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College Student Reporting Responses to Hypothetical and Actual Safety Concerns

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ABSTRACT

Campus violence prevention often includes proactively reducing crime through noticing and resolving concerning situations. Within these efforts, interventions aimed at enhancing reporting have been considered necessary. The current study explored several reporting influences on college students’ responses to hypothetical and actual campus safety concerns. Students were unwilling to report most (i.e., 52%) vignettes of pathway behavior, and most students who witnessed campus safety concerns did not report (i.e., 87%). Students who witnessed several concerning behaviors from a nonfriend perpetrator tended to be more willing to report, especially if personally victimized and understanding the violence risk associated with pathway behavior. Analyses supported campus-wide exhibitions of the dangerousness of various pathway behaviors and the fair, flexible authority problem solving available to struggling students.

ARTICLE HISTORY

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KEYWORDS

Campus threat assessment; community policing; reporting improvement interventions; violence prevention

Campus-targeted violence includes a perpetrator that poses an identifiable or potentially identifiable threat toward an individual, group, or organization prior to attack (Fein, Vossekuil, & Holden, 1995). In police and media records of targeted violence, a behavioral “path to intended violence” (Calhoun & Weston, 2003, p. 58) has preceded nearly all of these attacks (Fein & Vossekuil, 1999; Meloy et al., 2004), as violent statements, stalking/harassing actions, aggressive behaviors, and weapon acquisitions have been displayed by perpetrators before intended assault. Thus, campus safety professionals can prevent violence through gathering, assessing, and intervening upon noticeable threatening behaviors (i.e., pathway behaviors) that signify foreseeable violence (Cornell et al., 2004; Deisinger, Randazzo, O’Neill, & Savage, 2008; Meloy, 2011; Scalora et al., 2002a).

This prevention approach, termed threat assessment, has mostly been considered a strategy to inhibit sensationalized attacks (Hollister & Scalora, 2015), but pathway behaviors also relate broadly to general assault prevention on campus. Other effective campus violence prevention approaches, such as community-oriented policing, sexual assault, and workplace violence prevention efforts (Hollister, Scalora, Bockoven, & Hoff, 2015a), similarly attempt to interrupt repetitive, escalating problematic behavior, and, in one collegiate study, 84% of students who witnessed physical assault and 56% of students who witnessed sexual assault also observed pathway behaviors from the perpetrator (Hollister et al., 2015b). Thus, across safety efforts, campus security professionals have an interest in gathering a range of concerning pathway behaviors in addition to general criminal acts (Scalora, Simons, & VanSlyke, 2010; Sulkowski & Lazarus, 2011).

If students fail to report pathway behavior, effective violence prevention procedures can be hindered (Hollister, Scalora, Hoff, & Marquez, 2014; Scalora et al., 2010; Sulkowski, 2011). Analyses of victimized college students (e.g., stalking, sexual assault, and physical assault victims)
have included less than 5% informing police, with most victims seeking assistance through informal sources (e.g., friends or family; Buhi, Clayton, & Surrency, 2009; Thompson, Sitterle, Clay, & Kingree, 2007). Approximately one third of college students who witnessed stalking, threatening, or assaultive behavior on campus (i.e., about 85% nonvictimized bystanders) reported their observations to authorities (Hollister, Scalora, Bockoven, & Hoff, 2015a), and most took no action or informally responded (e.g., changed personal security, sought assistance from a friend, talked with the perpetrator; Hodges, Low, Holliser, Viñas-Racionero, & Scalora, 2015). Because of these low reporting rates, interventions intended to enhance victim and bystander reporting have been considered necessary to effective campus violence prevention (Deisinger, Randazzo, & Nolan, 2014; Griffith, Hueston, Wilson, Moyers, & Hart, 2004; Hollister et al., 2014; Sulkowski, 2011).

Even with these recommendations and recent increases in administrative scrutiny and financial expenditures on campus violence prevention (i.e., after mass shootings at Northern Illinois and Virginia Tech universities; Drysdale, Modzeleski, & Simons, 2010; Lazarus & Sulkowski, 2011), seemingly no empirical program evaluation of attempted collegiate reporting improvement efforts has occurred (Hollister & Scalora, 2015).

This paucity may relate to existing research seeming to highlight only a portion of influences that affect reporting decisions and not reviewing interactions between reporting factors. Thus, the current study comprehensively examined college student reporting responses to hypothetical and actual pathway behaviors with a range of hypotheses from relevant criminological and crime prevention fields and inclusive multivariate models.

In-depth, small-sample victim and bystander surveys with high school and college students have explored attitudes corresponding with authority notification decisions (Buhi et al., 2009; Daniels, et al., 2007; Nekvasil & Cornell, 2011; Pershing, 2003; Pollack et al., 2008; Thompson et al., 2007), but generally have not assessed incident characteristics and interactions between attitudinal factors. Victims and bystanders that inform authorities have possessed connection with their school, certainty that concerns will be taken seriously, and awareness of risk associated with observed concerns. Those not informing authorities have noted their concerns were not serious, not likely to relate to further risk, and personal. These nonreporters have lacked trust in police and have worried of negative authority responses to their concerns. These findings have corresponded with suggested campus reporting enhancement through increasing positive authority–student interactions (Pollack et al., 2008; Sulkowski, 2011), advertising an anonymous reporting contact (Scalora et al., 2010), displaying the range of concerning activity that can relate to heightened violence (Hollister et al., 2015b), and exhibiting the positive impacts (e.g., problem-solving perpetrator grievances) that can follow reporting.

