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Prospective Predictors of Receiving Disclosures of Intimate Partner Violence and Sexual Assault Among College Students

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Abstract

Objective: Previous research has indicated that many undergraduates receive disclosures of sexual assault and intimate partner violence (IPV) from their peers; however, much of this research has been cross-sectional. The present study assessed the extent to which demographic characteristics and victimization history predicted whether participants received disclosures over the subsequent 6 months. Directional hypotheses assessed whether psychological symptoms and attitudes predicted, or were consequences of, disclosures at follow-up.

Method: College students ($n = 867$) from a broader treatment intervention study completed pretest (Time 1) and 6-month follow-up surveys (Time 2).

Results: Individuals who reported new disclosures at follow-up (56%) were more likely to be women, have previous experience receiving either sexual assault or IPV disclosures, and have experienced sexual assault or IPV victimization in their lifetime and across the follow-up period. Sexual orientation did not predict receipt of disclosures at follow-up; intervention group did not moderate these relationships. Results of longitudinal structural equation models found that although higher Time 1 posttraumatic stress disorder symptoms and depressive symptoms

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predicted disclosure status at follow-up, Time 1 disclosure status did not predict subsequent increases in posttraumatic stress disorder and depressive symptoms. Attitudinal variables were not significantly associated with disclosures reported at Time 1 or follow-up.

Conclusions: Findings suggest the importance of attending to personal experiences of victimization within interventions aiming to improve responses to disclosure. Although individuals with higher distress are more likely to receive subsequent disclosures, disclosure does not appear to lead to increases in long-term psychological distress.

Keywords

sexual assault; intimate partner violence; disclosure; social reactions

Research has consistently documented that sexual assault and intimate partner violence (IPV) are common among college students and are associated with deleterious outcomes (Banyard et al., 2013; Carey, Norris, Durney, Shepardson, & Carey, 2018; Dworkin, Menon, Bystrynski, & Allen, 2017). A majority of young adults who experience sexual assault or IPV disclose these experiences to others, most commonly to informal sources such as family and friends (Sylaska & Edwards, 2014). Although *positive social reactions* (e.g., believing the victim and providing emotional support and tangible aid) to these disclosures are most common, many survivors also receive *negative social reactions* (e.g., victim blame, disbelief, and treating the survivor differently; Ullman, 2010). Meta-analytic research demonstrates that negative social reactions are associated with a number of negative outcomes for survivors, including increases in posttraumatic stress disorder (PTSD) symptoms, depression, anxiety, and substance use (Dworkin, Brill, & Ullman, 2019). Therefore, there has been increased recognition of the importance of interventions that aim to improve social reactions to disclosures of violence (Edwards & Ullman, 2018).

Having knowledge of who is most likely to receive sexual assault and IPV disclosures could assist in tailoring intervention content. However, to date, limited research has studied the characteristics of individuals who receive disclosures. In addition, the few studies that exist have explored these factors cross-sectionally, which limits understanding of whether certain characteristics of disclosure recipients (e.g., attitudes, mental health) affect or are affected by disclosure receipt. Thus, the purpose of the present study is to use a prospective design to explore whether certain characteristics of disclosure recipients, including gender, sexual orientation, and *previous violence exposure* (i.e., previous experiences of IPV or sexual assault), predict whether participants will receive IPV and/or sexual assault disclosures over the subsequent 6 months. In addition, the present article sought to explore directional hypotheses for potential associations between being a disclosure recipient and *psychological symptoms* (i.e., levels of PTSD or depression symptoms) and *attitudinal characteristics* (e.g., empathy for survivors and confidence in one's ability to help a friend who experienced sexual assault or IPV), including whether these symptoms or attitudes led to increases in subsequent disclosure, and/or whether disclosure led to increases in psychological symptoms or changes in attitudes toward survivors.

