Research Article

Correlates of College Women's Sexual Assault Resistance Self-Efficacy

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Abstract

Studies suggest that actively fighting back against an attacker is effective in decreasing the severity and completion of a sexual assault, yet little is known about the factors that contribute to women's confidence in fighting back. Accordingly, the present study examines correlates of college women's self-efficacy in resisting unwanted sexual advances ($N = 650$). Results suggest that fewer psychological barriers to resistance, greater sexual communication, increased use of dating self-protective behaviors, and greater sexual assertiveness were associated with increased sexual resistance self-efficacy. Findings underscore the importance of developing sexual assault prevention programs that increase women's confidence in fighting back.

Keywords

college women, sexual victimization, resistance self-efficacy

Sexual victimization is a significant public health concern that disproportionately impacts women, especially those attending college (Smith et al., 2018). In fact, approximately one in five undergraduate women experience an attempted or completed sexual assault by the end of their senior year (Conley et al., 2017; Krebs et al., 2007). Other forms of sexual victimization among college women, such as unwanted sexual contact and sexual coercion, are even more prevalent (Fedina et al., 2018). The immediate

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consequences of sexual victimization are extensive and include physical and genital injuries (Sugar et al., 2004), social isolation (Gutner et al., 2006), distressing emotions (e.g., fear, shame, guilt, anger, and sadness; Amstadter & Vernon, 2008), and missed classes (Rothman et al., 2021). There are also numerous long-term consequences of sexual victimization, including sexual dysfunction (Rellini, 2008); decreased emotional and sexual intimacy (Rothman et al., 2021); increased substance use (Gidycz et al., 2008; Kaysen et al., 2006); risky sexual behaviors (Turchik & Hassija, 2014); lower academic achievement (Jordan et al., 2014); depression, posttraumatic stress disorder, and disordered eating (Carey et al., 2018; Gidycz et al., 2008; Kilpatrick et al., 2013); and increased suicidal ideation (Gidycz et al., 2008; McFarlane et al., 2005). Given the overwhelming burden of sexual assault, research that enhances our knowledge of factors that inform the development of sexual assault prevention programs is crucial.

Sexual assault prevention programs targeting college women are often referred to as risk reduction and resistance education programs (Gidycz, 2018). Although risk reduction and resistance education approaches vary, programs are generally guided by Nurius and Norris' (1996) cognitive ecological model of women's response to male sexual coercion in dating, as well as Rozee and Koss's (2001) "Assess, Acknowledge, and Act" (AAA) model of identifying and responding to risky social and dating situations. According to the cognitive ecological model of risk perception and response, women first engage in primary appraisals to determine whether a situation is positive, neutral, or threatening (Nurius & Norris, 1996). If a threat is perceived, women engage in a secondary appraisal that involves considering the potential outcomes of specific behavioral actions (Nurius & Norris, 1996). Similarly, Rozee and Koss's (2001) AAA model highlights how women can reduce their risk for sexual assault by actively assessing social situations, acknowledging (i.e., labeling) when a situation is threatening, and acting quickly and forcefully by engaging in resistance efforts (e.g., yelling for help, fighting the attacker, fleeing the situation). Both Nurius and Norris's (1996) and Rozee and Koss's (2001) models highlight the importance of engaging in some type of behavioral action (e.g., resistance strategies) to avoid a potential assault. Informed by these models, most effective risk reduction and resistance education programs developed and tested over the past 2 decades incorporate training in empowerment self-defense (e.g., Gidycz et al., 2006,, 2015; Orchowski et al., 2008; Senn et al., 2015). Beyond decreasing rates of sexual assault (e.g., Hollander, 2014; Orchowski et al., 2008), such programs have been linked to decreased self-appointed blame, greater likelihood of engaging in assertive resistance efforts, more frequent use of self-protective strategies, increased assertive communication, and increased sexual assault resistance self-efficacy (i.e., confidence in one's ability to avoid an assault; Gidycz et al., 2015; Hollander, 2014; Orchowski et al., 2008; Pinciotti & Orcutt, 2018; Senn et al., 2015).