In studies with larger collegiate samples, several incident and attitudinal factors have related to students’ unwillingness to report (Hollister & Scalora, 2015). But, without comprehensive multivariate considerations, these examinations have provided several disparate reporting improvement suggestions. In college student samples, nonassaultive concerning behaviors (23%) have included lower authority notification rates than assaults (35%), which suggests contacting authorities may be delayed until the criminal conduct is clear and completed (Hollister et al., 2015a; Pollack, Modzeleski, & Rooney, 2008). College bystanders have displayed strong peer loyalty limiting their willingness to “betray” fellow students through reporting misconduct (Pershing, 2003, p. 150), especially if bystanders identify with social groups possessing antisocial beliefs (Sulkowski, 2011). College students tend to overestimate peer involvement in deviant behavior and underestimate protective responses to misbehavior (Martens et al., 2006; Paul & Gray, 2011), which corresponds with fear of losing respect and social status upon confronting problematic behavior (Fabiano, Perkins, Berkowitz, Linkenbach, & Stark, 2003). College students are unlikely to report offending behavior if committed by a friend or intimate partner due to concerns about harming loved ones (Buhi et al., 2009; Thompson et al., 2007); yet, perpetrators most often display problematic behaviors to close friends or family (Fein & Vossekuel, 1999; Pollack, Modzeleski, & Rooney, 2008). College bystanders that see conflicts within intimate relationships are less likely to consider pathway
behavior problematic or report their observations (Weller, Hope, & Sheridan, 2013; Yamawaki, Ochoa-Shipp, Pulsipher, Harlos, & Swindler, 2012), despite intimate contexts accounting for a substantial proportion of general criminal activity on campus (Drysdale et al., 2010; Noonan & Vavra, 2007). Thus, several incident and attitudinal factors that impact collegiate reporting have been explored (Deisinger et al., 2014; Griffith et al., 2004; Hollister et al., 2014; Sulkowski, 2011), and subsequent recommendations have involved requests to strengthen awareness of campus resources, enhance prosocial student attitudes, and support intimate partner victims.

Studies utilizing vignettes of concerning behavior within college student samples have further clarified incident-related and attitudinal influences (Hollister et al., 2014; Sulkowski, 2011; Weller et al., 2013; Yamawaki et al., 2012), but may have limited applicability to actual reporting decisions (Baumeister, Vohs, & Funder, 2007; Shaffer, Peller, Laplante, Nelson & Labrie, 2010). College students have exhibited lower willingness to report in response to vignettes with intimate partner conflict, fewer concerning behaviors, and no threatening verbalizations (Hollister et al., 2014; Tarling & Morris, 2010; Weller et al., 2013; Yamawaki et al., 2012). College students most willing to report in response to vignettes have had greater campus connectedness and trust in campus authorities. They have been less likely to feel safe on campus, have less involvement in delinquent behavior (Hollister et al., 2014; Sulkowski, 2011), and have beliefs in an inherently fair world (Yamawaki et al., 2012). Hypothetical reporting studies have proposed psychoeducational presentations exhibiting the impact of criminal behavior, the importance of combating social norms supportive of offending, and the methods of assisting victims (e.g., reporting to campus authorities; Hollister et al., 2014; Sulkowski, 2011).

Some campus sexual assault prevention efforts have produced lasting attitudinal changes (Brecklin & Forde, 2001; Breitenbecher, 2000; Paul & Gray, 2011), but have generally lacked review of willingness to report (Breitenbecher, 2000; Hollister & Scalora, 2015; Paul & Gray, 2011). Sexual assault prevention efforts have been most successful with relevant and nonconfrontational material tailored toward college students likely to witness and not report concerning activity (e.g., males and minority groups with poor perceptions of police; Brank et al., 2007; Slocum, Taylor, Brick, & Esbensen, 2010), and these effective techniques have frequently been applied to recommendations for addressing general student attitudes related to unwillingness to report (Hollister et al., 2014; Sulkowski, 2011).

Additionally, large national victimization surveys have analyzed locational reporting factors (Goudiraan et al., 2004; Schnebly, 2008). In these studies, countries with greater trust in police and cities with community-policing departments have greater reporting rates for victimizations. With these findings, collegiate reporting improvement through exposure to police officers in non-crisis situations (e.g., foot patrol, new student orientation presentation; Griffith et al., 2004), police postings (e.g., campus posters, Internet displays) emphasizing a collaborative-community approach to maintaining campus safety (Bain, Robinson, & Consor, 2014; Bartling, Yardley, & Evans, 2010), and opportunities for prosocial partnerships (e.g., service-learning experiences, interest groups) between students and campus professionals (Sulkowski, 2011) have been suggested.

The current study comprehensively reviewed these several hypothesized reporting influences. With these hypotheses, several research fields were explored to aid in reporting improvement suggestions for campus violence prevention efforts.

Based on in-depth, small-sample victim and bystander surveys, the following hypotheses are presented:

**H1:** Personally victimized students will be less likely to report to campus authorities than nonvictimized bystanders.

**H2:** Higher campus connectedness will correspond with increased reporting to campus authorities.

Based on findings from larger college student samples, the following hypotheses are presented:
H3: Students who viewed weapon use will be more likely to report to campus authorities.
H4: Students who viewed property damage will be more likely to report to campus authorities.
H5: Students who viewed assault will be more likely to report to campus authorities.
H6: Students who were friends with the perpetrator will be less likely to report to campus authorities.
H7: Students who were friends with the victim will be more likely to report to campus authorities.
H8: Students with prior exposure to safety concerns will be less likely to report to campus authorities.
H9: Students who observed campus safety concerns within intimate partner contexts will be less likely to report to campus authorities.
H10: Students with more peer loyalty will be less likely to report to campus authorities.

Based on studies utilizing hypothetical reporting responses from college students, the following hypotheses are presented:

H11: Students who observed fewer concerning behaviors from the perpetrator will be less likely to report to campus authorities.
H12: Students who observed threatening statements will be more likely to report to campus authorities.
H13: Students who felt less safe on campus will be more likely to report to campus authorities.
H14: Students with greater adherence to beliefs in an inherently fair world will be less likely to report to campus authorities.
H15: Students with higher self-reported delinquency will be less likely to report to campus authorities.

