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Class Standing Differences in Bystander Intervention Intentions to Prevent Sexual Assault: A Reasoned Action Approach

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Keywords

reasoned action approach; bystander intervention; sexual assault; class standing

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The purpose of this study was to examine differences in determinants of bystander intervention (BI) participation based on undergraduate students' year in school using the Reasoned Action Approach (RAA). Students ($n = 291$) were recruited from general education courses at two universities in the United States and completed an online survey evaluating intentions, attitudes, perceived norms, and perceived behavioral control (PBC) associated with engaging in BI. Next, attitudes, perceived norms, and PBC were used to predict intentions using separate linear regression models – one model with upper-level students and another model with first-year students. Both models significantly predicted intentions, with the upper-level student model (adjusted $R^2 = 0.609$) accounting for more variance compared to the first-year student model (adjusted $R^2 = 0.469$). When compared to upper-level students, freshman also had significantly greater knowledge, intentions, and perceived norms, PBC and autonomy to engage in BI ($p < .05$). These findings provide an in-depth understanding regarding the role of class standing in BI behavior. Results indicate students have different reasons for engaging/not engaging in BI based on year in school and support the need for targeted BI reinforcement sessions throughout the college years.

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Introduction

Sexual violence in college student populations is a serious public health issue in the United States (U.S.) that disproportionately impacts first-year college students. One report from the Association of American Universities revealed an increase in rates of sexual assault victimization among college women and men despite significant increases in students' knowledge of campus definitions and procedures associated with sexual assault and sexual misconduct (Cantor et al., 2019).

Whereas it is unclear whether the first year of college is a time of increased risk for

sexual assault among men, research suggests most sexual assault victimization cases of women are committed in the first year of college during periods of increased campus social activity. Furthermore, over half of all sexual assaults occur between August and November (Krebs et al., 2007; Cranney, 2015), which is often the first four months of a person's college career. As first-year students navigate campus life, they are often unfamiliar with the campus environment and have not solidified helpful social connections, increasing their risk of being victimized during their first six to eight weeks on campus (Kimble, 2008). This window of time commonly known as the "red

zone” rarely extends into the second year of college (Cranney, 2015; Flack et al., 2008; Kimble et al., 2008; Krebs et al., 2007).

In response to pervasive sexual violence on college campuses, the U.S. government requires bystander intervention (BI) training for all students (American Council on Education, 2014). BI training teaches students to intervene in situations that could potentially lead to sexual assault (Campus Sexual Assault Elimination Act, n.d.) and highlights the role that peers can take in preventing sexual assault. Research has identified multiple barriers to engaging in BI (e.g., having many bystanders present, deficit in skills to intervene, shyness) as well as facilitators (e.g., increased knowledge about sexual assault, knowing the victim, possessing increased sense of responsibility) (Banyard & Moynihan, 2011; Bennet et al., 2014).

Although BI training is associated with lower rates of victimization on college campuses, there is a lack of standardization across BI training programs and few empirical studies that have evaluated the efficacy of these programs, specifically at different points in time while students are in college (Banyard, 2014; Evans et al., 2019; Kettrey & Marx, 2019). Some BI programs have been implemented across all college years, however most curriculums are required only for entering freshman (first-year) students and consist of a one-time session with few programs requiring additional ‘booster’ sessions. Several universities have implemented BI programs among students in later college years, but these programs are not tailored based on class standing (first-year, second-year, and so on) and no rigorously evaluated programs to date require ongoing BI training throughout college years regardless of time of initial exposure (Kettrey & Marx, 2019). In reviews of BI programs on college campuses, evaluation measures were primarily assessed

post-intervention, with no measures evaluated more than 12 months after initial exposure to BI training (Evans et al., 2019).

While bystander attitudes and behaviors may change over time, confidence in one’s ability to intervene and intervention behavior decreases as age increases (Banyard, 2008; Banyard & Moynihan, 2011). Meta-analysis results (Kettrey & Marx, 2019) suggest program effects on BI intentions are increased during early college years compared to later college years, elevating the importance of peers acting as bystanders during early college years when students are at greatest risk for sexual assault. Furthermore, because young students are more likely to confide in peers regarding sexual assault rather than other adult figures, it is reasonable to assume they would also trust their peers to intervene and prevent a potential sexual assault (Kettrey & Marx, 2019). This makes it increasingly important to foster an understanding and supportive environment on campus where students are aware of the importance of BI and feel confident to intervene.

Reasoned Action Approach

The Reasoned Action Approach (RAA) was adapted from the Theory of Reasoned Action (Fishbein & Ajzen, 1975) and the Theory of Planned Behavior (Ajzen, 1991), and has been foundational in the development of numerous public health interventions and applied to a range of health behaviors, including BI to prevent sexual assault (Hackman et al., 2022; Lukacena et al., 2019). The RAA posits attitudes (one’s overall feelings towards a behavior), perceived norms (social pressure one feels to engage in a behavior), and perceived behavioral control (PBC; how much control one feels they have over a behavior) together predict a person’s intention (or willingness) to perform a behavior.

