Understanding Unhealthy Life Transitions: Relationships Between Perceived Bullying and Tobacco Use, Binge Drinking, and Marijuana Use

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Bullying, considered by some to be the dark side of communication, has contributed to many teens and college students falling victim to the worst fate imaginable: death. Although previous research has linked bullying to many psychological health outcomes, less is known about the relationship between perceptions of bullying and future participation in unhealthy behaviors – namely cigarette smoking, binge drinking, and marijuana use. The current study attempts to fill this gap by investigating the relationship between perceptions of bullying and these three health behaviors via the framework of the Theory of Planned Behavior. Conclusions were drawn from a sample of 369 young adults from two separate institutions. Correlational data support the relationship between perceptions of bullying, cigarette smoking, binge drinking, and marijuana use, although regression analyses suggest perceptions of bullying plays less of a role in the participation of these behaviors.

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Tyler Clementi was an 18-year old Rutgers University student who completed suicide after being bullied following the release of a sex video showing him engaged in a sexual encounter with another man (Braegger, 2010). Alexis Pilkington completed suicide after receiving negative messages via social media indicative of bullying (Huffington Post, 2011). Alyssa Funke shot herself in 2014 after being relentlessly taunted for her decision to appear in an amateur porn film (Washington Post, 2014). These students, and many others, suffered due to the abuse of bullies, resulting in the worst fate imaginable: death. Today, more than ever, bullying is a serious problem. Though it was not until the 1990's that bullying received much interest in the United States (Monks et al., 2009), in recent years, the

consequences of bullying have become a priority and a concern for the entire nation, inspiring a wealth of bullying research (Adams & Lawrence, 2011; Kim & Leventhal, 2008; Newman, Holden, & Delville, 2010; Reid, Monsen, & Rivers, 2004; Twemlow & Fonagy, 2001). A focal point of such research is to ultimately prompt societal change allowing teens and young adults to live in a world of greater tolerance and acceptance. This change should come through our communication with others.

According to Keltner and his colleagues, bullying is representative of the ‘‘dark side’’ of communication (Keltner, Young, Heerey, Oemig, & Monarch, 1998). Studies have shown that bullying often has psychological implications for victims, including fear, depression, and academic consequences (Reid et al., 2004; Twemlow & Fonagy, 2001). Furthermore, victims of bullying often suffer from emotional difficulties, relational problems, lowered self-esteem (Hawker & Boulton, 2000; Sharp, Thompson, & Arora, 2000) and even exhibit dissociative and traumatic symptoms (Sesar, Barisic, Pandza, & Dodaj, 2012).

While much research has been devoted to the ways in which bullying contributes to negative psychological outcomes, (Newman et al., 2010; Kim & Leventhal, 2008), the link between perceptions of bullying as an act of communication and physical health is less clear. Moreover, there is a little research addressing college level bullying (Chapell et al., 2004). Adams and Lawrence (2011) argue that the effects of bullying continue into the college years, but the outcomes of bullying among undergraduate college students is not clear. Recently, researchers have examined the impact of graduate faculty bullying on graduate students (Goodboy, Martin, & Johnson, 2015), but the undergraduate population is still largely underrepresented in communication research.

With psychological and physical health being inextricably linked, the goal of the present study is to determine if and how one’s perception of bullying contributes to the decision to use harmful substances. Specifically, this study investigates bullying perception as it relates to the college student use of the following products/substances: cigarettes, alcohol, and marijuana.

With this knowledge, researchers and other health practitioners will be better able to meet both the psychological and physical health needs of victims of bullying and to develop bullying prevention messages on college campuses.

