

Self-Compassion: A Proposed Moderator of the Relationship Between Bullying Victimization
and Risk-Taking Behaviors

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BULLYING, RISK-TAKING, AND SELF-COMPASSION

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BULLYING, RISK-TAKING, AND SELF-COMPASSION

Abstract

Research reflects a relationship between bullying victimization and risk-taking behaviors. Specifically, individuals who have experienced bullying victimization have also been found to engage in higher rates of risk-taking behaviors. The purpose of this study was to examine the relationship, and to propose a potential moderator, self-compassion. It was hypothesized that individuals who had experienced bullying victimization, in middle or high school, would report higher frequencies of risk-taking behavior in young adulthood. However, those who had been victimized but who had higher ratings of self-compassion would report fewer risk-taking behaviors than those who had experienced the victimization and reported lower ratings of self-compassion. Results indicated a significant positive relationship between earlier experiences of bullying and risk-taking behaviors during the college age. Regression analyses indicated that experiences of bullying significantly predicted sexual risk-taking. Self-compassion was not found to moderate this relationship between experiences of bullying and risky sexual behaviors.

Keywords: Bullying, Risk-Taking Behaviors, Self-Compassion, College Population

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CHAPTER I

Research reflects a relationship between bullying victimization and risk-taking behaviors. Specifically, individuals who have experienced bullying victimization have also been found to engage in higher rates of risk-taking behaviors. The purpose of the current study was to examine the relationship, and to propose a potential moderator, self-compassion. It was hypothesized that individuals who had experienced bullying victimization, in middle or high school, would report higher frequencies of risk-taking behavior in young adulthood. However, those who had been victimized but who had higher ratings of self-compassion, would report fewer risk-taking behaviors than those who had experienced the victimization and reported lower ratings of self-compassion. Results indicated a significant positive relationship between earlier experiences of bullying and risk-taking behaviors during the college age. Regression analyses indicated that experiences of bullying significantly predicted sexual risk-taking. Self-compassion was not found to moderate this relationship.

Keywords: Bullying, Risk-Taking Behaviors, Self-Compassion, College Population

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Self-Compassion: A Proposed Moderator of the Relationship Between Experiences of Bullying and Risk-Taking Behaviors

Data from the National Crime Victimization Survey reflect that 27.8% of children between the ages of 12-18 reported having been bullied at school, while 9% of children in the same age range reported bullying via electronic media (Robers, Kemp, Rathbun, & Morgan, 2014).

The sequelae of bullying, as a result of both the traditional form of bullying (i.e., peer aggression that includes intentional, repetitive, and negative actions, and involves an imbalance of power between the aggressor and the victim), as well as through cyberbullying (i.e., bullying conducted via technology and social media) are both immediate as well as long-lasting. For example, immediate consequences of bullying include affective distress (e.g., anxiety and depression), impaired social relationships (e.g., peer rejection), and more negative school experiences (e.g., lower academic performance; Evans, Smokowski, & Cotter, 2014). Other researchers (Crookston et al., 2014) have found that those who are bullied engage in risk-taking behaviors such as substance abuse and higher-risk sexual activity. In examining longer-term consequences, Wolke, Copeland, Angold, and Costello (2013) found that being bullied as a child was predictive of an increased risk of poorer health, lower wealth, and impaired social-relationships in adulthood. Li, DiStefano, Mouttapa, and Gill (2014) found that for young men who had sex with men in the last 12 months (who may have identified as gay or bisexual), and who reported experiences of bullying during high school, were more likely to engage in what was labeled by the U.S. CDC as riskier sexual activity, including unprotected, receptive, anal intercourse (U.S. Center for Disease Control, 2013). Finally, Sigurdson, Wallander, and Sund (2014) found that individuals who experienced bullying in adolescence had an increased risk of

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illegal drug use and tobacco use in adulthood, indicating that bullying may not just contribute to sexual risk-taking in the short and long term, but may also be associated with other short- and long-term health risk behaviors, such as substance use. These data highlight that the effects of bullying are not just immediate, rather those who experience this form of victimization carry the effects of their experiences with them over time.

Understanding how childhood bullying affects individuals during college (ages 18-24) is particularly important. Specifically, in the college-age population, risk-taking behaviors, such as substance use and sexual risk-taking, are a concern (Abikoye & Uchendu, 2014; Trepka et al., 2008). College is a time when individuals are gaining autonomy and are under less parental supervision, so there is greater opportunity to engage in these behaviors. Risk-taking behaviors in particular have been found to be associated with concerns such as missing class, engaging in fights, increased behaviors resulting in emergency room visits, increased risk of contracting sexually transmitted diseases, and experiencing unwanted pregnancy (Seal & Agostinelli, 1996; Toledo Brandão et al., 2011).

Risk-Taking Behaviors

While there are various behaviors that can be defined as “risk-taking,” there are two domains that appear frequently in the literature related to college students: higher-risk sexual behaviors and substance use. Trepka et al.,(2008) examined two types of sexual risk-taking: risky-sex and consistent-risky-sex. Risky-sex was defined as not using a condom during the last encounter of vaginal intercourse and having had more than one sexual partner in the last year. Consistent-risky-sex was defined as not using a condom most times or always within the past month during vaginal intercourse and having more than one sexual partner within the past year. Researchers found that of the 1200 responses collected, 14% of respondents engaged in risky-sex

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and 11.9% reported consistent-risky-sex. The authors suggest that substance use, such as alcohol and illicit drug use, may have been an influencing factor on this risky sexual behavior.

Regarding the second domain associated with risk-taking, substance use, Pedrelli et al. (2011) found that out of a sample of 904 college students, 21.1% of males and 12.2% of females reported compulsive use of alcohol (i.e., persistent thoughts about use, feeling unable to control use). Results suggested that men who reported compulsive use of alcohol had an associated increased risk for compulsive street and prescription drug use, compulsive sexual activities, and gambling. For women, compulsive alcohol use was associated with an increase in compulsive street drug use and compulsive sexual activity (Pedrelli et al., 2011). Huang and Jacobs (2010) found that heavy episodic drinking in college students was associated with increased sexual risk taking in both males and females, but that this relationship had twice the effect in females. Finally, Griffin, Umstattd, and Usdan (2010) found that alcohol use by college students had a negative correlation with safe-sex practices, such as condom use, and a positive correlation with sexual aggression when either the perpetrator or victim had engaged in alcohol use. These findings demonstrate the interconnected nature of substance use and sexual risk taking in the college-age population.

Self-Compassion

While it is relevant to understand the negative outcomes of bullying, it is equally important to understand factors that may buffer against these negative outcomes. One such potential buffer is the concept of self-compassion. Neff (2009) describes self-compassion as consisting of three elements: (a) self-kindness, (b) common humanity, and (c) mindfulness. Self-kindness involves the concept of having sympathy and kindness towards ourselves, even when we face personal failures. Common humanity involves understanding that everyone goes through

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difficult times and by understanding that we are not alone in our experiences, we learn not to take our specific situation personally. Finally, mindfulness involves openly examining our negative thoughts and emotions and learning that we do not have to “over-identify” with those emotions (Neff, 2009).

Researchers have examined self-compassion in relation to various mental health outcomes, sexual risk-taking behaviors, and substance use. In general, self-compassion has been found to be negatively correlated with mental health concerns, such as symptoms consistent with depression (Johnson & O’Brien, 2013). Dawson and others (2014) found that individuals with higher self-compassion were less likely to report having engaged in sexual risk behaviors, even in the presence of illicit drugs. Researchers have also found that reports of childhood sexual and physical abuse were associated with problematic alcohol use for female college students, specifically when tied with lower self-compassion (Miron, Orcutt, Hannan, & Thompson, 2014). Other research documents that higher levels of self-compassion are related to lower levels of risky behaviors (e.g., substance use) and higher frequencies of positive health behaviors (e.g., medication adherence) (Brion, Menke, & Kimball, 2013; Costa, & Pinto-Gouveia, 2013; Hill, 2013; Jacob, Windle, Seilhamer, & Bost, 1999). In general, self-compassion appears to be negatively correlated with risk-taking behaviors as well as mental health concerns.

Given the negative relationship between self-compassion, mental health concerns, and risk-taking behaviors, it is important to explore how self-compassion may function in the relationship between experiences of bullying and subsequent risk-taking behaviors in the college population. The purpose of this study was to explore whether self-compassion moderated the relationship between early experiences of bullying and risk-taking behaviors (i.e., substance use and sexual risk taking) among the college-age population.

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Three hypotheses were proposed. First, it was anticipated that those who reported a higher frequency of bullying victimization in middle/high school, would report greater frequency of involvement in risk-taking behaviors during college. Second, it was proposed that experiences of bullying would significantly predict risk-taking behaviors. Third, it was hypothesized that for those who reported higher levels of self-compassion, there would be a weaker relationship between risk-taking and bullying, indicating that self-compassion was a moderator in the relationship between bullying victimization and risk-taking behaviors.

Method

Participants

Four hundred and fifty-nine college-age (18- to 24-year-old) students, from a mid-sized public university in the Southeast, collected via convenience sample, were used in the study. Table 1 reflects demographics of the sample. The majority of participants were 18 years of age ($n = 288$, 62.7%, $M = 18.7$) and freshman rank ($n = 321$, 69.9%). The majority of participants identified as White ($n = 330$, 71.9%), 15.7% identified as African American ($n = 72$), 4.6% identified as “More than one race/ethnicity” ($n = 21$), 2.8% identified as Hispanic ($n = 13$), 1.7% identified as Asian ($n = 8$), 1.3% identified as “Other” ($n = 6$), .9% identified as American Indian or Alaskan Native ($n = 4$), .7% identified as Latino ($n = 3$), .2% identified as Spanish ($n = 1$), and one individual did not specify his race (.2%). Concerning sexual orientation, 92.2% of the sample identified as Heterosexual ($n = 423$), 3.9% identified as Bisexual ($n = 18$), 1.7% identified as Lesbian ($n = 8$), 1.1% identified as “other” ($n = 5$), .7% identified as Gay ($n = 3$), and two individuals did not specify their sexual orientation (.4%). When asked about number of family members who had problems with substance use, the majority of participants ($n = 281$,

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61.2%) indicated that fewer than two members of their family had problems with illicit drug, prescription medication, or alcohol use.

[Placeholder for Table 1]

Materials

Five measures were used in this study, the *Cognitive Appraisal of Risky Events* (CARE; Katz, Fromme & D'Amico, 2000), a modified version of the *Multidimensional Peer Victimization Scale* (Mynard & Joseph, 2000), the *Self-Compassion Scale* (SCS; Neff, 2003), the *Marlowe-Crown Short Form- C (MC-Form C)* (Reynolds, 1982), and the *Patient Health Questionnaire* (PHQ-9; Kroenke, Spitzer, & Williams, 2001). A demographic questionnaire was also administered. A total of 110 questions were included in the online-administered survey.

Risk taking. The 30-item “Past Frequency” scale from the CARE instrument was used to measure the frequencies of engagement in risk-taking behaviors in the past six months. The measure is comprised of six domains: (a) illicit drug use, (b) heavy drinking, (c) risky sexual practices, (d) aggressive and illegal behaviors, (e) irresponsible academic/work behaviors, and (f) high-risk sports. Responses are self-reported as the “number of times” the participant has engaged in each behavior listed, in the past six months. The scale is scored by computing the sum of frequency scores for each factor. Only (a) illicit drug use, (b) heavy drinking, and (c) risky sexual practices were analyzed, as these are the behaviors that are the focus of the current study.

The CARE has been shown to have modest test-retest reliability ($r = .5-.8$; Fromme, Katz, & Rivet, 1997), and has demonstrated criterion validity as scores on the measure were significantly related to subsequent risk-taking behaviors in a 10-day period for participants

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(Fromme et al., 1997). The instrument has been used with college-aged individuals, making it appropriate for use in the current study.

Bullying. The Multidimensional Peer Victimization Scale (Mynard & Joseph, 2000) was designed and used for middle to high school students, ages 11 to 16, and has been used within bullying literature. The instrument contains 16 items and assesses bullying victimization in four domains: (a) physical victimization (i.e., kicked me), (b) verbal victimization (i.e., called me names), (c) social manipulation (i.e., tried to make my friends turn against me), and (d) attacks on property (i.e., made me hand over money). Questions are reported in a Likert-type fashion, with responses ranging from Not at all (0), to Once (1), and More than once (2). Scores are obtained by summing all responses, with scores ranging from 0-32, and with higher scores reflecting greater frequency of bullying victimization experiences.

In general, measures that are available to measure events of bullying have been normed on secondary or high school populations (i.e., Austin & Joseph, 1996; Mynard & Joseph, 2000; Orpinas, 1993), making those instruments inappropriate for the current research. As no measures of bullying existed that examined both traditional and cyberbullying, in a retrospective manner, and for a college-age population, a modified version of the Multidimensional Peer Victimization Scale (Mynard & Joseph, 2000) was administered. In the modified scale, participants were asked to reflect on their experiences in middle and high school and to report how often they experienced various forms of bullying. Using the categories proposed by Schenk and Fremouw (2012), in addition to asking questions about bullying in general, 12 questions were added to measure flaming (i.e., the electronic submission of angry, rude, or vulgar messages), online harassment, cyberstalking, belittling, masquerading, outing, and exclusion. Responses on the 25 items are scored on a Likert-type Scale ranging from Never (0), to Once (1), to More than once

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(2). Responses on the 25 items are then summed, with a summed score range from 0-50, with higher scores on this revised measure indicating greater frequency of bullying victimization experiences.

The Multidimensional Peer Victimization Scale has been found to have an acceptable overall test reliability (Cronbach's $\alpha = .9$; Balogun, & Olapegba, 2007). The modified bullying measure also evidenced overall test reliability with a Cronbach's alpha of .9 and a Cronbach's alpha of .9 for the retrospective subscale, specifically. With regard to the retrospective portion of the revised bullying measure, it has been shown to have appropriate structural as well as external convergent and divergent validity, through its significant negative correlation with the Rosenberg Self-Esteem Scale (Rosenberg, 1965; $r = -.2$) and the Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988; $r = -.1$), and its significant positive correlation with the Negative Acts Questionnaire (Einarsen, Hoel, & Notelaers, 2009; $r = .5$) and the Multidimensional Peer Victimization Scale (Mynard & Joseph, 2000; $r = .8$).

Self-compassion. The Self-Compassion Scale (Neff, 2003) was used to measure self-reported ratings of self-compassion. The SCS is a 26-question measure that assesses six subscales: (a) self-kindness, (b) self-judgment, (c) common humanity, (d) isolation, (e) mindfulness, and (f) over-identification. A total self-compassion score is calculated by reverse scoring negative subscales, and then computing a total score of all items. Overall scores can range from 26 to 130, with higher scores reflecting higher reports of self-compassion. The SCS has been shown to have good convergent validity as it has been found to be significantly negatively correlated with depression ($r = -.6$) and anxiety ($r = -.7$), as well as significantly positively related to self-esteem ($r = .6$) and self-acceptance ($r = .6$).

Control Variables

Social desirability. Research suggests that self-reports on sensitive topics, including alcohol use and sexual risk-taking behaviors, may be prone to bias (Davis, Thake, & Vilhena, 2010; DeJong, Pieters, & Stremersch, 2012). However, it is important to note that other researchers have found that social desirability does not affect self-reports regarding risky behaviors, specifically in an online survey method (Crutzen & Göritz, 2010). As the literature is inconsistent and because social desirability could potentially affect responses, the current study assessed and accounted for social desirability by using the 13-item MC-Form C (Reynolds, 1982). Respondents answer questions as True or False, and scores are obtained by adding one point for each response that indicates a socially desirable response (True on items 5, 7, 9, 10, and 13, False 1, 2, 3, 4, 6, 8, 11, and 12). Scores range from 0-33, with higher scores reflecting greater socially desirable responding.

Depression. Literature suggests a positive relationship between depression and bullying victimization (Evans et al., 2014), as well as between depression and risk-taking behaviors (Agardh & Cantor-Graae, 2012). In order to control for the potential influence of depression in the current study, the PHQ-9 was administered (Kroenke, Spitzer, & Williams, 2001). The PHQ-9 is a 9-item screening tool based on the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) criteria for Major Depressive Disorder. The first two items are included for the purpose of screening for Major Depression, while the remaining items assess symptom severity. Respondents are asked, “Over the past two weeks, how often have you been bothered by any of the following problems?” Responses range on a four-point Likert-type scale from: Not at all (0), Several days (1), More than half the days (2), Nearly every day (3). Scores can range from 0 to 27, with higher scores indicating greater severity of depressive symptomology. The PHQ-9 has been found to have good criterion and external validity, and scores greater than or equal to 10

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have been found to have 88% sensitivity and specificity for major depression (Kroenke, Spitzer, & Williams, 2001). The measure has also been used in literature with college-age populations, making it appropriate for use in the current study (Moreno, Jelenchick, & Breland, 2015).

Results

Scores on the CARE measure were converted into quartiles in order to organize skewed raw score responses in a way that could best be interpreted. As seen in Table 2, mean scores for risk-taking behaviors were relatively low (range = 0-4), with participants, on average, falling around the first quartile of illicit drug use ($M=.1$, $SD=1.4$), and between the first and second quartiles of heavy drinking ($M=1.6$, $SD = 1.5$), and risky sexual practices ($M=1.8$, $SD = 1.5$). These data indicate that participants, on average, fell below the second quartile of scores on risk-taking behavior. In addition, the mean score for self-compassion across participants was 76.5 ($SD = 16.6$). These results would indicate that, on average, participants scored around the middle of scores on this measure. With regard to social desirability, participants' mean score was 5.8 ($SD = 2.8$), indicating that participants were lower in their socially desirable responses. These data suggest that participants likely responded in a forthright way, without regard to impression management. The mean score on the PHQ-9, a measure of depression, was 7.6 ($SD = 5.4$), which is considered to be in the range of minimal symptoms of depression (Kroenke, Spitzer, & Williams, 2001). Finally, with regards to experiences of bullying, the average score on the modified bullying instrument (Mynard & Joseph, 2000) was 14.3 ($SD = 10.7$). These results would indicate that, on average, participants reported a relatively low frequency of bullying victimization in middle/high school.

[Placeholder for Table 2]

Intercorrelations

To examine whether individuals with greater numbers of experiences of bullying also endorsed greater frequency of risky behaviors, Pearson r correlations were calculated. Table 3 provides the intercorrelations between the MC-Short Form C (Marlowe-Crowne measure of social desirability), SCS (Self-Compassion Scale), the modified bullying instrument, PHQ-9 (Patient Health Questionnaire measure of depression) and CARE (Cognitive Appraisal of Risky Events) measures. Although the correlations were weak among most of the measures, there was a significant positive relationship between experiences of being bullied and drug use ($r = .1$, $p = .01$), alcohol use ($r = .1$, $p = .01$), and sexual risk taking ($r = .2$, $p = .00$). In addition, self-compassion had a significant negative relationship with experiences of bullying ($r = -.3$, $p = .00$), risky sexual behavior ($r = -.1$, $p = .01$), and depression ($r = -.5$, $p = .00$). These results indicate that there was a significant, but weak, positive relationship between being bullied and engaging in risky behaviors, providing support of the first hypothesis.

[Table 3 Placeholder]

Regression Analyses

Given the significant and positive correlation between bullying and risky behaviors, a series of multiple regression analyses were conducted to examine whether experiences of bullying significantly predicted risk-taking behaviors including drug use, alcohol use, and sexual risk taking, beyond that of the control variables of depression and social desirability. In the first model, bullying, depression, social desirability, and drug use were included. Results indicated that bullying did not significantly predict drug use ($\beta = .03$, $p = .6$).

In the second model, bullying, depression, social desirability, and alcohol use were included. Results indicated that bullying did not significantly predict risky alcohol use ($\beta = .02$,

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$p=.7$) beyond the variability accounted for by depression and social desirability. The third model included bullying, depression, social desirability, and sexual risk taking. Together, bullying, depression, and social desirability accounted for 7.2% of the variance in sexual risk taking ($R^2 = .07$, $F(3,447) = 11.5$, $p=.00$), and experiences of bullying significantly predicted sexual risk taking ($\beta=.1$, $p=.01$) above the variability accounted for by depression and social desirability. These results suggest that individuals who have greater experiences of bullying are also significantly more likely to engage in sexual risk taking than those with fewer or no experiences of bullying. The effect size was small for this relationship $t(455) = 2.8$, $p=.006$, $r = 0.1$. Table 4 provides information regarding the results of regression analyses that included bullying, depression, and social desirability as predictors for the dependent variables: drug use, alcohol use, and sexual risk taking.