A robust body of empirical literature suggests that fighting back against an attacker is an effective strategy for decreasing the severity and completion of a sexual assault (see Hollander, 2018 for a review). For example, a meta-analysis conducted by Wong and Balemba (2018) suggested that women who resisted during a sexual assault were more likely to prevent completed rape compared to women who did

not resist. Beyond avoiding rape completion and lessening the severity of an assault, resistance efforts also appear to mitigate the development of mental and physical health symptoms associated with sexual assault (Gidycz & Dardis, 2014), including self-appointed blame (Rozee & Koss, 2001). Although it has been questioned whether the use of active resistance strategies may increase a woman's risk of incurring an injury, findings show that when the temporal order of resistance and injury is considered, physical resistance does not result in an increased likelihood of injury (Guerette & Santana, 2010; Tark & Kleck, 2014). Instead, physical injuries typically precede resistance efforts, rather than follow (i.e., women resist *because* they are being injured; they are not being injured because they resist).

While empirical findings support the use of assertive resistance strategies for decreasing the severity and completion of sexual assault, little is known regarding the factors that contribute to a woman's confidence in fighting back—a key aspect of engaging in assertive resistance efforts when faced with a potential assault. Sexual resistance self-efficacy is a concept derived from Bandura's (1986) social cognitive theory and refers to an individual's level of self-confidence regarding their ability to engage in specific behavioral actions to decrease their risk of experiencing a sexual assault (Walsh & Foshee, 1998). The extant literature suggests that low levels of sexual resistance self-efficacy are associated with greater sex-related negative affect (i.e., negative emotions/appraisals associated with engaging in sexual activity), as well as difficulties with relational sexual assertiveness (i.e., sexual assertiveness in a relational/partner context), sexual agency (i.e., sexual confidence and communication skills), and setting sexual standards (i.e., establishment of sexual limits/boundaries; Kelley et al., 2016). Greater sexual resistance self-efficacy is also associated with lower levels of psychological barriers to resistance (Kelley et al., 2016), which is a construct comprised of cognitions regarding self-consciousness (e.g., "I don't want him to laugh at me"), concern for relationship preservation (e.g., "I like him and I don't want to ruin things for the future"), and concern for exacerbation of injury (e.g., "I'm afraid of being physically hurt if I don't go along with it"; Norris et al., 1996). Importantly, sexual resistance self-efficacy appears to play a crucial role in predicting the likelihood of sexual victimization and revictimization (Marx et al., 2001; Walsh & Foshee, 1998). The relation between resistance self-efficacy and revictimization is supported by findings from Kearns and Calhoun (2010), who observed decreased situation-specific self-efficacy among women with a history of sexual victimization. While sexual resistance self-efficacy has been examined in several studies seeking to enhance knowledge on sexual victimization and revictimization (Kelley et al., 2016; Marx et al., 2001; Walsh & Foshee, 1998), no studies to our knowledge have specifically focused on identifying a range of correlates of resistance self-efficacy in college women.

Purpose of the Present Study and Hypotheses

Accordingly, the present study aims to examine the correlates of college women's self-efficacy in resisting unwanted sexual advances. Understanding the individual-level characteristics that influence college women's confidence in intervening will help