To examine these constructs more concisely, Fishbein and Ajzen (2010) recommended examining both direct and indirect measures of attitudes, perceived norms, and PBC. Direct measures include asking direct or ‘generalized’ questions for each construct, while indirect measures include asking about specific beliefs that are broken down into two constructs, using a “value expectancy” framework. Examples of direct and indirect questions for attitudes, perceived norms, and PBC can be found in our Methods section.

Although prior research has identified the importance of timing in intervention development, including BI programming (Evans et al., 2019; Kettrey & Marx, 2019), none has evaluated the impact of class standing on BI intentions or behavior. One study applied the RAA to examine BI as a means of sexual assault prevention on college campuses (Lukacena et al., 2019), but did not examine indirect measures of the RAA, a critical evaluation to understand how specific beliefs form RAA constructs. Therefore, the purpose of this study was to examine determinants of BI intentions based on differences in class standing (first-year students compared to upper-level students) as well as differences among indirect and direct constructs of the RAA.

Methods

Procedure

We collected data for this study at two universities, including a mid-sized public university in the western U.S. and a mid-sized private university in the northeastern U.S. The public university is a master’s level institution comprised of approximately 21,000 mostly undergraduate (96.3%), white (51.1%) students between 18-24 years old (94.4%). The private university is a doctoral level AANAPISI (Asian American and

Native American Pacific Islander-Serving Institution) comprised of approximately 15,000 mostly undergraduate (82%), minority or students of color (80%) between 18-24 years old (73.4%).

Prior to the term, researchers received permission from general education instructors to enter classrooms, deliver recruitment scripts, and disseminate online surveys via Qualtrics (Provo, Utah). After the fall semester began, students were recruited in class for voluntary study participation and received no compensation for their time. Participants were asked to review information about sexual assault and BI, including definitions, descriptions, and common examples. Sexual assault was described as: “Sexual assault is defined as ‘sexual contact or behavior that occurs without explicit and voluntary consent of the victim.’ Some forms of sexual assault include the following: penetration of someone’s body (rape), attempted rape, forcing a victim to perform sexual acts such as oral sex, and fondling or unwanted sexual touching.” BI was described as: “Bystander Intervention is defined as ‘when a third party witness intervenes to help stop situations that can lead to sexual assault.’ A common example of appropriate bystander intervention is when you step in to stop someone who is attempting to engage in sexual activity with another person who is too intoxicated to consent.”

After reviewing this material, participants completed the survey measuring sexual assault knowledge, attitudes, perceived norms, PBC, and behavioral intention related to engaging in BI. The survey took approximately ten minutes to complete and was developed based on responses from a qualitative study exploring RAA constructs in relation to BI. Survey development, including the elicitation of underlying behavioral beliefs, was guided by Fishbein and Ajzen’s (2010) outlined procedures for

developing surveys using the RAA theoretical framework and is discussed in detail in a previous study (Hackman et al., 2021).

Participants

Participants ($n = 291$) in this study were undergraduate college students 18-24 years of age (mean = 18.98 years, $SD = 1.25$). Slightly less than half were first-year students (45.7%), and a majority were women ($n = 175$, 60.3%). Most respondents did not belong to a social fraternity or sorority (88.7%), were not NCAA athletes (95.9%), and self-identified as white (60.8%), followed by Asian or Pacific Islander (14.8%), Hispanic (10.7%), biracial/multiracial (9.3%), black non-Hispanic (2.7%), and other (1.7%). Approximately 68% of participants reported knowing someone who had witnessed an assault or experienced an assault themselves.

Measures

Knowledge

Knowledge of sexual assault prevalence and university policies regarding BI and sexual assault was assessed with five items, including “check all that apply” questions and multiple-choice questions. Because the study took place at two universities, the answers were coded as “Correct” or “Incorrect” based on each university’s sexual assault/BI policy. Participant answers were coded as correct if they selected all the correct answers for “check all that apply” questions. One item was a multiple-choice question that had one correct answer. The question read “Approximately what percent of female students will experience sexual assault in college?” (correct answer was 20%).

Intentions

Intention, or an individual’s willingness to perform a behavior, is the primary determinant of whether an individual will perform a given behavior. In this study, a unipolar 7-point semantic differential scale (1 = “strongly disagree” and 7 = “strongly agree”) was used to measure participants’ intentions to engage in BI with four items (e.g., “I plan to engage in BI over the next three months”).

