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2020

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### Recommended Citation

Jouriles, Ernest N.; Krauss, Alison; Sargent, Kelli; Grych, John; Cascardi, Michele; O'Leary, K. Daniel; Murphy, Christina; Nguyen, Jamie; McDonald, Renee; and Rosenfield, David, "College Students' Feelings of Campus Connectedness, Party Safety Behavior and Intervening to Prevent Sexual Assault and Intimate Partner Violence" (2020). *Psychology Faculty Research and Publications*. 473.

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# College Students' Feelings of Campus Connectedness, Party Safety Behavior and Intervening to Prevent Sexual Assault and Intimate Partner Violence

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**Acknowledgement:** This research was supported by grants from the Eunice Kennedy Shriver National Institutes of Child Health and Human Development, R21 HD075585 and R21 HD085063. The content of this article is solely the responsibility of the authors and does not represent the official views of the sponsor.

## Abstract

**Objective:** This research examines associations between college students’ feelings of campus connectedness and two types of prosocial bystander intervention behavior to prevent sexual assault: party safety behavior and intervening in high-risk situations. **Method:** Short-term longitudinal associations between college students’ feelings of campus connectedness and bystander intervention behavior were examined in three studies. Study 1 ( $n = 213$ ) examined these associations over a 1-month period. Study 2 ( $n = 557$ ) was designed to replicate findings from Study 1 in a larger, more diverse sample. Study 3 ( $n = 730$ ) was designed to replicate and extend findings with party safety behavior from Studies 1 and 2 over a 2-month period. Study 3 also examined whether frequency of party attendance and feelings of responsibility might help explain the association between campus connectedness and party safety behavior. In each of the three studies, students were recruited from multiple universities; students reported on feelings of campus connectedness at baseline and on bystander behavior at baseline and follow-up assessments. **Results:** In each study, students’ feelings of campus connectedness predicted party safety behavior at follow-up, controlling for party safety behavior at baseline. Feelings of campus connectedness were not associated with intervening in high-risk situations. In Study 3, frequency of party attendance and feelings of responsibility did not explain the association between campus connectedness and party safety behavior. **Conclusion:** Feelings of campus connectedness may be important to consider in campus efforts to prevent sexual assault.

## Keywords:

bystander intervention behavior, party safety, college students, sexual assault

Sexual assault and intimate partner violence on college campuses is a prevalent public health concern (Fedina, Holmes, & Backes, 2018). To help address this problem, the American College Health Association (2016) recommends that colleges implement bystander training programs, which are designed to increase prosocial actions intended to prevent sexual assault and intimate partner violence (referred to in this article as bystander intervention behavior). Conceptual frameworks for bystander intervention behavior describe multiple types of bystander behavior, which can occur before, during, or after a violent act (McMahon & Banyard, 2012). The prototypical type of bystander intervention behavior involves intervening in risky situations, either immediately prior to or during an assault (e.g., “I stopped a friend who was escorting an intoxicated person to a bedroom with the intention of having sex”). Other types are more preventative in nature and can occur well

before a potential assault, such as party safety behavior (e.g., “I talked with a friend about going to parties together, staying together, and leaving together”). The multidimensional nature of bystander intervention behavior is reflected in comprehensive measures of bystander behavior (Banyard, Moynihan, Cares, & Warner, 2014; McMahon et al., 2014) and in the content of bystander training programs (Banyard, Moynihan, & Plante, 2007; Jouriles, Kleinsasser, Rosenfield, & McDonald, 2016). Meta-analytic reviews indicate that bystander training programs positively influence college students’ self-reported bystander intervention behavior, although effects tend to be small and short-lived, and their influence on specific types of bystander intervention behavior (intervening in risky situations, party safety behavior) is unclear (Jouriles, Krauss, Vu, Banyard, & McDonald, 2018; Katz & Moore, 2013; Kettrey & Marx, 2019).

Most of the empirically supported bystander training programs (Banyard et al., 2007; Jouriles, McDonald, et al., 2016) attempt to increase students’ bystander intervention behavior by targeting cognitions (e.g., efficacy, responsibility) suggested by Latané and Darley’s (1970) model. Identifying additional variables related to students’ bystander intervention behavior might improve bystander training programs by expanding intervention targets (Banyard, Rizzo, Bencosme, Cares, & Moynihan, 2018; McMahon, 2015). The present research considers an overlooked and potentially important correlate of students’ bystander intervention behavior: students’ feelings of campus connectedness. Specifically, the present research examines short-term longitudinal associations between college students’ feelings of campus connectedness and two different types of bystander intervention behavior: intervening in risky situations and party safety behavior.

Campus connectedness is conceived as a sense of belonging to one’s university and fitting in with other students (Banyard, 2008; Sulkowski, 2011). Developmentally, a sense of belonging is especially salient to college-aged individuals (Arnett, 2000; Pittman & Richmond, 2008), whose personal identity, autonomy, and interpersonal intimacy evolve from late adolescence into emerging adulthood (Zarrett & Eccles, 2006). Theoretically, their perceptions of themselves as part of a collective (i.e., campus community) has potentially important implications for bystander intervention behavior. According to self-categorization theory, people’s social identity is defined, in part, by the groups to which they feel most connected (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). Self-categorization theory posits that students will take on their group’s needs, goals, and motives and act to help members of their group when their social identity is activated (Levine, Cassidy, Brazier, & Reicher, 2002). If the campus community is conceptualized as an important group to which students feel they belong, and a goal or motive of the institution is for students to be safe, a strong sense of campus connectedness might elevate students’ willingness to protect their fellow students and as a result prompt bystander intervention behavior to prevent violence on campus (Banyard, 2011; McMahon, 2015). Indeed, feelings of “fitting in” with the campus community may encourage students to act in ways that protect the university’s image as a safe and appealing school to attend.