Theoretical Framework

Based on *rational choice* theory (Becker, 1968), and applied to disclosures of victimization (Menard, 2005; Ullman, 2010), survivors are theorized to make decisions about to whom they will disclose based on an evaluation of the anticipated costs and benefits of disclosure and the social norms of disclosure. Ultimately, many factors are likely to influence survivors' decisions about why, to whom, and how often they choose to disclose victimization experiences. A model by Liang, Goodman, Tummala-Narra, and Weintraub (2005) and adapted by Ullman (2010) includes, for example, the need for survivors to do the following before disclosure: (a) define victimization as a problem, (b) make the decision to seek support (including to whom, when, and what details to share), and then (c) consider the effects of outcomes of various disclosures, all within a framework considering contextual (e.g., rape myths, norms, and accessibility of supports) and individual (e.g., demographics, assault characteristics, and social network availability) influences.

Narrowing this process to the specific question of *to whom* survivors disclose, researchers have theorized that survivors are more likely to disclose to individuals who they believe will understand their experiences and concerns (Ullman, 2010) and who they believe will treat them well (Fisher, Daigle, Cullen, & Turner, 2003). By contrast, survivors who do not disclose often report fears that others will not understand, will offer negative social reactions, or will be overwhelmed by the disclosure (Edwards, Dardis, & Gidycz, 2012; Mahlstedt & Keeny, 1993). Survivors have also reported that they either delay disclosure or do not disclose when they perceive that they will not be supported, fear receiving negative social reactions, fear problematic responses from disclosure recipients (e.g., violent reactions), or when they are concerned about overwhelming disclosure recipients (Ullman, O'Callaghan, Shepp, & Harris, 2020). However, there are exceptions to *rational choice theory*; for example, qualitative research suggests that some disclosures are not chosen, rather, others may observe the violence directly or may learn of the violence when a disclosure recipient discloses to others without the survivors' consent (Ullman et al., 2020).

Who Receives IPV and Sexual Assault Disclosures?

Studies assessing characteristics of sexual assault and IPV disclosure recipients have mostly taken two forms, either assessing these characteristics from the perspectives of survivors or from the perspectives of disclosure recipients. In general, these studies have found that survivors disclose to individuals who may be more likely to react positively rather than negatively to their disclosure, consistent with rational choice theory.

Research from the perspective of survivors.—First, with respect to demographic characteristics, empirical evidence indicates that survivors more frequently disclose to women than men (Dworkin, Pittenger, & Allen, 2016; Jacques-Tiura, Tkatch, Abbey, & Wegner, 2010; Orchowski & Gidycz, 2012). Ullman (2010) theorized that sexual assault survivors will more frequently disclose to female peers because they expect more positive reactions from other women on account of greater perceived empathy. Supporting this theory, in a study of victim–supporter disclosure dyads, Lorenz et al. (2018) found that female friends provided more positive responses compared with male friends, male

significant others, and family members, in part owing to their own personal experiences with trauma. Though sexual orientation of disclosure recipients has been less frequently explored, Sylaska and Edwards (2015) found comparable rates of IPV disclosures were made to both heterosexual and lesbian, gay, bisexual, transgender, and questioning (LGBTQ+) disclosure recipients.

Beyond demographic variables, there have been limited studies among samples of survivors assessing whether they disclosed to certain individuals owing to their victimization history. Among a sample of community women who experienced sexual assault (Jacques-Tiura et al., 2010), 13% reported disclosing to someone who had also experienced sexual assault because “the person had a similar situation (p. 182).” However, a qualitative study of undergraduates found that only 2% of survivors specifically sought to disclose to a fellow survivor (Fleming & Muscari, 2019). It is also possible that survivors may disclose to peers who have experienced victimization previously in a process of reciprocal disclosure (Choi, Park, Lutz, & Neuilly, 2018).

To our knowledge, previous quantitative studies have not assessed whether survivors choose to disclose to certain individuals because of the perceived psychological functioning or attitudes of that individual. However, in a qualitative study, Ullman et al. (2020) found that some survivors of sexual assault chose not to disclose owing to concerns about burdening others because they believed that available recipients would lack critical knowledge about how to be supportive, or because they feared possible recipients would hold violence-supportive norms and attitudes.