Review of Literature

Bullying has been defined as the exposure, repeatedly and over time, to negative actions on the part of one or more other persons (Olweus, 1991; 1997). A negative action occurs when a person intentionally inflicts pain or discomfort upon another person through physical contact, words, or similar negative behaviors (Olweus, 1991). Over the years, research has been dedicated to the differentiation of bullying from other communicative behaviors. For instance, incivility (low deviant behavior with ambiguous intent) in certain contexts is often blurred with bullying behaviors. Lutgen-Sandvik, Tracy, and Alberts (2007) distinguished the two communicative acts and argued bullying is not the same as incivility. Another misconception is that teasing (which is arguably one form of incivility) and bullying are the same construct. While teasing and bullying are related, they are distinct from one another (Mills & Carwile, 2009). In certain circumstances, teasing can be constructive and/or functional, but bullying is never viewed as productive.

Not only is bullying destructive communication, research indicates bullying can possibly take more than one form (Bauman & DelRio, 2006). In fact, there are at least three different categories of bullying: physical, relational, and verbal. Physical bullying includes hitting, pushing, spitting, and similar behaviors. Relational bullying may be characterized by social exclusion, spreading rumors and generally degrading existing or potential social relationships. Finally, verbal bullying includes threats, derogatory comments, name-calling, and extreme teasing. Whether verbal or nonverbal, bullying is clearly communicative behavior.

Only recently, however, have researchers begun to view bullying as a communication phenomenon (Coombs, & Holladay, 2004; Lutgen-Sandvik et al., 2007). According to Porhola, Karhumen, & Rainivarra, bullying is related to “various communication processes taking place between individuals and within groups” (2006, p. 250). Further, it has been asserted that on a micro-level, bullying is fundamentally interpersonal communication that may occur in a certain context (Lutgen-Sandvik et al., 2007). This argument, of course, could include the college classroom context. Thus, bullying within the context of the present study is considered an act of communication that may be perceived on an individual basis. Thus, perceptions of bullying will be operationalized in the current study.

In their review of the most commonly used bullying measure, the Negative Acts Questionnaire (NAQ) (see Einarsen, & Hoel, 2001; Einarsen,

Hoel, & Notelaers, 2009), Lutgen-Sandvik and colleagues (2007) analyzed the 22 negative behaviors that the instrument assesses. They conclude that all but five of the negative behaviors determined to characterize bullying are communicative in nature. Items centered on withholding information from others, having opinions ignored, being humiliated or ridiculed, being isolated by others, and being insulted or offended are unmistakably communication behaviors. Therefore, a rationale for the study of bullying from a communication perspective is advanced.

While bullying, as a communication phenomenon, has received much attention when occurring in a workplace context (Anderson & Pearson, 1999; Lutgen-Sandvik, 2003), the same attention has not been given to bullying that occurs on college campuses. While it is clear that bullying is problematic in grade schools, minimal research has centered on bullying at the collegiate level. The primary purpose of the present study is to explore the perception of bullying on college campuses. Particularly, the relationship between perceptions of bullying and selected health behaviors will be examined.

Bullying Perception and Health Behaviors

Previous research has shown frequent bullying victimization has been linked to substance use and abuse; and, further, depression has served as the mediator of that relationship (Luk, Wang, & Simons-Morton, 2010). Bullying has been linked to risky health behaviors such as tobacco use, alcohol abuse/binge drinking, as well as the use of illegal substances, such as marijuana (Berthold & Hoover, 2000; Carlyle & Steinman, 2007). In fact, studies suggest victimization predisposes boys in particular to heavy smoking later in life (Niemela et al., 2011). According to the Centers for Disease Control (CDC), tobacco use is the number one cause of preventable illness and death in the United States (2015a). Most established adult users of tobacco began the behavior in adolescence or young adulthood (CDC, 2015b). Because tobacco use typically starts during these years, it is important to understand why these individuals begin using tobacco and what can be done to prevent such usage. It is possible that when one perceives herself/himself as being bullied, s/he may be more likely to engage in tobacco use. The same could be argued for other potentially harmful substances such as alcohol.