Such theory is consistent with findings that bystanders are more likely to help victims perceived as in-group members, or people they feel connected to, than to out-group members, or people they perceive as different (Levine et al., 2002; Levine, Prosser, Evans, & Reicher, 2005). It is also consistent with findings from a handful of cross-sectional studies indicating that a greater sense of community is associated with bystander intervention behavior among college students and young adults (Banyard, 2008; Bennett, Banyard, & Garnhart, 2014; Edwards, Mattingly, Dixon, & Banyard, 2014). In addition, campus connectedness and bystander intervention behavior are related in both cross-sectional (Chapman, Buckley, Reveruzzi, & Sheehan, 2014; Evans & Smokowski, 2015; Mulvey et al., 2019) and longitudinal (Luengo Kanacri et al., 2017) studies of bullying prevention among high school students. However, longitudinal research linking campus connectedness to different types of bystander intervention behavior among college students is sparse.

Study 1 provides an initial test of the prospective association of campus connectedness with two types of bystander intervention behavior. Specifically, feelings of campus connectedness were hypothesized to predict

(a) intervening in risky situations and (b) party safety behavior. Because feelings of campus connectedness were expected to have an immediate effect on behavior, the associations were examined over a 1-month period. In Study 1, we also explored whether student sex, race, or ethnicity moderated the hypothesized relations.

## Study 1

### Method

#### Participants

Participants ( $n = 213$ ) were recruited from undergraduate psychology classes at two midsized, private universities in the United States. One was located in the south (S;  $n = 69$ ) and the other in the northern midwest (MW;  $n = 144$ ). The sample was predominantly female ( $n = 172$ ; 80.8%) and White ( $n = 179$ ; 84.0%), but it also included Asian ( $n = 11$ ; 5.2%), Black ( $n = 9$ ; 4.2%), and bi- or multiracial ( $n = 9$ ; 4.2%) students, as well as students who did not endorse any of these categories ( $n = 5$ ; 2.3%). In a separate question about ethnicity, 21 participants (9.9%) identified as Hispanic. Participants' average age was 19.14 years ( $SD = 1.81$ ). They received extra credit in a psychology course for their participation. Of the 213 who volunteered to participate, four withdrew before the follow-up assessment, resulting in a sample of 209 with complete data.

#### Procedure

Data were collected in the context of a sexual assault prevention study conducted at both universities, in which students had participated in either a bystander training program or a control condition (Jouriles, McDonald, et al., 2016). Institutional review boards at both universities approved all procedures, and informed consent was obtained from all participants. Students were told during the consent process that participation involved a visit to the lab to complete questionnaires on a variety of topics (baseline) and an e-mail with a link to an online survey approximately 1 month later (1-month follow-up). All measures were administered using the Qualtrics survey software. The number of days between the baseline and 1-month follow-up assessments was  $M = 30.4$  ( $SD = 4.79$ ).

#### Measures

##### ***Campus connectedness***

Participants reported on their feelings of campus connectedness at baseline using three items from the Campus Climate Validation Study School Connectedness subscale (Krebs, Lindquist, Berzofsky, Shook-Sa, & Peterson, 2016). They rated the extent to which they agreed with each item on a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*). Items included the following: *I feel close to people on campus*; *I feel like I am part of the university community*; and *I feel like I "fit in" at this university*. Responses to items were averaged. Coefficient  $\alpha$  at baseline for the sample was .87.

Theory and previous research suggest that campus connectedness is linked to depressive symptoms (Pittman & Richmond, 2008). As a test of the criterion validity of our measure of campus connectedness, we found a concurrent association with depressive symptoms in an independent sample of 947 first-year students from S,  $r = -.48$ ,  $p < .001$ .

##### ***Party safety behavior***

At both assessments, students reported on party safety behavior in the past month on the Party Safety (eight items) subscale from the 49-item Bystander Behaviors (for Friends) Scale (BBS; Banyard et al., 2014). Sample items include the following: *I talked with a friend about going to parties together and staying together and leaving together*, *I made sure a friend didn't leave an intoxicated friend behind at a party*, and *If a friend had too much to drink, I asked them if they need to be walked home from the party*. "Yes" responses were counted to derive a total score. The coefficient  $\alpha$  for the sample was .88 at baseline and .92 at follow-up. Party Safety

subscale scores relate to efficacy and a sense of responsibility for engaging in bystander intervention behavior (Banyard et al., 2014).