Based on reviews of collegiate sexual assault prevention efforts, the following hypotheses are presented:

H16: Males will be less likely to report to campus authorities.
H17: Students of minority ethnic groups will be less likely to report to campus authorities.
H18: Students with higher estimations of problematic behavior on campus will be less likely to report to campus authorities.

Based on large national victimization surveys, the final hypothesis is presented:

H19: Greater trust in campus police will correspond with increased reporting to campus authorities.

**Method**

**Participants**

Undergraduate students in the psychology department subject pool (n = 1,735; 70% female; 85% White) of a large, public, Midwestern university selected to participate in an online survey in exchange for course credit.

**Procedure**

Prior to the survey, students electronically received study information and agreed to a statement of consent. At the conclusion of the study, these students were provided a debriefing statement.
Measures

Dependent variables

Participants completed two dependent variables to measure reporting responses to pathway behaviors. The Vignettes of Concerning Behavior (VCB) measure provided a continuous, hypothetical reporting measure of willingness to report. For participants that noted observation of actual campus safety concerns, the categorical binary reporting to authorities (RA) measure examined self-reported responses to witnessed collegiate safety issues.

Vignettes of Concerning Behavior. The VCB assesses participants’ willingness to inform campus authorities of concerning behaviors (Hollister et al., 2014). This measure consists of 12 scenarios with 9 containing behavior that has preceded targeted attacks (e.g., violent expressions, fixation on weapons). After each scenario, participants select any actions they would take in response on a 7-point scale (1 = none; 2 = change my personal security [such as changing locks or changing phone numbers]; 3 = have a third party, besides university administration, talk to the individual; 4 = talk with a friend of the individual; 5 = talk with the concerning individual; 6 = notify the university administration or faculty; 7 = notify police). Participants could select multiple responses and could also choose “other” then enter a text description. Each answer to scenarios that possesses concerning behavior was coded 0 if authorities would not be notified (i.e., not selecting 6, 7, or an “other” authority reporting description), or 1 if authorities would be notified (i.e., selecting 6 or 7 or entering an authority reporting other description). Thus, the maximum score of this continuous scale was 9, and higher scores represented greater willingness to inform authorities of concerning behavior.

This scale was normally distributed (skewness = 0.20, SE = .06; kurtosis = −0.61; SE = .06) and had good internal consistency (α = .75) with the current sample. In the portion of the total sample that observed concerning behavior on campus (n = 631), this scale significantly corresponded with actual campus safety reporting decisions, t(108.94) = 4.08, p < .01, r = .23, as those reporting in actual campus safety concerns (M = 4.89, SD = 2.03) displayed higher VCB scores than those not reporting in actual campus safety concerns (M = 3.91, SD = 2.05).

Reporting to authorities. Participants’ self-reported responses to their observations of concerning behavior (i.e., Appendix A, Question 5) were used for a categorical binary RA variable. Responses that would not notify campus authorities (i.e., not selecting 6, 7, or “other” authority notification description) were coded as 0, and responses that would notify campus authorities (i.e., selecting 6, 7, or “other” authority notification description) were coded as 1.

Independent variables

Two binary demographic variables were included in analyses. A gender variable (male) included females coded as 0 and males coded as 1. An ethnicity variable (White) included participants that identified as white coded as 1 and participants that identified with other ethnicities coded as 0.

All participants were presented demographic questions, the Self-Report Delinquency Scale (SRDS), the Campus Connectedness Scale (CCS), the Peer Loyalty Scale (PLS), the Feelings of Safety on Campus Scale (FSCS), and the Feelings Toward Campus Police Scale (FCPS). Participants were also asked questions about their estimation of peer involvement in problematic activity, beliefs about the world being inherently fair, and exposure to concerning behavior on campus.

Self-Report Delinquency Scale (SRDS). The SRDS measures self-reported criminal involvement in the past 12 months (Piquero, MacIntosh, & Hickman, 2002). This scale was originally nine questions in length, but has been shortened to four questions in the past “due to limited variability across items and categories” (Sulkowski, 2011, p. 56). Participants were asked these four questions (i.e., about illicit drug use, theft, forcible robbery, and use of physical aggression). The scale had low internal
consistency with the current sample ($\alpha = .25$), but was included in analyses as a diverse, face-valid measure of self-reported antisocial involvement.

**Campus Connectedness Scale (CCS).** The CCS measures student attachment to the campus community (Summers, Beretvas, Svinicki, & Gorin, 2005) with 16 Likert-type questions measured on a 6-point scale ($1 = \text{strongly disagree}; 6 = \text{strongly agree}$). Higher scores correspond with greater connection to the campus community. The scale had excellent internal consistency with the current sample ($\alpha = .94$).

**Peer Loyalty Scale (PLS).** The PLS measures participants’ loyalty to their friend group (Hollister et al., 2014) with three Likert-type questions measured on a 6-point scale ($1 = \text{strongly disagree}; 6 = \text{strongly agree}$). Higher scores correspond with greater peer loyalty. The scale had good internal consistency with the current sample ($\alpha = .70$).

**Feelings of Safety on Campus Scale (FSCS).** The FSCS measures students’ feelings of safety on campus with two face-valid questions (i.e., “I feel safe on campus during the day”; “I feel safe on campus at night”; Hollister et al., 2014, p. 133) answered on a 5-point, Likert-type scale ($1 = \text{in no areas}; 5 = \text{in all areas}$). These scores are reverse coded and summed. This scale had acceptable internal consistency with the current sample ($\alpha = .60$).