Bullying has been shown to contribute to alcohol abuse among adolescents and young adults (Luk et al., 2010). Binge drinking, the

consumption of four or more drinks for women or five or more drinks for men in a two hour sitting, is common among college students according to the National Institute on Alcohol Abuse and Alcoholism (NIAAA, 2004). Of the college students who drink, half of these students also binge drink (NIAAA, 2015). Especially for young adults, binge drinking can have serious consequences, such as alcohol poisoning, vehicular crashes, sexually transmitted infections, and unintended pregnancies.

Finally, significant associations have been found between bullying and abuse of illegal substances, such as marijuana (Luk et al., 2010; Vaughn et al., 2010). Marijuana is the most frequently abused illegal drug. Chronic use of marijuana is concerning because it distorts perception, impairs coordination, and contributes to learning and memory difficulty (National Institute on Drug Abuse, 2015). Marijuana use has been associated with increased rates of anxiety, depression, and other psychological disorders. Reports of marijuana addictions are highest among users who start young.

Theory of Planned Behavior

The Theory of Planned behavior (TPB) is a T-behavior change with the primary focus being the relationship between attitude, intention, and behavior. This theory assumes human beings to be rational, to use information available to them, and to consider the implications of their actions (Ajzen, 1985). The ultimate goal is the desired behavior; however, the theorist of TPB suggested a link between perceived behavioral control (volitional control) and intention.

The TPB has been supported by several studies as an effective model for understanding and explaining tobacco use, binge drinking, and marijuana use among young adults (Collins & Carey, 2007; Johnston & White, 2003; McMillan & Conner, 2003a; McMillan & Conner, 2003b; Norman & Conner, 2006). As a result, this theory was chosen as an appropriate theoretical framework to guide this study for two reasons. First, it contains the key components of many health behavior theories, including attitude, self-efficacy (perceived behavioral control), and normative influences, making it more comprehensive than other health behavior theories (Fishbein & Cappella, 2006). Second, while there is a foundation of literature to guide the current study, there is a need to fill a gap in applying the TPB to bullying and health outcomes.

As previously stated, there has been much attention given to bullying and its influence on one's mental health (Hawker & Bouton, 2000),

but less is known about being bullied and its subsequent effects upon one's health-related beliefs, attitudes, and behaviors. The current study aimed to determine if perceptions of bullying predicts cigarette smoking, binge drinking, and marijuana use for young adults. Thus, the following research questions were advanced:

RQ1: Is there a relationship between perceptions of bullying and smoking among college students?

RQ2: Is there a relationship between perceptions of bullying and alcohol use among college students?

RQ3: Is there a relationship between perceptions of bullying and marijuana use among college students?

Methods

Research Participants

Data were collected at two different, regional, public universities. A total sample of 369 undergraduate and graduate students enrolled in Communication and Psychology courses participated in this study and were analyzed as one sample. Participants in this study included 248 females and 121 males. Approximately 80.5% (*n* = 297) of the participants were Caucasian, 13.5% African-American, 1% Hispanic/Latino, 1% Asian/Asian-American, and 4.5% coming from other ethnicities. In terms of class rank, participants included 18% freshmen, 21% sophomores, 29% juniors, 27% seniors, and 6% graduate students. Ages of participants in this study ranged from 17-63 years with 85% of participants falling within the 18-25-age range.

Procedures

Institutional Review Board approval was received from both institutions included in this study, and the same procedures were followed in both study locations. Participants were initially briefed in their classes on the logistics of the study, including directions on how to access the website containing the online survey. Participation in the study was voluntary, and students who agreed to partake in the study were provided an Internet link to an online survey that included questions centered on demographics,

perceived bullying behaviors, and various health behaviors. Initially, participants were instructed to read the consent form, which served as the first page of the web survey, and then to click "continue" to consent to participation in the study. If the student was not willing to participate in the study, s/he was instructed to close the browser.