Research from the perspective of disclosure recipients.—Research has been mixed regarding demographic characteristics of disclosure recipients. Similar to the research from the perspective of survivors, some research studies from the perspective of disclosure recipients suggest that women are more likely than men to report receiving sexual assault and IPV disclosures (Banyard, Moynihan, Walsh, Cohn, & Ward, 2010; Beeble, Post, Bybee, & Sullivan, 2008). However, findings have been more mixed with respect to age (Beeble et al., 2008; Paul et al., 2013; Paul, Walsh, et al., 2014) and race (Paul, Kehn, et al., 2014; Paul et al., 2013; Paul, Walsh, et al., 2014).

Studies from the perspective of disclosure recipients are optimal for assessing several other characteristics of potential disclosure recipients, including the disclosure recipients’ (a) previous history of victimization, (b) psychological functioning, and (c) attitudes (e.g., victim blame and confidence in supporting a survivor). Although survivors may know or surmise some of this information (e.g., victimization history and attitudes toward survivors), some of this may be based on assumption (e.g., perception of another’s psychological symptoms) and might be better assessed through the disclosure recipient’s report. Across numerous studies, both personal victimization and mental health history have been consistently associated with receiving IPV and sexual assault disclosures (Beeble et al., 2008; Paul et al., 2013; Paul, Kehn, et al., 2014; Paul, Walsh, et al., 2014). However, in each study, either IPV or sexual assault history was assessed rather than both forms of violence. In addition, the two retrospective studies assessing the psychological symptoms of disclosure recipients found that individuals who received sexual assault disclosures were

more likely to report lifetime PTSD, depression, previous history of substance use and abuse, and previous mental health treatment utilization (Paul et al., 2013; Paul, Walsh, et al., 2014).

Further, there is limited research to date on attitudinal variables differentiating recipients and nonrecipients of disclosures. However, Paul, Kehn, et al. (2014) found that, compared with nonrecipients, individuals receiving sexual assault disclosures perceived victims to be less responsible for their victimization and reported more effectiveness in helping survivors; victim empathy did not differ between recipients and nonrecipients. As such, individuals who receive disclosures may hold more supportive attitudes toward survivors of sexual assault and IPV.

Are Attitudes and Psychological Conditions Causes or Consequences of Disclosure?

Few previous studies have explored whether receiving disclosures leads to distress. For example, a qualitative study by Kirkner, Lorenz, Ullman, and Mandala (2018) found that recipients were initially impacted by the disclosure at some level; participants reported emotional responses varying between feeling sad, angry, and triggered. The authors attributed some of this distress to feeling overwhelmed about how to assist a survivor, which has been observed in a similar study (Christiansen, Bak, & Elklit, 2012). Furthermore, Kirkner et al. (2018) found that individuals with a trauma history endured a more intense emotional response. This may be owing to a disclosure acting as a triggering agent eliciting a reaction based on a personal victimization history. However, previous studies have not assessed these constructs among recipients of IPV disclosures and have not examined whether disclosure leads to prolonged psychological distress (e.g., PTSD and/or depressive symptoms) beyond the initial disclosure event. Attitudinal changes as a result of disclosure have not previously been assessed, to our knowledge; however, given that the previous research documenting associations between attitudes and receiving disclosures was cross-sectional (Paul, Kehn, et al., 2014), it is possible that just as attitudes may influence who receives disclosures, so might the experience of being a disclosure recipient affect beliefs about survivors of violence. Longitudinal research is needed to disentangle the directionality of these associations.