[Placeholder for Table 4]

Test of Moderation

Based on the model developed by Baron and Kenny (1986), once a regression model tests significant, then it is appropriate to conduct a test of moderation. As the third regression model indicated that experiences of bullying significantly predicted sexual risk taking, a test of moderation was conducted to explore whether or not self-compassion moderated the relationship between bullying and sexual risk taking, as hypothesized. As reflected in Table 5, results indicated that self-compassion did not significantly moderate the relationship between bullying and sexual risk taking ($\beta = -.1$, $p = .1$). These results indicate that those who have experienced a higher frequency of bullying and have higher ratings of self-compassion, do not in fact experience lower frequencies of sexual risk taking than those who have similar experiences of bullying but lower ratings of self-compassion. Thus, results failed to support the hypothesis.

[Placeholder for Table 5]

To summarize, results indicated that experiences of bullying were significantly correlated with all three forms of risky behaviors: drug use, alcohol use, and sexual risk. Regression analyses indicated that experiences of bullying significantly predicted sexual risk taking, but did not significantly predict either drug use nor alcohol use. Finally, a test of moderation indicated that self-compassion did not moderate the relationship between experiences of bullying and sexual risk taking.

Discussion

Literature indicates several possible explanations for these findings. First, it is possible that depression is a more significant predictor of substance abuse concerns. Therefore, individuals who have been bullied may have a higher risk of developing substance abuse concerns, but only if they experience depression as a result of their victimization (Luk, Wang, & Simons-Morton, 2010). A study conducted by Luk and others (2010) found that for females, the relationship between bullying victimization and substance use was mediated by depression, suggesting it is possible individuals who experience victimization but do not experience depression as a result, may not be at a greater risk for substance use.

A second plausible explanation is that bully-victims (i.e., those who victimize others but who are also victims of bullying) are at different risks for substance concerns than those who bully. Niemelä and others (2011) found that experiences of bullying victimization at age 8 predicted daily heavy smoking at age 18 in males. However, bullying others at age 8 predicted illicit drug use at age 18. Thus, it is possible that those who bully are in fact the individuals who are more likely to engage in illicit drug and alcohol use during the college age.

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In the third hypothesis, it was proposed that self-compassion would moderate the relationship between experiences of bullying and subsequent risk-taking behaviors. It was hypothesized that individuals who experienced higher frequencies of bullying victimization, but who also reported higher rates of self-compassion, would report lower frequencies of risk-taking behaviors. Results did not indicate that self-compassion moderated the relationship between experiences of bullying and sexual risk taking. While self-compassion was not found to moderate this relationship, it is possible that other explanations exist for how self-compassion may work within and among these variables.

As mentioned previously, literature supports a link between experiences of bullying and depression (Evans et al., 2014). The literature also provides evidence that depression is linked to risk-taking behaviors, such as sexual risk taking (Agardh, Cantor-Graae, & Ostergren, 2012). In addition, researchers have found that depression, in some cases, mediates the relationship between bullying and risky behaviors such as substance use (Luk, Wang, & Simons-Morton, 2010). It is possible, therefore, that the increased likelihood of engaging in risk-taking behaviors may actually be more related to depression that resulted from the victimization, rather than the victimization itself. Literature also suggests that self-compassion has been found to effectively decrease depressive symptomology (Van Dam, Sheppard, Forsyth, & Earleywine, 2011). Therefore, self-compassion may only buffer against sexual risk taking, by alleviating depressive symptoms. If someone does not experience depression as a consequence of bullying victimization, then it is possible that the relationship between self-compassion and sexual risk may be weakened.

Taking this information into account, it may be the case that experiences of bullying, for some, may lead to an increased likelihood of developing depression. This depression may then

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increase an individual's propensity for engaging in behaviors, such as risky sexual practices. If this is the case, self-compassion may work as a buffer by decreasing depressive symptomology, which then decreases the risk of engagement in risky sexual behaviors. In fact, the literature already suggests that self-compassion is negatively associated with depression (Hall, Row, Wuensch, & Godley, 2013; Van Dam, Sheppard, Forsyth, & Earleywine, 2011), and that depression is linked to sexual risk taking (Agardh, Cantor-Graae, & Ostergren, 2012). It is possible that by alleviating depression in those who have experienced bullying, risky behaviors, such as sexual risk taking, may also decrease. Again, these results, along with the literature reviewed, demonstrates the complex relationships between earlier experiences of bullying, mental health outcomes, and the potential for increased risk of risky behaviors in college-aged individuals. It also suggests areas that future research should explore in order to better understand the complexities related to consequences of bullying.

Limitations and Directions for Future Research

Multiple limitations are associated with conducting research. One limitation of this study involved the use of an online self-report questionnaire. With this format, it is possible that students underreported their risky behaviors (Tourangeau & Yan, 2007). This difference could have influenced the data that was obtained by not fully capturing the true relationship between the variables that were explored. However, participants were notified that the study would be anonymous, and data analysis accounted for social desirability.

A second limitation related to the questionnaire was the use of retrospective questions in the reports of bullying. It is possible that some individuals may not be able to accurately identify their experiences of bullying because it was in the past. It is also possible that an individual may perceive "bullying" differently from when they were in middle and high school versus how they

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may perceive it as an adult, which could lead to either underreporting or overreporting. As discussed by Holt and others (2014), it is possible that individuals who have had a positive experience in college may reflect on their earlier experiences of bullying in a way that leads to underreporting. Essentially, because survey responders have not experienced continuing direct consequences related to the bullying victimization, the events may not be as salient.

Consequently, those who experienced bullying victimization and subsequently developed mental health concerns that they continue to struggle with, may have answered in a way that led to either more accurate accounts of bullying victimization or an overreporting of such experiences. Also, because the data in this study was collected through a survey method, and the data collected was correlational, cause and effect between variables cannot be determined. The data in this study can only describe associations between variables and explore which variables may significantly predict others.

It is important to note that this study focused on college-aged individuals who were currently attending college. It is possible that varying results could be found in college-age individuals (ages 18-24) who were not currently attending college, and this is a population that should be explored further in the research. For example, Burke, Nic Gabhainn, and Young (2015) found that individuals within the college-age range who were not attending school were found to engage in inconsistent condom use, and other risky sexual behaviors including multiple partners and high levels of sexual activity, more often than individuals who were attending college. It is possible, therefore, that individuals who are not attending college, within the 18- to 24-year-old age range, may in fact have a higher risk of risky sexual activity after experiencing early bullying victimization. However, more research is needed in this area. The purpose of this study was to examine college students in particular in order to provide insight into ways to

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prevent or treat the relationship between bullying and sexual risk-taking in a college environment.

Finally, the use of the CARE measure, which included open-ended responses of estimates of various risk-taking behaviors, resulted in data that were skewed. The range of responses on the items was too large and variable to be able to make meaningful predictions using item responses alone. This skewness had to be corrected by breaking responses into quartiles to provide more of an index of risky behaviors rather than specific numerical scores of responses. It is possible that other methods of handling skewed data could have provided different results. It is also possible that forced-choice responses may have captured the data in a less skewed manner. Because of having to manage this skewness in the current study, it is possible that it was more difficult to find significant results. This is important for future researchers to explore and decide on the best way to capture risky behaviors in college-age individuals.

Future Research

Future research should explore various methods to collecting information regarding risky behaviors in this population. As mentioned previously, a forced-choice measure may provide less concern with the skewness of responses. However, currently there is a lack of forced-choice measures that assess multiple domains of risky behavior in a college population. Part of this future research will likely include creating such measures.

Research should also continue to explore the relationship between earlier experiences of bullying and risky behaviors during college age, as there are inconsistencies in the current literature, as was also seen in this study. While some studies find a connection between earlier experiences of bullying victimization and risky behaviors (Kim, Catalano, Haggerty, & Abbott, 2011), other research has found little to no connection between the two (Wolke, Copeland,

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Angold, & Costello, 2013). Also, the literature supports that risky behaviors are influenced differently by victimization. For example, Niemelä, and others (2011) found that while being a victim of bullying predicted heavy smoking as an adult, they did not find that victimization predicted alcohol use. They also found that being a victim was associated with less illicit drug use, rather than more. Consequently, other research has supported a connection between victimization and drug use, such that victimization predicts greater drug use (Sigurdson, Wallander, & Sund, 2014). Accordingly, in the current study, results indicated a connection between earlier experiences of bullying victimization and later risky sexual behaviors, which supports other findings in the literature (Crookston et al., 2014; Li, DiStefano, Mouttapa, & Gill, 2014). However, no connection was found between victimization and substance use. These discrepancies should be noted and explored in future research.

With regards to self-compassion, future research should explore the mechanisms by which self-compassion may moderate the relationship between bullying and risky behaviors. It is possible, as mentioned above, that self-compassion may work through depression such that self-compassion may not buffer against risky behaviors, rather it is the decrease in depressive symptomology that contributes to less risk. The interplay between self-compassion, depression, and risk-taking behaviors should be deconstructed and explored further in future studies. Along with this research, future studies should begin to examine specific interventions that may be implemented and useful in preventing risk in those who have been bullied, specifically with regards to sexual risk taking. Finally, more research in prevention of bullying to begin with is necessary in order to preemptively eliminate the subsequent consequences discussed in this manuscript.

Conclusion

In sum, findings from the current study indicate that there does appear to be a link between earlier experiences of bullying and subsequent sexual risk-taking behaviors in college. As shown by the results of this study, it is possible that those who are bullied in middle and high school may be at an increased risk for engaging in risky sexual practices. This is an important relationship to consider when working with college-age students who report that they have experienced bullying in the past. Future research should focus on deconstructing and explaining the relationship between experiences of bullying, mental health concerns, and risk-taking behaviors, while also exploring possible prevention methods for these consequences of bullying victimization.

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Table 1

Demographic Characteristics of the Sample.

Demographics	N	%
<u>Age</u>		
18	288	62.7
19	80	17.4
20	45	9.8
21	31	6.8
22	10	2.2
23	2	.4
24	3	.7
<u>Year in College</u>		
Freshman	321	69.9
Sophomore	53	11.5
Junior	47	10.2
Senior	38	8.3
<u>Gender</u>		
Male	86	18.7
Female	369	80.4
Transgender	2	.4
Other	1	.2
No Response	1	.2
<u>Race</u>		
American Indian or Alaskan Native	4	.9
Asian	8	1.7
Black or African American	72	15.7
White	330	71.9
Spanish	1	.2
Hispanic	13	2.8
Latino	3	.7
More than one race/ethnicity	21	4.6
Other	6	1.3
No Response	1	.2
<u>Sexual Orientation</u>		
Heterosexual	423	92.2
Lesbian	8	1.7

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Gay	3	.7
Bisexual	18	3.9
Other	5	1.1
No Response	2	.4

Religious Beliefs

Agnostic	25	5.4
Atheist	23	5.0
Buddhist	2	.4
Christian Protestant	75	16.3
Christian Catholic	75	16.3
Christian Non-Denominational	153	33.3
Hindu	1	.2
Jewish	6	1.3
Muslim	2	.4
Believe in higher power, but do not identify with any religion	66	14.4
Other	30	6.5
No Response	1	.2

Is English primary language?

Yes	450	98.0
No	5	1.1
No Response	4	.9

Geographic Location

Rural	190	41.4
Urban	75	16.3
Suburban	194	42.3

Number of family members with problems of drug use,

Rx medications, or alcohol use

0	208	45.3
1	73	15.9
2	67	14.6
3	34	7.4
4	18	3.9
5	22	4.8
6	12	2.6
7	2	.4
8	5	1.1
10	3	.7
12	4	.9

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20	2	.4
24	1	.2
No Response	8	1.7

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Table 2
Descriptive Statistics of Variables.

Variable	Descriptive Statistics		
	Mean	Standard Deviation	Range
CARE (Illicit Drug Use)	1.0	1.4	4.0
CARE (Heavy Drinking)	1.6	1.5	4.0
CARE (Risky Sexual Practices)	1.8	1.5	4.0
SCS	76.5	16.6	92.0
BULLYING	14.3	10.7	46.0
PHQ-9	7.6	5.4	27.0
MC-SHORT	5.8	2.8	12.0

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Table 3

Summary of Intercorrelations.

Measure	MCSHORT	SCS	BULLYING	CARE (Illicit Drug Use)	CARE(Heavy Drinking)	CARE(Risky Sexual Practices)	PHQ-9
MCSHORT	-	.4**	-.3**	-.2**	-.2**	-.2**	-.3**
SCS	.4**	-	-.3**	-.1	-.04	-.1**	-.5**
BULLYING	-.3**	-.3**	-	.1*	.1**	.2**	.4**
CARE (Illicit Drug Use)	-.2**	-.1	.1*	-	.5**	.4**	.2**
CARE (Heavy Drinking)	-.2**	-.04	.1**	.5**	-	.4**	.2**
CARE (Risky Sexual Practices)	-.2**	-.1**	.2**	.4**	.4**	-	.2**
PHQ-9	-.3**	-.5**	.4**	.2**	.2**	.2**	-

Note. In the table above, MCSHORT represents the Marlowe Crowne Short Form-C; SCS represents the Self-Compassion Scale; BULLYING refers to the modified bullying instrument, CARE (Illicit Drug Use) is the illicit drug use subcategory on the Cognitive Appraisal of Risky Events (CARE), CARE (Heavy Drinking) is the heavy drinking subscale on the CARE; CARE (Risky Sexual Practices) is the risky sexual practices subscale on the CARE; PHQ-9 represents the Patient Health Questionnaire.

*represents results significant at the $p < .05$ level, **represents results significant at the $p < .01$ level.

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Table 4

Regression analyses of risky behaviors as predictors.

Variable	CARE (Illicit Drug Use)			CARE(Heavy Drinking)			CARE(Risky Sexual Practices)		
	B	SE B	β	B	SEB	β	B	SEB	β
BULLYING	.004	0.01	0.03	.003	.01	.02	.02	.01	.1*
PHQ-9	.04	0.01	0.1*	.04	.01	.1*	.01	.01	.1
MCSHORT	-.1	0.02	0.1*	-.1	.03	-.2*	-.1	.03	-.2*

Note. *represents results significant at the $p < .05$ level, **represents results significant at the $p < .01$ level.

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Table 5

Test of Self-Compassion as a Moderator in the Relationship between Bullying and Sexual Risk-Taking Behaviors.

Variable	CARE(Risky Sexual Practices)		
	B	SE B	β
BULLYING	.3	.1	.2*
SCS	-.1	.1	-.1
BullyXSCS	.1	.1	.1

Note. *represents results significant at the $p < .05$ level, **represents results significant at the $p < .01$ level.

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CHAPTER II

LITERATURE REVIEW

Overview

In this chapter, literature will be reviewed regarding the relationship between experiences of bullying victimization, risk-taking behaviors, and self-compassion. In order to comprehensively consider this relationship, each construct will be explored thoroughly. First, the literature on bullying will be examined, including information regarding prevalence rates as well as contributing factors and consequences associated with this form of victimization. Then, risk-taking behaviors in a college population will be examined, including information regarding prevalence rates, contributing factors, and consequences of engaging in such behaviors. Following this information, literature will be reviewed that suggests a link between earlier experiences of bullying victimization and risk-taking behaviors in a college population. Finally, the construct of self-compassion will be explained and information related to how self-compassion may relate to the relationship between experiences of bullying and subsequent risk-taking behaviors in college-age individuals will be provided.

Data from the National Crime Victimization Survey indicates that 27.8% of children between the ages of 12-18 reported having been bullied at school, and 9% of children in that age range reported being bullied through electronic media (Robers, Kemp, Rathbun, & Morgan, 2014). One area that has generated interest within psychological research is an examination of bullying and its effects. While it is noted that those who experience bullying, in general, report higher levels of mental health concerns, such as anxiety, depression, and traumatic symptoms, in young adulthood (Sesar, Barisic, Pandza, & Dodaj, 2012), the literature also suggests that experiences of bullying are associated with risk-taking behaviors involving substance misuse and

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sexual risk taking in young adulthood as well (Harlow & Roberts, 2010; Holt, Matjasko, Espelage, Ried, & Koenig, 2013).

Overall, the data lends support to the idea that those who experience bullying, even during childhood, are at risk for developing problematic behaviors and mental health concerns later in their lives (Seal & Agostinelli, 1996). Specifically, these concerns could begin for individuals during college years, a time of development where adolescents and emerging adults are exploring their identities and goals for the future (Santrock, 2013). Therefore, consequences of bullying may be compounded when an individual is in college, as it is an important time of development that includes a variety of changes, exploration, and potential stress. Specifically, in the college-age population, risk-taking behaviors, such as substance use and sexual risk taking, are a concern. College is a time when individuals are gaining autonomy and are under less parental supervision, so there is perhaps more of an opportunity to engage in these behaviors. Risk-taking behaviors in particular have been found to be associated with concerns such as missing class, engaging in fights, increased risk for needing emergency room visits, increased risk of contracting sexually transmitted diseases, and experiencing unwanted pregnancy (Seal & Agostinelli, 1996; Toledo Brandão, Correia, Alves de Farias, Tavares Antunes, & da Silva, 2011). Since the literature suggests that experiences of bullying victimization may lead to an increased risk for engaging in such behaviors for college-age individuals, it is important to explore these relationships further.

In contrast to the body of literature that examines the negative outcomes of bullying, another important area that needs further examination is the potential buffers against the association between experiences of bullying and subsequent risk-taking behaviors. One such potential buffer is the concept of self-compassion. Neff (2009) describes self-compassion as

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someone acknowledging and accepting that one is personally going through a difficult time instead of dismissing the situation or judging oneself for experiencing difficulty. Neff (2009) explains that self-compassion involves someone asking how one can comfort and take care of oneself during these times, while also remembering to not harshly judge or criticize oneself over “personal failings.” Research suggests that increasing self-compassion can lead to decreases in substance use (Jacob, Windle, Seilhamer, & Bost, 1999) and can lead to more positive health behaviors, such as medication adherence and seeking medical attention, in those who have serious or chronic medical conditions (Brion, Menke, & Kimball, 2013; Costa, and Pinto-Gouveia, 2013; Hill, 2013). Other research (Johnson & O’Brien, 2013) has documented that self-compassion is negatively associated with mental health concerns such as depressive symptoms. This association is important given the relationship between bullying victimization and such symptomology (Sesar, Barisic, Pandza, & Dodaj, 2012). In order to understand the relationship between self-compassion, bullying victimization, and risk-taking behaviors, an overview of the literature is provided.

Bullying Defined

Traditional bullying is thought of as a form of peer aggression that includes intentional, repetitive, and negative actions, and involves an imbalance of power between the aggressor and the victim (Olweus, 1993). Cyberbullying is a more recent form of bullying that has developed as a result of technology and social media. This form of bullying involves aggressive acts similar to traditional bullying, but that are engaged in through electronic mediums (Olweus, 2013). In general, traditional bullying is broken down into several types: (a) verbal, (b) physical, and (c) relational (Olweus, 1996). These types may also be categorized as direct or indirect forms of bullying. Indirect bullying refers to the social/relational forms of bullying, such as spreading

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rumors, and direct bullying involves verbal and physical aggressive acts, such as calling someone a name or being physically violent towards another person (Mynard & Joseph, 2000). Verbal bullying includes behaviors such as calling people names and making fun of them, while physical bullying involves actions such as hitting and kicking a fellow peer. Relational and social aggression, which is considered the more indirect form of bullying, involves spreading rumors about peers and turning other peers against an individual (Mynard & Joseph, 2000).

Cyberbullying has taken many forms and has been divided into seven different categories: (a) flaming, (b) online harassment, (c) cyberstalking, (d) belittling, (e) masquerading, (f) outing, and (g) exclusion (Schenk & Fremouw, 2012). Flaming and online harassment involve the electronic transmission (flaming) or repeated sending (harassment) of angry, rude, and vulgar messages. Cyberstalking involves threats of harm or intimidation to an individual. Belittling entails sending possibly untrue and cruel information about a person to others. Masquerading involves pretending to be someone else online and sharing information to damage a person's reputation and/or relationships. Sharing sensitive and/or private information about a person to others is referred to as outing. Finally, leaving someone out of a group online with malicious intent is referred to as exclusion (Schenk & Fremouw, 2012). While various researchers have examined bullying and worked to operationally define bullying, another area of research tied to bullying victimization involves obtaining prevalence rates of these experiences across the world.