**Feelings toward Campus Police Scale (FCPS).** The FCPS measures participants’ support for campus police with a five-item, 5-point Likert-type questions ($1 = \text{not at all true}; 5 = \text{completely true}$) regarding the perceived quality, confidence, and performance of campus police (Hollister et al., 2014). Higher scores correspond with more positive feelings of campus police. The scale had good internal consistency with the current sample ($\alpha = .85$).

**Social Norms Scale (SNS).** Participants were asked four questions about their estimation of peer involvement in problematic activity, listed in Appendix B, which will be referred to as the SNS. The answers to these four questions were summed, and higher scores corresponded with greater estimations of student involvement in problematic activity. The SNS had good internal consistency with the current sample ($\alpha = .85$).

**Just World Scale (JWS).** Participants were asked to provide their level of agreement with nine statements about beliefs in a fair world, listed in Appendix C, which will be referred to as the JWS. The answers to these nine questions were summed, and higher scores corresponded with greater adherence to beliefs in a fair world. The JWS had excellent internal consistency with the current sample ($\alpha = .92$).

As shown in Appendix A, participants were asked about their exposure to a range of concerning behavior while on campus. If participants indicated observation of at least one concerning behavior, they were informed to “focus on the most recent [perpetrator] in answering the following questions” and asked additional questions shown in Appendix A.

**Participant Exposure to Concerning Behavior (PECB).** If participants selected “I have not observed any of the behaviors listed above,” they were not asked the questions shown in Appendix A and were excluded from analyses regarding responses to actual campus safety concerns. They were coded as 0 on a binary PECB variable, and 1 signified participants that witnessed at least one listed concerning behavior.

**Incident-related variables.** Eight incident-related variables that have impacted reporting decisions (Hollister & Scalora, 2015) were coded based on participant answers to questions in Appendix A. The total concerning behaviors displayed by the perpetrator (TCB) variable was calculated by adding...
the amount of threatening behavior categories selected (i.e., on Appendix A, Question 1). The perpetrator involvement in assault (PerpA), vandalism/property theft (PerpV), acquisition/interest in weapons (PerpW), and/or threatening statements (PerpT) variables were based on participant selection of these categories of concerning behavior (i.e., on Appendix A, Question 1). Participants’ friendship with the perpetrator (FPerp) related to their selection of this relationship (i.e., on Appendix A, Question 2). The participant being personally victimized (PVic) or witnessing the victimization of a friend (FVic) corresponded with selection of these victim categories (i.e., on Appendix A, Question 3). An intimate partner context (IPCont) involved participant identification of romantic/sexual obsession and/or an intimate relationship relating to the concerning behavior (i.e., on Appendix A, Question 4). These variables were coded with 0 being absence of the incident characteristic and 1 being the presence of the incident characteristic.

**Results**

All participants (n = 1,735; 70% female; 85% White) were included in analyses of willingness to report. The VCB was used as the criterion variable, and the means for variables utilized in willingness to report analyses are displayed in Table 1. The bivariate relationships between these variables are shown in Table 2. Without controlling across factors, females, students with less self-reported delinquency,
students with less feelings of safety on campus, students with greater trust in campus police, and students who had not observed concerning behavior on campus had greater willingness to report. Several variables did not have significant binary relationship with willingness to report, as noted in Table 2.

A multiple regression was conducted to review the interaction of predictor variables on willingness to report. The VCB was the dependent variable, and the predictors were the variables shown in Table 3. This multiple regression model was significantly predictive of VCB, \( R^2 = .07, F(10, 1702) = 12.66, p < .01 \). A scatterplot of the dependent variable and the regression values indicated that an assumption of linearity was reasonable. The regression model was normally distributed (skewness = −.59, SE = .06; kurtosis = .72, SE = .12).

In this model, four variables had significant negative regression weights, as less self-reported delinquency, less peer loyalty, fewer feelings of safety on campus, and no prior exposure to concerning behaviors on campus significantly related to greater willingness to report, after controlling for other predictors. Additionally, one variable had a significant positive regression weight, as more positive feelings of campus police significantly corresponded with greater willingness to report, after controlling for other predictors. Several predictors did not have significant contributions to the model, as noted in Table 3.

The portion of the total sample that observed concerning behavior on campus \( (n = 631, 67% \) female, 85% White) was used in analyses of authority notification in actual observations of concerning behavior. The binary RA variable was used as the criterion, and variables listed in Table 6 were used as predictors. The means of participants on continuous variables separated into those that did not report and those that did report are shown in Table 4. Independent sample \( t \) tests with equal variances not assumed are also displayed in Table 4 to exhibit bivariate relationships with the criterion reporting variable. Without controlling across variables, participants with less campus connectedness, lower estimations of peer involvement in problematic activity, and more categories of concerning behavior observed were more likely to report their observations to campus authorities. Several variables did not have significant differences between those that did not report and those that did report, as noted in Table 4.

The distribution of participants based on categorical predictor variables are separated into those that did not report and those that did report and shown in Table 5. \( 2 \times 2 \) \( \chi^2 \) Tests of Independence were used to display bivariate relationships with the criterion variable. Without controlling across variables, participants that experienced personal victimization, witnessed the perpetrator engage in physical/sexual assault, and/or observed vandalism/property theft from the perpetrator were more likely to report. Several variables did not significantly differ between those that did and did not report, as noted in Table 5.