Current Study

As the identification of likely disclosure recipients could inform the development and dissemination of intervention strategies targeting harmful reactions, the present study examined who is more likely to receive sexual assault and IPV disclosures over a 6-month period based on demographic, personal victimization, psychological functioning, and attitudinal factors. In addition, previous studies indicated an initial increase in emotional distress in some disclosure recipients immediately following the provision of support (Kirkner et al., 2018); however, it is less clear whether receiving disclosures leads to increases in psychological distress over the long term when controlling for one's initial psychological functioning. Understanding who is most likely to be a disclosure recipient can help to tailor information to individuals who might be particularly likely to receive disclosures and to provide critical insight on the extent to which certain components (e.g.,

self-care and coping with personal mental health while assisting another) are important to include. The existing literature on demographic and attitudinal factors has been largely mixed; further, studies have been mostly cross-sectional and have frequently focused on the characteristics of female sexual assault disclosure recipients only (Paul et al., 2013; Paul, Walsh, et al., 2014). Thus, prospective research is needed to explore whether these constructs are pertinent to men and to understand the directions of these associations more clearly, including whether disclosure recipients experience long-term psychological distress and/or attitudinal changes as a result of receiving disclosures. Further, previous studies have largely focused on just one form of disclosure (i.e., sexual assault or IPV); therefore, it is unclear whether there are different characteristics of disclosure recipients that contribute to the likelihood of receiving disclosures overall.

Based on existing theory and research, we hypothesized that, compared with individuals who did not receive sexual assault or IPV disclosures over a 6-month period, individuals who received *either* a sexual assault or IPV disclosure will be more likely to (a) be women (Hypothesis 1), (b) have a history of previous victimization (Hypothesis 2), and (c) have previously received disclosures (Hypothesis 3). We also had two directional hypotheses. Hypothesis 4 was that higher Time 1 psychological distress (i.e., PTSD and depressive symptoms) would predict a higher probability of receiving a disclosure of sexual assault or IPV at Time 2, and that the opposite direction (i.e., that Time 1 disclosure predicts increased psychological distress at Time 2, when controlling for Time 1 symptoms) would not be significant. Hypothesis 5 was that individuals who reported more disclosure-supportive attitudes at Time 1 (i.e., individuals who have more confidence in their abilities as a supporter, greater victim empathy, and lower attributions of victim blame) would be more likely to report having received *either* a IPV or sexual assault disclosure at Time 2, and that the opposite direction (i.e., that Time 1 disclosure predicts changes in confidence, empathy, and victim blame) would not be significant.

Method

Participants

Participants were 1,268 full-time undergraduate students from a university in the northeastern United States. Demographic characteristics are reported in Table 1. Compared with the general population demographics of the university, women were overrepresented in the current study (the university is 55% women; our sample included 68.5% women) though the racial composition was comparable. Participants were largely young and heterosexual/straight, and there was an approximately even distribution of participation across years in school. Among individuals who returned at Time 2 ($N = 889$), 22 participants did not answer the question about receiving a disclosure over the interim. Thus, the final sample includes 867 participants.

Procedure

The study took place at a residential, medium-sized public university in the northeastern United States and received approval from the university's institutional review board. The university's dean of students sent e-mails to 7,000 randomly selected, full-time,

undergraduate students on behalf of the researchers in Fall 2018, with information about the 20-min study and a link to the Qualtrics survey; of these, 1,831 students started the survey (26.2%), and 1,268 qualified, consented to, and completed the survey (18.1%). Additional details about study recruitment can be found in Edwards et al. (2020). The social support intervention provided guidance on how to respond to disclosures, opportunities for role play, and an emphasis on the importance of balancing self-care with the needs of victims of IPV and sexual assault across two 90-min sessions. Results indicated that intervention participants' intentions to provide positive reactions significantly increased at 6-month follow-up relative to the control group; however, treatment and control groups did not significantly differ with respect to actual social reactions provided (Edwards et al., 2020).

Participants first completed the baseline survey (Time 1). An average of 2 weeks later, individuals in the intervention group participated in the first intervention session. The follow-up survey (Time 2) occurred 6 months after the first intervention session, and, for control participants, 6 months and 2 weeks after their baseline survey (to ensure receipt of e-mail at times comparable to intervention participants). The researchers sent participants up to eight total text, e-mail, and call reminders to remind them of the Time 2 survey. Of the 1,268 baseline participants, 889 participants completed the Time 2 survey, for a response rate of 70.1%. Participants received a \$15 gift card for completing Time 1 and a \$25 gift card for completing Time 2.