Rates of Prevalence

In examining the literature, bullying appears to be universal. Various researchers have documented similar experiences in a variety of countries (Almeida dos Santos, Cabral-Xavier, Paiva, & Leite-Cavalcanti, 2014; Arslan, Savaser, & Yazgan, 2010; Chen & Cheng, 2013). While it appears that bullying is not culturally specific, obtaining precise prevalence rates can be

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difficult, as studies use various ways of capturing bullying victimization. For example, Chen and Cheng (2013) examined student self-reports of bullying victimization, whereas Garcia-Moya, Suominen, and Moreno (2014) included observer (i.e., teacher) reports of victimization. Also, some researchers provide definitions of bullying when asking individuals about their victimization experiences, whereas other researchers do not. Research suggests that providing a definition or not providing one may influence prevalence rates obtained. Chen and Cheng (2013) found that 10.7% of secondary students in Taiwan reported having been bullied 2-3 times per month. Researchers conducted their study on students in Grades 7-12 and explored whether providing a definition of bullying would alter reported frequencies. Results found no significant statistical difference between reports from students who were given a definition and those students who were not given a definition of bullying before self-reporting their experiences (Chen & Cheng, 2013). In contrast, other researchers found that providing a definition of bullying may influence reported frequencies of victimization. Vaillancourt and others (2008) found that, in general, individuals who were given a definition of bullying before reporting their experiences reported less bullying victimization than those who were not given a definition. The only difference reported was for males, who reported more victimization regardless of whether a definition was provided for bullying. Researchers explained that some of the discrepancy in reported frequency is associated with the finding that when asked to provide a definition, participants rarely mentioned three of the key pieces of the accepted definition of bullying in the literature: (a) intentional, (b) repetitive, (c) imbalance in power. Literature would suggest that researchers' definitions of bullying (e.g., Vaillancourt et al., 2008) may be slightly different than adolescents' perceptions of what constitutes bullying, which may result in inconsistent prevalence rates, especially when using self-report measures. It is important to keep these

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findings in mind when examining the literature on prevalence of bullying victimization as the actual findings may be slightly distorted from what may truly be occurring in the natural environment for adolescents. For this reason, studies examining similar populations may report slightly different numbers in relation to prevalence rates of bullying experiences.

Even with an awareness that prevalence rates may be distorted, it is important to assess the frequency of bullying victimization throughout elementary and secondary school years. This information is essential in understanding how many individuals may be at risk during college-age years for potential consequences associated with these earlier life experiences. Arslan and others (2010) examined peer bullying in high school students in Turkey, and found that 5.9% of students reported being a victim of bullying. The researchers also found bullying rates to be higher for females than males (Arslan et al., 2010). Arslan, Hallett, Akkas, and Akkas (2012) found similar results with a study that examined Turkish adolescents ages 11-15. Eight percent of the sample reported having experienced bullying, with females reporting higher levels of victimization than males in each of the categories of bullying, except overt bullying, which involves physical victimization (Arslan et al., 2012).

One study that examined rates of bullying victimization in 13- to 17-year-old Brazilian school children found that 23.6% of their sample reported experiencing bullying victimization (Almeida dos Santos, Cabral-Xavier, Paiva, & Leite-Cavalcanti, 2014). Researchers found that males were the primary target of this victimization, which is in contrast to the findings of Arslan et al., (2010). In examining types of victimization, the predominant forms of bullying appeared to be verbal, followed by relational, and then physical (Almeida dos Santos, Cabral-Xavier, Paiva, & Leite-Cavalcanti, 2014). This again is in contrast with the results from Arslan and others (2010), who found that males experience more physical types of victimization, rather than

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verbal or social bullying. Mok, Wang, Cheng, Leung, and Chen (2014) found that 9.3% of students, Grades 7-12 in Hong Kong, Taiwan, and Macao, reported experiencing bullying victimization. Findings also reflected that for these students, males experienced more victimization than females, and that verbal bullying was the most common form of victimization experienced. These studies illuminate the discrepancies that exist in bullying literature regarding not only prevalence rates of victimization, but also involving who gets bullied and what forms of bullying are used.

Garcia-Moya and others (2014) pointed out discrepancies in prevalence rates in their own study depending upon whether reports were self-reports or observer reports of bullying victimization. Discrepancies based on source of reported information demonstrate that it is not just providing a definition that can make a difference in obtained prevalence rates. Specifically, they found that 4.8% of Hispanic students, ages 11-18, self-reported experiences of bullying. However, 21.0% of students were observed as being victimized by teachers. Another study that found a similar pattern examined bullying experiences of students with Autism Spectrum Disorder (ASD). Roekel, Scholte, and Didden (2009) found that prevalence rates of bullying victimization ranged from 6% to 46%, with teachers reporting more observed victimization than peers. In examining students with ASD, Sterzing, Shattuck, Narendorf, Wagner, and Cooper (2012) found in their data a prevalence rate of 46.3% for bullying victimization, however their only source of data came from observations made by parents, school principals, and school staff. Findings reflect that observational reports may yield higher prevalence rates than self-reported experiences. Again, the literature suggests that the source of the data collected may influence reported prevalence rates of victimization. In general, it is important to remember when considering all of the literature that method of data collection, use of definitions, and culture may

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play some role in differences of reported prevalence rates, and that discrepancies are common in this area of research.

In continuing to examine differences in prevalence rates, one study examined teasing, exclusion, and physical assault specifically in 12- to 15-year-old Norwegian adolescents (Undheim & Sund, 2010). Ten percent of the adolescents surveyed reported experiences of bullying, with 8% having been teased, 3.5% having been socially excluded, and 1.9% having experienced physical assault. Males were found to have reported higher rates than females of physical assault, while experiences of teasing and social exclusion were not statistically different between males and females (Undheim & Sund, 2010). Wu and others (2014), examined bullying behaviors and experiences of Chinese students in Grades 7-9 and 10-12. Results indicated that 4.8% of students reported being bullied, with males being more likely to be bullied than females. Important to note is that this study did not break bullying down specifically into categories, so a broad definition of bullying without regard to specific types could be related to the differences in victimization found between males and females. Specifically, the researchers provided a description of what constitutes “bullying,” which included verbal and physical elements. However, researchers only asked questions related to whether the student had experienced bullying, bullied others, experienced both, or experienced neither (Wu et al., 2014).

Scholars in the United States have also examined the construct of bullying and have attempted to establish prevalence rates. One study assessed data on bullying experiences based on various demographics for students in Grades 6-12 in 16 different school districts in Ohio (Carlyle & Steinman, 2007). Results indicated that 20.1% of the sample reported experiencing bullying victimization within the past year of the study. Researchers also found that victimization was slightly more likely to occur in sixth to eighth graders and in males. Carlyle and Steinman

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(2007) found a difference in reported bullying victimization experiences between males and females, but noted that the pattern of males reporting more victimization than females was only found for White and Asian study participants. Finally, Carlyle and Steinman (2007) found that Native American youth reported much higher rates of bullying victimization overall than any other ethnic group, which suggests that various cultural groups may experience different rates of bullying victimization.

Perius, Brooks-Russel, Wang, and Iannotti (2014) conducted a longitudinal study using a nationally representative sample of students, grades 6-10, and examined trends in bullying from 1998 to 2010. Researchers found that overall bullying decreased from 16.5% in 1998 to 7.5% in 2010, and this decline was consistent across all subgroups of ethnicity and race. However, differences that were noted included that the decline in frequency of bullying experiences was larger for males, for those in Grades 6-8 compared to Grades 9-10, and for white students when compared to African American students. Results also suggested that males endorsed having experienced higher levels of all forms of bullying except for the social exclusion. Another study that examined middle school students (Grades 5-9), from 20 schools in New Jersey and New York, found that rates of bullying victimization types (i.e., excluded, verbal, physical, etc.) ranged from 4%-38% depending on location in the school (Perkins, Perkins, & Craig, 2014). Specifically, they found that the majority of victimization occurred in hallways, with the classroom and lunchroom close behind, suggesting that these experiences of victimization occur even when teachers or administrators are present. While it is apparent that ethnicities studied, the way data is collected, and definitions that are used, can all affect the prevalence rates that have been reported in the literature, it is also clear that bullying is occurring to some degree worldwide and that numerous adolescents are experiencing such victimization. Most of the

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literature has focused specifically on the traditional, in school-based bullying, however some research has also looked at prevalence rates for cyberbullying.

Cyberbullying

In general, the literature suggests that while cyberbullying occurs, it has a lower prevalence than traditional forms of bullying (Garcia-Moya et al., 2014; Modecki, Minchin, Harbaugh, Guerra, & Runions, 2014). The literature also suggests a link between experiencing cyberbullying in addition to more traditional forms (Modecki et al., 2014), indicating the importance of asking individuals about their experiences with both cyber and traditional forms of bullying in treatment and research. Garcia-Moya and others (2014) found that 5% of their representative sample of Hispanic adolescents reported experiencing cyberbullying, with 4% of those individuals experiencing victimization through the use of computers and 3.6% experiencing it through the use of cell phones. The same researchers found that cyberbullying frequently appeared in combination with nonphysical and/or physical victimization. Modecki, and others (2014) conducted a meta-analysis involving 80 studies that examined prevalence rates of bullying. Researchers found mean prevalence rates of 35% for traditional bullying and 15% for cyberbullying, and noted a significant positive correlation with higher rates of cyberbullying being associated with higher rates of traditional bullying. Because of these findings, Modecki, and others (2014) suggested that it is not appropriate to focus on cyberbullying alone, in treatment or in research, rather they suggest always considering both types of bullying when deciding on treatment and intervention.

Another study obtained reports of students, Grades 9 through 12, in Massachusetts. In the study, 15.8% of students reported experiencing cyberbullying, while 25.9% reported traditional school bullying (Schneider, O'Donnell, Stueve, & Coulter, 2012). Scholars conducting this

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research also found the positive overlap between cyber and traditional bullying as seen in Modecki and others (2014), with 36.3% of the victims of school bullying also reporting experiences of cyberbullying (Schneider et al., 2012). Wang, Iannotti, and Nansel (2009) reported similar rates of cyberbullying experiences among a nationally representative sample of students in the U.S. in Grades 6 through 10. Results demonstrated that 53.5% of adolescents were involved in bullying as either a bully, victim, or as a bully and a victim. Researchers explained that out of those involved, 13.5% of students reported experiences of cyberbullying, with other forms of bullying having higher prevalence rates (i.e., relational bullying comprising 51.4% of all bullying experiences). Finally, Chang and others (2012) found in a sample of 10th-grade Taiwanese students, 18.4% had experienced cyberbullying, and they also reported the positive association between these experiences and experiencing traditional/school bullying. Researchers reported finding that males were more likely to be involved in cyberbullying experiences than females, and that verbal forms of cyberbullying were most commonly experienced (Chang et al., 2012).

Kubiszewski, Fontaine, Potard, and Ausoult (2015) found that 15% of a sample of 1,422 French students, Grades 6-12, were victims of school bullying, while 18% were cyberbullying victims. Researchers' analyses demonstrated that the actual overlap between experiences of traditional and cyberbullying were fairly low, suggesting that cyberbullying may be an independent form of bullying. The findings presented by Kubiszewski and others (2015) illuminate the fact that some discrepancy exists in the literature that posits traditional and cyberbullying are positively related. Even with conflicting results, researchers provide further evidence that cyberbullying is a concern and should always be considered when addressing concerns of bullying victimization experiences. It appears based on all of the reviewed literature

that cyberbullying does occur and may occur in addition to the presence of traditional bullying, or as a separate experience.

Consequences of Bullying

Anxiety and depression. Another important area of interest in studying bullying involves examining the sequelae associated with being bullied. Findings suggest that the immediate consequences of bullying for middle and high school students may include outcomes such as poorer mental health functioning (e.g., anxiety and depression), impaired social relationships, and school experiences (Evans et al., 2014). Specifically, Evans et al. (2014) found that those who repeatedly experienced bullying victimization had increased rates of depression, anxiety, and aggression, as well as decreased self-esteem and future optimism. Researchers also found that increased experiences of victimization were associated with lower teacher, peer, and parental support and increased peer rejection, as well as an increased perception of their school as an unsafe and hostile environment (Evans et al., 2014). Thus, not only are those who have experienced increased rates of bullying victimization at greater risk for serious mental health consequences, they may be more likely to struggle with a lack of support during these difficult times.

The relationship between bullying and negative mental health outcomes is not just specific to one country or cultural group. In addition to being evident throughout the literature that bullying occurs in all cultures, it is also apparent that bullying has similar effects on the victim. For example, Chang and others (2012) found through examining 10th-grade students in Taiwan that those who experienced cyberbullying tended to have lower self-esteem than their peers, and those who experienced both cyberbullying and traditional in-school bullying tended to have higher rates of depression than their non-bullied counterparts.

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Other researchers support these links between bullying victimization and negative mental health outcomes. Kubiszewski and others (2015) found that those who experienced school bullying were more likely to experience higher psychological distress, including low self-esteem and symptoms of depression, than their peers. Interestingly, they point out that school bully victims are likely to experience these types of problems more than cyberbully victims, again distinguishing the two forms of victimization. Pelchar and Bain (2014) also found the connection between bullying victimization and internalizing distress (i.e., anxiety, depression, feelings of insecurity, withdrawal from others, and general unhappiness). Specifically, they examined gifted children in Grades 4 and 5, and found that those who were bullied reported greater internalizing distress than those who were not involved in victimization (Pelchar & Bain, 2014).

Similarly, Arslan and others (2012), who studied bullying consequences in a sample of Turkish adolescents, found that bullying victims tended to be three times as likely as their peers to experience low mood, increased feelings of loneliness and helplessness, and difficulties sleeping, as well as increased tiredness in the mornings. Difficulties sleeping have also been documented elsewhere in the literature.

Sleep difficulties. A study that examined children 11 to 17 years old in Scotland also reported the connection between bullying victimization and difficulty sleeping (Hunter, Durkin, Boyle, Booth, & Rasmussen, 2014). The data from this study validated that depressive symptomology significantly contributed to difficulties in sleeping, establishing a possible link between victimization, depression, and sleep difficulties. However, Hunter and others (2014) explained that the mechanism behind the link between bullying and sleep difficulties remains unclear at this time. Seals and Young (2003) also provide evidence for the link between bullying victimization and depression. The researchers examined students in seventh and eighth grade,

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and found that when controlling for demographics, students who were bullied were found to have low self-esteem, in general, and higher rates of depression than their peers (Seals & Young, 2003).

Physical and academic consequences. Other consequences of bullying victimization have also been reported in the literature. For example, Ramya and Kulkarni (2011) studied children ages 8-14 in India and found that those who were bullied were more likely to report psychosomatic symptoms, such as fever, headache, and stomach aches, as well as symptoms consistent with depression. Cornell, Gregory, Huang, and Fan (2013), using a sample of ninth graders from 276 public high schools in Virginia, found that for schools whose students reported higher rates of teasing and bullying, there was a 16.5% increase in school-dropout rates. Additionally, for schools whose teachers reported higher rates of in-school bullying, there was a 10.8% increase in student dropout. In other words, if a school's environment involves bullying victimization, students are more likely to drop out.

Finally, in a study of obese adolescents in Belgium, Grades 7-12, DeSmet and others (2014) found that obese adolescents who experience bullying victimization experience a lower quality of life, lower motivation for exercise, and higher avoidance of healthy lifestyles than those who were not victimized. While this study was specific to obese adolescents, it is important to consider that bullying victimization may have a compounded impact on students who are already struggling with other disabilities or concerns outside of school, such as health and weight. Not only is bullying victimization problematic because of the psychological effects it can have on the victims, but it is also concerning because of the physical effects it can have as well.

Suicidal ideation and attempts. Suicidal ideation has also been reported for victims of bullying. Bhatta, Shakya, and Jeffris (2014) examined this relationship in a sample of middle school adolescents in a rural Appalachian county in Ohio. Researchers found that in their sample, 43.1% of students reported “ever being bullied,” and that ever being bullied was significantly associated with suicidal ideation and planning for both males and females. The authors suggest that the mechanism involved in the relationship between victimization and suicidal ideation/planning is unclear and requires further examination. However, the researchers note that it is possible that depression is the link in this association (Bhatta et al., 2014). In a study examining youth ages 10 through 19 in Toronto, Canada from 1998 to 2011, Sinyor, Schaffer, and Cheung (2014) found that out of 94 youth suicides, bullying was present in 6 of those deaths, as evidenced by bullying victimization being included in the coroner’s reports of “recent stressors”. Sinyor and others (2014) also explain that depression was detected in 40.4% of the suicide cases, suggesting that adolescent suicide involves complex interchanges between psychological, biological, and social experiences such as bullying (Sinyor et al., 2014). Other researchers have examined this relationship between suicide and bullying with a specific focus on Hispanic females. Using a sample of high school students in Arizona, researchers found that the females who reported victimization at school were 1.5 times more likely to report a suicide attempt. Again, depression appeared as a possible influence on this relationship as the participants who reported experiencing depression in the previous year were 5.1 times more likely to consider suicide than their non-depressed counterparts (Romero, Wiggs, Valencia, & Bauman, 2013).

Psychosis. Another potential outcome related to experiences of bullying that has been studied involves psychosis symptomology. Wolke, Lereya, Fisher, Lewis, and Zammit (2014) examined this connection using a longitudinal study following children from age 7 to 18 in the

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United Kingdom. After controlling for intelligence, mental health diagnoses, internalizing/externalizing behaviors, symptoms of depression, and psychotic experiences prior to adolescence, children who experienced bullying at age 10 (assessed by child and mother's report) were more likely to have psychotic experiences at age 18. Psychotic or depression symptoms present in early adolescence partially mediated the psychotic symptoms at age 18, suggesting depression as a potentially important link between experiences of bullying and subsequent mental health outcomes (Wolke et al., 2014). A study using a nationally representative sample of Dutch adolescents ages 12 to 16 found that individuals who were bullied were at a greater risk for experiencing subclinical psychotic experiences, such as hallucinations and delusions. Interestingly, the authors also found that the classroom climate in relation to bullying could influence the association between bullying victimization and psychotic experiences. According to Horrevorts, Monshouwer, Wigman, and Vollebergh (2014), in classrooms where there were higher rates of bullying, victims experienced fewer psychotic symptoms than bully victims who were a part of classrooms with less bullying. Researchers suggest that this could be related to the support students may feel if others are experiencing similar victimization. Trotta and others (2013) found a link between bullying victimization and symptoms of psychosis in a sample of individuals ages 16-65 from the United Kingdom. The authors included individuals who were presenting in treatment for the first time with a psychotic disorder and a matched control from the general population. Individuals retrospectively answered questions about bullying victimization experiences, and researchers reported that those who were presenting with the psychotic disorder were nearly twice as likely to report previous bullying victimization as those in the control group. Researchers also found that the controls who reported

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previous experiences of bullying victimization were more likely to report experiencing at least one psychosis-like symptom (Trotta et al., 2013).

Substance use. Certain risk-taking behaviors such as substance abuse and sexual risk taking have been linked to bullying, such that experiencing victimization is associated with a higher risk in engaging in these behaviors. Radliff, Wheaton, Robinson, and Morris (2012) studied 6-12th graders in the U.S. with the goal of examining a potential relationship between involvement in bullying as a bully, victim, or bully-victim, and substance use in both middle and high school. Researchers found that high school bullying victims were more likely to use cigarettes and alcohol than students who were not involved in bullying in any way. Researchers also noted that there was no statistically significant evidence between experiences of bullying victimization and substance use for middle school students, indicating a potential difference in the relationship between bullying and substance use depending on age. Johnston, Dumas, Midgett, and Moro (2017) found that high school students who reported experiences of bullying victimization also reported higher drug and alcohol use than those who had not experienced bullying victimization. The authors explained that this relationship was stronger for males, such that males who had experienced bullying victimization reported the highest illicit drug use. While these authors found a relationship between bullying victimization, alcohol use, and illicit drug use, they explained that experiences of bullying victimization were not significantly related to marijuana use in their study. Similarly, Tharp-Taylor, Haviland, and D'Amico (2009) examined middle school students, Grades 6-8, in California to examine the relationship between bullying victimization and substance use. The authors reported that students who experienced mental or physical bullying were also more likely to report current alcohol use. Results also indicated that students who reported experiencing mental or physical bullying were 3.0 and 2.5

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times more likely to use cigarettes, respectively. In this particular study, bullying victimization was also related to higher likelihood of marijuana and inhalant use for middle school students (Tharp-Taylor et al., 2009).

Litwiller and Brausch (2013) examined data collected on high school students ages 14-19 and found that both physical and cyber forms of bullying predicted substance use, violent behavior, sexual behavior, and suicidal behavior. The authors suggested that the violent behavior and substance use partially mediated the relationship between bullying and suicidal behaviors. This is an important finding, as previously noted, that one outcome of bullying is suicidal ideation. The study by Litwiller and Brausch (2013) suggests that risk-taking behaviors that are associated with bullying may be a contributing factor to suicidal behaviors, making the risk-taking behavior outcomes of bullying just as important to focus on as the other outcomes previously mentioned.