Direct and Indirect Measures of Attitudes

Attitudes refer to whether an individual perceives a behavior as favorable or unfavorable. To evaluate direct measures of attitudes, both experiential (affective) and instrumental (cognitive) attitudes were measured with four items [e.g., experiential attitudes (“My engaging in BI in the next three months is beneficial”); instrumental attitudes (“My engaging in BI in the next three months is unimportant”)]. To evaluate attitudes using indirect measures, we included five behavioral belief items (Table 4). Each behavioral belief item had a corresponding outcome evaluation item. For example, for the belief ‘help the victim’, the following two items were assessed: behavioral beliefs (“My engaging in bystander intervention if necessary during the next 3 months will help the victim”) and outcome evaluation (“It would be good for me to engage in bystander intervention if necessary during the next 3 months if it helped the victim”). All items were on a seven-point semantic differential scale (1 = “strongly disagree” and 7 = “strongly agree”).

Direct and Indirect Measures of Perceived Norms

We evaluated perceived norms, or the social pressure one feels to engage/disengage in a behavior, using three descriptive norms items (e.g., “My peers will engage in BI over the next three months”) and three injunctive norms items (e.g., “My peers whose opinions I value would (strongly disagree-strongly agree) with my engaging in BI over the next three months”). To evaluate perceived norms using indirect measures, we evaluated three injunctive normative belief items and three descriptive normative belief items (Table 4). Each injunctive normative belief item had a corresponding motivation to comply item and each descriptive normative belief item had a corresponding identification with referents item. For example, for the descriptive normative belief ‘my best friend’, we assessed the following two items: descriptive normative beliefs (“My best friend would engage in bystander intervention if necessary over the next 3 months”) and identification with the referent (“When it comes to engaging in bystander intervention if necessary during the next 3 months, I want to be like my best friend”). All items were on a seven-point semantic differential scale.

Perceived Behavioral Control (PBC)

We evaluated PBC, the perceived ability to perform or carry out a behavior, by using three perceived capacity items (e.g., “I see myself as not at all capable of engaging in BI during the next three months”) and three autonomy items (e.g., “I have no control whether I engage in BI during the next three months”). To evaluate PBC using indirect measures, we used six control belief items (Table 4). Each control belief item also had a corresponding perceived power item. For example, for the belief ‘my friends will be present’, we assessed the following two

items: control belief (“I expect that my friends will be present in times when it might be necessary to engage in bystander intervention during the next 3 months”) and perceived power (“If my friends are present, I would be able to engage in bystander intervention when necessary during the next 3 months”). All items were on a seven-point semantic differential scale.

Data Analysis

We used SPSS (IBM Corp., Armonk, NY) to complete statistical analyses. Data were reviewed and participants were removed if they completed less than 75% of the survey ($n = 62$), an *a priori* cut-point for removing participants established by researchers. Mean scores between -3 and +3 were computed for all constructs by summing the scales and dividing by the number of items on each scale (e.g., scores indicating strong negative attitudes [-3] to strong positive attitudes [+3]).

Direct Measures of Attitudes, Perceived Norms and PBC

Differences in knowledge, intentions, attitudes, perceived norms, and PBC (capacity and autonomy subscales) were evaluated between first-year students and upper-level students using independent *t*-tests. We used Cohen’s *d* values to determine practical significance as, i.e., small [$d = 0.2$], medium [$d = 0.5$], and large [$d = 0.8$] (Cohen, 1992).

Differences in determinants of intentions to engage in BI between first-year and upper-level students were analyzed using two sets of separate linear regression models. In set one (three-component model), attitudes, perceived norms, and PBC served as independent predictors of intentions, while in set two (six-component model) instrumental attitudes, experiential attitudes, injunctive

norms, descriptive norms, capacity and autonomy served as independent predictors of intention.

Indirect Measures of Attitudes, Perceived Norms and PBC

All belief-based items (i.e., behavioral, injunctive normative, descriptive normative and control beliefs) were multiplied by its corresponding value-based item (i.e., outcome evaluation, motivation to comply, identification with a referent, and perceived power). Next, the product of each pair was correlated with the related direct measure of RAA construct. Therefore, all [behavioral belief x outcome evaluation pairs] were correlated with the direct attitudes scale; all [injunctive normative belief x motivation to comply pairs] were correlated with the direct injunctive norms scale; all [descriptive normative belief x identification with a referent pairs] were correlated with the direct descriptive norms scale; and all [control belief x perceived power pairs] were correlated with the direct PBC scale (Fishbein & Ajzen, 2010).

Results

There were 133 first-year students and 158 upper-level students in the study. Table 1 presents correlations between RAA constructs for first-year students and upper-level students. Correlations between variables for first-year students are presented with the variable on the left-hand side of the table and correspond with the variable in each column. Correlations between variables for upper-level students are presented with the variable at the top of each column and correspond with the variable in each row. Effect sizes ranged primarily from medium to large and there were statistically significant correlations between almost all RAA constructs (including direct and indirect) for

first-year and upper-level students. This large number of associations between variables highlights many potential relationships of interest that deserve further exploration (Lorden et al., 2011).