inform the development of sexual assault risk reduction and resistance programs. As prior research has identified associations between domains of sexual assertiveness, psychological barriers to resistance, and resistance self-efficacy (Kelley et al., 2016), these constructs were considered in the current study. Other variables commonly targeted as primary and secondary outcomes in sexual assault risk reduction and resistance education programs were also examined, including sexual communication and engagement in dating self-protective behaviors. Given the robust association between a history of multiple sexual assaults and impairments in risk perception (Messman-Moore & Brown, 2006)—which may be due, in part, to low resistance self-efficacy—we examined the prior history of sexual victimization as a correlate of resistance self-efficacy as well. Of note, the occurrence of multiple sexual assaults may have a cumulative effect on resistance self-efficacy, such that confidence in one's ability to resist unwanted sexual advances decreases with numerous assaults. Nonetheless, both possibilities would suggest a negative association between a history of sexual victimization and resistance to self-efficacy. Alcohol is another factor likely to be associated with decreased sexual resistance self-efficacy, given the detrimental cognitive and physical effects of intoxication on women's ability to engage in resistance strategies (Abbey et al., 2004; Koss & Dinero, 1989), and was thus included as a correlate in the present study. In line with prior findings, several hypotheses were proposed:

Hypothesis 1: Women endorsing greater sexual resistance self-efficacy will report less severe prior sexual victimization.
Hypothesis 2: Women endorsing greater sexual resistance self-efficacy will report less hazardous alcohol use.
Hypothesis 3: Women endorsing greater sexual resistance self-efficacy will demonstrate lower psychological barriers to resistance, greater sexual communication, and increased engagement in self-protective dating behaviors.
Hypothesis 4: Sexual resistance self-efficacy will be significantly associated with all four domains of sexual assertiveness. Specifically, women endorsing greater sexual resistance self-efficacy will demonstrate (a) greater relational sexual assertiveness, (b) greater sexual agency, (c) greater sexual standards, and (d) lower levels of sex-related negative affect.

A secondary aim of this study was to explore multivariate associations among these constructs. A multivariate regression analysis was conducted, which included all variables with a significant univariate association with sexual resistance self-efficacy. For this analysis, no specific hypotheses were proposed.

Method

Participants and Procedures

Data were collected in the context of a larger study at a Midwestern University evaluating a sexual assault prevention program for college women (Gidycz et al., 2015).

Prior to implementing the prevention program, questionnaires were distributed to women residing in on-campus residence halls. Participants assigned to both the treatment (those who received the prevention program) and control groups (those who did not receive the prevention program) completed the questionnaires. The study was advertised as examining dating and social behavior among women. Participants were recruited from first-year residence halls on the campus via advertisements, emails, and contact from Residential Life staff. While these facilities primarily house freshman, they may also accommodate sophomores due to a variety of circumstances such as increased enrollment, housing availability, or personal preference. Consequently, a small number of respondents in the current study were identified as sophomores residing in first-year residence halls. The study was approved by the Institutional Review Board at (redacted) and all participants provided informed consent. Pencil and paper survey assessments were administered prior to the implementation of the prevention program. Women completed the questionnaires (i.e., in groups comprising other members of their residence hall floor) in a large group meeting room within their residence hall. The groups were limited to women, and questionnaires were distributed by trained female graduate students. Participants were given ample space to complete the questionnaire confidentially and returned the packet to the research staff in a sealed manilla envelope. The questionnaire was anonymous. After completing the surveys, participants were provided with a list of campus resources and compensated $20 for study participation.

Measures

Demographic Characteristics. Participants completed a short survey to assess demographic characteristics. Survey items included assessments of race, ethnicity, age, marital status, and sexual orientation.

Alcohol Use Disorders Identification Test. Alcohol use was assessed with the Alcohol Use Disorders Identification Test (AUDIT; Saunders et al., 1993), which assessed overall alcohol intake, potential dependence on alcohol, and experiences of alcohol-related harms. Participants responded to 10 items using a 5-point Likert-type scale from 0 (*never*) to 4 (*daily or almost daily*). Total scores on the measure ranged from 0 to 40, with higher scores reflecting an increased likelihood of alcohol misuse. The AUDIT has demonstrated good reliability and validity across multiple studies (Conigrave et al., 1995; Hall et al., 1993). Reliability was .85 in the current sample.