Participant Attrition Analysis

We conducted a series of χ^2 and t test analyses to compare participants who completed the Time 2 survey with participants not completing the Time 2 survey on Time 1 constructs. Before Bonferroni correction (Bland & Altman, 1995), at baseline, participants completing the Time 2 survey were more likely to be women and were less likely to report lifetime IPV or sexual assault victimization at baseline. Groups did not differ as a function of intervention condition or any other study variable. After applying a Bonferroni correction, none of these variables were significant.

Measures

Demographics.—At Time 1, the participants reported their age, race, ethnicity, gender, and sexual orientation. They also reported their year in college, parental income, and whether or not their parent or guardian pays at least part of their tuition or room and board.

Experiences of disclosure.—At Time 1 and Time 2, participants responded to the researcher-created item, “In the past 6 months, has someone (e.g., friend, acquaintance, family member, dating/romantic partner) told you they experienced any of the following?” This item was followed by three sexual assault items (e.g., “someone [including, but not limited to, a romantic partner] used physical force, threats of physical force, alcohol/drugs to incapacitate to have sexual intercourse [oral, anal, vaginal]”) and 13 items of physical, verbal, and psychological IPV (e.g., “their partner threw something at them,” “their partner refused to talk to them,” “their partner monitored their phone, e-mail, social

media account”). The outcome variable of interest is the presence or absence of receiving disclosures of any of form of sexual assault or IPV at Time 2.

Sexual assault victimization.—At Time 1, participants responded to two questions asking if they had ever, in their lifetime, experienced unwanted sexual contact or unwanted sexual intercourse (0 = *no*, 1 = *yes*), with the questions (Banyard et al., 2007; Ward, Chapman, Cohn, White, & Williams, 1991), “In your lifetime, have you had sexual contact with someone when you didn’t want to?” and “In your lifetime, have you had sexual intercourse with someone when you didn’t want to?” Sexual intercourse was defined as, “any form of sexual penetration including vaginal intercourse, oral sex, and anal intercourse,” and sexual contact was defined as “touching of genitals without a person’s permission (but there is no penetration).” Unwanted sexual intercourse/contact was defined as “those situations in which you were certain at the time that you did not want to engage in the sexual experience and you either communicated this in some way (e.g., you said no; you protested; you said you didn’t want to; you physically struggled; you cried), or you were intimidated or forced by someone, or you were incapacitated (e.g., drunk, passed out).” The same questions were asked at Time 2, referring to the past 6 months. The responses to these items were used dichotomously, as the absence (0) or presence (1) of any sexual victimization across the lifetime (Time 1) or over the past 6 months (Time 2). For both sexual assault and IPV victimization measures, we did not add an α for internal consistency. For these behaviors, it is not clear that what is being measured is an underlying common characteristic; further, presumption of an underlying common characteristic for victimization could be perceived as victim-blaming (Koss et al., 2007). With respect to validity, using these items, Banyard et al. (2007) found that those who experienced sexual victimization reported more negative outcomes (i.e., on academic performance, sleep, substance use, perceptions of self and others) than did nonvictims.

IPV victimization.—At Time 1, the participants responded to four questions asking if they had ever, in their lifetime, experienced verbal, physical, or psychological IPV (0 = *no*, 1 = *yes*). These questions were taken from the revised Conflict Tactics Scale–Short Form (Straus & Douglas, 2004). Psychological/verbal IPV was assessed using the following two items: “My partner insulted or swore or shouted or yelled at me,” and “My partner destroyed something belonging to me or threatened to hit me.” Physical IPV was assessed using the following two items: “My partner punched or kicked or beat me up” and “My partner pushed, shoved, or slapped me.” At Time 2, participants only received the questions about the previous 6 months. The responses to these items were used dichotomously, as the absence (0) or presence (1) of any IPV victimization across the lifetime (Time 1) or over the past 6 months (Time 2).

