Recreation/Leisure
- Citizenship/Community
- Family
- Marriage/Couples/Intimacy
Turning Values into Action

Complete the questions below. In each, consider the values you identified in the previous session and how you can turn them into action in your everyday life.

*In order to live a more value driven and meaningful life...*

Here are some ways I will act differently:

...Here are some ways I will treat myself differently:

...Here are some ways I will treat others differently:

Here are some personal qualities and character strengths I will develop and demonstrate to others:
Control Group Session 1 Activity

Session 1 Activity

Please complete the questions below.

Why is it important to accept people for who they are?

Why do you think people have trouble accepting others who are different from them?

Write about a time when you stood up for something that you believed in. Was it hard to express an opinion that other people didn’t agree with? Why or why not?
Control Group Session 2 Video

Crash Course Psychology: Aggression vs Altruism (10:40)

https://www.youtube.com/watch?v=XoTx7Rt4dig
Control Group Session 3 Activity

Session 3 Activity

Please complete the questions below.

Do you think bullying is more prevalent online or in the classroom? At school or during extra-curricular activities?

What is the difference between teasing and bullying? How can you tell the difference between them?

At what point does teasing become bullying? Does the frequency of the behavior play a role?
Control Group Session 4 Videos

Stanford Prison Experiment (7:01)
https://www.youtube.com/watch?v=d2TCfex1aFw

Bandura Bobo Doll Experiment (5:17)
https://www.youtube.com/watch?v=zerCK0IRjp8
Appendix C

Questionnaires

Cyber-Aggression Typology Questionnaire (CATQ)

Please read the following items and circle the number that best represents how true each statement is of you over the past two weeks.

<table>
<thead>
<tr>
<th>ID #</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>If someone tries to hurt me, I will use an electronic device to immediately get back at them</td>
<td>Very Unlike Me</td>
<td>Somewhat Unlike Me</td>
<td>Somewhat Like Me</td>
</tr>
<tr>
<td>2</td>
<td>If someone does something to hurt me, I would get back at them in my own time by using my electronic device(s)</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>If I don't like someone, I use the internet to turn others against them</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>I get carried away having fun online and others think I'm being a cyberbully or a troll</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>If I get teased or threatened, I get angry easily and strike back online right away</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>6</td>
<td>If someone tries to hurt me, I will use my electronic device(s) to get back at them in my own time</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>7</td>
<td>Sometimes I'll team up with my friends to bring someone down online</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>8</td>
<td>I use an electronic device to get back at someone as soon as they post a harmful message about me</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>9</td>
<td>I make fun of people I don't know on the internet without thinking about whether they will see it or not</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>10</td>
<td>If someone makes me angry I quickly post mean texts and messages online</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>11</td>
<td>I get back at people who make fun of me on the internet because their posts hurt more than I think about them</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>12</td>
<td>If someone makes fun of me on the internet, I get frustrated and respond angrily online right away</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>13</td>
<td>Sometimes I can be mean to people online to get what I want</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>14</td>
<td>If I'm having fun and joking online, I don't care if someone's feelings get hurt</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>15</td>
<td>I overreact before I have a chance to think about the consequences when someone says something mean online</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>16</td>
<td>If I see a message online that gets me angry, I react too quickly and then regret the way I respond</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>17</td>
<td>When I don't like a person, I use the Internet to make them feel like they do not belong in my group</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>18</td>
<td>If someone tries to cyberbully me, I quickly lash back with something online</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>19</td>
<td>I repeatedly annoy people online because I think it's funny</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>20</td>
<td>If someone says something online to hurt me, I post something back right away to get back at them</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>21</td>
<td>I like using my electronic device(s) to plan my revenge when I feel angry at someone</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>22</td>
<td>If somebody criticizes me online or in a text, I often react aggressively without thinking of the consequences</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>23</td>
<td>If I need to get revenge on someone, I would rather strike back using my electronic device(s) where I can plan out how to do it</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>24</td>
<td>I pretend to be someone else online to ruin somebody else's friendships</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>25</td>
<td>I hastily respond to something written online and regret it later</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>26</td>
<td>If I see a mean message about me on my electronic device, it bothers me more and more when I think about it, and I try to get even</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>27</td>
<td>I respond very quickly to a message or post that is disrespectful to me</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>28</td>
<td>I have at times used the Internet to make someone look bad</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>29</td>
<td>Joking online is so much fun that I don't worry about whether someone might be bothered by what I say</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
Mindfulness Attention Awareness Scale (MAAS)