Continuing to examine literature related to bullying victimization and risk-taking behaviors, Luk and others (2010) found that experiences of bullying for both males and females were associated with increased substance use. Using a nationally representative sample of 10th-grade U.S. adolescents, the researchers explored the potential mediating effect of depression on the relationship between bullying and substance use. Researchers found that for females, depression did mediate the relationship between experiences of bullying and substance use. Luk and others (2010) also found that for males, experiences of bullying were linked to depression and substance use, but depression was not a mediator in the relationship between bullying victimization and substance use. These findings suggest that experiences of bullying victimization, as well as the various potential outcomes of bullying (i.e., mental health concerns,

risk taking-behaviors), may all be related in a complex fashion with those outcomes influencing other potential consequences.

Other support for the complex relationship between bullying victimization and its potential outcomes is found in a study by Goebert, Else, Matsu, Chung-Do, and Chang (2011). The authors studied adolescents from two high schools in Hawaii and found that experiences of cyberbullying increased the use of alcohol and marijuana by 2.5 times. In contrast to the literature reviewed so far, Selkie, Kota, Chan, and Moreno (2015) examined consequences of experiences of cyberbullying in late adolescence/early adulthood. Researchers examined these consequences for both bullies and victims, in a population that included young women ages 18-25 from four different universities in the United States. Selkie and others (2015) found females who reported experiencing cyberbullying about 3.0 times as likely to develop depression as those with no cyberbullying experiences. However, findings did not reflect victims of cyberbullying being at an increased risk of substance abuse. Rather, bullies were the group at higher risk of developing substance abuse problems (Selkie et al., 2015).

Bullies versus victims risk-taking consequences. Some of the literature presents a more complicated relationship between bullying victimization and risk-taking behaviors. While Litwiller and Brausch (2013) found a connection between sexual behaviors (i.e., age of first sexual encounter, contraceptive methods used) and victimization in high school students, other research has found more sexual concerns in those who are bullies and victims rather than just victims. Holt, Matjasko, Espelage, Reid, and Koenig (2013) studied 8,687 U.S. high school students from 24 schools, and focused on both heterosexual students as well as those students who identified as LGBTQ. Findings suggested that (a) bullies as well as (b) those who bully in addition to being victims, were more likely to have casual sex as well as sex under the influence

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of substances compared to those who were victims or uninvolved in bullying. Researchers also found that this relationship primarily existed for heterosexual adolescents. However, for LGBTQ individuals, those who were bullies and also victims themselves had a greater likelihood of participating in casual sex, but not sex under the influence (Holt et al., 2013). This study demonstrates the complexities involved in examining the experiences of bullying victimization and risk-taking behaviors. That is, not only are the consequences interconnected, but individuals can be a part of bullying as bullies, as victims, and as a combination of the two, with similar outcomes for each.

Discrepancies in the literature. Harlow and Roberts (2010) studied 6-12th graders from one school district in New Jersey, and another in Texas, and found that experiences of bullying victimization were not significantly related to alcohol use. In addition, while victimization was significantly related to substance abuse in general, combining data across alcohol and drug use, the differences were slight between victims and non-victims. Researchers reported that these results suggest that adolescents who are bullied are in a separate category from adolescents who use substances.

Another discrepancy pointed out in the bullying literature is the question of directionality in the relationship between bullying and bullying-related consequences. Gamez-Guadix, Orue, Smith, and Calvete (2013) explored this topic by looking at the reciprocal relationships between cyberbullying experiences, depression, substance use, and problematic internet use, for Spanish adolescents ages 13-17. The authors did so in a longitudinal design where adolescents filled out measures at Time 1, then again 6 months later to create Time 2. Results indicated that experiencing cyberbullying at Time 1 predicted depressive symptoms and problematic internet use at Time 2. In addition, higher depressive symptomology and substance use at Time 1

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predicted more cyberbullying at Time 2. However, cyberbullying was not predictive of substance use. Important to note is that individuals who were bullies as well as victims were higher on measures of depression, substance use, and problematic internet use, compared to those who were victims only.

Long-term consequences. While inconsistencies are present in the literature regarding the relationship between bullying involvement and short-term consequences, there is longitudinal data that support the association between bullying experiences and negative mental health and risk-taking outcomes. Various articles have examined how experiences of bullying in childhood/adolescence are associated with negative consequences in later adolescence and adulthood. One example of this approach to longitudinal analysis is a study that examined psychiatric outcomes of children living in North Carolina. This longitudinal study investigated outcomes of bullying experiences at ages 9, 11, 13, 16, 19, 21, and 24-26. Researchers found that those who were bullied in childhood were more likely than their non-bullied peers to have childhood psychiatric disorders, as well as more likely to experience depressive disorders, anxiety disorders, and panic disorder with and without agoraphobia later in life (Copeland et al., 2013).

Accordingly, Crookston and others (2014) studied 675 children in Peru, and measured their victimization as well as risk-taking behaviors at age 8 and then again at age 15. Authors included both the parents' and the children/adolescents' reports in their study. Results indicated that individuals who experienced bullying at ages 8 and 15 were 1.58 times more likely to smoke cigarettes, 1.57 times more likely to drink alcohol, and 2.17 times more likely to have had a sexual relationship when compared to those who were not bullied at either of those ages. This study reflects that earlier experiences of bullying victimization may not only lead to negative

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consequences at the time of bullying, but may also lead to consequences that follow that individual throughout their life.

In continuing to examine risk-taking behaviors, Li, DiStefano, Mouttapa, and Gill (2014) looked specifically at risky sexual behaviors in men 18-29 who have sex with men. Researchers found that for these individuals, biased-motivated bullying (e.g., bullying associated with sexual orientation) during high school years was associated with current unprotected, receptive, anal intercourse. Li and others (2014) also examined potential moderators of this relationship, such as depression, low self-esteem, and internalized homonegativity, but found that none of these moderated the relationship between the experiences of bullying and subsequent sexual risk-taking behaviors.

Other research has found risk-taking behaviors in adulthood associated with prior experiences of bullying during adolescence. Sigurdson, Wallander, and Sund (2014) examined adolescents in Norway at ages 14-15, and followed up with the same participants at ages 26-27. Researchers found that individuals who reported having been bullied in adolescence had an increased risk of illegal drug use in adulthood, and those who were bullies as well as victims had a higher risk of tobacco use as adults. Findings suggested that other consequences in adulthood associated with earlier experiences of bullying included poorer general health, higher levels of reported pain, and lower levels of educational achievement.

More support for the link between early experiences of bullying and later risk-taking behaviors was found in research by Kim, Catalano, Haggerty, and Abbott (2011). Scholars collected data from first- and second-grade students in the U.S. and then collected data again on these participants after age 18. Results indicated that childhood bullying was associated with risk of violence, heavy drinking, and marijuana use at age 21. Niemelä and others (2011) examined

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Finnish males from whom researchers collected data at age 8 and 18. In this study, results reflected that being victimized frequently (i.e., everyday) at age 8 significantly predicted daily heavy smoking as an adult. However, these researchers did not find an association between victimization and later alcohol use. Niemelä and others (2011) found that being a victim of bullying, as opposed to being a bully, was associated with less illicit drug use, rather than more.

Wolke and others (2013) explored the impact of childhood bullying on adult health, wealth, crime, and social outcomes. Researchers included a cohort of children ages 9, 11, and 13 from 11 counties in North Carolina in their study and collected data from this cohort initially at those ages, then again at ages 16, 19, 21, and 24-26. Authors found that involvement in being a victim of bullying as a child led to an increased risk of poor health, wealth, and social-relationship outcomes in adulthood. Specifically, findings indicated that victims of bullying (in addition to bullies and those who were bullies in addition to being victims) were more likely to be impoverished in adulthood and have difficulties maintaining a job. Individuals involved in bullying were also found to have problematic social relationships as an adult. However, this particular study did not find that victims were more likely to engage in risky or illegal behaviors in adulthood (Wolke et al., 2013).

The literature reviewed highlights that the effects of bullying may not just be a short-term, transitive, problem. Instead, those who experience this form of victimization carry the effects of their experiences with them over time. It also highlights the possibility that the effects of bullying are multifaceted and cross multiple domains of the victims' lives. It is apparent that there are inconsistencies in findings across the literature related to bullying, but all of the literature suggests that bullying is problematic in that it may lead to negative consequences for victims, whether in the short term, long term, or both. It is also apparent that a potential link

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exists between early experiences of bullying and later risk-taking behaviors, although again the specifics of this association are still somewhat unclear. One particular gap that exists in the literature is examining how earlier bullying experiences may be associated with risk-taking behaviors for college students specifically.

Risk-Taking Behaviors

Sexual risk taking. While various behaviors can be defined as “risk-taking,” there are two areas that appear frequently in the literature related to college-age students: risky sexual behavior and substance use. It is important to understand prevalence as well as potential consequences of these behaviors, as data support a link between early experiences of bullying victimization and subsequent risk taking. What follows is an overview of prevalence rates of sexual risk taking in the college population, in general, followed by consequences of these behaviors. Trepka and others (2008) examined two types of sexual risk taking: risky sex and consistent risky sex among college students. “Risky sex” was defined as not using a condom during the last encounter of vaginal intercourse and having had more than one sexual partner in the last year. “Consistent risky sex” was defined as not using a condom “most times” or “always” within the past month during vaginal intercourse and having more than one sexual partner within the past year. In examining both undergraduate and graduate students from a university in the U.S., Trepka and others (2008) found that of the 1,200 participants they surveyed, 14% engaged in behaviors that met the criteria of risky sex and 11.9% reported behavior that met the criteria of consistent risky sex. Researchers also found that 52.1% of respondents did not use a condom in their last sexual encounter. Authors reported that even under a conservative definition of sexual risk-taking behaviors, a sizable portion of their respondents indicated engaging in sexual risk-taking behaviors. In continuing to examine

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prevalence rates of sexual behaviors, Fielder and Carey (2010) examined first-semester female college students, specifically, and found that from their sample, participants reported that condoms were not used 31% of the time, during oral, vaginal, or anal sex.

Burke, Gabhainn, and Young (2015) contribute to data on prevalence rates of sexual risk. Scholars examined both college students and young adults who were not in college with regard to sexual risk-taking behaviors such as inconsistent condom use, high levels of sexual activity, and instances of multiple partners. Authors reported that 38.4% of student men and 19.0% of student women reported having four or more sexual partners in their lifetime. Burke and others (2015) also found that 3.8% of male and female students reported not using contraceptive methods during last intercourse. In this study researchers found that younger age of first sexual encounter was linked to risk-taking behaviors. Twenty two percent of male students and 13.4% of female students reported having sex before the age of 17. One notable finding, however, was that risky behaviors were more prevalent in non-student populations. Thus, individuals not in college, but within this age range, may experience higher engagement in risky sexual behaviors (Burke et al., 2015).

Another study examined sexual risk taking in U.S. LGBT college students. Lindley, Nicholson, Kerby, & Lu (2003) found that 45% of respondents reported having had six or more sexual partners during their lifetime. While the majority of participants reported using a condom during penile-vaginal sex (61%) and anal sex (63%), only 4% reported using a condom during oral sex and only 28% reported using a condom in their last sexual encounter.

Some researchers have attempted to examine contributing factors to sexual risk-taking behaviors in college students. One contributing factor noted in the literature that is related to increased engagement in sexual risk-taking behaviors is weight. Eisenberg, Neumark-Sztainer,

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and Lust (2005) found that for U.S. college students, individuals with higher body mass index (BMI) were at increased odds of having a casual sexual partner. Women who reported unhealthy weight control behaviors (i.e., bingeing, purging, using laxatives) were also at increased risk of having a casual sex partner as well as using no or unreliable contraception (i.e., being intoxicated at last intercourse).

Another study that examined perceptions of U.S. college students found that there was an overestimation bias in judging others' risky sexual behaviors. In other words, researchers found that their sample estimated a higher prevalence for sexual risk taking than actually existed. Seal & Agostinelli (1996) suggest that self-protection/enhancement factors are at play in this overestimation, with beliefs that personal risky behaviors are not as bad or worth noting because everyone else engages in similar actions. It seems as if college students' sense of invulnerability to the negative consequences related to sexual risk taking, along with their overestimation of those risky behaviors in their peers, leads them to be at an increased risk in engaging in that sexual risk taking.

Another contributing factor, although research is limited on this relationship especially in a college population, is child sexual abuse. Watson, Matheny, Gagne, Brack, and Ancis (2012) looked at this relationship in undergraduate women in the U.S. Results indicated that childhood sexual abuse was associated with sexual risk behaviors (defined as behaviors that may lead to unintended pregnancy or sexually transmitted infections [STIs]). Researchers explained that feelings of shame about one's body as well as difficulty identifying and verbalizing emotions (alexithymia) were other correlates that were directly associated with child sexual abuse, as well as sexual risk-taking behaviors. Turchik (2012) examined the relationship between sexual victimization of males who were college students in the U.S. and subsequent risk behaviors. In

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this study, experiences of previous and current sexual victimization (i.e., unwanted sexual contact, sexual coercion, and rape) associated with increased sexual risk-taking behaviors, such as engaging in sexual intercourse without a condom and having casual sex. Again, it appears that earlier experiences of victimization (i.e., sexual abuse, bullying), as well as body/weight issues, may be related to engagement in sexual risk-taking behaviors during college years.

Other factors have also been found to be related to sexual risk taking in the college population. For example, another study looked at the relationship between mental health concerns and risk-taking behaviors for university students in Uganda. This study found that higher scores on depression were linked with high numbers of sexual partners for males and females. Elevated anxiety scores were associated with higher numbers of sexual partners and inconsistent condom use. Psychoticism was also significantly associated with higher numbers of sexual partners, but for men alone (Agardh & Cantor-Graae, 2012). This study demonstrates that a link may exist between mental health concerns and sexual risk taking, and as discussed previously, experiences of bullying victimization are linked with mental health concerns such as anxiety and depression. This is important to keep in mind when considering the relationship between experiences of bullying victimization and sexual risk-taking behaviors. Xinying and others (2013) found other factors related to sexual risk taking. Authors explained that exposure to pornographic information, alcohol consumption, and sexual education were important contributing factors to condom use. Specifically, exposure to pornographic information, greater alcohol consumption, and less education about sex were linked with less condom use. Other findings suggest a potential link between sexual risk taking and substance abuse.

Sexual risk taking and substance use. Researchers have found a link between substance use and sexual risk taking (Fielder & Carey, 2010; Trepka et al., 2008; Xinying et al., 2013). For

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example, Trepka and others (2008) conducted a study looking at college students from a large urban minority university in South Florida. Scholars examined prevalence rates of risky sex and consistent risky sex, as mentioned previously, in addition to examining the role that substance use played in these behaviors. Trepka and others (2008) found that past-month alcohol use had the strongest independent relationship with risky sex as well as consistent risky sex, and while illicit drug use was only marginally significant, they found that there was an association between illicit drug use and risky sexual behaviors. Fielder and Carey (2010) found that for first-semester college females, alcohol use was associated with “hooking up” as opposed to romantic interactions with a stable partner (p. 355). Results indicated that alcohol intoxication was cited as a motive for 51% of hookups, and women reported having approximately three drinks prior to hooking up, whereas they reported only having approximately one drink before engaging in sexual interactions with a romantic partner. This study provides support for an association between substance use and sexual behaviors, which could be associated with greater risk for sexual risk taking (Fielder & Carey, 2010).

Bernert, Ding, and Hoban (2012) used secondary data from a biannual survey that included college students from across the United States. They found that students who reported having a disability (i.e., learning disability, psychiatric condition, chronic illness) were more likely to engage in substance use (i.e., alcohol use, marijuana use, illicit drug use, and non-prescribed drug use) as well as risky sexual behaviors (having two or more partners and not using a condom) than those who reported having no disabilities. The findings demonstrate that in a population at higher risk for substance use, higher rates of risky sexual behaviors co-occur, continuing to suggest a potential link between substance use and sexual risk taking in a college population (Bernert et al., 2012).

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A literature review by Griffin, Umstattd, and Usdan (2010) also indicated a connection between substance use and sexual risk taking in British literature that specifically focused on collegiate women. Researchers found in general, negative sexual consequences for females, such as having unprotected sex and experiencing sexual aggression, were associated with alcohol use by either the male or female in the sexual situation. Rostad, Silverman, and McDonald (2014) also studied college females. The authors used a sample of 203, 18- to 22-year-old female U.S. college students in their analysis. Findings suggested that self-reported lower perceived closeness to one's father predicted greater subsequent substance abuse as well as sexual risk-taking behaviors in college, again establishing a positive association between substance use and sexual risk taking. In another study, Pedrelli et al. (2010) examined both male and female college students in the U.S. and found that for both males and females, self-reported compulsive drinking (i.e., persistent thoughts about alcohol, inability to control consumption) was associated with a greater risk for compulsive sexual behaviors (e.g., compulsive drive to engage in sexual behaviors as well as unsafe sexual practices).

In examining collegiate athletes specifically, Huang, Jacobs, and Derevensky (2010) found that heavy episodic drinkers reported significantly higher prevalence rates of unprotected sex and having multiples sexual partners. They also explained that this relationship was twice as strong for females compared to males. Additionally, Burnett, Sabato, Wagner, and Smith (2013) found that college students with higher self-reports of substance use also report greater sexual risk taking (i.e., having multiple partners, engaging in unprotected sex). This study also found that while alcohol was the preferred drug of U.S. college students, illicit prescription drug use was also associated with higher sexual risk taking in this population.

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A study by Stiles (2013) examined the relationship between substance use and sexual experiences in college students, but from a different perspective. These authors researched second-hand effects of substance use (e.g., effects on individuals not engaging in the substance use), among a sample of rural college students. Results indicated that 22.9% of the sample reported experiencing unwanted sexual advances from a peer who was under the influence. The findings suggest that substance use may be associated with an increase in the initiation of sexual advances, which supports a positive relationship between substance use and sexual behaviors, whether risky or otherwise. As it seems that a relationship exists between substance use and sexual risk-taking behaviors in college students, it is important to examine findings in the literature regarding substance use for this population.

Substance use. Pedrelli and others (2010) found that out of their sample of 904 American college students, 21.1% of males and 12.2% of females reported compulsive use of alcohol, defined as problems controlling use, having persistent thoughts about drinking, and feeling an intense urge to drink. Abikoye and Uchendu (2014) also obtained prevalence rates of substance use. Results indicated that lifetime prevalence rates of alcohol were highest (57.3%), while other substances followed at lower rates (stimulants 35.7%, tobacco 24.0%, and heroin 1.7%). When examining current use specifically, researchers found that 34.3% of students reported drinking alcohol within the past 30 days, while 14% reported using tobacco, 29.8% reported using stimulants, and .8% reported using heroin. Other substances were assessed for as well in this study (i.e., cannabis, 9% current use, 14.5% lifetime prevalence; hallucinogens, 1.5% current, 2.7% lifetime; inhalants, 5% current, 11.2% lifetime). When Abikoye and Uchendu (2014) consolidated this information to form a lifetime prevalence rate of substance abuse in general, they found that the rate was 67.7%, and overall current use across substances was 46%.

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Barnett and others (2014) conducted a study that examined substance use prevalence in U.S. college students, who identified as heterosexual or LGB. They found that the average number of drinks per week was 8.3, with men showing higher rates of consumption per week than women (men 10.2 drinks per week, women 6.5 drinks per week). In regards to marijuana use, 29.8% of their sample had engaged in marijuana use within the semester, with no significant differences found between males and females. Margolin, Ramos, Baucom, Bennett, and Guran (2013), in their study examining urban college students in the U.S., found that 27% of participants reported at least one day of alcohol consumption, 10% reported at least one day of drug use, and 6% reported at least one day of using both.

Toledo Brandão and others (2011) conducted a study that looked at the prevalence of alcohol consumption among university students in Brazil and found that 12.4% of participants reported never drinking alcohol. Within the year that the study was conducted, 71.3% reported that they had consumed alcohol, with 56.7% of those reporting consumption being men. In a study, Oliveira and others (2013) examined a nationwide sample of Brazil college students' substance use. Researchers found that 26% of students reported never using alcohol or drugs, while 70.1% admitted to drinking at least one alcoholic drink and 30.8% reported using at least one illicit drug. Authors reported that the five most common drugs co-used with alcohol included marijuana, amphetamines, inhalants, tranquilizers, and hallucinogens, with 26% of students reporting co-using alcohol and at least one illicit drug. Toledo Brandão and others (2011) also found similar patterns of use among males and females and across age groups. However, males 18 years and younger, along with those 35 years and older, were less likely to engage in drug use than those 18-24 or 25-34.