Results from Table 2 indicate that when compared to upper-level students, first-year students showed significantly higher levels of knowledge ($p = .016$, $d = 0.29$), behavioral intentions to engage in BI ($p = .002$, $d = 0.39$), perceived norms about engaging in BI ($p = .049$, $d = 0.24$), perceived behavioral control over engaging in BI ($p = .005$, $d = 0.33$), and autonomy over engaging in BI ($p = .001$, $d = 0.42$).

Regression models examined determinants of BI intention (Table 3). Outliers, multicollinearity, and homoscedasticity was examined using Cook's distance, variance inflation factor, and residual plots respectively, and no issues were found. Using the three-component model, PBC ($p < .001$) and attitudes ($p < .001$) accounted for 45.4% of variance in intentions among first-year students (perceived norms was not a significant predictor; $\beta = -0.011$, $p = .879$), while for upper-level students, PBC ($p < .001$), attitudes ($p < .001$), and perceived norms ($p = .024$) explained 58.2% of variance in intentions. Standardized beta coefficients for first-year students indicated PBC was the strongest predictor ($\beta = 0.445$) of intentions followed by attitudes ($\beta = 0.347$). For upper-level students, attitudes was the strongest predictor ($\beta = 0.535$), followed by PBC ($\beta = 0.265$) then perceived norms ($\beta = 0.124$).

Using the six-component model for first year students, capacity ($p < .001$), instrumental attitudes ($p = .002$), and experiential attitudes ($p = .047$) accounted for 46.9% of variance in intentions (autonomy [$\beta = 0.107$, $p = .179$], injunctive norms [$\beta = -0.036$, $p = .640$], and descriptive norms [$\beta = 0.023$, $p = .749$] were not significant), while for upper-level students, 60.9% of the

Table 1

Pairwise correlations (r) among RAA constructs for first-year students and upper-level students

			Upper-level Students (<i>n</i> = 158)									
			1. Int	2. Att	3. IA	4. EA	5. PN	6. IN	7. DN	8. PBC	9. Cap	10. Aut
First-year students (<i>n</i> = 133)	1.	Int	-	0.722***	0.728***	0.404***	0.349***	0.382***	0.255**	0.608***	0.605***	0.426***
	2.	Att	0.565***	-	0.862***	0.751***	0.279***	0.280***	0.233**	0.575***	0.581***	0.395***
	3.	IA	0.553***	0.835***	-	0.313***	0.359***	0.380***	0.276***	0.603***	0.611***	0.414***
	4.	EA	0.367***	0.804***	0.344***	-	0.055	0.029	0.077	0.290**	0.291**	0.201**
	5.	PN	0.267**	0.351***	0.420***	0.144	-	0.940***	0.914***	0.288***	0.284***	0.204**
	6.	IN	0.234**	0.362***	0.466***	0.114	0.853***	-	0.720***	0.311***	0.247**	0.265***
	7.	DN	0.216**	0.227**	0.238**	0.131	0.835***	0.425***	-	0.215**	0.283***	0.098
	8.	PBC	0.615***	0.499***	0.519***	0.291***	0.351***	0.284***	0.310***	-	0.765***	0.873***
	9.	Cap	0.634***	0.508***	0.532***	0.293***	0.283***	0.237**	0.241**	0.870***	-	0.354***
	10.	Aut	0.462***	0.381***	0.393***	0.226**	0.335***	0.264**	0.303***	0.897***	0.562***	-

Note.

Int (Intentions); Att (Total Attitudes); IA (Instrumental Attitudes); EA (Experiential Attitudes); PN (Total Perceived Norms); IN (Injunctive Norms); DN (Descriptive Norms); PBC (Total Perceived Behavioral Control); Cap (Capacity/Self-Efficacy); Aut (Autonomy)

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

Table 2*Differences in RAA constructs between first-year students and upper-level students*