Posttraumatic stress symptoms.—To assess disclosure recipients’ psychological symptoms, participants responded to the PTSD Checklist for *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (Weathers et al., 2013), at both Time 1 and Time 2. Participants who reported sexual assault or IPV in their lifetime answered questions in relation to the most traumatic/emotional/intense experience of victimization in their lifetime, whereas participants who did not report previous victimization history answered questions

about the most traumatic/stressful experience in their lifetime. In total, 20 items such as “How much were you bothered by repeated, disturbing, and unwanted memories of the stressful experience?” were asked about the past month. Response items ranged from 0 (*not at all*) to 4 (*extremely*). Final score was a sum of items. Convergent and divergent validities for the PTSD Checklist for *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition*, have been established through positive associations with measures of anxiety and fear and weaker associations with scores on externalizing symptoms (e.g., psychopathy and alcohol abuse; Bovin et al., 2016). Reliability was $\alpha = .95$ at Time 1, and $\alpha = .94$ at Time 2.

Depressive symptoms.—Depressive symptoms were also assessed as part of disclosure recipients’ psychological functioning. At Time 1 and Time 2, participants responded to the modified, seven-item Center for Epidemiologic Studies Depression Scale (Mirowsky & Ross, 1990), with items such as “I felt that I could not shake off the blues.” Response items ranged from 0 (*rarely or none of the time*) to 3 (*most or all of the time*). Final score was a sum of items. Reliability was $\alpha = .89$ at Time 1 and $\alpha = .91$ at Time 2. Scores on the short-form correlate strongly with those of the full measure, as well as with measures assessing exposure to life stress (Levine, 2013).

Attitudes: Efficacy, empathy, and blame.—At Time 1 and Time 2, participants responded to three items created for the current study on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*): “I feel confident that I could help a friend who has been a victim of intimate IPV and/or sexual assault,” “I feel empathy for victims of intimate IPV and sexual assault. (Empathy is the ability to understand and share the feelings of another.),” and “Victims of intimate IPV and sexual assault are at least partly responsible for what happened to them.”

Statistical Analysis Plan

For Hypotheses 1–3 assessing demographic, previous violence experience, and previous disclosure experience variables, logistic regression models were used to assess whether the constructs of interest (e.g., gender and previous victimization) were associated with subsequently receiving any disclosure over the 6-month follow-up period (0 = *no disclosure*, 1 = *any disclosure*). For the directional hypotheses (Hypotheses 4 and 5), longitudinal structural equation models using full information maximum likelihood estimation tested the hypothesis that Time 1 psychological symptoms (i.e., PTSD and depressive symptoms) and attitudes (i.e., confidence, empathy, and victim responsibility) would be associated with receipt of any disclosure over the follow-up period, while testing the competing hypothesis that disclosure would predict Time 2 psychological symptoms and attitudes. Analyses were conducted in R, using the *lavaan* package (Rosseel, 2012). Model fit was based upon a nonsignificant model χ^2 , comparative fit index $.95$, and root mean square error of approximation $.05$ with a nonsignificant confidence interval ($p > .05$). Treatment group (i.e., control group, individuals in the treatment group who attended the intervention, individuals in the treatment group who did not attend the intervention) was included as a moderator in all models; when the moderator was not significant, treatment group was included as a covariate. Although there are few established conventions for power analysis in cross-lagged panel models, recommended ratios of $N:q$ (observed parameters)

have ranged from at least 10:1 (Schreiber, Nora, Stage, Barlow, & King, 2006) to 20:1 (Kline, 2015); the present model far surpasses both requirements (i.e., 889:6). Using G* Power (Faul, Erdfelder, Lang, & Buchner, 2007) power analyses for the binary logistic associations indicated that some demographic variables were underpowered (i.e., achieved power <80%) to detect significant effects owing to small sample sizes or effect sizes (e.g., race/ethnicity, age, and examination of sexual assault-only disclosures compared with IPV-only disclosures) and are thus not presented here.