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In a study conducted on university students in the U.K., 20.7% of students reported using one or more illicit drug, with the most common drug reported as cannabis (19% of students). Sixteen other drugs were included in this study with use ranging from 6.1% using ecstasy to 0% using crack-cocaine or steroids (Bennett & Holloway, 2014). McCrystal and Percy (2011) studied lifetime and current substance use of students in Northern Ireland. They found that tobacco use had one of the highest lifetime and current prevalence in college-age students seeking further education (78% and 55% respectively), while pill use was the least prevalent (10% and 7%). While they did not obtain current prevalence for alcohol use, they found that students reported a lifetime prevalence of 90%. Cannabis was reported as having a 46% lifetime prevalence and 34% last year use (current) prevalence, making it also one of the most common forms of substance use for this population. Other drugs such as illicit drugs (i.e., ecstasy, heroin, and cocaine) were also included in this study, but were found to have much lower prevalence rates (i.e., cocaine 11% lifetime and 9% current) than tobacco, alcohol, and marijuana use, which is consistent with previously mentioned results from the literature (Bennett & Holloway, 2014).

Mohammadpoorasl, Ghahramanloo, and Allahverdipour (2013) also included prevalence rates for substance use reported in their study that included Iranian college students. They found that 15.8% of students reported smoking tobacco, while other substance use only had a prevalence rate of 7.6%. For this population, it seems that tobacco use is one of the more common risk-taking behaviors when compared to other behaviors such as drinking alcohol and engaging in sexual risk taking. Another study that demonstrates the prevalence of substance use in college students as being cross cultural examined female college students in Nigeria. Oye-Adeniran, Aina, Gbadegesin, and Ekanem (2014) found that in their sample, 27.1% of female students reported engaging in substance use at all, and out of that percentage, 22.7% reported

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using alcohol, 2.2% reported using nicotine, and nearly 1% reported using cannabis. Again, it seems as if alcohol use and tobacco use are the more common forms of substance use among college students cross-culturally.

Hensel, Todd, and Engs (2014) examined substance use trends among U.S. college students over a 20-year period. Scholars compared students' reported use in 2011-2012 to reports from students taken during the 1991-1992 school year. Results indicated that substance use trends differed between males and females in that 20-year span. For example, originally, 20% of men reported abstaining from alcohol with this rate increasing in the recent data collection to 27% of men reporting abstinence from alcohol. For women, moderate drinking decreased and heavy drinking increased over that 20-year span (moderate drinking 38% to 31%, heavy drinking 4%-8%). In defining binge drinking as five or more drinks for males in one sitting, or four or more drinking for females in one sitting, binge drinking significantly decreased for males (67% to 57%) from 1991-2011 and significantly increased for females (46% to 52%). Hensel, Todd, and Engs (2014) also found that smoking tobacco had significantly decreased over the past 20 years from 24% to 14% across gender. While the trends may differ between males and females, these prevalence rates demonstrate higher occurrences of substance use in men than women (57% engaging in binge drinking compared to 52% of females engaging in the same behaviors). Varela and Pritchard (2011) examined U.S. college students and found that men were more likely to drink alcohol and use chewing tobacco than women, and that men were more likely to binge drink than women. However, researchers noted that cigarette use as well as misuse of prescription medication did not differ between genders, indicating that gender may have an effect on which types of substances are used.

Specific populations and substance use. Specific populations within college-aged populations have been explored with regard to substance use. For example, Schauer, Berg, and Bryant (2013) examined college students in the LGB community. The authors reported that for males, there were no significant differences in alcohol use, binge drinking, marijuana use, or tobacco use between homosexual, heterosexual, and bisexual individuals. However, for females, differences were found. Bisexual females were more likely to report alcohol use, binge drinking, tobacco use, and marijuana use in the past 30 days than their heterosexual or homosexual counterparts. The overall prevalence rates for substance use in the past 30 days, across categories of sexual orientation, were as follows: alcohol use 56.4%, binge drinking 22.1%, marijuana use 12.9%, tobacco use 30.32%, and total substance use 41.73%.

Kerr, Ding, and Chaya (2014) found similar results for the LGB population. Researchers studied pre-existing data that included U.S. college students across three semesters. Results indicated that bisexual college students were at the greatest risk for using alcohol, tobacco, and other drugs compared to their heterosexual or gay/lesbian counterparts. Researchers also found that bisexual women had the highest levels of substance use including alcohol, tobacco, and other drugs. Gay men in this study were found to have greater prevalence of cigarette smoking, alcohol use, and sedative use than heterosexual men. Bisexual men, like women, were more likely to engage in all substance use behaviors at a higher rate than gay or heterosexual men. An example of prevalence rates within a 30-day time span from this study includes tobacco use: 18.4% heterosexual females, 33.5% lesbian, and 39.1% bisexual females compared to 31.9% heterosexual males, 30.6% gay males, and 38.5% bisexual males. For alcohol use: 57.5% prevalence rate was found in heterosexual females, 60.2% lesbians, and 67.6% bisexual females compared to 58.5% heterosexual males, 67.1% gay males, and 67.4% bisexual males. Marijuana

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use was the third most used substance across sexual orientation groups as well as across gender for this study, with all other drugs falling in much smaller percentages across orientation and gender.

Application with Greek-life has been a population of interest in studying substance use. Sidani, Shensa, and Primack (2013) used data from a large-scale survey of health behaviors for those who were a part of a Greek organization (i.e., fraternities and sororities). Researchers found that for members who lived within the fraternity or sorority, current use was highest for binge alcohol use (70.4%), followed by 25.6% marijuana use, and 24.6% cigarette use. The authors also found that these rates of use were higher than those found in students who were not a part of a Greek organization and for those who are members but who do not live within the organization. Prevalence rates of non-members indicated current substance use was 36.3% binge-drinking, 16.2% marijuana use, and 16.5% cigarette use. While prevalence rates vary depending on culture, it is evident that substance use does occur in a college population, and that alcohol use, tobacco use, and marijuana use are, in general, the most common types of use seen throughout the literature. Given the rates of occurrence, it is important to recognize contributing factors to use in order to understand possible areas of intervention.

Substance use contributing factors. One important factor that may influence substance use in college is the presence of others including peers and family. In the study by Toledo Brandão and others (2011) examining Brazilian college students, 25.5% of students reported that their first drink was in their home, while 23.7% reported that their first drink occurred in the homes of their friends. In this study, friends or peers were cited as the number one source of offering the students alcohol for the first time (37.6%), followed by family (21.6%). Toledo Brandão and others (2011) explained that during college years, peers become a significant

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influence on students' consumption as they set examples of what is acceptable and not, and that they are a source of reinforcement of alcohol consumption.

Other studies have also supported the link between peer and family influence on substance use for college students. For example, Varela and Pritchard (2011) found that in their sample of U.S. college students, individuals were more likely to drink in the presence of someone else, specifically if they were with friends. Authors also found that when drinking with others, students were more likely to report consuming multiple drinks, as opposed to just one. Varela and Pritchard (2011) also reported that students were more likely to use tobacco as well as misuse others' prescription medications, if they were in the presence of others, specifically when with their friends. Additionally, women reported that they were more likely to smoke cigarettes in the presence of family members, while men reported an increased likelihood in smoking when they were alone or with friends.

A study by Barnett and others (2014) examined whether peer associations influenced alcohol use, marijuana use, and exercise involvement of college students. Results indicated that the peers did in fact influence substance use, while they did not influence exercise level. Specifically, the weekly volume of alcohol consumed by the peer associates directly corresponded to the volume of alcohol consumed by study participants. Peer associate marijuana use directly corresponded to participants' use, even after controlling for various covariates (i.e., gender, class year, race). Luhtanen and Crocker (2005) found in a sample of U.S. college students that belonging to a fraternity or sorority was associated with higher rates of drinking, as well as higher rates of binge drinking. This information is important as it suggests that being around peers and friends more often, such as in a living situation, is associated with higher substance use than living alone or away from substance-using peers. It also demonstrates that

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close relationships, such as those found in organizational settings, may lead to higher rates of substance abuse, which reiterates the importance of peer and friend influence on college students' substance use.

Religion as a contributing factor. Another potential contributing factor to substance use that has been examined is religion. Bennett and Holloway (2014) found in a sample of college students from the U.K. that those students who reported not being religious were three times as likely to report drug use as those who described themselves as religious. Oye-Adeniran, Aina, Gbadegesin, and Ekanem (2014) used religion as a predictor variable of substance use in their study of female Nigerian college students. Researchers examined specifically the difference between Christian and Muslim students, and found that Christian students were about three times as likely to engage in substance use as their Muslim counterparts. Finally, a study by Giordano and others (2013) examined how religious coping and spirituality affected different types of substance use in U.S. college students. Findings suggested that students who had positive religious coping, and reported identifying with various aspects of spirituality, were less likely to engage in hazardous drinking and marijuana use. However, when differences for psychostimulant users were examined, religious coping and spirituality were not associated with this type of substance use. So, while the literature is somewhat mixed as to the influence of religion on substance use, it does seem as if, at least for some substances, having religious beliefs or being spiritual may in fact buffer against hazardous substance use.

Academic achievement as a contributing factor. Low academic achievement and motivation has also been suggested as a potential contributing factor to substance use in college students, however research is limited in this area. McCrystal and Percy (2011) found for their sample of U.K. college students, high academic performance on testing prior to entry into

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college predicted lower incidences of drug misuse in college. In other words, those who tended to excel academically were less likely to engage in substance misuse as college students.

Similarly, Luhtanen and Crocker (2005) found that for U.S. college students, those who placed value on academic competence as part of their self-worth engaged in less alcohol use when compared to those who placed value on appearance as part of their self-worth. Researchers also found that those who based self-worth on this academic competence decreased alcohol use from their first semester in college to their second. That is to suggest that those who experienced higher self-worth in regards to having higher academic competence engaged in less alcohol use to begin with and also decreased that use over time.

Family history and trauma as contributing factors. Other contributing factors supported by the literature on college substance abuse include family history of substance use and histories of abuse. Elliott, Carey, and Bonafide (2012) studied family history of substance abuse and the influence that may have on college students' use. Scholars examined this relationship using a meta-analysis that included college students from five different countries, however most students were from the U.S. Family history of alcohol use was found to have a small effect on the amount of alcohol consumed by students. However, family history was significantly related to the number of problems students experienced related to alcohol use as well as other drug use.

Finally, Calmes and others (2013) studied the relationship between childhood traumatic experiences and college students' substance use. The researchers found a significant relationship between experiencing a childhood traumatic event and substance use, as well as substance dependence, in the first year of college. Specifically, those who reported experiencing a traumatic event in childhood, as well as those who reported multiple traumatic events, were more

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likely to have higher substance use and be at greater risk for developing substance dependence. For the purposes of the study, trauma referred to a number of potential experiences such as parents' divorce, parental substance use, medical problems, death, or suicide of a family member. Findings such as these demonstrate the wide range of traumatic childhood experiences that can potentially result in increased risk of college substance use and dependence.

Overall, risk-taking behaviors appear to be prevalent in the college-age population, with many factors contributing to such behavior. One final area important to explore related to these behaviors involves the consequences and implications that may arise due to the engagement in substance use and/or sexual risk taking.

Consequences and Interrelatedness of Risk

Throughout the literature, consequences associated with substance use and sexual risk taking for the college population and college-age individuals have been examined. For example, Kelly and others (2005) conducted a study that examined alcohol-related incidents that led individuals to seek help in emergency departments. Out of the sample of 950 E.R. patients ages 12-20, 54% were treated for an alcohol-related emergency. Out of those individuals, 55% were being treated for acute alcohol intoxication, 30% for an alcohol-related injury, 10% for an assault that was related to intoxication, 3% for an illness related to alcohol consumption, and 2% for self-inflicted injury (p. 1681). Researchers also found that those who were seeking emergency services for an alcohol-related event also endorsed higher frequency of risk-taking behaviors in general, as assessed through the CARE scale. While this particular study did have younger individuals included, they found that the mean age for seeking emergency services related to alcohol problems was 19.3, demonstrating that some college-age individuals who engage in at least alcohol use do in fact experience negative health outcomes from their use. This study also

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demonstrates that those who engage in alcohol use and who end up seeking emergency services because of it are also more likely to be at risk for other risk-taking behaviors (i.e., drug use, sexual risk taking).

The notion that engaging in alcohol use is associated with other risk-taking behaviors is supported by Pedrelli and others (2010). The authors reported that college-age men who reported compulsive use of alcohol had an increased risk for compulsive street and prescription drug use, as well as compulsive sexual activities. For women, compulsive alcohol use was associated with an increase in compulsive street drug use and compulsive sexual activities. The findings also lend support to the idea that those who are more likely to engage in the use of one type of substance may be at risk for engaging in the use of other substances as well. Individuals who engage in substance use may also be at a higher risk for other risk-taking behaviors such as sexual risk taking.

Related to health concerns, Hensel and others (2014) found that heavy alcohol consumption (more than 28 drinks per week) by college students was related to higher self-reported illnesses, including gastrointestinal problems, overall illness, as well as upper respiratory infections. The data suggest that substance use, especially heavier use, negatively affects physical health and well-being. The research by Hensel and others (2014) also supports the data previously mentioned by Kelly and others (2005), who documented that alcohol use was associated with higher emergency care needs.

School-related consequences. Abikoye, Eze, and Uchendu (2014) found that use of stimulants, cocaine, alcohol, tobacco, and cannabis were all significantly associated with withdrawal from college due to academic difficulties. Meshesha, Dennhardt, and Murphy (2015) conducted a study examining whether substance use was associated with a lack of substance-free

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reinforcement among U.S. college students. The researchers found that individuals who engaged in heavy drinking, marijuana use, and illicit drug use experienced less peer substance free reinforcement, less time spent exercising, less time spent on academics, less participation in extracurricular activities, and greater risk for depression. In other words, students who engage in substance use tended to have fewer reinforcements to stop behaviors, and they tended to neglect academic work and other positive activities, which was in turn associated with greater risk for mental health concerns such as depression (Meshesha et al., 2015).

A study conducted by Palmer, McMahon, Moreggi, Rounsaville, and Ball (2012) found a number of negative consequences listed by U.S. undergraduate college students who engaged in illicit drug use, marijuana use, or prescription pill use. The most common negative consequences cited by this population as having happened in the last year included “not done homework, not study for a test, or received a lower grade” (58%), “said or done something embarrassing” (50%), and “felt guilty or ashamed” (50%) (p. 128). Other consequences included feeling physically bad, missing school or work, and being physically injured while under the influence. One important consequence to note found in this study is that 48% of students who engaged in substance use reported driving a car while under the influence. A study by Beck, Caldeira, Vincent, and Arria (2013) examined U.S. college students at three times (Year 1, Year 3, and Year 4). The researchers found that individuals who drank in social contexts, during times of emotional pain, in a vehicle, or in relation to sex-seeking during Year 1 were more likely to engage in drunk driving and experience alcohol dependence at Year 3 and 4.

Another potential consequence of substance use involves aggressive behaviors. Margolin and others (2013) found in their sample of U.S. college students that for males specifically, alcohol use was associated with aggressive behavior perpetration on the same day as that use, as

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well as experiences of aggressive victimization with friends or dating partners. These behaviors and experiences included physical aggression, verbal and electronic aggressive language, and sexual coercion. Not only is being aggressive with others a consequence of alcohol use, but experiencing aggression from others also appears to be a negative consequence experienced especially by males, in relation to alcohol use.

Consequences of sexual risk taking. It is important to understand the negative consequences associated with sexual risk taking, as these may also be secondary consequences of substance use. One such consequence discussed in the literature involves depression. Grello, Welsh, and Harper (2006) conducted a study on U.S. undergraduate college students who were enrolled in an introductory psychology course. Researchers found that for females, casual sex was associated with higher rates of depressive symptoms. There was a statistically significant association between casual sex and feelings of regret for both males and females, and those who reported experiencing feelings of regret also reported more depressive symptomology.

Another study also examined feelings of guilt associated with casual sexual experiences. Paul and Hayes (2002) studied college students in New Jersey and found that some common negative emotions tied to casual sexual experiences included feeling regretful or embarrassed (8% of their sample), nervous or scared (7%), or feelings of confusion (6%). Authors also explained that another negative consequence reported in their study involved females' feelings of pressure to engage in unwanted sexual behaviors. Based on the literature, sexual risk taking does seem to have some negative emotional and potential psychological concerns tied to it. Other areas of consequences involve more physical/health-related concerns.

Two potential physical concerns tied to sexual risk taking in college populations involve unwanted pregnancy and sexually transmitted infections (STIs). Sawyer, Pinciaro, and

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Anderson-Sawyer (1998), in a study at a U.S. university health center, found that 30% of their 2,029 sample of college women seeking pregnancy testing tested positive, with the majority of those students identifying as graduate students (40.3%). The researchers found that 56.7% of women stated that they would want to terminate, but only 18% decided to continue the pregnancy and keep the child.

One of the other important consequences to consider in relation to sexual risk taking in college is contracting an STI. According to the Centers for Disease Control and Prevention (2013), individuals in the 15-24 age group, which includes college-age individuals, acquire 50% of all new STIs. Other literature explains that chlamydia and human papillomavirus (HPV) are most common for the adolescent/emerging adult populations (Santrock, 2013). One of the obvious consequences related to STIs is that while some are curable, others are not, leading to lifelong physical consequences. Santrock (2015) explains that STIs caused by viruses (i.e., AIDS, genital herpes, and genital warts) are not curable, whereas those caused by bacteria (i.e., gonorrhea, syphilis, and chlamydia) are. According to the CDC (2014), for STIs that are curable, various physical consequences may arise, such as genital burning, irritation, and painful urination, sores or blisters, abnormal discharge, and infection. Even with STIs that are curable, if left untreated, serious physical consequences may arise such as infertility for men and women, as well as pelvic inflammatory disease, and ectopic pregnancy for women.

It is evident that engaging in substance use as well as sexual risk taking in college may have negative consequences for students. The literature reviewed to this point has discussed the circular relationship between substance use and sexual risk taking in the college-age population, as well as the negative outcomes of engaging in each type of behavior. With the awareness of the impact risky behaviors can have, it is important to look for buffers against the engagement in

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these behaviors. As previously mentioned, one contributing factor involved with risky behaviors in college-age populations are experiences of bullying in middle and high school. It is important to explore possibilities for intervening in the potential pattern of early experiences of bullying contributing to risk taking behaviors in college. For the current study, one potential buffer that will be examined in relation to this bullying, risk taking relationship cycle is self-compassion.

Self-Compassion

The following section provides an overview of the construct of self-compassion. Included in this section is a review of the literature that examines self-compassion and the role it may play in mental health concerns, substance use, and sexual risk behavior. Literature on both college-age and non-college-age populations is reviewed. Neff (2009) describes self-compassion as consisting of three elements: (a) self-kindness, (b) common humanity, and (c) mindfulness. Self-kindness involves the concept of having sympathy and kindness towards oneself, even when facing personal failures. Common humanity involves understanding that everyone goes through difficult times, and by understanding that one is not alone in one's experiences, individuals learn not to take their specific situations personally. Finally, mindfulness involves openly examining negative thoughts and emotions and learning not to "over-identify" with these thoughts (Neff, 2009). Research has examined this construct in relation to various mental health outcomes, such as anxiety and depression, and a small amount of research has examined self-compassion in relation to sexual risk-taking behaviors as well as substance use.

Self-compassion and mental health. Johnson and O'Brien (2013) conducted a study with Canadian university students to explore the relationship between self-compassion and mental health concerns such as depressive symptoms, as well as rumination and feelings of shame. Researchers reported that self-compassion was negatively associated with depressive

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symptomology and that this relationship was a result of self-compassion's negative relationship with shame, rumination, and low self-esteem, which can lead to and reinforce symptoms of depression. Johnson and O'Brien (2013) also conducted a second part to the study that had participants engage in a self-compassion writing exercise, a neutral writing exercise, or no exercise. The researchers found that at a two-week follow up, individuals who completed the self-compassion exercise showed reduced proneness to feelings of shame and less depressive symptomology than those in the other conditions. The authors explain that self-compassion appeared to calm or soothe certain negative responses to difficult situations, such as feelings of shame or rumination, which then contributed to less depressive symptomology.