	Freshman (<i>n</i> = 133) Mean (SD)	Others (<i>n</i> = 158) Mean (SD)	<i>p</i> -value	Effect Size (Cohen's <i>d</i>)
Total Knowledge	3.27 (1.3)	2.88 (1.4)	.016	0.29
Behavioral Intentions	2.01 (0.8)	1.68 (0.9)	.002	0.39
Attitudes towards the behavior	1.64 (0.8)	1.49 (0.8)	.101	--
Instrumental Attitudes towards the behavior	2.21 (0.8)	2.02 (1.0)	.070	--
Experiential Attitudes towards the behavior	0.88 (1.0)	0.79 (1.0)	.442	--
Perceived Norms about the behavior	1.46 (1.0)	1.21 (1.1)	.049	0.24
Injunctive Norms about the behavior	1.81 (1.2)	1.55 (1.3)	.078	--
Descriptive Norms about the behavior	1.11 (1.1)	0.88 (1.1)	.081	--
Perceived Behavioral Control over the behavior	1.63 (0.8)	1.37 (0.8)	.005	0.33
Capacity over the behavior	1.86 (0.8)	1.75 (0.8)	.290	--
Autonomy over the behavior	1.41 (0.9)	0.99 (1.1)	.001	0.42

variance in intentions was explained using instrumental attitudes ($p < .001$), capacity ($p < .001$), injunctive norms ($p = .011$), and experiential attitudes ($p < .001$) (descriptive norms ($\beta = -0.100$, $p = .181$) and autonomy ($\beta = 0.079$, $p = .170$) were not significant predictors). Standardized beta coefficients for first-year students indicated capacity was the strongest predictor ($\beta = 0.396$) of intentions followed by instrumental attitudes ($\beta = 0.264$) then experiential attitudes ($\beta = 0.137$). For upper-level students, instrumental attitudes was the strongest predictor ($\beta = 0.450$), followed by capacity ($\beta = 0.227$), injunctive norms ($\beta = 0.201$), and experiential attitudes ($\beta = 0.184$).

Table 4 includes correlation values between direct and indirect measures of RAA constructs. Reported effect sizes for the attitudes construct were small to medium, and items that had the strongest relationship included *Help the victim* (first-year students: $r = 0.46$; upper-level students: $r = 0.61$) and *Make the victim grateful* (first-year students: $r = 0.51$; upper-level students: $r = 0.43$). For upper-level students, *Offend the perpetrator* ($r = 0.25$), *Be disapproved of by my peers* ($r = 0.18$), and *Make the perpetrator upset* ($r = 0.27$) were all significant, although these were not significant for first-year students. Reported effect sizes for injunctive and descriptive normative beliefs were small to medium. Injunctive normative belief item *Most professors or faculty who are important to me* was significant for both first-year ($r = 0.21$) and upper-level students ($r = 0.27$), while the items *Other witnesses* ($r = 0.25$) and *My peers* ($r = 0.29$) were only significant for upper-level students. Descriptive normative belief item *My best friend* was significant for both first-year ($r = 0.25$) and upper-level students ($r = 0.20$), while *My peers* ($r = 0.23$) and *Students in my classes* were only significant referents for first-year students ($r = 0.20$). Lastly, reported effective sizes for PBC were primarily in the medium

range and all six control belief items were significant for both first-year and upper-level students. Three items had similar relationships with PBC for both first-year and upper-level students: *There will be bystanders present* (first-year students [$r = 0.65$]; upper-level students [$r = 0.38$]), *My friends will be present* (first-year students [$r = 0.60$]; upper-level students [$r = 0.34$]), and *I will know the victim* (first-year students [$r = 0.32$]; upper-level students [$r = 0.38$]).

Discussion

This study was designed to examine whether class standing played a role in predicting BI intentions and whether indirect and direct measures of RAA constructs differed based on class standing when determining what formulates students' attitudes, perceived norms, and PBC. Results indicated notable differences between groups. First-year students had significantly higher levels of knowledge, intentions, perceived norms, PBC, and autonomy over engaging in BI. This is encouraging because first-year students are at highest at risk for sexual assault on college campuses and may be more aware of experiences they encounter where BI is needed.

First-year students are exposed to some variation of BI education upon entering college and may have stronger intentions to intervene when BI education is fresh on their mind. The number of upper-level students who face sexual assault is lower, however, and because BI training is typically completed in a student's first year, the effectiveness of the training is likely reduced over time. In this study, BI training was provided for students at both universities participating in the study. All students at the public university received information on BI engagement and institutional policies during new student orientation, and all first-year students were required to complete a series of

Table 3*Parameter estimates and model prediction for class-standing determinants of intentions*

	Adjusted R ²	Standardized coefficients β	<i>t</i>	<i>p</i>
<i>First-year students (3-component)</i>	0.454			
Perceived Behavioral Control		0.445	5.857	< .001
Attitudes		0.347	4.562	< .001
Perceived Norms		-0.011	-0.153	.879
<i>First-year students (6-component)</i>	0.469			
Capacity		0.396	4.678	< .001
Instrumental Attitudes		0.264	3.115	.002
Experiential Attitudes		0.137	2.002	.047
Autonomy		0.107	1.350	.179
Injunctive Norms		-0.036	-0.468	.640
Descriptive Norms		0.023	0.321	.749
<i>Upper-class students (3-component)</i>	0.582			
Attitudes		0.535	8.396	< .001
Perceived Behavioral Control		0.265	4.154	< .001
Perceived Norms		0.124	2.272	.024
<i>Upper-class students (6-component)</i>	0.609			
Instrumental Attitudes		0.450	6.504	< .001
Capacity		0.227	3.463	< .001
Injunctive Norms		0.201	2.582	.011
Experiential Attitudes		0.184	3.419	< .001
Descriptive Norms		-0.100	-1.343	.181
Autonomy		0.079	1.378	.170