Measurement

Bullying. Perceptions of bullying were operationalized using a revised version of Einarsen and Hoel's (2001) Negative Acts Questionnaire (NAQ). Specifically, revisions included re-wording of the items to apply to a college classroom context instead of a workplace context. Some of the items on the scale include, "In my classes I have felt that information has been withheld by other students," "In my classes I have been shouted at or targeted with spontaneous anger," "In my classes I have been subjected to practical jokes," and "In my classes I have had gossip and rumors spread about me". The resulting scale reliability of the 22-item NAQ was .94 [M = 39.59, SD = 12.25].

Attitude, subjective norm, and perceived behavioral control. The direct measure of attitude, subjective norm, and perceived behavioral control were broad measures constructed by following Ajzen's (2006) guidelines. The direct measure of attitude, subjective norm, and perceived behavioral control were measured using three, five-point Likert-type items each (9 total items for each behavior). Sample items include: "If you had a chance to smoke a cigarette in the next week, do you think it would hurt you?" Also, "How do your friends feel about people your age drinking alcohol to get drunk?"

Intention. The three-item (per behavior), five-point Likert-type intention scale was also adapted from Ajzen's (2006) guidelines. Participants were asked the extent to which they agreed with statements such as; "You plan to smoke marijuana sometime this week." Responses ranged from "definitely not" to "definitely yes."

Past behavior. Questionnaire items related to past cigarette smoking, binge drinking, and marijuana use were adapted from Helme, Donohew, Baier, and Zittleman (2007). To assess past cigarette smoking, participants were asked 1) whether or not they have every smoked cigarettes, 2) on how many days they smoked cigarettes in the last 30 days, and 3) the number of cigarettes smoked per day in the past 30 days. To assess past binge drinking behavior, participants were asked 1) whether or

not they ever binge drank, 2) how often they binge drank in the last 12 months, 3) on how many days they binge drank in the last 30 days. The format for items related to marijuana use followed that of binge drinking.

Results

The first research question inquired about the relationship between perceptions of bullying and tobacco use. Correlational analysis indicated that there is a small, positive correlation between perceptions of bullying and tobacco use (r = .12, p = .02). The second research question inquired about the relationship between perceptions of bullying and alcohol use. Reports of perceived bullying did positively and significantly relate to binge drinking (r = .18, p = .001). The third research question inquired about the relationship between perceptions of bullying and marijuana use. Correlational analysis indicated there is no statistically significant correlation between perceptions of bullying and marijuana use in the last 12 months (r = .08, p = .11). Descriptive statistics for all variables may be found in Table 1.

Table 1. *Mean, Standard Deviation, and Cronbach's Alpha for Theoretical Variables and Past Behavior*

Variable Name	Mean (SD)	α
Smoking Attitude	5.57 (1.40)	.71
Smoking Subjective Norm	2.33 (1.04)	.60
Smoking Perceived Behavioral Control	6.17 (1.27)	.63
Smoking Intention	2.36 (1.83)	.83
Binge Drinking Attitude	4.82 (1.58)	.85
Binge Drinking Subjective Norm	3.40 (1.36)	.70
Binge Drinking Perceived Behavioral Control	4.29 (.85)	.84
Binge Drinking Intention	3.79 (1.76)	.74
Marijuana Attitude	4.34 (2.06)	.92
Marijuana Subjective Norm	2.96 (1.43)	.70
Marijuana Perceived Behavioral Control	6.37 (1.28)	.80
Marijuana Intention	2.69 (1.87)	.77

***p<.001; **p<.01; *p<.05

While correlational analysis is sufficient to answer the research questions, it does not allow for the investigation of the relationship

between perceptions of bullying and various health behaviors as outlined in the Theory of Planned Behavior. In an attempt to test the theory, several linear regression analyses were conducted.

To test the relationship between perceived bullying and smoking behavior, demographic variables (gender, ethnicity, and age), bullying, cigarette smoking attitude, cigarette smoking subjective norm, and cigarette smoking perceived behavioral control were entered in the regression model as predictors of cigarette smoking intention, as well as past smoking behavior. The model was significant for intention to smoke cigarettes, F (7, 360) = 9.39, $p < .001$, multiple R =.39. Although bullying was not a significant predictor, this model accounted for 15% of the variance in intention to smoke cigarettes. With regard to past smoking behavior, the model was significant for the following: the number of days cigarettes were smoked per day in the last 30 days, F (7, 360) = 5.06, $p < .001$, multiple R =.30; and the number of cigarettes smoked per day in the past 30 days, F (7, 360) = 6.04, $p < .001$, multiple R =.33 (see Table 2).