Results

Descriptive Results

Of the 867 participants who responded at Time 2, 481 (55.5%) reported being a recipient of any disclosure in the previous 6 months, whereas 386 (44.5%) did not. Of individuals who received disclosures ($n = 481$), 439 (91.3%) received IPV disclosures, and 149 (31.0%) received sexual assault disclosures. Receiving one form of disclosure was significantly associated with receiving the other form, $\chi^2 = 32.28, p < .001$. Thus, across the entire sample, 44.5% ($n = 396$) did not receive a Time 2 disclosure, 12.3% ($n = 107$) received both sexual assault and IPV disclosures, 38.3% ($n = 332$) received only IPV disclosures, and 4.8% ($n = 42$) received only sexual assault disclosures. Overall, the likelihood of being a recipient of either a IPV or sexual assault disclosure did not vary based on intervention group status at either Time 1, $\chi^2(2) = 2.12, p = .347$, or Time 2, $\chi^2(2) = 0.93, p = .628$.

Hypotheses 1–3: Demographic, Victimization, and Previous Disclosure Experiences as Predictors of Receiving Any Disclosure

A series of binary logistic regressions compared each of the demographic, victimization history, and previous disclosure experiences constructs among individuals who did and did not receive a Time 2 disclosure of either IPV or sexual assault (Table 2). Intervention group did not significantly moderate any of these associations (all p s > .01). As shown in Table 1 and consistent with Hypothesis 1, women were more likely to receive disclosures than men. Sexual minority status did not predict whether one subsequently received a disclosure. Consistent with Hypothesis 2, compared with individuals who did not report victimization, individuals who reported any lifetime victimization, lifetime psychological/verbal victimization, or lifetime sexual victimization at Time 1 were twice as likely to receive disclosures. Further, compared with individuals who were not victimized over the interim, being victimized in any form over the interim was associated with a higher likelihood of receiving disclosures over that same period. Hypothesis 3 was also supported, as individuals who had received disclosures at Time 1 had two to three times greater odds, depending on type, of receiving a disclosure over the subsequent 6 months, compared with individuals who did not receive Time 1 disclosures.

Hypotheses 4 and 5: Directional Hypotheses Exploring Associations Between Time 1 and Time 2 Disclosure, Psychological Symptoms, and Attitudes

Next, longitudinal structural equation modeling with full information maximum likelihood estimation was used to assess directional hypotheses related to Time 1 and Time 2 disclosure status with psychological symptoms and attitudes. Results for psychological symptoms,

including model fit statistics, are shown in Figures 1a and 1b. Consistent with Hypothesis 4, Time 1 depressive symptoms ($B = .10, p = .003$) and PTSD symptoms ($B = .09, p = .008$) significantly predicted receiving a disclosure at Time 2. As hypothesized, the opposite direction was not supported, as Time 1 disclosure did not predict an increase in Time 2 depressive ($B = .02, p = .584$) or PTSD symptoms ($B = .05, p = .150$).

Results for attitudinal variables are presented in Figures 2a–2c. Contrary to hypotheses, there were no significant associations between Time 1 confidence ($B = .06, p = .078$), perceptions of victim responsibility ($B = .02, p = .573$), or victim empathy ($B = .04, p = .254$) and whether the participant received a Time 2 disclosure. There were also no significant associations in the opposite direction (i.e., Time 1 disclosure did not predict Time 2 confidence [$B = .005, p = .869$], victim responsibility [$B = -.03, p = .437$], or empathy [$B = .01, p = .709$]).

Discussion

The current study examined whether a range of factors (i.e., demographic, victimization history, psychological symptoms, and attitudinal) predicted whether participants received a disclosure of sexual assault or IPV over a span of 6 months and also explored directional associations between receiving a disclosure and psychological symptoms and attitudes. This is the first longitudinal study, to our knowledge, of predictors and outcomes of receiving a disclosure from the perspective of disclosure recipients. Results indicated that receiving a disclosure was common, and that women, individuals with a previous victimization history, and those with more severe baseline symptoms of PTSD or depression were more likely to receive a disclosure. There was no evidence that receiving a disclosure was associated with future changes in attitudinal variables or psychological symptoms.