### ***Intervening in risky situations***

Students completed the Risky Situations (19 items) subscale from the 49-item BBS (Banyard et al., 2014) at both assessments, reporting on their bystander intervention behavior in the past month. Sample items include the following: *If I saw a friend taking a very intoxicated person up to their room, I said something and asked what they were doing; I supported a friend who wanted to report sexual assault or intimate partner abuse that happened to them even if others could get in trouble; and I heard a friend talking about forcing someone to have sex with them, spoke up against it, and expressed concern for the person who was forced.* “Yes” responses were counted to derive a total score. The coefficient  $\alpha$  for the sample was .92 at baseline and .94 at follow-up. Risky Situations subscale scores relate to efficacy and a sense of responsibility for engaging in bystander intervention behavior (Banyard et al., 2014).

### ***Data analysis plan and power***

To examine prospective associations among the variables, we used ordinary least squares (OLS) regression. We report squared semipartial correlations ( $sr^2$ ) for each predictor as an index of the unique variance explained by a given variable over and above all other variables in the model. The  $sr^2$  is equal to the  $R^2$  change obtained when adding the variable as the last step in a hierarchical regression analysis (Tabachnick & Fidell, 2019). We examined two models in Study 1: one predicting party safety behavior and one predicting intervening in risky situations. Residuals of the party safety behavior model evidenced normality in a normal P-P plot and limited skewness ( $-0.64$ ). However, residuals of the intervening in risky situations model were skewed ( $1.56$ ). We therefore log-transformed risky situations scores (skewness =  $.17$ ; results for raw and transformed variables did not differ, and results for transformed variables are described in the following text). In addition, scatter plots of the residuals and predicted values indicated equal error variance across predicted values, suggesting homoscedasticity. Finally, variance inflation factor (VIF) values for all predictors in both models were less than 2, indicating no multicollinearity. Thus, our data suggested we did not violate assumptions of OLS regression (Tabachnick & Fidell, 2019). We used robust standard errors in both models to ensure unbiased results.

We conducted exploratory analyses to examine whether student sex, race, or ethnicity moderated the relation of campus connectedness to party safety behavior or intervening in risky situations. We added each moderator and its interaction with campus connectedness to the models mentioned earlier, performing separate analyses for each of the three moderators and each of the two outcomes, using the Benjamini-Hochberg procedure to adjust the  $p$  values for conducting multiple tests. If there was no interaction between campus connectedness and a given moderator, the interaction was dropped, and the model recomputed with only the main effect of that moderator in the analysis.

Based on findings from prior cross-sectional research (Bennett et al., 2014) and given that we were using a conservative prospective design, we expected that the relations between campus connectedness and bystander intervention behavior would be small-to-medium in magnitude. To evaluate power for our primary hypotheses, we conducted a power analysis using G\*Power (Faul, Erdfelder, Lang, & Buchner, 2007). With four predictor variables (campus connectedness, baseline bystander intervention behavior, intervention condition, and university), alpha set at .05, and a sample size of 209, power exceeded .89 to detect a small- to medium-sized effect ( $f^2 = .05$ ).

## **Results**

Means, standard deviations, and correlations among the study variables are reported in Table 1. We first examined the prospective association between campus connectedness and party safety behavior, with baseline party safety behavior, intervention condition (intervention vs. control), and university (S vs. MW) as control

variables (Table 2). A greater sense of campus connectedness at baseline predicted more party safety behavior 1 month later, controlling for party safety behavior at baseline,  $b = 0.47$ ,  $SE = 0.20$ ,  $p = .02$ ,  $sr^2 = .02$ . Party safety behavior at baseline predicted party safety behavior at follow-up,  $b = 0.83$ ,  $SE = 0.05$ ,  $p < .001$ ,  $sr^2 = .51$ . Neither intervention condition nor university related to party safety behavior at follow-up.

Table 1. Means, Standard Deviations, and Correlations Between Study Variables (Study 1)

Variable	1	2	3	4	<i>M (SD)</i>	Range
1. Party safety behavior at $t_1$	—				5.39 (2.71)	0–8
2. Party safety behavior at $t_2$	.75**	—			4.94 (3.09)	0–8
3. Intervening in risky situations at $t_1$	.37**	.27**	—		4.16 (4.97)	0–19
4. Intervening in risky situations at $t_2$	.28**	.35**	.29**	—	3.62 (5.13)	0–19
5. Campus connectedness	.18**	.26**	.07	-.01	3.80 (0.87)	0–5

Note.  $t_1$  = baseline;  $t_2$  = follow-up. All variables were scored such that higher scores reflect greater levels of the construct.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 2. Prospective Associations of Campus Connectedness With Party Safety Behavior and Intervening in Risky Situations (Study 1)

Variable	Party safety		Risky situations			
	$\beta$	<i>B (SE)</i>	$sr^2$	$\beta$	<i>B (SE)</i>	$sr^2$
Intervention condition	-.02	-0.15 (0.28)	<.01	.10	0.21 (0.13)	.01
University	-.03	-0.19 (0.39)	<.01	-.07	-0.15 (0.13)	<.01
Campus connectedness	.13*	0.47 (0.20)	.02	-.04	-0.05(0.07)	<.01
Baseline party safety	.73***	0.83 (0.05)	.51			
Baseline risky situations				.42***	0.46 (0.07)	.17

Note. Intervention condition was coded as follows: 0 = control, 1 = intervention; University was coded as follows: 0 = south, 1 = northern midwest.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

In the parallel analysis for intervening in risky situations, campus connectedness did not predict intervening in risky situations at follow-up,  $b = -0.05$ ,  $SE = 0.07$ ,  $p = .47$ ,  $sr^2 < .01$ , nor did intervention condition or university. Intervening in risky situations at baseline did predict intervening in risky situations at follow-up,  $b = 0.46$ ,  $SE = 0.07$ ,  $p < .001$ ,  $sr^2 = .17$ .