A binary logistic regression was conducted to review the interaction of predictors on actual reporting decisions. Thus, the categorical binary RA was the dependent variable, and the categorical

<table>
<thead>
<tr>
<th>Variables</th>
<th>( b )</th>
<th>SE (( b ))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>.09</td>
<td>.13</td>
</tr>
<tr>
<td>White</td>
<td>.09</td>
<td>.14</td>
</tr>
<tr>
<td>SRDS</td>
<td>-.08**</td>
<td>.03</td>
</tr>
<tr>
<td>CCS</td>
<td>.01</td>
<td>.01</td>
</tr>
<tr>
<td>PLS</td>
<td>-.07*</td>
<td>.03</td>
</tr>
<tr>
<td>FSCS</td>
<td>-.26**</td>
<td>.05</td>
</tr>
<tr>
<td>FCPSS</td>
<td>.11</td>
<td>.02</td>
</tr>
<tr>
<td>SNS</td>
<td>.01</td>
<td>.01</td>
</tr>
<tr>
<td>JWS</td>
<td>-.01</td>
<td>.01</td>
</tr>
<tr>
<td>PECB</td>
<td>-.38**</td>
<td>.11</td>
</tr>
</tbody>
</table>

\( ^* p < .05, \ ^{**} p < .01. \)

| Table 3. Multiple regression results with willingness to report criterion variable (VCB). | Note. SRDS = Self-Report Delinquency Scale; CCS = Campus Connectedness Scale; PLS = Peer Loyalty Scale; FSCS = Feelings of Safety on Campus Scale; FCPSS = Feelings Toward Campus Police Scale; SNS = Social Norms Scale; JWS = Just World Scale; PECB = Participant Exposure to Concerning Behavior; \( b = \) unstandardized coefficient; SE (\( b \)) = standard error of the unstandardized coefficient. |
and continuous predictors were the variables shown in Table 6. This binary logistic regression was significantly predictive of the dependent variable, \( X^2 (18) = 47.55, p < .01 \). The model was able to correctly classify 99.8% of those that did not report and 7.2% of those that did report, which resulted in an 87.6% overall success rate. Three variables had significant positive regression weights, as students with higher estimation of peer involvement in misconduct, higher adherence to beliefs in a fair world, and personal victimization were significantly more likely to inform authorities, after controlling for other predictors. Two variables had regression weights that approached significance, as students who observed more types of concerning behavior (\( B = 0.22, p = .07 \)) and who were not friends with the perpetrator (\( B = -0.83, p = .05 \)) tended to be more likely to report, after controlling for other predictors. Several predictors did not have significant contributions to the model, as noted in Table 6.

For the current study, Table 7 summarizes the outcome of hypothesis testing with vignettes and actual responses to campus safety concerns. Personally victimized students were more likely to report to campus authorities than non-victimized bystanders, and Hypothesis 1 was not supported. Higher campus connectedness did not correspond with increased reporting to campus authorities, and Hypothesis 2 was also not supported. Furthermore, Hypothesis 3 was not supported, as students who viewed weapon use were not more likely to report to campus authorities.

### Table 4. Means of continuous variables in actual reporting analyses.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Did not report (n = 548)</th>
<th>Did report (n = 83)</th>
<th>( t )</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRDS</td>
<td>5.36 (2.19)</td>
<td>5.37 (2.44)</td>
<td>.04</td>
</tr>
<tr>
<td>CCS</td>
<td>72.71 (13.93)</td>
<td>68.80 (15.23)</td>
<td>2.21*</td>
</tr>
<tr>
<td>PLS</td>
<td>12.61 (1.80)</td>
<td>12.35 (2.00)</td>
<td>1.10</td>
</tr>
<tr>
<td>FSCS</td>
<td>8.28 (1.35)</td>
<td>8.06 (1.43)</td>
<td>1.33</td>
</tr>
<tr>
<td>FCPS</td>
<td>17.76 (3.94)</td>
<td>17.61 (4.53)</td>
<td>0.27</td>
</tr>
<tr>
<td>SNS</td>
<td>12.42 (5.30)</td>
<td>14.57 (5.91)</td>
<td>3.12**</td>
</tr>
<tr>
<td>JWS</td>
<td>27.16 (5.90)</td>
<td>27.71 (6.21)</td>
<td>0.75</td>
</tr>
<tr>
<td>TCB</td>
<td>1.97 (1.30)</td>
<td>2.48 (1.67)</td>
<td>2.70***</td>
</tr>
</tbody>
</table>

*Note. SRDS = Self-Report Delinquency Scale; CCS = Campus Connectedness Scale; PLS = Peer Loyalty Scale; FSCS = Feelings of Safety on Campus Scale; FCPS = Feelings Toward Campus Police Scale; SNS = Social Norms Scale; JWS = Just World Scale; PECB = Participant Exposure to Concerning Behavior.

*\( t \) scores were used to calculate the differences for each variable between the “did not report” and “did report” categories. 
*\( p < .05 \). **\( p < .01 \).

### Table 5. Distribution of categorical variables used in actual reporting analyses.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Did not report</th>
<th>Did report</th>
<th>( X^2 ) (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>182 (33%)</td>
<td>25 (30%)</td>
<td>0.31</td>
</tr>
<tr>
<td>White</td>
<td>472 (86%)</td>
<td>66 (80%)</td>
<td>2.51</td>
</tr>
<tr>
<td>PerpA</td>
<td>106 (19%)</td>
<td>27 (33%)</td>
<td>7.54**</td>
</tr>
<tr>
<td>PerpV</td>
<td>127 (23%)</td>
<td>30 (36%)</td>
<td>6.49*</td>
</tr>
<tr>
<td>PerpW</td>
<td>8 (1%)</td>
<td>2 (2%)</td>
<td>0.42</td>
</tr>
<tr>
<td>PerpT</td>
<td>203 (37%)</td>
<td>28 (34%)</td>
<td>0.34</td>
</tr>
<tr>
<td>FPerp</td>
<td>82 (15%)</td>
<td>8 (10%)</td>
<td>1.67</td>
</tr>
<tr>
<td>PVic</td>
<td>70 (13%)</td>
<td>21 (25%)</td>
<td>9.17**</td>
</tr>
<tr>
<td>FVic</td>
<td>192 (35%)</td>
<td>30 (36%)</td>
<td>0.04</td>
</tr>
<tr>
<td>IPCont</td>
<td>209 (38%)</td>
<td>26 (31%)</td>
<td>1.43</td>
</tr>
<tr>
<td>Total</td>
<td>548 (100%)</td>
<td>83 (100%)</td>
<td></td>
</tr>
</tbody>
</table>

*Note. PerpA = perpetrator involvement in assault, PerpV = vandalism/property theft, PerpW = acquisition/interest in weapons, PerpT = threatening statements; FPerp = participants’ friendship with the perpetrator; PVic = personally victimized; FVic = witnessing the victimization of a friend. \( 2 \times 2 X^2 \) Tests of Independence were used to calculate the differences between the “did not report” and “did report” category.