Table 4
Determinants of attitudes, injunctive & descriptive norms, and perceived behavioral control

	First-year Students		Upper-level Students				First-year	Upper-level
	Belief Strength	Outcome Evaluation	Belief Strength	Outcome Evaluation	Belief Strength	Outcome Evaluation		
<i>Behavioral Beliefs</i>	<i>bb_v</i> M(SD)	<i>oe_v</i> M(SD)	<i>bb_vx oe_v</i> M(SD)	<i>bb_u</i> M(SD)	<i>oe_u</i> M(SD)	<i>bb_ux oe_u</i> M(SD)	<i>Combination of bb_vx oe_v with Attitudes</i>	
Help the victim	6.38 (0.9)	2.41 (1.0)	16.17 (6.3)	6.20 (1.0)	2.33 (0.9)	15.13 (6.2)	0.46***	0.61***
Offend the perpetrator	4.82 (1.3)	0.62 (1.4)	3.62 (7.8)	4.72 (1.4)	0.47 (1.5)	2.63 (7.8)	0.13	0.25***
Be disapproved by my peers	2.24 (1.3)	-0.02 (1.7)	0.24 (4.2)	2.31 (1.2)	-0.01 (1.6)	-0.03 (3.8)	-0.07	0.18*
Make the perpetrator upset	5.28 (1.2)	0.59 (1.4)	3.58 (8.2)	5.06 (1.1)	0.31 (1.4)	2.06 (8.0)	0.09	0.27***
Make the victim grateful	6.11 (1.2)	2.21 (1.1)	14.51 (7.6)	5.95 (1.0)	1.99 (1.1)	12.52 (7.5)	0.51***	0.43***
<i>Injunctive Normative Beliefs</i>	<i>Belief Strength</i> <i>inb_v</i>	<i>Motivation to Comply</i> <i>mtc_v</i>	<i>inb_vx mtc_v</i>	<i>Belief Strength</i> <i>inb_u</i>	<i>Motivation to Comply</i> <i>mtc_u</i>	<i>inb_ux mtc_u</i>	<i>Correlation of inb_vx mtc_v with Injunctive Norms</i>	
Most professors or faculty who are important to me	6.02 (1.1)	1.17 (1.4)	8.59 (9.1)	5.91 (1.1)	1.18 (1.3)	6.92 (8.7)	0.21**	0.27***
Other witnesses	5.83 (1.0)	0.95 (1.4)	6.66 (8.8)	5.79 (1.0)	0.92 (1.3)	5.24 (8.2)	0.13	0.25***
My peers	5.99 (1.0)	1.07 (1.4)	7.26 (8.8)	5.82 (1.0)	0.96 (1.3)	6.01 (8.7)	0.14	0.29***
<i>Descriptive Normative Beliefs</i>	<i>Belief Strength</i> <i>dnb_v</i>	<i>Identification with Referent</i> <i>ivr_v</i>	<i>dnb_vx ivr_v</i>	<i>Belief Strength</i> <i>dnb_u</i>	<i>Identification with Referent</i> <i>ivr_u</i>	<i>dnb_ux ivr_u</i>	<i>Correlation of dnb_vx ivr_v with Descriptive Norms</i>	
My best friend	6.19 (0.9)	1.69 (1.2)	10.13 (8.2)	5.72 (1.2)	1.03 (1.4)	8.74 (8.9)	0.25**	0.20*
My peers	5.59 (1.0)	1.07 (1.2)	7.42 (8.0)	5.56 (1.0)	0.86 (1.4)	5.13 (7.8)	0.23**	0.12
Students in my classes	5.16 (1.1)	0.73 (1.2)	5.71 (7.6)	5.31 (1.9)	0.68 (1.4)	3.39 (7.3)	0.20*	0.07
<i>Control Beliefs</i>	<i>Belief Strength</i> <i>cb_v</i>	<i>Perceived Power</i> <i>pp_v</i>	<i>cb_vx pp_v</i>	<i>Belief Strength</i> <i>cb_u</i>	<i>Perceived Power</i> <i>pp_u</i>	<i>cb_ux pp_u</i>	<i>Correlation of cb_vx pp_v with PBC</i>	
There will be bystanders present	5.63 (1.1)	1.85 (1.1)	11.12 (7.0)	5.48 (1.2)	1.64 (1.2)	9.73 (6.7)	0.65***	0.38***
I will be faced with my peer's disapproval	3.63 (1.6)	1.73 (1.1)	6.44 (6.0)	3.73 (1.7)	1.31 (1.4)	5.31 (5.6)	0.46***	0.33***
My friends will be present	5.22 (1.2)	2.14 (0.8)	11.53 (5.8)	5.08 (1.3)	1.77 (1.1)	9.96 (6.0)	0.60***	0.34***
The perpetrator will be intimidating	5.34 (1.2)	1.25 (1.2)	7.90 (6.8)	4.71 (1.3)	1.48 (1.2)	6.14 (6.7)	0.60***	0.36***
I will know the victim	4.39 (1.3)	2.37 (0.9)	10.20 (5.2)	4.53 (1.3)	1.96 (1.2)	9.48 (5.8)	0.32***	0.38***
I will know the perpetrator	4.13 (1.4)	1.99 (0.9)	(5.3)	4.29 (1.4)	1.76 (1.2)	7.29 (5.6)	0.39***	0.37***