For our exploratory analyses, race was coded into two categories (White vs. people of color), as White students comprised 85% of the sample, and there were no more than 11 participants (5% of the sample) from any other individual racial group. Neither sex nor race moderated the association between campus connectedness and party safety behavior, or campus connectedness and intervening in risky situations. However, sex predicted party safety behavior, with women reporting more party safety behavior on average, raw  $M = 5.26$ ,  $SD = 2.98$ , than men, raw  $M = 3.56$ ,  $SD = 3.24$ ;  $b = 1.02$ ,  $SE = .38$ ,  $p = .009$ ,  $sr^2 < .02$ .

## Discussion

Study 1 provides evidence that student feelings of campus connectedness are associated prospectively with party safety behavior, but not with intervening in risky situations. Notably, the association for party safety behavior emerged despite a strong association between baseline and follow-up party



safety behavior. The longitudinal relation between campus connectedness and party safety behavior is consistent with theory suggesting that campus connectedness can encourage prosocial behavior (Banyard, 2011; McMahon, 2015; Turner et al., 1987). It also conforms with cross-sectional findings indicating that a greater sense of campus community is linked to college students' bystander intervention behavior (Banyard, 2008; Bennett et al., 2014; Edwards et al., 2014). Moreover, it adds to a nascent line of bystander research extending our understanding of predictors of bystander intervention behavior (Banyard et al., 2018). However, replication of this association in a more diverse sample is needed to boost confidence in the findings.

## Study 2

In Study 2, we aimed to replicate the findings in Study 1 with a sample recruited from four universities. We hypothesized again that campus connectedness would be positively related to party safety behavior. We did not hypothesize an association between campus connectedness and intervening in risky situations, but we examined the association to see if the absence of that association found in Study 1 would be replicated. We again explored student sex, race, and ethnicity as possible moderators.

## Method

### Participants

Undergraduate students from four universities were recruited. Campuses included the two private universities from Study 1 (S, MW) and two public universities in the northeast (NE1, NE2). No participants from Study 1 were included in the Study 2 sample. Participants were recruited from undergraduate psychology courses and received extra credit for participation. The total sample ( $n = 557$ ) was predominantly female ( $n = 431$ ; 77.4%), and racially and ethnically diverse; 59.6% were White ( $n = 332$ ), 22.6% Asian ( $n = 126$ ), 7.9% Black ( $n = 44$ ), 2.7% bi- or multiracial ( $n = 15$ ), 0.2% American Indian/Alaska Native ( $n = 1$ ), 0.4% Native Hawaiian/Pacific Islander ( $n = 2$ ), and 6.3% were another race ( $n = 35$ ). Seventy-one (12.7%) indicated they were Hispanic. On average, participants were 20.15 ( $SD = 2.98$ ) years old.

### Procedure

Data were collected as part of a sexual assault prevention study across the participating universities; students participated in either a bystander training program or a control condition (Jouriles et al., 2017). Institutional review boards at each of the universities approved all procedures, and informed consent was obtained from all participants. Participants completed baseline questionnaires in a research lab and were emailed a link to complete a 1-month follow-up assessment approximately 30 days later ( $M_{days} = 30.54$ ,  $SD = 6.24$ ). Only 26 students did not complete the 1-month follow-up, resulting in 531 students (95.3% retention) with complete data. Baseline sample size and retention rate at each of the universities were as follows: MW  $n = 126$ , 95.2%; S  $n = 138$ , 96.4%; NE1  $n = 208$ , 94.2%; NE2  $n = 85$ , 96.5%.

### Measures

Students completed the same measures as in Study 1. In the Study 2 sample, for campus connectedness,  $\alpha = .90$  at baseline. For party safety,  $\alpha = .91$  at baseline and  $\alpha = .92$  at follow-up. For risky situations,  $\alpha = .93$  at baseline and  $\alpha = .95$  at follow-up.

## Data analysis plan and power

As in Study 1, the assumptions of OLS regression were met for Study 2. Specifically, residuals from the model predicting party safety behavior evidenced normality in a normal P-P plot and adequate skewness (-0.18). Residuals from the model predicting intervening in risky situations demonstrated skewness (1.41); thus, risky situation scores were log transformed (skewness = .10). Results for the transformed and raw variables did not differ (results using the log transformation are described in the following text). Scatter plots of residuals and predicted values from both models demonstrated homoscedasticity, and VIF values for all predictors in both models were less than two, indicating no multicollinearity. We again utilized robust standard errors to ensure unbiased results. We report the  $sr^2$  to index the unique variance explained by each predictor, over and above the others. Using the same procedures as in Study 1, we also explored whether sex, race, or ethnicity moderated the effect of campus connectedness on either party safety behavior or intervening in risky situations.

Based on results from Study 1, we anticipated a small- to-medium-sized relation between campus connectedness and party safety behavior. A power analysis using G\*Power (Faul et al., 2007) indicated that with six predictor variables (campus connectedness, baseline party safety behavior, intervention condition, and dummy codes for three of the four universities), with an  $\alpha$  set at .05, and our sample size of 557, power exceeded .99 to detect a small effect ( $f^2 = .05$ ).