*\( p < .05 \). **\( p < .01 \).
Hypotheses 4 and 5 were partially supported, as witnessed property damage and assault related to reporting in bivariate analyses, but not multivariate review. After controlling for other factors, students who were friends with the victim were more likely to report, but this variable did not relate to reporting decisions in multivariate analyses. Thus, Hypothesis 6 was also partially supported.

Table 6. Binary regression results for participants observing concerning behavior on campus with reporting criterion variable (RA).

<table>
<thead>
<tr>
<th>Variables</th>
<th>B</th>
<th>SE (B)</th>
<th>Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>.55</td>
<td>.32</td>
<td>1.06</td>
</tr>
<tr>
<td>White</td>
<td>-.49</td>
<td>.33</td>
<td>0.61</td>
</tr>
<tr>
<td>SRDS</td>
<td>-.01</td>
<td>.06</td>
<td>0.99</td>
</tr>
<tr>
<td>CCS</td>
<td>-.02</td>
<td>.01</td>
<td>0.99</td>
</tr>
<tr>
<td>PLS</td>
<td>-.07</td>
<td>.07</td>
<td>0.94</td>
</tr>
<tr>
<td>FSCS</td>
<td>-.02</td>
<td>.10</td>
<td>0.98</td>
</tr>
<tr>
<td>FCPS</td>
<td>.01</td>
<td>.03</td>
<td>1.00</td>
</tr>
<tr>
<td>SNS</td>
<td>.05*</td>
<td>.02</td>
<td>1.05</td>
</tr>
<tr>
<td>JWS</td>
<td>.05*</td>
<td>.02</td>
<td>1.05</td>
</tr>
<tr>
<td>TCB</td>
<td>.22</td>
<td>.12</td>
<td>1.24</td>
</tr>
<tr>
<td>PerpA</td>
<td>.48</td>
<td>.31</td>
<td>1.61</td>
</tr>
<tr>
<td>PerpV</td>
<td>.39</td>
<td>.30</td>
<td>1.47</td>
</tr>
<tr>
<td>PerpW</td>
<td>-.11</td>
<td>.90</td>
<td>0.90</td>
</tr>
<tr>
<td>PerpT</td>
<td>-.45</td>
<td>.35</td>
<td>0.64</td>
</tr>
<tr>
<td>FPerp</td>
<td>-.83</td>
<td>.43</td>
<td>0.44</td>
</tr>
<tr>
<td>PVic</td>
<td>.81*</td>
<td>.31</td>
<td>2.25</td>
</tr>
<tr>
<td>FVic</td>
<td>.22</td>
<td>.27</td>
<td>1.25</td>
</tr>
<tr>
<td>IPCont</td>
<td>-.47</td>
<td>.29</td>
<td>0.63</td>
</tr>
</tbody>
</table>

Note. SRDS = Self-Report Delinquency Scale; CCS = Campus Connectedness Scale; PLS = Peer Loyalty Scale; FSCS = Feelings of Safety on Campus Scale; FCPS = Feelings Toward Campus Police Scale; SNS = Social Norms Scale; JWS = Just World Scale; PECB = Participant Exposure to Concerning Behavior; PerpA = perpetrator involvement in assault; PerpV = vandalism/property theft; PerpW = acquisition/interest in weapons; PerpT = threatening statements; FPerp = participants' friendship with the perpetrator; PVic = personally victimized; FVic = witnessing the victimization of a friend.

*p < .05. **p < .01.

Table 7. Support for hypotheses across experimental methodologies.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Methodology</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bivariate VCB</td>
</tr>
<tr>
<td>1</td>
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</tr>
<tr>
<td>2</td>
<td>✔</td>
</tr>
<tr>
<td>3</td>
<td>X</td>
</tr>
<tr>
<td>4</td>
<td>X</td>
</tr>
<tr>
<td>5</td>
<td>X</td>
</tr>
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<td>X</td>
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<td>X</td>
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<td>X</td>
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<td>17</td>
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<tr>
<td>18</td>
<td>✔</td>
</tr>
<tr>
<td>19</td>
<td>✔</td>
</tr>
</tbody>
</table>

Note. VCB = Vignettes of Concerning Behavior; RA = reporting to authorities; X = findings that significantly (p < .05) or near significantly (p < .09) supported the hypothesis; ! = insignificant findings that did not support the hypothesis; blank = hypothesis not examined with the specific methodology.
Students who were friends with the victim were not more likely to report to campus authorities; thus, Hypothesis 7 was not supported. Throughout analyses, students with prior exposure to safety concerns were less likely to report to campus authorities, and Hypothesis 8 was fully supported.

Hypothesis 9 was not supported, as reporting in intimate contexts did not differ from nonintimate contexts. Hypothesis 10 was partially supported, as peer loyalty corresponded with heightened reporting in multivariate vignette analyses, but not in other examinations.

Hypothesis 11 was fully supported, as students who observed fewer concerning behaviors from the perpetrator were less likely to report. Hypothesis 12 was not supported, as students who observed threatening statements were not more likely to report to campus authorities.