Table 2. *Multiple Linear Regression Cigarette Smoking Intention and Past Behavior Using the TPB*

Predictor Variables	β	R	R^2
Cigarette Smoking Intention		.39	.15
Gender	.01		
Age	.06		
Ethnicity	-.11*		
Bullying	.08		
Subjective Norm	.21***		
Attitude	.08		
Perceived Behavioral Control	-.24***		
Cigarette Smoking (number of days)		.30	.09
Gender	.04		
Age	.08		
Ethnicity	-.07		
Bullying	.09		
Subjective Norm	.22***		
Attitude	.08		
Perceived Behavioral Control	-.19**		

Cigarette Smoking (number of cigarettes)		.33	.11
Gender	.08		
Age	.09		
Ethnicity	-.06		
Bullying	.08		
Subjective Norm	.25***		
Attitude	.004		
Perceived Behavioral Control	-.16**		

***p<.001; **p<.01; *p<.05

Linear regression was also used to test perceptions of bullying and binge drinking, as well as past binge drinking behavior, as predicted by the TPB. The demographic variables along with bullying, binge drinking attitude, binge drinking subjective norm, and binge drinking perceived behavioral control were tested as predictors of binge drinking intention. The model was significant for intention to binge drink, F (7, 360) = 38.47, p < .001, multiple R = .65. Moreover, the same predictors were investigated with regard to prediction of past binge drinking behavior. The model was significant for number of binge drinking occasions in the past 12 months, F (7, 360) = 19.89, p < .001, multiple R = .53 (28% of variance explained), and for number of binge drinking occasions in the past 30 days., F (7, 360) = 19.90, p < .001, multiple R =.53 (28% of variance explained) (see Table 3).

Table 3. *Multiple Linear Regression Binge Drinking Intention and Past Behavior Using the TPB*

Predictor Variables	β	R	R^2
Binge Drinking Intention		.65	.43
Gender	-.10*		
Age	.01		
Ethnicity	-.05		
Bullying	.06		
Subjective Norm	.49***		
Attitude	.26*		
Perceived Behavioral Control	.05		
Binge Drinking (past 12 months)		.53	.28
Gender	-.05		
Age	-.05		

Ethnicity	.03		
Bullying	.06		
Subjective Norm	.47***		
Attitude	.06		
Perceived Behavioral Control	-.06		
Binge Drinking (past 30 days)		.54	.29
Gender	-.08		
Age	-.04		
Ethnicity	-.01		
Bullying	.07		
Subjective Norm	.48***		
Attitude	.06		
Perceived Behavioral Control	-.03		

***p<.001; **p<.01; *p<.05

Finally, linear regression was used to test the relationship between perceptions of bullying and intended marijuana use, as well as past marijuana use. Demographics, perceived bullying, marijuana use attitude, marijuana use subjective norm, and marijuana use perceived behavioral control were entered as predictors of marijuana use intention. The overall model was significant for intention to use marijuana F (7, 360) = 53.61, p < .001, multiple R = .71. Marijuana subjective norm (ß = .48, p < .01), marijuana attitude (ß = .27, p < .01), and marijuana perceived behavioral control (ß = -.14, p < .01) were significant predictors and accounted for 50% of the variance in intention to use marijuana. The same predictor variables were entered to investigate past marijuana use. The model for marijuana use during the past 12 months, F (7, 360) = 31.53, p < .001, multiple R = .62, and in the past 30 days, F (7, 360) = 28.00, p < .001, multiple R = .59, were both significant. Additionally, 38% of the variance in marijuana use in the past 12 months and 35% of the variance in marijuana use in the past 30 days was explained (see Table 4).