online learning modules aimed at increasing BI knowledge, sexual assault knowledge, and prevention. At the private university, all first-year and transfer students enrolled in new student orientation engaged in a session on BI that focused on BI and sexual assault knowledge and awareness. However, research has shown that confidence in one's ability to intervene decreases as age increases, potentially reflecting why first-year students scored higher for RAA constructs than upper-level students. This is concerning because it could indicate that whereas current BI training raises initial attitudes and awareness, it does not have a lasting impact on knowledge and psychosocial predispositions towards engaging in BI. Either current BI programs should be standardized and modified to produce longer lasting effects, or BI program boosters should be mandated among upper-level students so there is less recidivism in the level of awareness. Developing targeted programming for upper-level students during each year of college could increase protective actions among all students and intention to intervene across the college experience. Required booster sessions in the later years of college could provide opportunities to address class standing barriers.

According to the three-component model of the RAA we discovered through our regression analyses that PBC was the strongest predictor of intentions for first-year students, and attitudes were the strongest predictors for upper-level students. Because upper-level students have more experiences on college campuses, their perception of having control over situations, or whether those around them believe it is important to intervene, may have changed throughout their time in college, thereby making it essential to explore changes in these factors throughout college years. Interestingly, perceived norms were not significant predictors for first-year students but they

were the second strongest predictor for upper-level students. Although first-year students have just begun their college experience and have yet to immerse themselves in the campus social scene, they may be unaware of the impact peers can have on their intention to engage in BI. Because upper-level students have had more time to develop strong peer relationships, the value of what their peers think could be greater.

The expanded six-component model of the RAA provided further insight into the ability of indirect RAA constructs to predict BI intention. Our results showed that capacity, instrumental attitudes, and experimental attitudes, respectively, were strongest predictors of intentions for first-year students. On the other hand, instrumental attitudes, capacity, injunctive norms, and experiential attitudes, respectively, were strongest predictors of BI intention. Taken together with results from the 3-component model, it appears BI training is effective at helping freshmen develop skills needed to engage in BI, including perceiving risky situations and knowing when to act. These skills significantly decrease as time progresses, which may indicate a need for future health promotion interventions.

Both the three-component and six-component models of the RAA explained more variance for upper-level students than first-year students, with the six-component model explaining more variance (60.9%) compared to the three-component model (58.2%). For first-year students, the three-component and six-component model predicted a similar amount of variance for first-year students (45.4% and 46.9% respectively) suggesting the model is better suited to upper-level students experiences and beliefs regarding BI. These findings align with results from a meta-analysis which suggests BI timing could matter more for

increasing BI intentions than for impacting actual BI behavior (Kettrey & Marx, 2019).

Similar to previous research exploring RAA and BI, experiential attitudes is a consistently strong predictor of intention to engage in BI (Lukacena et al., 2019). In this study, both first-year and upper-level students exhibited strong instrumental attitudes, indicating both groups understand possible outcomes of BI behavior and believe them to be important. However, first-year students exhibited lower experiential attitudes, which could indicate first-year students have greater negative or conflicting feelings about engaging in BI behavior. Future programs should consider using specific methods to increase students' emotions and feelings about engaging in BI behavior.