## Results

Means, standard deviations, and correlations among the study variables are reported in Table 3. We examined the prospective association of campus connectedness at baseline with party safety behavior at follow-up, controlling for baseline party safety behavior, intervention condition, and university (dummy coded with S as the reference group; Table 4). Results indicated that campus connectedness predicted party safety behavior at follow-up,  $b = 0.25$ ,  $SE = 0.12$ ,  $p = .03$ ,  $sr^2 = .006$ . Party safety behavior at baseline and follow-up were associated,  $b = 0.64$ ,  $SE = 0.04$ ,  $p < .001$ ,  $sr^2 = .32$ . Although intervention condition was not related to party safety behavior at follow-up, university was. Students at S reported greater party safety behavior than students at either NE1 or NE2.

Table 3. Means, Standard Deviations, and Correlations Among Study Variables (Study 2)

Variable	1	2	3	4	<i>M (SD)</i>	Range
1. Party safety behavior at $t_1$	—				4.76 (2.99)	0–8
2. Party safety behavior at $t_2$	.63**	—			4.06 (3.20)	0–8
3. Intervening in risky situations at $t_1$	.33**	.25**	—		4.12 (5.18)	0–19
4. Intervening in risky situations at $t_2$	.23**	.43**	.50**	—	3.66 (5.46)	0–19
5. Campus connectedness at $t_1$	.25**	.26**	-.01	.01	3.41 (1.04)	0–5

Note.  $t_1$  = baseline,  $t_2$  = follow-up. Measures were scored so that higher scores reflect greater levels of the construct.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 4. Prospective Associations of Campus Connectedness With Party Safety Behavior and Intervening in Risky Situations (Study 2)

	Party safety		Risky situations			
Variable	$\beta$	<i>B (SE)</i>	$sr^2$	$\beta$	<i>B (SE)</i>	$sr^2$
Intervention condition	.002	0.02 (0.22)	<.01	.04	0.08 (0.08)	<.01

University (MW)	-.03	-0.24 (0.28)	<.01	-.05	-0.12 (0.11)	<.01
University (NE <sub>1</sub> )	-.10*	-0.67 (0.31)	<.01	-.01	-0.01 (0.11)	<.01
University (NE <sub>2</sub> )	-.13**	-1.12 (0.37)	.01	-.04	-0.12 (0.13)	<.01
Campus connectedness	.08*	0.25 (0.12)	.01	.04	0.03 (0.04)	<.01
Baseline party safety	.59***	0.64 (0.04)	.32	—		
Baseline risky situations				.52***	0.54 (0.04)	.26

*Note.* MW midwest; NE northeast. Intervention condition was coded as follows: 0 = control, 1 = intervention. University was dummy-coded with south as the reference variable.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

We similarly analyzed the prospective association between campus connectedness and intervening in risky situations, controlling for baseline intervening in risky situations, intervention condition, and university. As in Study 1, baseline campus connectedness did not predict intervening in risky situations at follow-up,  $b = 0.03$ ,  $SE = 0.04$ ,  $p = .47$ ,  $sr^2 < .01$ . Intervening in risky situations at baseline was associated with intervening in risky situations at follow-up,  $b = 0.54$ ,  $SE = 0.04$ ,  $p < .001$ ,  $sr^2 = .006$ , but neither intervention condition nor university were.

For the exploratory moderator analyses, the diversity of the Study 2 sample allowed dummy-coding race into four categories, White, Black, Asian, and other people of color. Results indicated that sex, race, or ethnicity did not moderate the prospective association between campus connectedness and party safety behavior, or between campus connectedness and intervening in risky situations. However, race was associated with intervening in risky situations, with Black students reporting intervening in risky situations at higher levels, raw  $M = 5.50$ ,  $SD = 6.81$ , than White students, raw  $M = 2.85$ ,  $SD = 4.56$ ;  $b = .41$ ,  $SE = .15$ ,  $p = .006$ ,  $sr^2 < .01$ .

## Discussion

As in Study 1, feelings of campus connectedness prospectively predicted party safety behavior, but not intervening in risky situations. Thus, the pattern of findings from Study 1 was replicated in a larger, more diverse sample. However, neither Study 1 nor Study 2 was designed to explain the association between feelings of campus connectedness and party safety behavior. In Study 3, we turn to examine possible explanations for this association.

## Study 3

A potentially important explanation for the relation between campus connectedness and party safety behavior is how frequently a student attends parties. Students who attend parties frequently may feel more connected to their campus and may engage in more party safety behavior because they have more opportunities to do so. Another possible explanation involves the construct of responsibility or feeling obligated to do something to help protect others (Banyard, 2015). From the perspective of self-categorization theory (Turner et al., 1987), students who feel connected to their campus may be more inclined to assume responsibility for the welfare of other students, and they may view party safety behavior as a collective responsibility (e.g., “We go to parties in groups and we keep an eye out for each other”). In Study 3, we hypothesized that the association between campus connectedness and party safety behavior would emerge, even after accounting for frequency of party attendance, and feelings of responsibility will mediate the association between campus connectedness and party safety behavior. We again explored whether student sex, race, or ethnicity moderated the relation between campus connectedness and party safety behavior.