Table 4. *Multiple Linear Regression Marijuana Use Intention and Past Behavior Using the TPB*

Predictor Variables	β	*R*	R^2
Marijuana Use Intention		.71	.51
Gender	-.10*		
Age	-.06		
Ethnicity	-.03		
Bullying	.01		
Subjective Norm	.48***		
Attitude	.27***		
Perceived Behavioral Control	-.14**		
Marijuana Use (past 12 months)		.62	.38
Gender	-.11**		
Age	-.06		
Ethnicity	-.05		
Bullying	-.04		
Subjective Norm	.54***		
Attitude	.09		
Perceived Behavioral Control	-.09*		
Marijuana Use (past 30 days)		.59	.35
Gender	-.09*		
Age	-.04		
Ethnicity	-.03		
Bullying	-.02		
Subjective Norm	.51***		
Attitude	.07		
Perceived Behavioral Control	-.14**		

***p<.001; **p<.01; *p<.05

Discussion

The purpose of this study was to investigate the relationship between perceptions of bullying and various health behaviors including the use of tobacco, alcohol, and marijuana. The present study suggests while one's perception of being bullied is slightly related to negative health behaviors such as cigarette smoking and binge drinking among college students, there is no relationship between perceptions of bullying and the

use of marijuana. Past research suggests among young adults and adolescents, perceptions of bullying are related to alcohol use (Luk et al., 2010). The current study supports this finding. While the relationship between the two variables is small, it is quite feasible that students feel like they are victims of bullying; they need an outlet for stress. One such outlet may be the use of alcohol in unhealthy amounts, or binge drinking. Binge drinking is a common occurrence on college campuses (NIAAA, 2004), and may be increased in the instance that a student is bullied.

Similarly, there appears to be a slight relationship between perceived bullying and cigarette smoking. Based on the argument that victims of bullying experience high amounts of psychological stress (Newman et al., 2010; Kim & Leventhal, 2008), it is possible that smoking behavior is increased when one is bullied in an attempt to reduce stress.

Previous research indicates that there is a correlation between perceptions of bullying and the use of illegal substances including marijuana (Luk et al., 2010; Vaughn et al., 2010). This was not supported in the present study. One possible explanation could be the sample utilized in this study. According to the CDC cigarette smoking and binge drinking are common behaviors exhibited among college students (2010a; 2010b), thus freely discussed and reported. Interpreting the results of the current study, it is possible the use of marijuana is not as frequently utilized; thus, when stress levels are increased, they are not the first "line of defense." When one perceives being bullied, s/he may choose to engage in binge drinking and/or smoking with friends and take it to excess. If one's peers do not use marijuana, they may also be less likely to use marijuana and may choose other outlets for stress relief.

According to the Theory of Planned Behavior (TPB), there should be a link between behavioral beliefs and normative beliefs to behavioral intention via attitude and subjective norm (Ajzen, 1985). Within the context of the present research study, approximately 15% of the variance of intentions to smoke cigarettes was predicted by ethnicity, cigarette smoking subjective norm, and cigarette smoking perceived behavioral control. Interestingly, perceptions of bullying did not remain significant in the regression model.

Likewise, when examining the context of alcohol use (binge drinking), one's gender, attitude toward binge drinking, and binge drinking subjective norm significantly predicted approximately 42% of the variance in intention to binge drink, but perceptions of bullying was again not a

significant predictor. When examining the relationship between perceived bullying and marijuana use, marijuana subjective norm, attitude towards marijuana use, and perceived behavioral control predicted 50% of the variance in one's intention to use marijuana while perceptions of bullying was non-significant.