Sexual Experiences Survey. Experiences of sexual victimization from the age of 14 to the time of the survey were assessed with the Sexual Experiences Survey (SES; Koss & Oros, 1982). The SES includes 10 behaviorally specific questions assessing a range of unwanted sexual experiences, including unwanted sexual contact, sexual coercion, attempted rape, and completed rape. Participants responded yes or no to each question.

The SES has demonstrated acceptable psychometric properties, with measures of internal consistency for assessing unwanted sexual experiences equaling .74 (Gylys & McNamara, 1996; Koss & Gidycz, 1985).

Sexual Resistance Self-Efficacy Rating Scale. Women's confidence in performing an array of assertive responses in threatening dating situations was assessed with the Sexual Resistance Self-Efficacy Rating Scale (Marx et al., 2001; Ozer & Bandura, 1990). Responses to seven items were provided along a 7-point scale, ranging from 1 (*not at all confident*) to 7 (*very confident*), with higher scores reflecting greater confidence in responding to threatening situations. Sample items include: "If a man you were with was attempting to get you to consume alcohol despite your wishes not to do so, how confident are you that you could successfully resist his pressuring" and "If a man you were with was attempting to get you to have sex with him and you were not interested, how confident are you that you could successfully resist his advances." Good construct validity for this scale has been demonstrated by Marx et al. (2001) and reliability in the current sample was .85.

Dating Self-Protection Against Rape Scale. Women's use of behaviors to decrease the risk of sexual victimization was assessed with the Dating Self-Protection Against Rape Scale (Moore & Waterman, 1999). Participants responded to 15 items on a 6-point scale, ranging from 1 (*never*) to 6 (*always*). Sample items include: "Try to be aware of where other people are who may be able to help you in case of an emergency" and "Let a friend or family member know where you are and whom you are with." This scale has been utilized in numerous studies of sexual assault risk reduction programming (Gidycz et al., 2006; Orchowski et al., 2008). Reliability in the current sample was .79.

Sexual Communication Survey. The Sexual Communication Survey (Hanson & Gidycz, 1993) included 21 items that address women's likelihood of using open sexual communication with their partner. Participants responded to items along a 7-point scale ranging from 1 (*never*) to 7 (*always*). Items are summed for a total score, with higher scores representing greater engagement in open sexual communication about sexual likes and dislikes. Sample items include: "Do you speak openly to the guys that you go out with about the issue of birth control" and "Do you speak openly to the guys that you go out with about the issue of sexually transmitted diseases." Reliability in the current sample was .87.

Psychological Barriers to Resisting Questionnaire. The Psychological Barriers to Resisting Questionnaire (Nurius et al., 2000) assessed psychological barriers to resisting against an unwanted sexual advance. The scale includes three subscales: (a) self-consciousness; (b) concern for preserving the relationship; and (c) concern for exacerbating injury. Participants rated the extent to which each concern interferes with their ability to protect themselves along a 5-point scale, with responses ranging from 1 (*not at all significant*) to 5 (*very much significant*). Sample items across these scales

include: "I don't want him to think I am uptight or a 'prude,'" "I like him and don't want to ruin things for the future," and "I am afraid of being physically hurt if I don't go along with it." Scores are summed for each subscale, with higher scores reflecting greater self-rated psychological barriers to resistance. Prior research has substantiated the reliability and validity of this scale (Norris et al., 1996). Reliability in the current sample was .85, .82, and .82 for the self-consciousness, relationship preservation, and exacerbation of injury subscales, respectively.

Sexual Assertiveness Questionnaire for Women. Assertiveness in sexual situations was measured with the Sexual Assertiveness Questionnaire for Women (Messman-Moore et al., 2007). Participants responded to 30 items along a 5-point scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*); items were summed, such that higher scores reflected higher levels of each domain. The measure includes the following four subscales: (a) relational sexual assertiveness (e.g., "I am easily persuaded to engage in sexual activity"; reverse scored); (b) sexual agency (e.g., "I am good at expressing my sexual needs and wants"); (c) sexual standards (e.g., "I don't have intercourse unless I know my partner very well"); and (d) sex-related negative affect (e.g., "I feel bad after I have sex"). The reliability and validity of this scale are reported by Messman-Moore et al. (2007). Reliability for the current sample was .74, .83, .92, and .78, for sex-related negative affect, sexual standards, relational sexual assertiveness, and sexual agency subscales, respectively.