Similarly, Krieger, Altenstein, Baettig, Doerig, and Holtforth (2013) examined self-compassion as it related to depression in a sample of outpatient participants known to have depression, compared to a sample of individuals known never to have had depression. In general, the depressed outpatient sample reported lower self-compassion scores when compared to the non-depressed controls. Researchers found that self-compassion was negatively associated with depressive symptoms because it is associated with a decrease in rumination as well as cognitive and behavioral avoidance. Again, these data reflect that self-compassion appears to work in negative association with some of the patterns of thoughts, emotions, and behaviors that reinforce or contribute to depressive symptomology.

Other research has demonstrated similar findings regarding depression and anxiety. Raes (2010) reported that in a sample of college-age undergraduates in Belgium, self-compassion was negatively associated with depression and anxiety, and that these relationships were mediated by factors such as rumination and worry. Specifically, self-compassion was negatively associated with brooding, which explained why self-compassion was negatively associated with depression.

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For anxiety, self-compassion was negatively associated with both brooding and worrying, which explained the relationship between self-compassion and anxiety. Lihua, Jian, Xiaoqun, Dali, and Linyan (2013) reported similar findings in a study they conducted on Chinese college students. A negative relationship was reported between self-compassion and negative cognitive style, or thought patterns, explaining the negative association between self-compassion and depression.

Van Dam, Sheppard, Forsyth, and Earleywine (2011) used a large U.S. community sample and found that self-compassion was negatively correlated with symptom severity in both anxiety and depression, and reported that self-compassion significantly predicted quality of life, with higher levels of self-compassion associated with higher quality of life scores. Importantly, researchers established that all elements of self-compassion predicted, above and beyond, what mindfulness alone could for each of these categories. Van Dam and others (2011) reported that self-compassion did appear to be a strong predictor of psychological health and that it could be useful to supplement in mindfulness-only interventions used in therapy.

Germer and Neff (2013) found similar results from a mindful self-compassion 8-week training workshop. Findings suggested that individuals reported greater self-compassion at the end of the training as well as less depressive and stress symptomology. Germer and Neff (2013) explained that self-compassion contributed to less negative thought patterns, which were then associated with individuals' outlooks and emotional responses to negative life events or stressors. Hall, Row, Wuensch, and Godley (2013) examined the relationship between self-compassion and well-being by breaking self-compassion into its three categories and seeing which categories corresponded with different mental health consequences. Results indicated that self-kindness as well as common humanity elements of self-compassion were negatively associated with depressive symptomology and positively correlated with overall physical well-

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being. Self-kindness and mindfulness were found to be predictive of more positive management of life stressors.

Other data has focused more on perception of well-being. For example, Saricaoglu and Arslan (2013) studied Turkish university students and found that self-compassion was positively associated with six factors of well-being: (a) positive relations with others, (b) autonomy, (c) environmental control, (d) personal growth, (e) purpose in life, and (f) self-acceptance. Thus, self-compassion was negatively associated with mental health concerns such as anxiety and depression; it was positively associated with well-being and positive characteristics that individuals may hold. While findings suggest that self-compassion may buffer against negative mental health outcomes, and contribute to positive, healthy, characteristics, there is less literature available specific to how self-compassion may play a role in buffering against risk-taking behaviors.

Self-compassion and substance use. There are findings that self-compassion may have a negative association with substance use. Other findings suggest that self-compassion may serve as a buffer against such risk-taking behaviors. Miron and others (2014) studied U.S. undergraduate females and explored the relationship between self-compassion, childhood abuse, and problematic alcohol use in college. Researchers reported that self-compassion was associated with the link between childhood emotional abuse and alcohol problems within a college-age population. The authors suggested that self-compassion may help alleviate self-critical and self-blaming ways of thinking, which can then help to alleviate problematic alcohol use. While not specific to college students, Tanaka, Wekerle, Schmuck, and Paglia-Boak (2011) found similar results in their study that examined U.S. adolescents who were receiving child protective services. In this study, individuals who reported high emotional abuse and neglect, and physical

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abuse, also reported lower levels of self-compassion. Accordingly, participants who reported lower rates of self-compassion were more likely to experience psychological distress and problem alcohol use. Again, there appears to be a connection between self-compassion and substance use such that higher rates of self-compassion are associated with lower rates of substance use. However, it is important to be mindful that this literature strictly examines self-compassion and alcohol use within a population of individuals who have experienced childhood trauma.

A second study that looked at the link between self-compassion and alcohol use did so in a sample of alcohol-dependent individuals who were clients in a publicly funded Drug and Alcohol Service Program (Brooks, Kay-Lambkin, Bowman, & Childs, 2012). Researchers found that at the baseline measure before treatment began, the participants were lower on self-compassion, and higher on levels of stress, alcohol use, and depression than the general population. However, after treatment and in a 15-day follow up, participants reported a significant increase in self-compassion and self-kindness, and less self-judgment and isolation. The authors suggested that less alcohol use was significantly associated with the increase in self-kindness for participants, again showing that elements of self-compassion, when increased, can have significant effects on substance use.

Limited research exists examining the relationship between self-compassion and drug use. However, one study did examine the construct in relation to smoking cessation. Kelly, Zuroff, Foa, and Gilbert (2010) conducted a three-week self-compassion intervention that included imagery-based self-talk techniques that were designed to create feelings of safeness and well-being. The goal was for individuals to use these self-talk methods when they felt the urge to smoke, therefore increasing their ability to refrain. Researchers found that increasing self-

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compassion was helpful to reduce smoking, especially for individuals who had low readiness to change and who were high on self-criticism. The authors also found that for those who included vivid imagery, the self-compassion exercises were more beneficial. So, there is support for the idea that increasing self-compassion can help with smoking cessation, in addition to the literature that has shown increases in self-compassion to be associated with less alcohol use and alcohol use problems.

Self-compassion and failure. In a study conducted by Neely, Schallert, Mohammad, Roberts, and Chen (2009), it was found that for U.S. college students, self-compassion contributed a significant amount of variance in well-being, above and beyond what goal regulation, or being able to meet one's goals, contributed. This finding is relevant because while self-compassion may foster achievement or goal adherence (Akin, 2014), it may also be associated with higher levels of well-being, even in the face of not meeting goals or standards one sets for him or herself. Smeets, Neff, Alberts, and Peters (2014) found that for U.S. undergraduate females, engaging in a short self-compassion intervention was associated with increases in self-compassion as well as self-efficacy and optimism, and a decrease in rumination. Again, it seems that self-compassion may foster self-efficacy or achievement, and also buffer against negative coping styles or thought processes that may occur in the presence of failure or disappointment.

Other research by Neff, Hsieh, and Dejitterat (2005) supports the notion that even in the face of failure, self-compassion can foster coping and positive outcomes. Findings suggest that for U.S. undergraduates, higher self-compassion was significantly associated with more positive emotion-focused coping in the face of academic failure, and it was also negatively associated with avoidance strategies that are unhelpful ways of coping. Neff and others (2005) also found

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that higher self-compassion was significantly related to individuals having more mastery academic goals, which are goals that are associated with more intrinsic motivation factors and greater persistence and effort. Again, it seems that while self-compassion may be associated with setting goals and seeking achievement, it is also a positive influence on coping in the face of failure or disappointment, which may help to buffer against college individuals using substances in the event that they do not meet their goals or experience poor academic performance.

Self-compassion and sexual risk taking. Very little research exists examining the role self-compassion may play in risk-taking behaviors. Rose and others (2014) examined how self-compassion was related to risky behaviors in people living with HIV/AIDS. The study involved individuals from Canada, China, Namibia, Thailand, and the U.S., with the majority of participants located in the U.S., middle-aged, and males. Researchers reported that in their sample of individuals living with HIV/AIDS, illicit drug use was highly correlated with engaging in sexual risk taking. However, those individuals who reported higher self-compassion scores were found to have significantly lower sexual risk taking (unprotected sex) than those with lower self-compassion scores. This relationship held constant, even in the presence of illicit drug use, demonstrating that self-compassion was a potential buffer in the relationship between drug use and sexual risk taking. These data demonstrate that sexual risk taking, at least in this population, is negatively associated with self-compassion, which provides some support for self-compassion as a buffer against sexual risk-taking behaviors in a college population (Rose et al., 2014).

Another related study included a sample of HIV-positive individuals ages 20-70, and examined the relationship between self-compassion and shame, as well as with behaviors related to shame (Brion, Leary, & Drabkin, 2014). Researchers found that levels of self-compassion were significantly predictive of feelings of shame for both males and females, with higher self-

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compassion associated with lower reports of shame. Consequently, those with lower self-compassion tended to report their feelings of shame kept them from engaging in healthy behaviors, like disclosing their HIV status, getting medical care, and wearing a condom or asking their partners to wear a condom. Researchers conjectured that increasing self-compassion may help to alleviate feelings of shame, and therefore increase positive health behaviors, such as having safe sex, seeking medical care, and disclosing HIV status to partners, family, and others. Although this study did not target a college-age population, the study does suggest that self-compassion may serve as a buffer against risky sexual behaviors.

Schoenefeld and Webb (2013) focused their study on U.S. college females, and explored how self-compassion related to adaptive eating patterns and body image acceptance. The authors reported that higher self-compassion predicted higher engagement in adaptive eating patterns through the positive association self-compassion has with body image flexibility. In other words, higher self-compassion was associated with greater body image flexibility, which was associated with greater adaptive eating styles, such as intuitive eating, or thinking about the food that is eaten instead of mindless consumption. As mentioned previously, a study by Eisenberg and others (2005) found that weight concerns and unhealthy weight control behaviors were related to sexual risk taking in college females. Watson, Matheny, Gagne, Brack, and Ancis (2012) found that shame about one's body was related to sexual risk taking.

In general, throughout the literature, self-compassion appears to negatively correlate with elements of risk-taking behaviors and problems in mental health. However, there is scant literature that examines self-compassion in relation to substance abuse and sexual risk taking, especially in a college-age population. There are no studies to date that examine whether self-compassion moderates the relationship between earlier experiences of bullying victimization and

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subsequent risk-taking behaviors in college. As noted throughout this manuscript, the literature on the relationship between experiences of bullying victimization and subsequent risk taking in college is inconsistent. The literature that does exist seems to support a potential positive association between experiences of bullying victimization and risk-taking behaviors later in life. Due to the lack of literature on self-compassion and risk taking in college, and the inconsistencies found in the literature on the relationship between bullying and risk taking, the current study intends to bridge the gap by proposing self-compassion as a moderator in the relationship between earlier experiences of bullying victimization and subsequent substance use and sexual risk taking in college.

Conclusion and Research Questions

Based on literature that supports a relationship between experiences of bullying victimization and risk-taking behaviors, as well as literature that supports self-compassion's negative relationship with substance use and risky sexual behaviors, the following hypotheses are proposed: I. Individuals who report greater experiences of bullying victimization in middle/high school will report higher frequency of engagement in these risk-taking behaviors, II. Experiences of bullying victimization will predict risk-taking behaviors, and III. Self-compassion will moderate this relationship, such that individuals who experienced higher frequencies of bullying victimization, but who report higher rates of self-compassion, will report lower frequencies of risk-taking behaviors than those who report lower rates of self-compassion.

CHAPTER III

METHODOLOGY

This chapter will address the research methodology utilized to examine whether self-compassion moderates the relationship between earlier experiences of bullying and subsequent risk-taking behaviors in a college-age sample. First, participants will be described and methods for recruitment addressed. Second, the materials and assessments that were used will be explained. Third, a description of the sampling procedures, as well as a description of the statistical design, will be provided.

To review, the following hypotheses are tested in this study: (1) Individuals who report greater experiences of bullying victimization in middle/high school will report higher frequency of engagement in risk-taking behaviors; and (2) Self-compassion will moderate this relationship, such that individuals who experienced higher frequencies of bullying victimization, but who report higher rates of self-compassion, will report lower frequencies of risk-taking behaviors than those who report lower rates of self-compassion.

Participants

Participants in this study included a convenience sample of 459 college-age (18-24 years old) students from a mid-sized public university in the Southeast. Out of this sample, as shown in Table 1, the majority of participants were 18 years of age ($n=288$, 62.7%) and freshman in college ($n=321$, 69.9%). With regards to race, most participants were White ($n=330$, 71.9%), with 72% identifying as African American ($n=72$), 1.7% identifying as Asian ($n=8$), 2.8% identifying as Hispanic ($n=13$), and .9% identifying as American Indian ($n=4$). Table 1 provides a more comprehensive break down of race. Concerning sexual orientation, 92.2% of students identified as Heterosexual ($n=423$), with 1.7% identifying as Lesbian ($n=8$), .7% identifying as

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gay (n=3), 3.9% identifying as bisexual (n=18), and 1.1% identifying as “other” (n=5). Finally, the majority of participants reported being from a suburban location (n=194, 42.3%) and indicated that zero members of their family had problems with illicit drug, prescription medication, or alcohol use (n=208, 45.3%). Table 1 provides further demographic information. Students participated in this study for course credit and learned of the study through a research participation scheduling system, where the student could participate in various studies.

Table 1

Demographic Characteristics of the Sample.

Demographics	N	%
<u>Age</u>		
18	288	62.7
19	80	17.4
20	45	9.8
21	31	6.8
22	10	2.2
23	2	.4
24	3	.7
<u>Year in College</u>		
Freshman	321	69.9
Sophomore	53	11.5
Junior	47	10.2
Senior	38	8.3
<u>Gender</u>		
Male	86	18.7
Female	369	80.4
Transgender	2	.4
Other	1	.2
No Response	1	.2
<u>Race</u>		
American Indian or Alaskan Native	4	.9
Asian	8	1.7
Black or African American	72	15.7

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White	330	71.9
Spanish	1	.2
Hispanic	13	2.8
Latino	3	.7
More than one race/ethnicity	21	4.6
Other	6	1.3
No Response	1	.2

Sexual Orientation

Heterosexual	423	92.2
Lesbian	8	1.7
Gay	3	.7
Bisexual	18	3.9
Other	5	1.1
No Response	2	.4

Religious Beliefs

Agnostic	25	5.4
Atheist	23	5.0
Buddhist	2	.4
Christian Protestant	75	16.3
Christian Catholic	75	16.3
Christian Non-Denominational	153	33.3
Hindu	1	.2
Jewish	6	1.3
Muslim	2	.4
Believe in higher power, but do not identify with any religion	66	14.4
Other	30	6.5
No Response	1	.2

Is English primary language?

Yes	450	98.0
No	5	1.1
No Response	4	.9

Geographic Location

Rural	190	41.4
Urban	75	16.3
Suburban	194	42.3

Number of family members with problems of drug use, Rx medications, or alcohol use

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0	208	45.3
1	73	15.9
2	67	14.6
3	34	7.4
4	18	3.9
5	22	4.8
6	12	2.6
7	2	.4
8	5	1.1
10	3	.7
12	4	.9
20	2	.4
24	1	.2
No Response	8	1.7

Materials

Five measures were used in the study, including (1) *Cognitive Appraisal of Risky Events* (CARE; Katz, Fromme & D'Amico, 2000), (2) A modified version of the *Multidimensional Peer Victimization Scale* (Mynard & Joseph, 2000), (3) *Self-Compassion Scale* (SCS; Neff, 2003), (4) *Marlowe-Crown Short Form-C (MC-Form C)* (Reynolds, 1982), and (5) *Patient Health Questionnaire* (PHQ-9; Kroenke, Spitzer, & Williams, 2001). A demographic questionnaire was also administered. A total of 110 items were included in this study and completed by the participants. The full battery of assessments can be found in Appendix A.

Risk taking. The 30-item “Past Frequency” scale from the CARE instrument was used to measure the frequencies of engagement in risk-taking behaviors in the past 6 months. This measure, in general, is comprised of six factors: (a) illicit drug use, (b) heavy drinking, (c) risky sexual practices, (d) aggressive and illegal Behaviors, (e) irresponsible academic/work behaviors, and (f) high risk sports. Responses are self-reported as the “number of times” the participant has engaged in each behavior listed in the past 6 months. This scale is scored by computing the sum of responses for each factor. Based on the review of the literature and the

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operationalization of risk-taking behaviors, which is defined as substance use and sexual risk taking for the purposes of the current study, the following three factors will be examined: (a) illicit drug use, (b) heavy drinking, and (c) risky sexual practices.

Reliability and validity. The CARE has been shown to have modest test-retest reliability ($r = .5-.8$), and has demonstrated criterion validity as scores on the measure were significantly related to subsequent risk-taking behaviors during a 10-day period for college-age participants (Fromme, Katz, & Rivet, 1997).

Utility. The CARE measure has been used throughout the literature, and has been implemented in studying both the adolescent (D'Amico & Fromme, 1997; Galvan, Hare, Voss, Glover, & Casey, 2007) as well as college-age populations (Copeland, Kulesza, Patterson, & Terlecki, 2009; Reingle et al., 2009). The measure was normed on an undergraduate sample with an average age of 19 years old for participants. The range of ages for the norming study was not provided by the authors (Fromme, Katz, & Rivet, 1997).

Bullying. The Multidimensional Peer Victimization Scale (Mynard & Joseph, 2000) was designed and used for middle to high school students, ages 11 to 16, and is used within bullying literature. The measure assesses frequency of experiences in four domains: (a) physical victimization (i.e., kicked me), (b) verbal victimization (i.e., called me names), (c) social manipulation (i.e., tried to make my friends turn against me), and (d) attacks on property (i.e., made me hand over money). Questions are reported in a Likert-type fashion, with responses ranging from not at all (0), to once (1), and more than once (2). Scores are obtained by summing responses, with overall scores on the measure ranging from 0-32, and subscale scores ranging from 0-8. Higher scores reflect greater frequency of experiencing victimization.

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Reliability and validity. Mynard and Joseph (2000) reported appropriate reliability for each subscale: physical victimization (Cronbach's $\alpha = .9$), verbal victimization (Cronbach's $\alpha = .8$), social manipulation (Cronbach's $\alpha = .8$), and attacks on property (Cronbach's $\alpha = .7$). Researchers also reported that this measure had appropriate convergent validity as scores on each subscale were significantly correlated with responses to the question "Have you ever been bullied?"

As no measures of bullying exist examining both traditional and cyberbullying from a retrospective manner in a college-age population, a modified version of the Multidimensional Peer Victimization Scale was used in order to examine retrospective experiences of bullying. The modified version of the Multidimensional Peer Victimization Scale used for this study (Abercrombie, Hank, LeBarre, Rimmer, Caughron, Cohn, & Hastings, 2014) includes the same four domains as the original (physical victimization, verbal victimization, social manipulation, and attack on property), but adds a new domain to address the issue of cyberbullying. Questions for the cyberbullying domain were established from the categories discussed in Schenk and Fremouw (2012), which include flaming, online harassment, cyberstalking, belittling, masquerading, outing, and exclusion. Participants are asked to reflect on their experiences in middle and high school and to report how often they experienced various forms of bullying. Responses on the 25 items are scored on a Likert-type Scale (0= Never, 1= Once, 2=More than once). These responses are summed to create an index score where scores can range from 0-50. Higher scores on this revised measure indicate greater frequency of bullying victimization experiences.

Reliability and validity of modified measure. A pilot study was conducted with the full revised measure that included both a current and retrospective subscale (Abercrombie, Hank,

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LeBarre, Rimmer, Caughron, Cohn, & Hastings, 2014). With regard to the retrospective portion of the revised bullying measure, used in the current study, it has been shown to have appropriate structural as well as external convergent and divergent validity, through its significant negative correlation with the Rosenberg Self-Esteem Scale (Rosenberg, 1965; $r = -.2$) and the Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988; $r = -.1$), as well as its significant positive correlation with the Negative Acts Questionnaire (Einarsen, Hoel, Notelaers, 2009; $r = .5$) and the Multidimensional Peer Victimization Scale (Mynard & Joseph, 2000; $r = .8$). This revised bullying measure evidences overall test reliability with a Cronbach's alpha of .9 and a Cronbach's alpha of .9 for the retrospective subscale, specifically.

Rationale and utility. Most other measures that are designed to measure bullying victimization involve the secondary school or high school population (i.e., Austin & Joseph, 1996; Mynard & Joseph, 2000; Orpinas, 1993). While the Retrospective Bullying Questionnaire (Schäfer et al., 2004) is available and is appropriate for use in the college population, it involves elements of work place bullying that does not apply to this study, and it does not include questions related to cyberbullying. The pilot study for the modified Multidimensional Peer Victimization Scale was conducted on college students, again creating a normative sample and establishing appropriateness of use for the population of interest in the current study. Because this measure is appropriate for a college population and because it involves items pertaining to cyberbullying, this measure obtains unique information when compared to other existing measures, which is why it is being used in the current study.