Hypothesis 13 (i.e., students who feel less safe on campus were hypothesized to be more likely to report to campus authorities) and Hypothesis 15 (i.e., students with higher self-reported delinquency were expected to be less likely to report to campus authorities) were supported in vignette, but not actual reporting analyses. Students with greater adherence to beliefs in an inherently fair world were not less likely to report to campus authorities; thus, Hypothesis 14 was not supported.

Hypothesis 16 was partially supported, as males were less likely to report in binary vignette analyses, but not other examinations. Throughout analyses, Hypothesis 17 (i.e., students of minority ethnic groups were expected to be less likely to report to campus authorities) and Hypothesis 18 (i.e., students with higher estimations of problematic behavior on campus were hypothesized to be less likely to report to campus authorities) were not supported. Hypothesis 19 (i.e., greater trust in campus police was expected to correspond with increased reporting to campus authorities) was supported in vignette analyses, but not actual reporting reviews.

Discussion

The findings of the current study suggested reporting improvement efforts were important to effective campus violence prevention. College students were unwilling to report most (i.e., 52%) vignettes of pathway behavior, and most students who witnessed campus safety concerns did not report (i.e., 87%). Students who witnessed concerns were equally unlikely to inform authorities of witnessed intimate (i.e., 11% reported) and nonintimate concerns (i.e., 14% reported), and only 20% of students who saw assault and 19% of students who witnessed vandalism noted that they reported their observations. Thus, regardless of examined contextual and incidental characteristics, observed campus safety concerns were unlikely to be reported, and several dangerous situations appeared to exist outside the awareness of protective campus resources.

These authority notification issues were not limited to specific college student groups, as gender, ethnicity, and self-reported antisocial involvement did not significantly impact reporting decisions by witnesses of campus safety concerns. Thus, in the current study, campus reporting improvement efforts, with campus-wide focus, received further support (Banyard, Plante, & Moynihan, 2004; Potter, Moynihan, Stapleton, & Banyard, 2009; Sulkowski, 2011).

With broad focus, campus safety professionals could exhibit utilization of flexible, problem-solving approaches in managing campus safety concerns (Hollister et al., 2014; Scalora et al., 2010). Consistent with criminological and threat assessment findings (Bosick, Rennison, Gover, & Dodge, 2012; de Becker, 1998; Deisinger et al., 2014; Hollister et al., 2014; Pollack et al., 2008; Tarling & Morris, 2010), for observers of campus safety concerns, witnessing more types of concerning perpetrator behavior related to heightened reporting, which suggests students may initially ignore or informally manage a problematic individual (e.g., talking with the perpetrator or a friend; Hodges et al., 2015; Pershing, 2003) prior to seeking authority assistance. Thus, campus authorities could promote (i.e., through posters or social media; Bain et al., 2014) their use of informal nonconfrontational aid (e.g., informed referrals to supportive campus resources) for struggling students. This enhanced understanding of supportive campus resources would seem highly important to campus violence prevention, as assaultive perpetrators often exhibit forewarning behaviors to close associates (Pollack et al., 2008), and friend perpetrator-observer relationship corresponded with failure to report, in the current study.
Similarly, as police contact has related to subsequent unwillingness to report (Tarling & Morris, 2010; Thompson et al., 2007), including in the current study, campus authorities could enhance reporting through enacting safety processes perceived as fair, hassle-free, and legitimate (Tarling & Morris, 2010; Tyler, Sherman, Strang, Barnes, & Woods, 2007). For instance, campus safety professionals could provide reporters anonymity, general support, and safety planning expertise (Deisinger et al., 2014; Pollack et al., 2008; Scalora et al., 2010). Through poster campaigns and social media (Bain et al., 2014), campus authorities could display their positive efforts and referral abilities to generate broad perceptions of trust and fairness within the campus community, since, in the current study, observers with greater beliefs in a fair world were more likely to report witnessed campus safety concerns, after controlling across other influences.

Additionally, campus authorities could inform the campus community of concerning behaviors that signify violence risk (Hollister et al., 2014; Pollack et al., 2008). Similar to national victimization surveys and police report analyses (Bosick et al., 2012; Tarling & Morris, 2010), in the current study, personally-victimized students, in comparison to nonvictimized bystanders, were more likely to inform authorities of witnessed concerns. As many victims fail to report concerns (i.e., in the current study, 77% noted not reporting), instead seeking trusted third party assistance (Buhi et al., 2009; Thompson et al., 2007; Yamawaki et al., 2012), campus authorities could display improvements in campus safety and victim outcomes that follow bystander reporting. Campus safety efforts could generalize this understanding through referencing various types and contexts of concerning behavior (Bartling et al., 2010; Hollister et al., 2014).

In the current study, for witnessed campus safety concerns, heightened estimation of peer misconduct related to increased reporting, which could be associated with higher estimations relating to awareness of the likelihood and immediacy of dangerousness upon concerning behavior exposure (Hodges et al., 2015; Pollack et al., 2008). Therefore, campus reporting improvement efforts could incorporate displays of attention-grabbing statistics regarding the prevalence and preventability of general violence concerns. For instance, students could be advised observers of campus physical (80%) and/or sexual (60%) violence often indicated witnessing additional pathway behaviors from perpetrators (Hollister et al., 2015b).