Data Analytic Plan

A series of bivariate correlation analyses were utilized to examine Hypotheses 1, 2, 3, and 4. To examine multivariate predictors of resistance self-efficacy, a multiple regression was performed. Only variables with significant univariate associations with resistance self-efficacy were entered into the regression model. Missing data were handled through listwise deletion, resulting in the varying degrees of freedom observed in the F and t-test statistics.

Results

Preliminary Analyses

Participants included 650 undergraduate women with a mean age of 18.15 ($SD = 0.35$). Most self-identified as White ($n = 597$, 91.8%), non-Hispanic/Latino ($n = 637$, 98.0%), and heterosexual ($n = 640$, 98.5%). Approximately one-quarter of participants reported their parent's yearly income as $100,000 or greater. Experiences of adolescent sexual assault were reported by 34.6% ($n = 225$) of the women in this study sample. Specifically, 25.8% ($n = 168$) of women reported a prior experience of either forced sexual contact, sexual coercion, or attempted rape, and 8.8% ($n = 57$) reported a prior experience of rape. Additional demographics and sample characteristics are presented in Table 1.

Table 1. Sample Demographics and Descriptive Characteristics.

Construct	*M* (*SD*)	Range	*n* (%)
Age	18.15 (0.35)	18–19	
Racial/ethnic background			
American Indian or Alaskan Native			3 (0.5%)
Asian			7 (1.1%)
Black or African-American			26 (4.0%)
Native Hawaiian or other Pacific Islander			5 (0.8%)
White			597 (91.8%)
Not listed			12 (1.8%)
Ethnicity			
Hispanic or Latino			13 (2.0%)
Not Hispanic or Latino			637 (98.0%)
Year in college			
Freshman			643 (98.9%)
Sophomore			6 (0.9%)
Not listed			1 (0.2%)
Relationship/dating status			
Not dating			64 (9.8%)
Dating casually			319 (49.1%)
Dating seriously and/or exclusively			262 (40.3%)
Engaged or married			5 (0.8%)
Sexual orientation			
Bisexual			10 (1.5%)
Heterosexual			640 (98.5%)
Parent's yearly income			
$10,000–20,000			12 (1.8%)
$20,001–30,000			21 (3.2%)
$30,001–40,000			24 (3.7%)
$40,001–50,000			50 (7.7%)
$50,001–75,000			111 (17.1%)
$75,001–100,000			94 (14.5%)
Over $100,000			162 (25.7%)
Unsure			167 (25.7%)
Not listed			9 (1.4%)

Univariate Associations

A series of bivariate correlation analyses documented several associations between study variables and resistance self-efficacy (see Table 2). History of sexual victimization since the age of 14 was negatively associated with resistance to self-efficacy, $r\,(650) = -.21$, $p < .001$. All types of psychological barriers to resistance were associated with resistance self-efficacy, including lower psychological barriers to resistance due to self-consciousness, $r\,(649) = -.33$, $p < .001$; less concern for preserving the relationship, $r\,(649) = -.36$, $p < .001$; and less concern for injury, $r\,(649) = -.37$, $p < .001$. Domains of sexual assertiveness were also associated with resistance to self-efficacy,

Table 2. Bivariate Correlations Between Study Variables.