## Method

### Participants

Participants were first-year undergraduate students from three universities. Campuses included two universities that participated in the earlier studies (MW and S) and a new public university in the northeast (NE3). No participants from Studies 1 or 2 participated in Study 3. Students received course credit (MW and S) or a \$10 gift card (NE3) for participation. The sample ( $n = 730$ ) was predominantly female ( $n = 461$ ; 63.2%). The sample was racially and ethnically diverse, including 68.8% White ( $n = 502$ ), 10.0% Asian ( $n = 73$ ), 9.0% Black ( $n = 66$ ), 6.3% “more than one race” ( $n = 46$ ), 0.4% American Indian/Alaska Native students ( $n = 3$ ), and 0.5% Native Hawaiian/Pacific Islander students ( $n = 4$ ). An additional 4.4% responded with “unknown or not listed” ( $n = 32$ ), four did not report their race; 121 (16.6%) indicated that they were Hispanic. Average age was 18.15 years ( $SD = 0.67$ ).

### Procedure

Data were collected as part of a sexual assault prevention study across the participating universities; students participated in either a bystander training program or a control condition. Institutional review boards at each of the universities approved all procedures, and informed consent was obtained from all participants. Baseline questionnaires were completed in a monitored research lab, dormitory, or university common space. After completing the baseline assessment, participants were e-mailed a link to a follow-up survey, which they were asked to complete within 1 week ( $M_{days} = 3.38$ ,  $SD = .63$ ). Of the 730 students at baseline, 59 did not complete the 1-week assessment (91.9% retention). A total of 2 months after baseline, students were invited to return to the lab to complete follow-up questionnaires ( $M_{days} = 56.32$ ,  $SD = 9.03$ ). Of the 730 students at baseline, 66 did not return for the 2-month follow-up (90.9% retention), resulting in a sample of  $n = 664$  with complete data. Baseline sample sizes and retention rates for the universities were as follows: MW  $n = 263$ , 86.4%; S  $n = 265$ , 97.4%; NE3  $n = 201$ , 88.6%.

### Measures

Students completed the same measures of campus connectedness and party safety behavior as in Studies 1 and 2. Party safety items were presented with a modified response format, but items were scored as in Studies 1 and 2 (1 = *yes, the participant reported intervening*, 0 = *no, the participant did not intervene*). In the Study 3 sample, for campus connectedness,  $\alpha = .87$  at baseline; for party safety behavior,  $\alpha = .83$  at baseline, and  $\alpha = .86$  at 2-month follow-up.

At baseline, students were asked, “How frequently do you go to parties?” Responses were recorded on a 4-point scale from 1 (*rarely*) to 4 (*more than once a week*). Responses on this item are stable over a 1-month period,  $r = .88$ ,  $p < .01$ . At the 1-week follow-up, students completed a four-item modified version of the Failure to Take Responsibility Scale (Burn, 2009), indicating their agreement with four statements (e.g., *It is my responsibility to protect a friend from being taken advantage of sexually, whether or not the friend is intoxicated*). Responses were rated on a 7-point scale ranging from 0 (*strongly disagree*) to 6 (*strongly agree*). Item scores were summed, and total scores ranged from 0 to 24. Coefficient  $\alpha$  for the scale was .94. Responsibility for intervening has been shown to be positively related to intent to engage in bystander behavior (Burn, 2009).

### Data analysis plan and power

As with Studies 1 and 2, we utilized OLS regression after ensuring we did not violate assumptions of the analysis. Residuals evidenced normality in both a normal P-P plot and in skewness ( $-0.18$ ). A scatter plot of residuals and predicted values indicated homoscedasticity, and all VIF values were less than 2, indicating no multicollinearity. We utilized robust estimators to ensure unbiased results. We again report the  $sr^2$  to index the amount of variance explained by each variable over and above other variables in the model.

To test the hypothesis that feelings of responsibility mediate the association between campus connectedness and party safety behavior, we first calculated the “a” path in the mediation model (the effect of campus connectedness on responsibility). This “a” path was the regression coefficient for campus connectedness at baseline predicting feelings of responsibility at the 1-week follow-up, controlling for university, intervention condition, and baseline party frequency. The “b” path was the effect of responsibility at the 1-week follow-up predicting party safety behavior at 2-month follow-up, controlling for baseline campus connectedness and party safety behavior, and the same control variables used in the regression for the “a” path. The statistical significance of the mediated pathway was tested using the distribution of products test (Tofighi & MacKinnon, 2011). Following the same procedures as in Studies 1 and 2, we also explored whether sex, race, or ethnicity moderated the effect of campus connectedness on party safety behavior, examining each moderator and each outcome separately, and dropping nonsignificant interactions.

Based on the previous results, we expected a small- to medium-sized relation between campus connectedness and party safety behavior when accounting for frequency of party attendance. A power analysis using G\*Power (Faul et al., 2007) indicated that with six predictors (campus connectedness, baseline party safety behavior, party frequency, intervention condition, and dummy codes for two of the three universities), with  $\alpha$  set at .05, and our sample size of 730, power exceeded .99 to detect a small effect ( $f^2 = .05$ ). For the mediation analysis, a Monte Carlo study by Fritz and MacKinnon (2007) indicated that we would have greater than .80 power to detect mediation if both the “a” and the “b” paths reflect a small effect (or greater).