Self-compassion measure. The Self-Compassion Scale (SCS) was used to measure self-reported ratings of self-compassion. The SCS is a 26-question measure that assesses six

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subscales: (a) self-kindness, (b) self-judgment, (c) common humanity, (d) isolation, (e) mindfulness, and (f) over-identified. Responses are reported on a Likert-type scale with responses ranging from 1 (Almost Never) to 5 (Almost Always). Subscale scores are obtained by calculating a total for each subscale, and a total self-compassion score is calculated by reverse scoring negative subscales (i.e., self-judgment, isolation, and over-identification), and then computing a total score for all items. Total scale scores can range from 26 to 130, with higher scores reflecting higher reports of self-compassion.

Reliability and validity. The SCS has been shown to have good convergent validity as it has been found to be significantly negatively correlated with depression ($r = -.6$) and anxiety ($r = -.7$), as well as significantly positively related to self-esteem ($r = .6$) and self-acceptance ($r = .6$). The SCS has also been found to have good construct validity as it has a significant positive correlation with the Social Connectedness Scale ($r = .4$), which Neff describes as measuring a similar construct to self-compassion (2003). Finally, the SCS has demonstrated good test-retest reliability ($r = .8-.9$ on subscales and $r = .9$ overall) (Neff, 2003).

Utility. This measure has been used throughout literature examining the construct of self-compassion, and has also been used on college populations (Hall, Row, Wuensch, & Godley, 2013; Miron, Orcutt, Hannan, & Thompson, 2014; Neely, Schallert, Mohammed, Roberts, & Chen, 2009). Because of the SCS's wide use, applicability to the college population, and its documented statistical appropriateness, this measure was selected for use in measuring the construct of self-compassion for the purposes of the current study.

Social desirability. Research suggests that because of social desirability, self-reports on sensitive topics, including alcohol use and sexual risk-taking behaviors, may be somewhat inaccurate or prone to bias (Davis, Thake, & Vilhena, 2010; DeJong, Pieters, & Stremersch,

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2012). However, it is important to note that other researchers have found that social desirability does not affect self-reports regarding risky behaviors, specifically in surveys administered online (Crutzen & Göritz, 2010).

Due to the inconsistent findings, the 13-item MC-Form C (Reynolds, 1982) was used. Respondents answered questions as “true” or “false”, and scores were obtained by adding 1 point for each response that indicates a socially desirable response (True on items 5, 7, 9, 10, and 13; False on 1, 2, 3, 4, 6, 8, 11, and 12). Example items include: “I sometimes feel resentful when I don’t get my way,” and “No matter who I’m talking to, I’m always a good listener”. Scores can range from 0-33, with higher scores reflecting greater socially desirable responding. The 13-item MC-Form C was a modified version of the original Marlowe-Crowne Social Desirability Scale, which was comprised of 33 items and was scored the same as the short form (i.e., assigning 1 point for socially desirable answers and summing those scores) (Crowne & Marlowe, 1960).

Reliability and validity. The original Marlowe-Crowne Social Desirability Scale was found to have appropriate internal consistency ($KR20 = .9$), as well as some evidence for convergent validity as this measure was significantly correlated with the Edwards Social Desirability Scale ($KR20 = .4$), a measure of social desirability (Crowne & Marlowe, 1960). The MC-Form C measure was reported as having appropriate reliability (Kuder-Richardson formula $20 = .8$), as well as concurrent validity, as it was found to be significantly correlated with both the original Marlowe-Crowne Social Desirability Scale ($r = .9$) and the Edwards Social Desirability Scale ($r = .4$) (Reynolds, 1982).

Utility. The original measure, as well as the MC-Form C, were normed on undergraduate students, making it appropriate for use with the college population. The MC-Form C has been

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used throughout the literature as a short measure for examining social desirability (i.e., Beasley & Jason, 2015; Lamis, Malone, & Jahn, 2014; Ryan & Blascovich, 2015).

Depression. Literature suggests a positive relationship between depression and bullying victimization (Evans et al., 2014), as well as between depression and risk-taking behaviors (Agardh & Cantor-Graae, 2012). In order to control for the potential influence of depression in the current study, the PHQ-9 was administered (Kroenke et al., 2001). The PHQ-9 is a 9-item screening tool based on the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) criteria for Major Depressive Disorder. The first two items are included for the purpose of screening for Major Depression, while the remaining items assess symptom severity.

Respondents are asked over the past two weeks how often they have been bothered by any of the following problems. Responses range on a four-point Likert-type scale from: Not at all (0), Several days (1), More than half the days (2), Nearly every day (3). Scores can range from 0 to 27, with higher scores indicating greater severity of depressive symptomology. Scores below 5 indicate the absence of depression, and scores above 5 can be assessed for severity of symptomology. Scores in the range of 5-9 indicate minimal depressive symptomology, while scores in the range of 10-14 indicate mild depression. Scores falling in the range of 15-19 indicate major depression, moderately severe, and scores greater than 20 indicate major depression, severe.

Reliability and validity. The PHQ-9 has been found to have good construct and external validity. Concerning construct validity, the measure correlated with self-reported disability days ($r = .4$) and symptom-related difficulty ($r = .6$). Regarding external validity, the PHQ-9 was first used on primary care patients, and results were then replicated on an obstetrics-gynecology patient population. The measure demonstrates good internal consistency (Cronbach's $\alpha = .9$) as

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well as test-retest reliability ($r = .8$). Scores greater than or equal to 10 have been found to have 88% sensitivity and specificity for major depression (Kroenke et al., 2001).

Utility. The PHQ-9 has been used within literature involving college-age populations, (i.e., Moreno, Jelenchick, & Breland, 2015), making it appropriate for use in the current study, which also focuses on a college-age population.

Demographic measure. Nine demographic questions were included for the purposes of this study, including questions about age, year in college, gender, race, sexual orientation, religious preferences, geographic location, primary language, and family history of substance abuse.

Procedure

The 110 items used in this study were formatted into a Qualtrics online survey for participants to access. University participants gained access to the survey by signing up through the research participation scheduling system (SONA) accounts, and a brief description of this study was provided. Once users viewed the description, they were able to access a link to the survey. Once participants accessed the link, they were then asked to give consent after reading the informed consent for internet research, which is included in Appendix B. Following consent, participants began the study, answering the demographic questions. Then, participants responded to questions on the CARE, SCS, modified Multidimensional Peer Victimization Scale, MC-Form C, and PHQ-9. When all questions were answered, participants received information regarding resources in the case of discomfort involving any subject matter from the survey. Participants also received a message that stated they had completed the study, in addition to contact information for the head researcher should they wish to learn more about the study or had questions or concerns they wished to address. Participants were excluded from data analysis if

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they fell outside of the 18-24 age range, or if they failed to complete the entire survey.

Participants who fell two standard deviations below the mean of completion time were also excluded from data analysis.

Statistical Analysis

Control variables, Depression and Social Desirability, were included in the analyses to determine whether or not they predicted risk taking above and beyond what was accounted for by bullying victimization and self-compassion. A multiple regression analysis was conducted to see if bullying significantly predicted risk-taking behaviors and if there was an interaction between bullying victimization and self-compassion when predicting risk-taking behaviors. Before running analyses, items on the Marlow Crown Short Form-C and Self-Compassion were reverse coded in the appropriate direction. Scores on the subscales of the CARE measure were also divided into quartiles prior to analysis in order to eliminate concerns of skewness.

CHAPTER IV

RESULTS

This chapter will provide the results from statistical analyses used to test the study's hypotheses. Again, it was hypothesized that (1) Individuals who reported greater experiences of bullying victimization in middle/high school would report higher frequency of engagement in risk taking behaviors; and (2) Self-compassion would moderate this relationship, such that individuals who experienced higher frequencies of bullying victimization, but who reported higher rates of self-compassion, would report lower frequencies of risk-taking behaviors than those who reported lower rates of self-compassion. This chapter begins by exploring the descriptive statistics of the variables of interest. Then, the chapter examines correlations between the independent variable, bullying, and the dependent variable, risk-taking behaviors. Next, the results from the multiple regression analyses are provided, examining whether bullying significantly predicted risky behaviors above the contributions of depression and social desirability. Finally, the test of moderation is discussed.

Scores on the CARE measure were converted into quartiles in order to organize skewed raw score responses in a way that could best be interpreted. As seen in Table 2, mean scores for risk-taking behaviors were relatively low (range = 0-4), with participants, on average, falling around the first quartile of illicit drug use ($M=1.0$, $SD=1.4$), and between the first and second quartiles of heavy drinking ($M=1.6$, $SD = 1.5$) and risky sexual practices ($M=1.8$, $SD = 1.5$). These data indicate that participants, on average, fell below the second quartile of scores on risk-taking behavior. In addition, the mean score for self-compassion across participants was 76.5 ($SD = 16.6$). These results would indicate that, on average, participants scored around the middle of scores on this measure. With regard to social desirability, participants' mean score was 5.8

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(SD = 2.8), indicating that participants were lower in their socially desirable responses. These data suggest that participants likely responded in a forthright way, without regard to impression management. The mean score on the PHQ-9, a measure of depression, was 7.6 (SD = 5.4), which is considered to be in the range of minimal symptoms of depression (Kroenke, Spitzer, & Williams, 2001). Finally, with regard to experiences of bullying, the average score on the modified bullying instrument (Mynard & Joseph, 2000) was 14.3 (SD = 10.7). These results would indicate that on average, participants reported a relatively low frequency of bullying victimization in middle/high school.

Table 2
Descriptive Statistics of Variables.

Variable	Descriptive Statistics		
	Mean	Standard Deviation	Range
CARE (Illicit Drug Use)	1.0	1.4	4.0
CARE (Heavy Drinking)	1.6	1.5	4.0
CARE (Risky Sexual Practices)	1.8	1.5	4.0
SCS	76.5	16.6	92.0
BULLYING	14.3	10.7	46.0
PHQ-9	7.6	5.4	27.0
MC-SHORT	5.8	2.8	12.0

Intercorrelations

To examine whether individuals with greater numbers of experiences of bullying also endorsed greater frequency of risky behaviors, Pearson *r* correlations were calculated. Table 3 provides the intercorrelations between the MC-Short Form C (Marlowe-Crowne measure of social desirability), SCS (Self-Compassion Scale), the modified bullying instrument, PHQ-9 (Patient Health Questionnaire measure of depression), and CARE (Cognitive Appraisal of Risky Events) measures. Although the correlations were weak among most of the measures, there was a

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significant positive relationship between experiences of being bullied and drug use ($r = .1$, $p=.01$), alcohol use ($r = .1$, $p=.01$), and sexual risk taking ($r = .2$, $p=.00$). In addition, self-compassion had a significant negative relationship with experiences of bullying ($r = -.3$, $p=.00$), risky sexual behavior ($r = -.1$, $p=.01$), and depression ($r = -.5$, $p=.00$). These results indicate that there was a significant, but weak, positive relationship between being bullied and engaging in risky behaviors, providing support of the first hypothesis.

Table 3
Summary of Intercorrelations.

Measure	MCSHORT	SCS	BULLYING	CARE (Illicit Drug Use)	CARE(Heavy Drinking)	CARE(Risky Sexual Practices)	PHQ-9
MCSHORT	-	.4**	-.3**	-.2**	-.2**	-.2**	-.3**
SCS	.4**	-	-.3**	-.1	-.04	-.1**	-.5**
BULLYING	-.3**	-.3**	-	.1*	.1**	.2**	.4**
CARE (Illicit Drug Use)	-.2**	-.1	.1*	-	.5**	.4**	.2**
CARE (Heavy Drinking)	-.2**	-.04	.1**	.5**	-	.4**	.2**
CARE (Risky Sexual Practices)	-.2**	-.1**	.2**	.4**	.4**	-	.2**
PHQ-9	-.3**	-.5**	.4**	.2**	.2**	.2**	-

Note. In the table above, MCSHORT represents the Marlowe Crowne Short Form-C; SCS represents the Self-Compassion Scale; BULLYING refers to the modified bullying instrument, CARE (Illicit Drug Use) is the illicit drug use subcategory on the Cognitive Appraisal of Risky Events (CARE), CARE (Heavy Drinking) is the heavy drinking subscale on the CARE; CARE (Risky Sexual Practices) is the risky sexual practices subscale on the CARE; PHQ-9 represents the Patient Health Questionnaire.

*represents results significant at the $p<.05$ level, **represents results significant at the $p<.01$ level.

Regression Analyses

Given the significant and positive correlation between bullying and risky behaviors, a series of multiple regression analyses were conducted to examine whether experiences of bullying significantly predicted risk-taking behaviors including drug use, alcohol use, and sexual risk taking, beyond that of the control variables of depression and social desirability. In the first model, bullying, depression, social desirability, and drug use were included. Results indicated that bullying did not significantly predict drug use ($\beta=.03$, $p=.6$).

In the second model, bullying, depression, social desirability, and alcohol use were included. Results indicated that bullying did not significantly predict risky alcohol use ($\beta=.02$, $p=.7$) beyond the variability accounted for by depression and social desirability. The third model included bullying, depression, social desirability, and sexual risk taking. Together, bullying, depression, and social desirability accounted for 7.2% of the variance in sexual risk taking ($R^2 = .07$, $F(3,447) = 11.5$, $p=.00$), and experiences of bullying significantly predicted sexual risk taking ($\beta=.1$, $p=.01$) above the variability accounted for by depression and social desirability. These results suggest that individuals who have greater experiences of bullying are also significantly more likely to engage in sexual risk taking than those with fewer or no experiences of bullying. The effect size was small for this relationship $t(455) = 2.8$, $p=.006$, $r = 0.1$. Table 4 provides information regarding the results of regression analyses that included bullying, depression, and social desirability as predictors for the dependent variables: drug use, alcohol use, and sexual risk taking.

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Table 4

Regression analyses of risky behaviors as predictors.

Variable	CARE(Illicit Drug Use)			CARE(Heavy Drinking)			CARE(Risky Sexual Practices)		
	B	SE B	β	B	SEB	β	B	SEB	β
BULLYING	.004	0.01	0.03	.003	.01	.02	.02	.01	.1*
PHQ-9	.04	0.01	0.1*	.04	.01	.1*	.01	.01	.1
MCSHORT	-.1	0.02	0.1*	-.1	.03	-.2*	-.1	.03	-.2*

Note. *represents results significant at the $p < .05$ level, **represents results significant at the $p < .01$ level.

Test of Moderation

Based on the model developed by Baron and Kenny (1986), once a regression model tests significant, then it is appropriate to conduct a test of moderation. As the third regression model indicated that experiences of bullying significantly predicted sexual risk taking, a test of moderation was conducted to explore whether or not self-compassion moderated the relationship between bullying and sexual risk taking, as hypothesized. As reflected in Table 5, results indicated that self-compassion did not significantly moderate the relationship between bullying and sexual risk taking ($\beta = .1$, $p = .1$). These results indicate that those who have experienced a higher frequency of bullying and have higher ratings of self-compassion do not in fact experience lower frequencies of sexual risk taking than those who have similar experiences of bullying but lower ratings of self-compassion. Thus, results failed to support the hypothesis.

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Table 5

Test of Self-Compassion as a Moderator in the Relationship between Bullying and Sexual Risk-Taking Behaviors.

Variable	CARE (Risky Sexual Practices)		
	B	SE B	β
BULLYING	.3	.1	.2*
SCS	-.1	.1	-.1
BullyXSCS	.1	.1	.1

Note. *represents results significant at the $p < .05$ level, **represents results significant at the $p < .01$ level.

To summarize, results indicated that experiences of bullying were significantly correlated with all three forms of risky behaviors; drug use, alcohol use, and sexual risk. Regression analyses indicated that experiences of bullying significantly predicted sexual risk taking, but did not significantly predict either drug use or alcohol use. Finally, a test of moderation indicated that self-compassion did not in fact moderate the relationship between experiences of bullying and sexual risk taking.

CHAPTER V

DISCUSSION

In this chapter, a discussion regarding interpretation of the results is provided. Limitations of this study and important future directions in research are also included in this chapter. Finally, clinical implications are discussed and a conclusion is provided.

As previously noted, this study tested three hypotheses. First, it was hypothesized that individuals who reported a greater number of experiences of bullying victimization in middle/high school would report higher frequency of current engagement in risk-taking behaviors (e.g., drug use, alcohol use, and sexual risk taking). Results indicated that bullying was significantly and positively correlated with all three aspects of risk; drug use, alcohol use, and sexual risk taking. In the second hypothesis, it was predicted that experiences of bullying would significantly predict risk-taking behaviors. However, when bullying, drug use, alcohol use, and sexual risk taking were tested through regression equations, only sexual risk-taking behaviors were significantly predicted by experiences of bullying. How does one interpret these findings?

Literature indicates several possible explanations for these findings. First, it is possible that depression is a more significant predictor of substance abuse concerns. Therefore, individuals who have been bullied may have a higher risk of developing substance abuse concerns, but only if they experience depression as a result of their victimization (Luk et al., 2010). A study conducted by Luk and others (2010) found that for females, the relationship between bullying victimization and substance use was mediated by depression, suggesting it is possible individuals who experience victimization but do not experience depression as a result may not be at a greater risk for substance use.

A second plausible explanation is that bully-victims (i.e., those who victimize others but who are also victims of bullying) are at different risks for substance concerns than those who

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bully. Niemelä and others (2011) found that experiences of bullying victimization at age 8 predicted daily heavy smoking at age 18 in males. However, bullying others at age 8 predicted illicit drug use at age 18. Thus, it is possible that those who bully are in fact the individuals who are more likely to engage in illicit drug and alcohol use during the college age.

In the third hypothesis, it was proposed that self-compassion would moderate the relationship between experiences of bullying and subsequent risk-taking behaviors. It was hypothesized that individuals who experienced higher frequencies of bullying victimization, but who also reported higher rates of self-compassion, would report lower frequencies of risk-taking behaviors. Results did not indicate that self-compassion moderated the relationship between experiences of bullying and sexual risk taking. While self-compassion was not found to moderate this relationship, it is possible that other explanations exist for how self-compassion may work within and among these variables.

As mentioned previously, literature supports a link between experiences of bullying and depression (Evans et al., 2014). The literature also provides evidence that depression is linked to risk-taking behaviors, such as sexual risk taking (Agardh et al., 2012). In addition, researchers have found that depression, in some cases, mediates the relationship between bullying and risky behaviors such as substance use (Luk et al., 2010). It is possible, therefore, that the increased risk of engaging in risk-taking behaviors may actually be more related to depression that resulted from the victimization, rather than the victimization itself. Literature also suggests that self-compassion has been found to effectively decrease depressive symptomology (Van Dam et al., 2011). Therefore, self-compassion may only buffer against sexual risk taking, by alleviating depressive symptoms. If so, if someone does not experience depression as a consequence of

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bullying victimization, the relationship between self-compassion and sexual risk may be weakened.

Taking this information into account, it may be the case that experiences of bullying, for some, may lead to an increased likelihood for developing depression, which then may increase their propensity for engaging in behaviors, such as risky sexual practices. If this is the case, self-compassion may then work as a buffer by decreasing depressive symptomology, which then decreases the risk of engagement in risky sexual behaviors. In fact, the literature already suggests that self-compassion is negatively associated with depression (Hall et al., 2013; Van Dam et al., 2011), and that depression is linked to sexual risk taking (Agardh et al., 2012), so it is possible that by alleviating depression in those who have experienced bullying, risky behaviors, such as sexual risk taking, may also decrease. Again, these results, along with the literature reviewed, demonstrate the complex relationships between earlier experiences of bullying, mental health outcomes, and the potential for increased risk of risky behaviors in college-aged individuals. It also suggests areas that future research should explore in order to better understand the complexities related to consequences of bullying.

Limitations and Directions for Future Research

Multiple limitations are associated with conducting research. One limitation of this study involved the use of an online self-report questionnaire. With this format, it is possible that students underreported their risky behaviors (Tourangeau & Yan, 2007). This difference could have influenced the data that was obtained by not fully capturing the true relationship between the variables that were explored. However, participants were notified that the study would be anonymous, and data analysis accounted for social desirability.

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A second limitation related to the questionnaire was the use of retrospective questions in the reports of bullying. It is possible that some individuals may not be able to accurately identify their experiences of bullying because it was in the past. It is also possible that an individual may perceive “bullying” differently from when they were in middle and high school versus how they may perceive it as an adult, which could lead to either underreporting or overreporting. As discussed by Holt and others (2014), it is possible that individuals who have had a positive experience in college may reflect on their earlier experiences of bullying in a way that leads to underreporting. Essentially, because survey responders have not experienced continuing direct consequences related to the bullying victimization, the events may not be as salient. Consequently, those who experienced bullying victimization and subsequently developed mental health concerns that they continue to struggle with, may have answered in a way that led to either more accurate accounts of bullying victimization or an overreporting of such experiences. Also, because the data in this study was collected through a survey method, and the data collected was correlational, cause and effect between variables cannot be determined. The data in this study can only describe associations between variables and explore which variables may significantly predict others.