	1	2	3	4	5	6	7	8	9	10	11
1. Resistance self-efficacy	—										
2. Prior victimization	−.21[c]	—									
3. Alcohol use	−.14[c]	.22[c]	—								
4. Barriers to resistance: self-consciousness	−.33[c]	.11[b]	.14[c]	—							
5. Barriers to resistance: Relationship Preservation	−.36[c]	.16[c]	.16[c]	.69[c]	—						
6. Barriers to resistance: injury	−.37[c]	.11[b]	.03	.41[c]	.44[c]	—					
7. Sexual communication	.31[c]	−.19[c]	−.26[c]	−.38[c]	−.40[c]	−.22[c]	—				
8. Dating self-protective behaviors	.32[c]	−.09[a]	−.25[c]	−.04	−.06	−.01	.04	—			
9. Sexual assertiveness: relational assertiveness	.45[c]	−.33[c]	−.26[c]	−.37[c]	−.43[c]	.31[c]	.46[c]	.23[c]	—		
10. Sexual assertiveness: sexual agency	.29[c]	−.02	−.002	−.29[c]	−.32[c]	−.21[c]	.36[c]	.02	.42[c]	—	
11. Sexual assertiveness: sexual standards	.14[c]	−.13[c]	−.31[c]	−.06	−.04	−.06	.17[c]	.09[a]	.37[c]	.14[c]	—
12. Sexual assertiveness: sex-related negative affect	−.32[c]	.18[c]	.04	.31[c]	.36[c]	.29[c]	−.37[c]	−.04	.57[c]	−.46[c]	−.07

[a]$p < .05$; [b]$p < .01$; [c]$p < .001$.

including lower sex-related negative affect, $r\,(647) = -.32$, $p < .001$; greater relational sexual assertiveness, $r\,(644) = .45$, $p < .001$; greater sexual agency, $r\,(647) = .29$, $p < .001$; and greater sexual standards, $r\,(650) = .14$, $p < .001$. Both sexual communication $r\,(606) = .31$, $p < .001$; and dating self-protective behavior, $r\,(650) = .32$, $p < .001$; were positively associated with resistance self-efficacy. Alcohol use was also negatively correlated with resistance self-efficacy, $r\,(641) = -.14$, $p < .01$.

Multivariate Associations

A multiple regression was performed to examine the correlates of resistance self-efficacy (see Table 3). Independent variables included: alcohol use, history of sexual victimization since age 14 to the time of the current study, dating self-protective behaviors, sexual communication, psychological barriers to resistance due to self-consciousness, concern for preserving the relationship, concern for injury, and several domains of sexual assertiveness (e.g., sex-related negative affect, relational sexual assertiveness, sexual agency, sexual standards). The model accounted for a significant amount of variability in women's resistance self-efficacy, $F(11, 576) = 30.28$, $p < .001$, $R^2 = 0.37$. In the presence of the other predictors, having no history of sexual victimization, $t(1, 586) = -2.19$, $p = .029$, greater self-protective dating behaviors, $t(1, 586) = 8.59$, $p < .001$, lower psychological barriers to resistance due to concern for injury, $t(1, 586) = -5.20$, $p < .001$, greater relational sexual assertiveness, $t(1, 586) = 3.16$, $p = .002$, and greater sexual agency, $t(1, 586) = 2.29$, $p = .022$, emerged as significant predictors of resistance self-efficacy.

Discussion

Given the relevance of resistance self-efficacy to responding to unwanted sexual advances, research which identifies factors associated with resistance self-efficacy

Table 3. Multiple Regression Predicting Resistance Self-Efficacy.

Independent variable	B	Standard error	β	*t*	*p*
Alcohol use	.05	.05	.04	1.01	.312
Prior victimization	**−1.14**	**.52**	**−.08**	**−2.19**	**.029**
Dating self-protective behaviors	**.21**	**.03**	**.30**	**8.59**	**<.001**
Sexual communication	.03	.02	.07	1.73	.084
Barriers to resistance: self-consciousness	−.20	.11	−.09	−1.85	.065
Barriers to resistance: relationship preservation	−.13	.11	−.05	−1.10	.272
Barriers to resistance: injury	**−.39**	**.08**	**−.20**	**−5.20**	**<.001**
Relational sexual assertiveness	**.11**	**.04**	**.16**	**3.16**	**.002**
Sexual agency	**.11**	**.05**	**.09**	**2.29**	**.022**
Sexual standards	−.01	.06	−.01	−0.14	.887
Sex-related negative affect	−.07	.09	−.03	−0.70	.483