## Results

Means, standard deviations, and correlations among the study variables are presented in Table 5. We first examined the prospective association between campus connectedness and party safety behavior, accounting for party frequency. To do this, we included party frequency with our other control variables (baseline party safety behavior, intervention condition, and dummy codes for university) in our regression analysis (Table 6). When controlling for baseline party safety behavior and party frequency, campus connectedness predicted party safety behavior at the 2-month follow-up,  $b = 0.26$ ,  $SE = 0.13$ ,  $p = .04$ ,  $sr^2 = .003$ , in the expected direction. Similar to the findings in Study 2, university was related to party safety behavior at follow-up, but intervention condition was not. Students at S reported greater party safety behavior than students at NE3.

Table 5. Means, Standard Deviations, and Correlations Among Study Variables (Study 3)

Variable	1	2	3	4	<i>M (SD)</i>	Range
1. Party safety behavior at $t_1$	—				4.49 (2.58)	0–8
2. Party safety behavior at $t_2$	.65**	—			4.44 (2.77)	0–8
3. Campus connectedness	.11**	.16**	—		2.10 (0.67)	0–5
4. Party frequency	.50**	.47**	.19**	—	1.18 (1.15)	1–4
5. Responsibility	.04	.08*	-.05	-.04	20.34 (4.43)	0–24

Note.  $t_1$  = baseline,  $t_2$  = follow-up. Measures were scored so that higher scores reflect greater levels of the construct.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 6. Prospective Associations of Campus Connectedness With Party Safety Behavior (Study 3)

Variable	$\beta$	<i>B (SE)</i>	$sr^2$
Intervention condition	.03	0.18 (0.16)	<.01
University (MW)	.02	0.10 (0.17)	<.01
University (NE <sub>3</sub> )	-.14***	-0.89 (0.23)	.01
Baseline party safety	.56***	0.60 (0.04)	.23
Party frequency	.12*	0.30 (0.09)	.01
Campus connectedness	.06*	0.26 (0.13)	.01

*Note.* MW = midwest; NE = northeast. Intervention condition was coded as follows: 0 = control, 1 = intervention; university was coded as follows: 0 = south, 1 = all others.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

#### Mediation analysis

Baseline campus connectedness was not related to feelings of responsibility 1 week later (the “a” path in the mediation analysis), but feelings of responsibility were positively related to party safety behavior at the 2-month follow-up,  $b = 0.05$ ,  $SE = 0.02$ ,  $p = .039$ ,  $sr^2 < .01$  (the “b” path in the mediation analysis). Thus, although feelings of responsibility did not mediate the effect of campus connectedness on party safety behavior, they did prospectively predict party safety behavior.

#### Exploratory analyses

We again dummy-coded race into four categories (White, Black, Asian, and other people of color). Sex, race, or ethnicity did not moderate the association between baseline campus connectedness and later party safety behavior. However, as in Study 1, there was a main effect of sex, with women reporting engaging in more party safety behavior, raw  $M = 4.73$ ,  $SD = 2.76$ , than men, raw  $M = 3.92$ ,  $SD = 2.74$ ,  $b = 0.54$ ,  $SE = 0.16$ ,  $p = .001$ ,  $sr^2 < .01$ .

## General Discussion

These studies document a prospective relation between college students’ feelings of campus connectedness and party safety behavior. Specifically, students’ feelings of belonging and fitting in with their university community predicted greater use of strategies for keeping themselves and their friends safe during parties in three separate samples of college students. Moreover, this relation emerged after accounting for frequency of party attendance in Study 3, and despite a strong relation between baseline and follow-up party safety behavior in all of the samples. These findings are generally consistent with theory (Banyard, 2011; McMahon, 2015; Turner et al., 1987) and previous research (Banyard, 2008; Bennett et al., 2014; Edwards et al., 2014) linking campus connectedness with certain types of bystander intervention behavior, and they extend this research by demonstrating prospective associations between campus connectedness and party safety behavior.

We evaluated two variables that might help to explain the association between campus connectedness and party safety behavior: frequency of party attendance and feeling responsible for protecting fellow students. Although both variables predicted party safety behavior, neither accounted for the relation between campus connectedness and party safety behavior. In the following text, we speculate on one other reason why campus connectedness may lead students to engage in more party safety behavior. Specifically, in keeping with self-categorization theory, feelings of campus connectedness may accrue from developing a supportive network of friends on campus, which in turn may encourage students to try to keep their friends safe at parties by planning to watch each other’s drinks, leave together, and look after friends who have had too much to drink. In other words, aspects of an individual’s social network on campus may help explain the association between campus connectedness and party safety behavior.

Unlike our hypothesis that campus connectedness would predict party safety behavior, our hypothesis that campus connectedness would predict intervening in high-risk situations was not supported in either Study 1 or Study 2. One possible explanation for this involves the level of personal risk to an

individual for engaging in particular bystander intervention behaviors (Banyard, Moschella, Grych, & Jouriles, 2019; Krauss et al., 2017). Specifically, intervening in high-risk situations, compared with trying to keep friends safe at parties, may be more likely to result in adverse consequences to the intervener, such as harassment, physical injury, and verbal threats. Feelings of campus connectedness might only predict bystander intervention behavior in situations when personal risk is thought to be low; when personal risk is perceived to be high, students' sense of campus connectedness may become much less salient than personal safety and consequently a poor predictor of bystander intervention behavior.