It is intriguing to the researchers that perceptions of bullying was not a significant predictor of intentions to binge drink, intentions to smoke cigarettes, or intentions to use marijuana. While victims of bullying may be more likely to engage in negative health behaviors such as cigarette smoking and binge drinking, perceptions of being bullied does not necessarily *predict* such behavior. Thus, it is reasonable to believe that one who already smokes cigarettes and/or excessively uses alcohol may increase use of these behaviors in the event they perceive being bullied, but the perception of bullying is not the sole reason for smoking or binge drinking. In other words, a person who drinks alcohol may drink more as a result of the perception of being bullied, but this perception may not be the only predictor of binge drinking.

Next, because there is a small relationship between perceived bullying and both cigarette smoking and binge drinking, but a perception of bullying does not significantly predict either behavior, it is possible there is an additional mediating variable that was not examined in the present study. As addressed earlier in this paper, past research has shown that frequent bullying victimization does lead to substance use as mediate via depression (Luk et al., 2010). When perceived bullying occurs, it is possible that one experiences depression, anxiety, stress, or some other psychological distress, which then correlates to increased engagement in negative health behaviors.

Pragmatically, the results of the current study provided further insight into the negative effects of bullying on the college campus. Though the relationship between perceptions of bullying and cigarette smoking and binge drinking is small, it is significant and indicates a problem in today's society. Beyond the negative effects already known about bullying, it appears that those who are bullied may engage in increased negative health behaviors, thus suffering long-term health consequences. Scholars have started to view bullying as a communication phenomenon (Coombs, & Holladay, 2004; Lutgen-Sandvik, Tracy, & Alberts, 2007). As awareness of bullying heightens, perhaps researchers should continue to examine the causes and outcomes of bullying on college campuses.

In conclusion, the current study adds to the ever-growing body of knowledge surrounding bullying on college campuses. Evidence from past research suggests that bullying can take more than one form (Bauman & Del Rio, 2006). Results of this exploratory study raise questions pertaining to the existing body of research on bullying and the communication processes involved. As with any good study, additional questions arise, warranting future research in this area. Therefore, limitations of this study and directions for future research are advanced.

Limitations

Although this research study provides insights about bullying on college campuses, it is not without limitations. One limitation includes the subject pool. The sample used in the current study is relatively homogenous in terms of age, ethnicity, and socioeconomic status. This, of course, potentially limits the external validity of this study. An additional limitation of this study includes the cross-sectional design. It is possible that one instance of perceived bullying will have a different impact than an established history of perceived bullying. Data collection at more than one point in time may have allowed for a more accurate understanding of the relationship between perceptions of bullying and various health behaviors. Finally, studying actual cases of bullying – as opposed to perceptions of bullying – could strengthen this research. Because bullying may be characterized as a communication behavior, one could argue that bullying is perception and an individualized construct. Regardless, using data inclusive of documented, reported cases of bullying could increase the internal validity.

Directions for Future Research

As a result of this study, many opportunities for research related to bullying on college campuses may be proposed. First and foremost, it is well known that no study by itself can be used to make definitive conclusions. Therefore, future research should begin with a replication of the current study. The tenets of the Theory of Planned Behavior (TPB) were supported in the current study even though bullying perceptions did not remain a significant predictor in any model posited. Therefore, replication using a more diverse sample could be insightful.

Next, it is possible that the relationship between perceptions of bullying and various health behaviors could be mediated through depression, anxiety, or a plethora of other communicative or psychological

behaviors. Such an assertion warrants future research further investigating the nature of this relationship.

Finally, the context in which bullying occurs may influence the relationship between perceptions of bullying and negative health behaviors. In this day and age, young adults use many computer-mediated channels to communicate with each other. Such communication may be positive or negative in nature. The way in which bullying was operationalized in the current study leaned toward face-to-face communication as the primary channel. As the instances of cyber bullying seemingly increase, it is possible that bullying on college campuses may occur less in face-to-face contexts and more in "cyberspace." Forums such as Facebook, Twitter, and other social media sites should be examined in future research. Once this behavior is better understood and further researched, bullying prevention messages can be developed to potentially prevent the victimization of other young adults like Tyler Clementi, Alexis Pilkington, and Alyssa Funke.

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