Note. Bolded font indicates significance at the $p < .05$ level.

can be utilized to inform the development of sexual assault risk reduction and resistance education programs. Several correlates of resistance self-efficacy in the current sample of college women emerged. In support of Hypothesis 1, the history of sexual victimization from the age of 14 to the time of the current study was negatively associated with resistance self-efficacy. These results align with prior research documenting an association between sexual resistance self-efficacy and sexual victimization (Kearns & Calhoun, 2010; Marx et al., 2001; Walsh & Foshee, 1998). Importantly, prior experiences of sexual victimization have demonstrated strong associations with the risk of revictimization (Littleton et al., 2009). Research that employs prospective, longitudinal design is warranted to examine whether resistance self-efficacy mediates the association between prior victimization and subsequent sexual assault.

The present study also contributes to the extant literature by documenting several correlates of resistance self-efficacy not previously examined in prior research. As proposed (Hypothesis 2), lower levels of alcohol use were associated with greater resistance self-efficacy. Notably, the theory of alcohol myopia indicates a reduced ability to focus and attend to important details while under the influence of alcohol (Steele & Josephs, 1990), causing impairment to individuals' physical and cognitive abilities to resist an unwanted sexual advance. Previous research on alcohol use among women with a history of sexual victimization has posited two theories to explain this: (a) alcohol is used to cope with the previous experiences of victimization (Najdowski & Ullman, 2009) or (b) alcohol use puts individuals at increased risk of risky sexual behaviors (Looby et al., 2019). Of note, these theories are not mutually exclusive. Still, future research that utilizes prospective, longitudinal designs is needed to better understand the nature and direction of the negative association between sexual resistance self-efficacy and alcohol use.

Resistance self-efficacy was also negatively associated with all forms of psychological barriers to resistance and positively associated with sexual communication and dating self-protective behaviors (Hypothesis 3). Notably, the use of protective behavioral strategies has been negatively correlated with incapacitated, attempted, or completed rape, use of alcohol before sex, and sexual assault severity (Gilmore et al., 2015). Another study also found that the use of protective behavioral strategies at baseline was correlated with less severe sexual assault victimization after a 3-month follow-up (Gilmore et al., 2018). These findings highlight the utility of addressing these interrelated constructs in the context of risk reduction and resistance education programs.

All domains of sexual assertiveness were associated with resistance self-efficacy, such that greater resistance self-efficacy was associated with lower levels of sex-related negative affect, greater relational sexual assertiveness, greater sexual agency, and greater sexual standards (Hypothesis 4). Data suggest that sexual assertiveness is one of the most salient mediators of preventing unwanted sexual advances, including sexual assault (Kelley et al., 2016), with one study finding heightened levels of social interaction anxiety leading to decreased sexual refusal assertiveness (Schry & White, 2013). Research aiming to elucidate why college men may cease to carry out unwanted sexual advances have found that men primarily stop an unwanted sexual advance in

response to women's verbal (Orchowski et al., 2022) or physical (Orchowski et al., 2021) resistance, or because the man had engaged in a discussion regarding the women's limits and/or choices. Taken together with results from previous studies, our findings underscore the relevance of sexual assertiveness to resistance self-efficacy.