ID # ________________________

Mindful Attention Awareness Scale

Instructions: Below is a collection of statements about your everyday experience. Using the 1-6 scale below, please indicate how frequently or infrequently you currently have each experience. Please answer according to what really reflects your experience rather than what you think your experience should be. Please treat each item separately from every other item.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Almost Always</td>
<td>Very Frequently</td>
<td>Somewhat Frequently</td>
<td>Somewhat Infrequently</td>
<td>Very Infrequently</td>
<td>Almost Never</td>
</tr>
</tbody>
</table>

1. I could be experiencing some emotion and not be conscious of it until some time later.
   1 2 3 4 5 6

2. I break or spill things because of carelessness, not paying attention, or thinking of something else.
   1 2 3 4 5 6

3. I find it difficult to stay focused on what’s happening in the present.
   1 2 3 4 5 6

4. I tend to walk quickly to get where I’m going without paying attention to what I experience along the way.
   1 2 3 4 5 6

5. I tend not to notice feelings of physical tension or discomfort until they really grab my attention.
   1 2 3 4 5 6

6. I forget a person’s name almost as soon as I’ve been told it for the first time.
   1 2 3 4 5 6

7. It seems I am “running on automatic,” without much awareness of what I am doing.
   1 2 3 4 5 6

8. I rush through activities without being really attentive to them.
   1 2 3 4 5 6

9. I get so focused on the goal I want to achieve that I lose touch with what I’m doing right now to get there.
   1 2 3 4 5 6

10. I do jobs or tasks automatically, without being aware of what I’m doing.
    1 2 3 4 5 6

11. I find myself listening to someone with one ear, doing something else at the same time.
    1 2 3 4 5 6

12. I drive places on “automatic pilot” and then wonder why I went there.
    1 2 3 4 5 6
<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Almost Always</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very Frequently</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Somewhat Frequently</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Somewhat Infrequently</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very Infrequently</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Almost Never</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- I find myself preoccupied with the future or the past.  
- I find myself doing things without paying attention.  
- I snack without being aware that I’m eating.
Appendix D

Informed Consent

Minnesota State University, Mankato
Consent to Participate in a Research Study

Title of the study: “An evaluation of a brief mindfulness and values training on cyber bullying behavior”

Investigator: Emily Boduch, Clinical Psychology, Minnesota State University, Mankato, Mankato, MN, 56001 working under the supervision of Dr. Angelica Aguirre, BCBA-D.

Introduction
You are being asked to participate in a research study that is being conducted by researchers from Minnesota State University, Mankato. The purpose of this consent form is to let you know more about the study so you can decide whether you want to participate or not. Please read the form carefully, you may ask questions about anything in the form that is not clear.

Purpose
The purpose of this study is to investigate the relationship between mindfulness, values training, and online bullying behavior.

Procedure
With your consent, you will be assigned to one of two groups: the first group will be asked to participate in four sessions in which educational videos will be viewed, the second group will be asked to participate in four mindfulness and values sessions. Two questionnaires will be administered at three time-points throughout the duration of this study: once during session 1, again on session 4, and a follow-up administered via Sona Systems 1-month after the completion of session 4. Sessions for both groups will be conducted twice a week, for two weeks, and last between 15 and 30 minutes each. Participation will end 1 month and 2 weeks after the initiation of session 1. Your participation in this study is voluntary and you have the right to withdraw at any time without penalty. If you wish to withdraw you may inform the research assistant at any time during your session or email the student investigator, Emily Boduch, at Emily.boduch@mnssu.edu. Your decision whether or not to participate will not affect your relationship with Minnesota State University, Mankato, and refusal to participate will not involve any penalty or loss of benefits.

If you agree to participate in this research study, you will be asked to do the following at four individual sessions lasting 15-30 minutes each over a 2-week period.

Session 1. At the first session, you will be asked to complete two short questionnaires and then you will either be guided through a series of two brief mindfulness exercises or you will be asked to complete a short worksheet.

Session 2. In session two you will either be guided through a values exercise and a brief mindfulness exercise or you will be asked to watch a short educational video.