Furthermore, existing studies suggest conflicting findings regarding descriptive and injunctive norms as predictors of BI intention (McEachan et al., 2016; Lukacena et al., 2019). Both injunctive and descriptive norms were identified as predictors of behavior in one meta-analysis (McEachan et al., 2016), while only descriptive norms predicted intentions in a study examining RAA constructs and BI (Lukacena et al., 2019). Our study provides new insight into this complex dynamic by suggesting that neither injunctive norms nor descriptive norms are significant predictors of BI intention for first-year students, while injunctive norms are significant for upper-level students. Both first-year students and upper-level students believe it is important to help the victim, and strongly believe their engaging in BI would make the victim grateful for the action of intervention. These beliefs can shape willingness to participate in BI and should be encouraged across college years. Study results indicated that upper-level students significantly believed that engaging in BI could offend the perpetrator, make the perpetrator upset, or cause them to be

disapproved of by their peers. These findings reinforce the idea that upper-level students have developed stronger interpersonal relationships on campus and weigh potential disapproval from peers against intervening in situations where BI is necessary. Additional results revealed that upper-level students considered approval/disapproval of their faculty, other witnesses, and their peers to be important, whereas first-year students only considered approval/disapproval of their faculty to be significant. These results portray a complex relationship between upper-level students' intention to help the victim by intervening while also considering the impact intervening could have on interpersonal relationships they have built on campus. First-year students have yet to build strong relationships and may be more willing to participate in BI as they have fewer interpersonal relationships to consider. Our results show that bystanders being present, friends being present, and knowing the victim significantly predicted willingness to intervene. Overall, the results of our study show that first-year students have greater intentions to engage in BI and have fewer considerations when determining whether to intervene.

The multidimensional nature of behaviors such as BI make it impossible to have a complete understanding of intentions and behavior by looking solely at primary constructs of the Theory of Planned Behavior such as attitudes, perceived norms, and PBC. This method of exploring indirect constructs or "sub-constructs" has increased with the RAA (Lukacena, et al., 2019) and provides more specific guidance in examining psychosocial ideas related to behaviors and behavior change, providing insight necessary to make forward progress in research and campus programming. To have greater exploration of the effectiveness of BI training on increasing both BI intentions and behavior throughout the college years, longitudinal

studies using these sub-constructs of RAA should be conducted on college campuses to help better understand the specifics of BI as well as the long-term effectiveness of BI programming. Additionally, longitudinal research applying RAA sub-constructs could provide a deeper understanding of the way predictors of BI intention evolve, ebb, and flow throughout the college years and help develop tailored programming for students based on these psychosocial evolutions at different points in time. Finally, applying RAA sub-constructs to help explore complex behaviors such as BI will provide continued guidance for the application of RAA sub-constructs to other complex behaviors and behavior change.

Limitations

Several limitations should be considered in relation to this study. First, the sample lacked diversity in specific areas which impact the study's generalizability (e.g., race, sexual and gender identity). Due to both the unequal distribution of students from the public and private universities and the lack of diversity among respondents, it cannot be assumed that belief scores are generalizable, and attitudinal, normative and control beliefs should be explored in diverse populations to improve understanding of their impact on BI behavior. Next, this study utilized convenience sampling, which may have led to oversampling of certain populations and weakened the ability to generalize results to a greater college student population.

Participants may not have responded to survey items honestly; given the negative attitude towards not intervening in a situation that describes sexual violence, some students may have felt response bias to provide socially acceptable answers and responded in dishonestly. Furthermore, recall bias is a potential limitation, as the study had respondents recall a prior situation that may

have happened in weeks or months previously, or occurred while the respondent was intoxicated (Fleming & Wiersma-Mosley, 2015; Ham et al., 2019). Finally, transfer status was not considered in analyses. This may have impacted the belief scores of upper-level students (sophomores, juniors or seniors) who had transferred because they could have received additional BI training at their previous institution(s) and they likely would have received BI training at orientation more recently than other upper-level students. Future research should examine transfer students as their own group or grouped in with first-year students.

Implications for Health Behavior Research

Understanding the most effective channels and techniques for BI training has become increasingly important. There is a lack of longitudinal research examining changes in intention to intervene as well as bystander behavior over the course of college years (Kettrey & Marx, 2019). Students need time to develop BI skills and providing them with training as they are entering the “red zone” does not allow time to cultivate necessary skills for intervening. To address declining BI intention as class standing progresses, programs should be followed up in later years of college to reinforce the importance of BI for upper-level students and to refresh their BI skills. These programs also should address specific barriers to BI, including perceived norms and injunctive normative beliefs that create a complex interplay for upper-level students who wish to intervene but refrain due to fear of social rejection. Future research should conduct in-depth analyses of perceived norms across college years and further explore best practices for increasing attitudes through regular exposure to BI training and education.

Discussion Questions

In this study we examined differences in beliefs and cognitions between first-year and upper-level students to engage in BI to prevent sexual assault. Which other background variables should be studied to prevent sexual violence on college campuses?

In this study we focused on individual knowledge and cognitions of BI engagement. Which environmental factors should be included to better study the presentation of sexual violence on college campuses?

Ethical Approval Statement

Approval for this study was obtained from Institutional Review Boards of both universities at which we collected data. Participants completed an informed consent

Conflicts of Interest

The authors have no conflicts of interest to declare.

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