It is important to note that this study focused on college-aged individuals who were currently attending college. It is possible that varying results could be found in college-age individuals (ages 18-24) who were not currently attending college, and this is a population that should be explored further in the research. For example, Burke and others (2015) found that individuals within the college-age range who were not attending school were found to engage in inconsistent condom use and other risky sexual behaviors, including multiple partners and high levels of sexual activity, more often than individuals who were attending college. It is possible,

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therefore, that individuals who are not attending college, within the 18- to 24-year-old age range, may in fact have a higher risk of risky sexual activity after experiencing early bullying victimization. However, more research is needed in this area, as the purpose of this study was to examine college students in particular, in order to provide insight into ways to prevent or treat the relationship between bullying and sexual risk taking in a college environment.

Finally, the use of the CARE measure, which included open-ended responses of estimates of various risk-taking behaviors, resulted in data that were skewed. The range of responses on the items was too large and variable to be able to make meaningful predictions using item responses alone. This skewness had to be corrected by breaking responses into quartiles to provide more of an index of risky behaviors rather than specific numerical scores of responses. It is possible that other methods of handling skewed data could have provided different results. It is also possible that forced-choice responses may have captured the data in a less-skewed manner. Because of having to manage this skewness in the current study, it is possible that it was more difficult to find significant results. This is important for future researchers to explore and decide on the best way to capture risky behaviors in college-age individuals.

Future Research

Future research should explore various methods to collecting information regarding risky behaviors in this population. As mentioned previously, a forced-choice measure may provide less concern with the skewness of responses. However, currently there is a lack of forced-choice measures that assess multiple domains of risky behavior in a college population. Part of this future research will likely include creating such measures.

Research should also continue to explore the relationship between earlier experiences of bullying and risky behaviors during college-age, as there are inconsistencies in the current

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literature, as was also seen in this study. While some studies find a connection between earlier experiences of bullying victimization and risky behaviors (Kim et al., 2011), other research has found little to no connection between the two (Wolke et al., 2013). Also, the literature supports that risky behaviors are influenced differently by victimization. For example, Niemelä, and others (2011) found that while being a victim of bullying predicted heavy smoking as an adult, they did not find that victimization predicted alcohol use. They also found that being a victim was associated with less illicit drug use, rather than more. Consequently, other research has supported a connection between victimization and drug use, such that victimization predicts greater drug use (Sigurdson et al., 2014). Accordingly, in the current study, results indicated a connection between earlier experiences of bullying victimization and later risky sexual behaviors, which supports other findings in the literature (Crookston et al., 2014; Li, DiStefano et al., 2014). However, no connection was found between victimization and substance use. These discrepancies should be noted and explored in future research.

With regards to self-compassion, future research should explore the mechanisms by which self-compassion may moderate the relationship between bullying and risky behaviors. It is possible, as mentioned above, that self-compassion may work through depression such that self-compassion may not buffer against risky behaviors. Instead, it is the decrease in depressive symptomology that contributes to less risk. The interplay between self-compassion, depression, and risk-taking behaviors should be deconstructed and explored further in future studies. Along with this research, future studies should begin to examine specific interventions that may be implemented and useful in preventing risk in those who have been bullied, specifically with regards to sexual risk taking. Finally, more research in prevention of bullying to begin with is

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necessary in order to preemptively eliminate the subsequent consequences discussed in this manuscript.

Clinical Implications

In clinical settings, it is important to explore with those clients who have a prior history of bullying any current behaviors that may be risky, in order to help facilitate change in those behaviors. It could also be beneficial to explore the connections that may exist between the victimization and the subsequent behaviors (i.e., risky behaviors being a way of coping with distressing emotions). In addition, it may be important for clinicians to assess for specific mental health concerns, such as symptoms of depression and anxiety, for anyone reporting previous experiences of bullying, as these particular consequences may then contribute to an increase in one's risk-taking behaviors. For prevention efforts, knowing and understanding the connections between bullying, mental health, and risky behaviors provides information that should be included in discussions aimed at prevention of bullying, and prevention of risk-taking in college. It may be helpful to include outreach on college campuses that explains how earlier experiences of bullying may be associated with increased risk of engaging in risky behaviors during college. Outreach may also then address positive coping skills and other behaviors that individuals who have experienced bullying may engage in, aside from the unhealthy risky behaviors.

Conclusion

In sum, findings from the current study indicate that there does appear to be a link between earlier experiences of bullying and subsequent sexual risk-taking behaviors in college. As shown by the results of this study, it is possible that those who are bullied in middle and high school may be at an increased risk for engaging in risky sexual practices. This is an important relationship to consider when working with college-age students who report that they have

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experienced bullying in the past. Future research should focus on deconstructing and explaining the relationship between experiences of bullying, mental health concerns, and risk-taking behaviors, while also exploring possible prevention methods for these consequences of bullying victimization.

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Appendix A

You are invited to participate in a research survey, entitled “Self-compassion: A proposed moderator in the relationship between bullying victimization and risk taking behaviors” The study is being conducted by Crystal Hank, MS and Dr. Tracy Cohn in the Psychology Department of Radford University at P.O. Box 6946 Radford, Virginia 24142, 1-540-230-5958, claudermilk@radford.edu The purpose of this research study is to examine the relationship between experiences of bullying victimization, risk taking behaviors, and self-compassion. Your participation in the research survey will contribute to a better understanding of the relationship between these experiences and constructs. We estimate that it will take about 15 minutes of your time to complete the questionnaire. You are free to contact the investigator at the above address and phone number to discuss the survey. Risks to participants are considered minimal. There will be no costs for participating, and Radford University students will receive 1 credit towards research participation, if they are enrolled in a course that requires a research component. However no other direct benefits will be obtained through participation. IP addresses will not be recorded. A limited number of research team members will have access to the data during data collection. Identifying information will be stripped from the final dataset, so your responses will be confidential. Your participation in this survey is voluntary. You may decline to answer any question and you have the right to withdraw from participation at any time without penalty. If you wish to withdraw from the study or have any questions, contact the investigator listed above. If you have any questions, please call Dr. Tracy Cohn at 1-540-230-5958 or send an email to claudermilk@radford.edu. You may also request a hard copy of the survey from the contact information above. If you have questions about your rights as a study participant, or are dissatisfied at any time with any aspect of this study, you may contact Dr. Dennis Grady, Dean, College of Graduate and Professional Studies, Radford University, dgrady4@radford.edu, 1-540-831-7163. If you agree to participate, please press the arrow button at the bottom right of the screen. Otherwise use the X at the upper right corner to close this window and disconnect. Thank you.

Q2 Please answer the following demographic questions:

Q4 What is your age?

Q6 What year are you in college?

- ☐ Freshman (1)
- ☐ Sophomore (2)
- ☐ Junior (3)
- ☐ Senior (4)
- ☐ Other (Specify) (5) _____

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Q8 What is your gender?

- ☐ Male (1)
- ☐ Female (2)
- ☐ Transgender (3)
- ☐ Other (specify) (4) _____

Q10 How would you describe your race?

- ☐ American Indian or Alaskan Native (1)
- ☐ Asian (2)
- ☐ Black or African American (3)
- ☐ Native Hawaiian or Pacific Islander (4)
- ☐ White (5)
- ☐ Spanish (6)
- ☐ Hispanic (7)
- ☐ Latino (8)
- ☐ More than one race/ethnicity (9)
- ☐ Other (specify) (10) _____

Q12 How would you describe your sexual orientation?

- ☐ Heterosexual (1)
- ☐ Lesbian (2)
- ☐ Gay (3)
- ☐ Bisexual (4)
- ☐ Other (specify) (5) _____

Q14 Please indicate which ONE of the following most accurately describes your present religious preference:

- ☐ Agnostic (1)
- ☐ Atheist (2)
- ☐ Buddhist (3)
- ☐ Christian Protestant (4)
- ☐ Christian Catholic (5)
- ☐ Christian Non-Denominational (6)
- ☐ Hindu (7)
- ☐ Jewish (8)
- ☐ Muslim (9)
- ☐ I believe in a higher power but do not identify with any religion (10)
- ☐ Other (Specify) (11) _____

Q16 Is English your primary language?

- ☐ Yes (1)
- ☐ No (If no, what is your primary language?) (2) _____

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Q18 What is your geographic location?

- ☐ Rural (1)
- ☐ Urban (2)
- ☐ Suburban (3)

Q97 How many members in your family (defined as mother, father, brother, sister, grandmother, grandfather, aunt, uncle, or cousin) would you say have had problems with illicit drug use (illegal drugs), prescription medications, or alcohol use? Please respond with numerical values only (i.e., 0,1,2).

Please check if you have experienced the following prior to turning 18 years old (please check as many as apply):

- ☐ Physical Abuse (for example, were you attacked with things or beaten by your parents or someone who was trusted to take care of you?) (1)
- ☐ Physical Neglect (for example, were you not provided with food, shelter, or appropriate clothing? Were you often left alone for excessive periods of time considering your age? Were you forced to provide childcare for your siblings or others before you were old enough to do so responsibly and legally?) (2)
- ☐ Emotional Abuse (for example, were you called names or put down by your parents or someone who was trusted to take care of you (3)
- ☐ Sexual Abuse (for example, did a parent or someone who was trusted to take care of you touch your private parts when you didn't want it or make you touch their private parts? Did a parent or someone trusted to take care of you ever force you to have sex with them? When you were a child did you do sexual things with anyone 18 or older, even things you both wanted to do?) (4)

For each of the activities listed below, please indicate how many times you have participated in this activity in the past six (6) months. Type the number of times you have participated in this activity in the past six (6) months in the space provided. ** Use only numerical values in your response (i.e., 0, 1, 2).

Q14 Tried/used drugs other than alcohol or marijuana

Q15 Missed class or work

Q16 Grabbed, pushed, or shoved someone

Q17 Left a social event with someone I have just met

Q18 Drove after drinking alcohol

Q19 Made a scene in public

Q20 Drank more than 5 alcoholic beverages

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Q21 Not studied for exam or quiz

Q22 Drank alcohol too quickly

Q23 Disturbed the peace

Q24 Damaged/destroyed public property

Q25 Sex without protection against pregnancy

Q26 Left tasks or assignments until the last minute

Q27 Hit someone with a weapon or object

Q28 Rock or mountain climbed

Q29 Sex without protection against sexually transmitted diseases

Q30 Played non-contact team sports

Q31 Failed to do assignments

Q32 Slapped someone

Q33 Not studied or worked hard enough

Q34 Punched or hit someone with fist

Q35 Smoked marijuana

Q36 How many different sexual partners have you had in the past 6 months?

Q37 Snow or water skied

Q38 Mixed drugs and alcohol

Q39 Got into a fight or argument

Q40 Involved in sexual activities without my consent

Q41 Played drinking games

Q42 Sex with someone I have just met or don't know well

Q43 Played individual sports

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Q72 Please read each statement carefully before answering. Indicate how often you behave in the stated manner.

Q46 I'm disapproving and judgmental about my own flaws and inadequacies.

- ☐ 1 (Almost Never) (1)
- ☐ 2 (2)
- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 Almost Always (5)

Q47 When I'm feeling down I tend to obsess and fixate on everything that's wrong.

- ☐ 1 (Almost Never) (1)
- ☐ 2 (2)
- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 Almost Always (5)

Q48 When things are going badly for me, I see the difficulties as part of life that everyone goes through.

- ☐ 1 (Almost Never) (1)
- ☐ 2 (2)
- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 (Almost Always) (5)

Q49 When I think about my inadequacies, it tends to make me feel more separate and cutoff from the rest of the world.

- ☐ 1 (Almost Never) (1)
- ☐ 2 (2)
- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 (Almost Always) (5)

Q50 I try to be loving towards myself when I'm feeling emotional pain.

- ☐ 1 (Almost Never) (1)
- ☐ 2 (2)
- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 (Almost Always) (5)

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Q51 When I fail at something important to me I become consumed by feelings of inadequacy.

- ☐ 1 (Almost Never) (1)
- ☐ 2 (2)
- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 (Almost Always) (5)

Q52 When I'm down and out, I remind myself that there are lots of other people in the world feeling like I am.

- ☐ 1 (Almost Never) (1)
- ☐ 2 (2)
- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 (Almost Always) (5)

Q53 When times are really difficult, I tend to be tough on myself.

- ☐ 1 (Almost Never) (1)
- ☐ 2 (2)
- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 (Almost Always) (5)

Q54 When something upsets me I try to keep my emotions in balance.

- ☐ 1 (Almost Never) (1)
- ☐ 2 (2)
- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 (Almost Always) (5)

Q55 When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.

- ☐ 1 (Almost Never) (1)
- ☐ 2 (2)
- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 (Almost Always) (5)

Q56 I'm intolerant and impatient towards those aspects of my personality I don't like.

- ☐ 1 (Almost Never) (1)
- ☐ 2 (2)
- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 (Almost Always) (5)

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Q57 When I'm going through a very hard time, I give myself the caring and tenderness I need.

- ☐ 1 (Almost Never) (1)
- ☐ 2 (2)
- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 (Almost Always) (5)

Q58 When I'm feeling down, I tend to feel like most other people are probably happier than I am.

- ☐ 1 (Almost Never) (1)
- ☐ 2 (2)
- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 (Almost Always) (5)

Q59 When something painful happens I try to take a balanced view of the situation.

- ☐ 1 (Almost Never) (1)
- ☐ 2 (2)
- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 (Almost Always) (5)

Q60 I try to see my failings as part of the human condition.

- ☐ 1 (Almost Never) (1)
- ☐ 2 (2)
- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 (Almost Always) (5)

Q61 When I see aspects of myself that I don't like, I get down on myself.

- ☐ 1 (Almost Never) (1)
- ☐ 2 (2)
- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 (Almost Always) (5)

Q62 When I fail at something important to me I try to keep things in perspective.

- ☐ 1 (Almost Never) (1)
- ☐ 2 (2)
- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 (Almost Always) (5)

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Q63 When I'm really struggling, I tend to feel like other people must be having an easier time of it.

- ☐ 1 (Almost Never) (1)
- ☐ 2 (2)
- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 (Almost Always) (5)

Q64 I'm kind to myself when I'm experiencing suffering.

- ☐ 1 (Almost Never) (1)
- ☐ 2 (2)
- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 (Almost Always) (5)

Q65 When something upsets me I get carried away with my feelings.

- ☐ 1 (Almost Never) (1)
- ☐ 2 (2)
- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 (Almost Always) (5)

Q66 I can be a bit cold-hearted towards myself when I'm experiencing suffering.

- ☐ 1 (Almost Never) (1)
- ☐ 2 (2)
- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 (Almost Always) (5)

Q67 When I'm feeling down I try to approach my feelings with curiosity and openness.

- ☐ 1 (Almost Never) (1)
- ☐ 2 (2)
- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 (Almost Always) (5)

Q68 I'm tolerant of my own flaws and inadequacies.

- ☐ 1 (Almost Never) (1)
- ☐ 2 (2)
- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 (Almost Always) (5)

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Q69 When something painful happens I tend to blow the incident out of proportion.

- ☐ 1 (Almost Never) (1)
- ☐ 2 (2)
- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 (Almost Always) (5)

Q70 When I fail at something that's important to me, I tend to feel alone in my failure.

- ☐ 1 (Almost Never) (1)
- ☐ 2 (2)
- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 (Almost Always) (5)

Q71 I try to be understanding and patient towards those aspects of my personality I don't like.

- ☐ 1 (Almost Never) (1)
- ☐ 2 (2)
- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 (Almost Always) (5)

This scale is intended to measure bullying defined as the willful, conscious desire to hurt or frighten someone else. This might take the form of physical, verbal, or psychological bullying. In the following questions "electronically" refers to email, text messaging, online multiplayer video games, and social media which can include websites such as Facebook, YouTube, Twitter, etc. Reflect on experiences with people who in middle/high school treated you poorly. Indicate how often they:

Q74 Punched you

- ☐ Never (0)
- ☐ Once (1)
- ☐ More than once (2)

Q76 Called you names

- ☐ Never (0)
- ☐ Once (1)
- ☐ More than once (2)

Q78 Took something of yours without permission, with intent to be mean

- ☐ Never (0)
- ☐ Once (1)
- ☐ More than once (2)

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Q80 Repeatedly sent you cruel messages electronically

- ☐ Never (0)
- ☐ Once (1)
- ☐ More than once (2)

Q82 Kicked you

- ☐ Never (0)
- ☐ Once (1)
- ☐ More than once (2)

Q84 Made fun of you because of your appearance

- ☐ Never (0)
- ☐ Once (1)
- ☐ More than once (2)

Q86 Tried to break something of yours

- ☐ Never (0)
- ☐ Once (1)
- ☐ More than once (2)

Q88 Threatened you electronically

- ☐ Never (0)
- ☐ Once (1)
- ☐ More than once (2)

Q90 Beat you up

- ☐ Never (0)
- ☐ Once (1)
- ☐ More than once (2)

Q92 Made fun of you for something you said

- ☐ Never (0)
- ☐ Once (1)
- ☐ More than once (2)

Q94 Excluded you because of who your friends were

- ☐ Never (0)
- ☐ Once (1)
- ☐ More than once (2)

Q96 Stole something from you, in order to upset you

- ☐ Never (0)
- ☐ Once (1)
- ☐ More than once (2)

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Q98 Posted harmful information about you for others to see, electronically

- ☐ Never (0)
- ☐ Once (1)
- ☐ More than once (2)

Q100 Made fun of you because of your hobbies/interests

- ☐ Never (0)
- ☐ Once (1)
- ☐ More than once (2)

Q102 Deliberately damaged some property of yours

- ☐ Never (0)
- ☐ Once (1)
- ☐ More than once (2)

Q104 Posted untrue information about you for others to see, electronically

- ☐ Never (0)
- ☐ Once (1)
- ☐ More than once (2)

Q106 Made fun of you because of your actions

- ☐ Never (0)
- ☐ Once (1)
- ☐ More than once (2)

Q108 Sent private information about you electronically

- ☐ Never (0)
- ☐ Once (1)
- ☐ More than once (2)

Q110 Pushed you

- ☐ Never (0)
- ☐ Once (1)
- ☐ More than once (2)

Q112 Told lies about you to other people

- ☐ Never (0)
- ☐ Once (1)
- ☐ More than once (2)

Q114 Slapped you

- ☐ Never (0)
- ☐ Once (1)
- ☐ More than once (2)

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Q116 Left you out on purpose

- ☐ Never (0)
- ☐ Once (1)
- ☐ More than once (2)

Q118 Embarrassed you on purpose

- ☐ Never (0)
- ☐ Once (1)
- ☐ More than once (2)

Q114 Read each item and decide whether it is true or false for you. Try to work rapidly and answer each question by clicking on the True or False.

Q101 It is sometimes hard for me to go on with my work if I am not encouraged. (reverse)

- ☐ True (1)
- ☐ False (2)

Q102 I sometimes feel resentful when I don't get my way.

- ☐ True (1)
- ☐ False (2)

Q103 On a few occasions, I have given up doing something because I thought too little of my ability.

- ☐ True (1)
- ☐ False (2)

Q104 There have been times when I felt like rebelling against people in authority even though I knew they were right.

- ☐ True (1)
- ☐ False (2)

Q105 No matter who I'm talking to, I'm always a good listener.

- ☐ True (1)
- ☐ False (2)

Q106 There have been occasions when I took advantage of someone.

- ☐ True (1)
- ☐ False (2)

Q107 I'm always willing to admit it when I make a mistake.

- ☐ True (1)
- ☐ False (2)

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Q108 I sometimes try to get even rather than forgive and forget.

- ☐ True (1)
- ☐ False (2)

Q109 I am always courteous, even to people who are disagreeable.

- ☐ True (1)
- ☐ False (2)

Q110 I have never been irked when people expressed ideas very different from my own.

- ☐ True (1)
- ☐ False (2)

Q111 There have been times when I was quite jealous of the good fortune of others.

- ☐ True (1)
- ☐ False (2)

Q112 I am sometimes irritated by people who ask favors of me.

- ☐ True (1)
- ☐ False (2)

Q113 I have never deliberately said something that hurt someone's feelings.

- ☐ True (1)
- ☐ False (2)

If after taking this survey you feel like you need assistance in relation to any of the subject matter covered please use the following resource: For Radford University Students: Contact the Radford Counseling Center, 540-831-5226 Thank you for your participation!