A second possible explanation involves risk appraisal. Some situations observed by bystanders are difficult to interpret; it may be unclear whether sexual overtures are unwelcome (Hoxmeier, O'Connor, & McMahon, 2019). The situations described in the Risky Situations subscale of the BBS are those where risk for sexual or physical violence may be high, but they are arguably more difficult for bystanders to interpret than the situations described on the Party Safety subscale, such as making sure an intoxicated friend has a safe way home from a party. If individuals are unsure of whether a situation presents a risk to a fellow student, their feelings of campus connectedness might not predict whether they intervene in the situation. A third possible explanation has to do with our measure of intervening in risky situations, which did not account for opportunity to intervene. Although we used a measure that has been used in previous studies (Banyard et al., 2014; Cascardi et al., 2018), recent research highlights the difficulty in interpreting scores from measures on intervening in risky situations when there is no measurement of opportunity (Jouriles, Kleinsasser, et al., 2016; McMahon, Palmer, Banyard, Murphy, & Gidycz, 2017). It is possible that a measure that accounts for opportunity to intervene would have yielded a different result.

### Limitations

The current research has a number of methodological strengths, but several limitations should also be acknowledged. We examined frequency of party attendance and responsibility in Study 3 as two variables that might help explain the association between campus connectedness and party safety behavior. However, we did not examine other variables that might be associated with campus connectedness, party safety behavior, or both, and that might help explain the findings. Potentially important third variables to consider include the degree of extracurricular involvement and friendships with others on campus, individual personality traits (e.g., extroversion, agreeableness), and mental health (depression, substance use). In addition, both campus connectedness and party safety behavior were measured via self-report questionnaires. Replication attempts using other measurement methods (e.g., direct observations) would bolster confidence in the present findings.

It should also be acknowledged that the data for the studies in the current research were drawn from larger studies evaluating a bystander training program. The program itself did not increase party safety behavior, suggesting perhaps that party safety behavior may not have received adequate attention in the bystander program being evaluated. It is not clear if similar findings on the link between campus connectedness and party safety behavior would have emerged if students had been provided other types of antiviolence programming. Another limitation is that students electing to participate in research that includes training in bystander intervention behavior may not be representative of students as a whole at their university. For example, the samples for both Study 1 and Study 2 were disproportionately female (80.8% and 77.4%, respectively). Similarly, even though this research was

conducted across multiple universities, those universities were not representative of all U.S. universities. It is not clear if the associations observed in the current research extend to college students in general. In future research, investigators with the goal of generalizing their findings to the general population of college students should consider sampling methods to help them obtain more representative samples.

### Prevention Implications

Taken together, the findings of these three studies suggest that party safety behavior may be enhanced by addressing students' feelings of campus connectedness. That is, helping students to feel that they fit in and are an integral part of the campus community may increase their efforts to look after their friends. More research is necessary to understand what factors increase campus connectedness, but programs targeting campus connectedness could include campus-specific information on how a university cares for their students and real-life examples of students helping fellow students. In addition, explicitly establishing student safety as a collective campus priority may help change social norms; students identifying with a community that highlights student safety are more likely to do so themselves. Increasing students' sense of belonging and the belief that the university prioritizes student safety might be especially important in the initial years of college, when young women are at greatest risk for sexual assault (Flack et al., 2008; Kimble, Neacsiu, Flack, & Horner, 2008) and when students may first begin to foster school pride and identity.

### Research Implications

The current research was prompted, in part, by calls for research to identify predictors of students' bystander intervention behavior that might be useful in enhancing bystander intervention programs (Banyard et al., 2018; McMahan, 2015). That is, research to identify variables that can be potential intervention targets in campus efforts to combat sexual assault and intimate partner violence. Our findings suggest that feelings of campus connectedness may be such a variable. To understand how campus connectedness may promote bystander intervention behavior, it is important to further examine what campus connectedness is, how it develops and what shapes it, its stability, and how it relates to other important student outcomes. Refining the conceptualization and measurement of campus connectedness may provide more sensitive tests of the role it plays in bystander intervention behavior. It would also be valuable to investigate ways to increase students' feelings of campus connectedness and to evaluate outcomes of doing so. There is some research on this topic (Hausmann, Schofield, & Woods, 2007), but experimental research is lacking.

In addition, party safety behavior appears to be desirable: It helps students return home from parties safely. However, there is little data on whether students actually enact or are protected by party safety plans or whether there are iatrogenic effects of attempting to increase party safety behavior, such as increasing underage drinking. In short, universities and researchers should attempt to gain a better understanding of the impact of party safety strategies and the broader effects of encouraging party safety behavior.

### Conclusion

In conclusion, our findings indicate that a feeling of being connected to a larger campus community predicts party safety behavior, but not intervening in risky situations, among college students. This



prospective association was found in three samples of college students from several universities. These data suggest that increasing feelings of campus connectedness may be one of several useful strategies for increasing a particular type of bystander intervention behavior that can be helpful in reducing campus violence, but further research on party safety behavior, campus connectedness, and how they relate to one another is needed to boost confidence in these results and further explain the association.

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