Although these findings are notable, the bivariate associations observed in the present study are best understood in the context of our multivariate findings. Specifically, the multivariate model documented that, in the context of the other predictors, dating self-protective behaviors, psychological barriers to resistance relating to concern for injury, relational sexual assertiveness, sexual agency, and a prior history of sexual victimization emerged as significant correlates of resistance self-efficacy. These findings have several implications for prevention. Specifically, risk reduction and resistance education programs may strengthen participants' confidence in resistance by taking a more concerted effort to dispel the myth that resistance against an attack perpetrated by an acquaintance is linked to exacerbation of injury (Guerette & Santana, 2010; Tark & Kleck, 2014). Media representations of crimes frequently portray women as powerless in response to criminal behavior, which may perpetuate nonassertive and nonforceful responses to threats (Snedker, 2012). The present findings also underscore the importance of ensuring that prevention programs address how sexual victimization increases the risk for subsequent sexual assault among college women. Risk reduction and resistance education programs for college women are commonly universal (Orchowski & Gidycz, 2018), highlighting the potential utility of more targeted programs for women with a history of sexual victimization. Findings from the present study emphasize the wide range of factors that can be addressed to promote women's confidence in resisting attackers. Indeed, Hollander (2018) and Ullman (2022) have advocated for the wide implementation of sexual assault prevention programs (e.g., training in empowerment self-defense; the Enhanced Assess, Acknowledge, and Act model) to address numerous core outcomes pertinent to risk reduction. Results of the present study have the potential to assist researchers in identifying the most critical factors to address when seeking to promote confidence in "fighting back" against a sexual assault.

Limitations and Future Directions

Several limitations should be noted. A revised, validated version of the SES now exists (i.e., it was not validated at the time of original data collection for the present study) that should be utilized in future research (Johnson et al., 2017). The prior version of the SES only assessed experiences of sexual victimization perpetrated by men against women, which may underrepresent experiences of victimization in the current sample. Reliance on self-report survey measures also limits the present research. Given that laboratory tasks have yet to be utilized to assess skills or confidence in resistance, innovative data collection methods for skills relevant to risk reduction are warranted. While the sample size was adequate, racial, ethnic, and sexual orientation diversity was limited in the study sample; as such, results should not be assumed to generalize to women possessing marginalized identities. Replication

among diverse samples of undergraduate women is needed to understand how race, ethnicity, sexual orientation, and gender identity may influence sexual resistance self-efficacy. It may also be beneficial to examine resistance self-efficacy among women enrolled in graduate school, which would clarify whether the experiences described in the current study are enduring throughout postsecondary education. Although the variables examined in the current study were well aligned with approaches to risk reduction, greater attention to other factors (i.e., beyond those considered in the present study) likely to influence confidence in responding to unwanted sexual advances in future research is warranted. For example, it is possible that general levels of self-efficacy may be associated with resistance self-efficacy, as well as prior participation in a self-defense course. Finally, many of the measures utilized to assess outcomes of sexual assault risk reduction were developed years ago and may warrant expansion and updating to reflect more recent advances in our understanding of risk reduction skills. Data were collected as part of a larger evaluation of sexual assault prevention programming for college women (citation masked) and men (citation masked). Based on the email lists of students living in the residence halls enrolled in this study, it is estimated that—across both the women's and men's arms of the study—1,285 of the possible 2,243 (or 57.3%) students who were asked to participate decided to enroll. Demographic information was only obtained for those who participated in the study, thus the precise enrollment rate for women is not available.

Conclusion

Given the high rates of sexual assault among women on college campuses, research is needed to drive the development and revision of sexual assault prevention approaches. Numerous studies document that fighting back against an attacker is effective for decreasing the severity and completion of a sexual assault, and existing sexual assault risk reduction programs for college women which demonstrate reductions in rates of sexual assault among program participants include specific training in empowerment self-defense (Orchowski et al., 2008; Senn et al., 2015). The current study advances the development of sexual assault prevention approaches by documenting factors that contribute to women's confidence in fighting back. Given the finding that greater dating self-protective behaviors, lower psychological barriers to resistance due to concern for injury, greater relational sexual assertiveness, greater sexual agency, and not having a history of adolescent sexual victimization were associated with resistance self-efficacy in the current sample, researchers and practitioners seeking to enhance women's confidence in "fighting back" may benefit from ensuring that empowerment self-defense curriculum pays specific attention to these factors.

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