Initial here after reading this page: 

IRBNet ID: 1523384
Session 3. In the third session you will be asked to participate in two short visualization exercises or you will be asked to complete a short worksheet.

Session 4. In the final session you will participate in a values training and a brief mindfulness exercise or you will be asked to watch two short educational videos. You will be asked to complete two short questionnaires at the end of this session.

Follow-Up. You will be asked to complete a final set of questionnaires 1-month after the completion of session 4. These questionnaires will be administered via Sona Systems. It should take no more than 10 minutes to complete both of these questionnaires online. If you would like more information about the specific privacy and anonymity risks posed by online surveys, please contact the Minnesota State University, Mankato Information and Technology Services Help Desk (507-389-6654) and ask to speak to the Information Security Manager.

Video/Audio Recording
With your consent, sessions will be videotaped for procedural integrity purposes. The video recordings will be kept on a USB drive in a locked file cabinet in an office in the psychology department. The only people with access to these recordings are Emily Boduch (student investigator), research assistants from Dr. Aguirre’s lab, and Dr. Aguirre (primary investigator). At the end of the study, and after procedural integrity is evaluated, all video data will be destroyed.

Confidentiality
Your identities will be kept private to the extent permissible by law and will not be identified in any reports, presentations, or publications in completion of this study. The primary investigator, student co-investigators, and student research assistants from the primary investigator’s research team will be the only ones with access to your identity and data. When the study has been terminated or you withdraw from the study any notification of your participation will be kept locked in a cabinet in the primary investigator’s office on the Minnesota State Mankato campus. Any information or data in regard to you will be destroyed after three years of the study.

Risks
Risks to you are minimal, however, there is the possibility of discomfort associated with memories of previous bullying behavior. If discomfort should arise, you will be given the opportunity to take a short break from the session. You may choose to continue with the study after a short break or terminate participation. Your decision to discontinue participation will not negatively affect your relationship with Minnesota State Mankato and you will still receive full credit for participation for the session you attempted. A list of campus resources will be provided to any student experiencing discomfort as a result of participation in this study.

Benefits
You may potentially benefit from this study by enjoying participation in the research. If participating in training sessions, you may additionally benefit by having the opportunity to learn about different mindfulness and values techniques.

Cost/Compensation

Initial here after reading this page:  
IRBNet ID: 1523384
Students who decide to participate in the current research study will be given extra credit by their psychology professors. Points will be administered as follows: two points for Sessions 1 and 2, three points for Session 3, and four points for Session 4 and the follow-up, totaling fifteen points for the entire study. The primary and student co-investigators will indicate via SONA if the student showed up to participate in the research and their designated professors will be notified via SONA how much extra credit each student should receive.

Questions
If you have any questions, please contact Dr. Angelica Aguirre at the Clinical Psychology M.A. Program, Minnesota State University, Mankato, Mankato, MN 56001. Phone: 507-389-1089; email: angelica.aguirre@mnsu.edu. If you have any questions about participants' rights and for research-related injuries, please contact the Administrator of the Institutional Review Board, Minnesota State University, Mankato, Mankato, MN, 56001. Phone (507-389-1242). A copy of this consent form will be provided to you once consent is provided.

☐ I ____________________________, DO agree to my participation in this research study conducted by Emily Boduch, Minnesota State University, Mankato Psychology student and Angelica A. Aguirre, Ph.D., BCBA, Assistant Professor of the Clinical Psychology program.

☐ YES, I agree to having my sessions video recorded.

☐ NO, I do NOT agree to having my sessions video recorded.

Student Participant Printed Name ____________________________ Age ______ Date ____________

Student Participant Signature ____________________________ Date ____________

By signing this document, I confirm that I am at least 18 years old.

Primary Investigator Signature ____________________________ Date ____________

Initial here after reading this page: ____________
IRBNet ID: 1523384
Appendix E

Campus Resources

Minnesota State University, Mankato Counseling Center

The Counseling Center is located on campus and provides a wide range of free help and services to students. The counseling center assists students with personal difficulties, and in social, educational, and mental health-related concerns. No problem is too small to seek assistance. These services are confidential, and no information obtained will become part of the student’s record.

For more information, visit the Counseling Center’s webpage at:
http://www.mnsu.edu/counseling/

To make an appointment:
Phone: (507) 389-1455
Location: Centennial Student Union, room 285