Several campus reporting improvement recommendations can be formed from the current study; however, limitations should be considered. All variables involved self-reporting from participants, which can include impression management and biased recall of past events. Moreover, the SRDS included poor internal consistency, and incident characteristics (i.e., TCB, PerpA, PerpV, PerpW, PerpT, IPCont) are based on observers’ interpretations of these terms without standard definitions. Two scales (i.e., JWS, SNS) were generated for the current study without confirmatory factor analyses validity analyses. In general, all variables included mostly close-ended, multiple-choice questions that may not have captured additional unmeasured reporting factors. Regarding campus generalizability, the sample may not fully represent the collegiate community, as participants were from a psychology department student pool, and no faculty/staff was surveyed. Thus, with repetitive requests for additional research (Hoff, 2015; Hollister, 2015; Hollister & Scalora, 2015; Pollack et al., 2009; Scalora et al., 2010; Sulkowski, 2011), campus reporting improvement could be explored further, with diverse samples, various scales of reporting factors, and multimodal examinations, to address weaknesses in the current study and general field.

Nonetheless, this study clarified interactions between reporting influences in hypothetical and actual student responses to concerning behavior. Several underexplored suggestions for campus reporting enhancement were examined, and the current study displayed options most likely to generate increased authority notification. Throughout analyses, findings supported campus-wide exhibitions of the dangerousness of various pathway behaviors and fair, flexible authority problem solving for struggling students. Rather than utilizing several disparate attempts, centralized reporting improvement techniques emphasizing these specific, empirically backed facets could be enacted and programmatically reviewed.
References


**Appendix A**

**Questions for Participants that Indicated Being Exposed to Concerning Behavior on Campus**

1. What were the behaviors of the potentially dangerous individual? Please select all that apply.
   - Repeated unwanted verbal contacts through email or phone (1)
   - Repeated unwanted face-to-face contact (2)
   - Physical following (3)
   - Vandalism or property theft (4)
   - Surveillance or monitoring (5)
   - A threatening gesture (6)
   - A threatening statement (7)
   - Acquisition or interest in weapons (8)
   - Physical assault (9)
   - Sexual assault or touching (10)
   - Suicidal statements or attempts (11)
   - Other (12) ________________

2. What was your relationship with this potentially dangerous individual?
   - Previous or current romantic partner (1)
   - A friend’s previous or current romantic partner (2)
   - A friend (3)
   - An acquaintance (4)
   - Stranger (5)
   - University faculty, administration, or staff (6)
   - Other (7) ________________

3. What was your relationship to the victim or victims? Please select all that apply.
   - I was the victim (1)
   - Previous or current romantic partner (2)
   - A friend’s previous or current or romantic partner (3)
   - A friend (4)
   - An acquaintance (5)
   - Stranger (6)
   - University faculty, administration, or staff (7)
   - An organization I was involved in (8)
   - The university I attend (9)
   - Other (10) ________________

4. What was the context of these behaviors? Please select all that apply.
   - An individual romantically/sexually obsessed with someone (1)
   - Related to an intimate relationship (2)
   - Concerns about grades (3)
   - A suspension or expulsion (4)
Workplace dismissal (5)
Draw attention to self or issue (6)
Mental health issues (7)
Revenge for perceived wronging (8)
Motivated by bias (such as racism, sexism, homophobia, etc.) (9)
Other (10) ____________________

(5) What action if any did you take in response to observing the behavior? Please select all that apply.
None (1)
Changed the victim’s personal security (such as changing locks or changing phone numbers (2)
Talked with the potentially dangerous individual (3)
Had a third party, beside university administration, faculty, or police, talk to the individual (4)
Talked with a friend of the potentially dangerous individual (5)
Notified the university administration or a university faculty member (6)
Notified police (7)
Collected or saved evidence (8)
Consulted a trusted individual (9)
Other (10) ____________________

Appendix B
Social Norms Scale

(1) What percentage of students do you think have been a victim of stalking on campus?
0–10% (1)
10–20% (2)
20–30% (3)
30–40% (4)
40–50% (5)
50–60% (6)
60–70% (7)
70–80% (8)
80–90% (9)
90–100% (10)

(2) What percentage of students do you think has ever felt unsafe because of the concerning behavior of another person, such as an exboyfriend/girlfriend, friend, acquaintance, stranger, etc.?
0–10% (1)
10–20% (2)
20–30% (3)
30–40% (4)
40–50% (5)
50–60% (6)
60–70% (7)
70–80% (8)
80–90% (9)
90–100% (10)

(3) What percentage of students do you think has ever been physically assaulted on campus?
0–10% (1)
10–20% (2)
20–30% (3)
30–40% (4)  
40–50% (5)  
50–60% (6)  
60–70% (7)  
70–80% (8)  
80–90% (9)  
90–100% (10)

(4) What percentage of students do you think has ever been sexually assaulted on camp

0–10% (1)  
10–20% (2)  
20–30% (3)  
30–40% (4)  
40–50% (5)  
50–60% (6)  
60–70% (7)  
70–80% (8)  
80–90% (9)  
90–100% (10)

Appendix C
Just World Scale

(1) Generally speaking, I would say that most people can be trusted.
Not at all true (1)  
A little true (2)  
Moderately true (3)  
Very true (4)  
Completely true (5)

(2) I believe that people are basically moral.
Not at all true (1)  
A little true (2)  
Moderately true (3)  
Very true (4)  
Completely true (5)

(3) I believe in human goodness.
Not at all true (1)  
A little true (2)  
Moderately true (3)  
Very true (4)  
Completely true (5)

(4) I believe most people try to be fair.
Not at all true (1)  
A little true (2)  
Moderately true (3)  
Very true (4)  
Completely true (5)
(5) I trust others.
Not at all true (1)
A little true (2)
Moderately true (3)
Very true (4)
Completely true (5)

(6) I would say that most of the time people try to be helpful.
Not at all true (1)
A little true (2)
Moderately true (3)
Very true (4)
Completely true (5)

(7) I believe that others have good intentions.
Not at all true (1)
A little true (2)
Moderately true (3)
Very true (4)
Completely true (5)

(8) I trust what people say.
Not at all true (1)
A little true (2)
Moderately true (3)
Very true (4)
Completely true (5)