Over half of the participants endorsed being a disclosure recipient during the 6-month study period, including 51% who received IPV and 17% who received sexual assault disclosures. The rate of IPV disclosures is similar to a previous mixed-gender sample of undergraduates (Edwards & Dardis, 2020). The rate of sexual assault disclosures within the past 6 months is somewhat below the rates of 35% (Paul, Walsh, et al., 2014) to 41% (Paul, Walsh, et al., 2014) of college women receiving sexual assault disclosures in previous studies; however, Paul and colleagues assessed lifetime disclosure, whereas the present study measured disclosures within the past 6 months. Further, although most studies have assessed rates of receiving *either* sexual assault or IPV disclosures, the present results highlight that about one in eight participants received *both* types of disclosures over a 6-month period. Thus, receipt of sexual assault and IPV disclosures, even over relatively brief periods, is quite common among undergraduates.

Regarding demographics, women were more likely than men to be disclosure recipients, consistent with our first hypothesis and previous research (Banyard et al., 2010; Beeble et al., 2008; Dworkin et al., 2016; Orchowski & Gidycz, 2012). Sexual minority status did not predict receiving subsequent disclosures. However, this result is not unexpected, as previous research studies (Beeble et al., 2008; Paul et al., 2013; Paul, Kehn, et al., 2014; Paul, Walsh, et al., 2014) report equivocal findings on the role of demographic predictors of receiving a

disclosure. It is also possible that, as noted by Lorenz and colleagues (2018), similarities between survivor and disclosure recipient demographics—which were not assessed in this study—may be more influential than overall rates of disclosure to individuals of diverse backgrounds.

Consistent with Hypothesis 2, individuals who reported a personal history of victimization, either recently or long ago, were more likely to receive a disclosure. This tendency has been supported by research from the disclosure recipient perspective (Beeble et al., 2008; Paul et al., 2013; Paul, Kehn, et al., 2014; Paul, Walsh, et al., 2014). Interestingly, survivors do not frequently report seeking out fellow survivors when they disclose (Fleming & Muscari, 2019; Jacques-Tiura et al., 2010); however, it is possible that IPV and sexual assault experiences cluster within peer groups (e.g., peers who drink heavily) and that victims are, therefore, more likely to disclose to other victims. Further, it is possible that peers observe signs of violence, behaviors that might have led up to the violence (e.g., a peer going home with an intoxicated man, an argument between partners), or the immediate aftermath of violence, leading them to ask survivors about these experiences directly.

Consistent with Hypothesis 4, individuals who received a disclosure reported higher baseline PTSD and depressive symptom levels, consistent with Paul et al. (2013; Paul, Walsh, et al., 2014), but receiving a disclosure was not associated with later PTSD or depressive symptoms. This finding helps to clarify the direction of the association between psychological symptoms and receiving a disclosure. Specifically, this indicates that individuals who are more distressed are more likely to receive a disclosure, rather than indicating that this distress is necessarily an outcome of disclosure. It is possible that people who are coping with their own distress may be seen as more sympathetic to survivors' distress, or survivors may disclose their assault as part of reciprocal disclosure of difficult experiences generally (Lorenz et al., 2018). In part, this might be explained by the concomitant increases in rates of victimization among these groups. However, this finding bears significance, as it is likely that individuals receiving disclosures might bear a disproportionate burden in managing their own symptoms while also providing support for their peers. Sexual assault survivors commonly blame themselves, engage in avoidance coping, and receive negative social reactions from others, all of which are related to PTSD and depression symptoms (Najdowski & Ullman, 2011; Ullman & Relyea, 2016). Disclosure recipients may be uniquely positioned to receive disclosures given their personal experiences but also uniquely burdened with their own and others' victimization. To the extent that specific social networks of students experience higher risk of victimization, greater disclosure receipt is likely within those networks, so interventions targeting those networks are needed to help survivors and supporters deal with their own and others' victimization.

Contrary to our Hypothesis 5, attitudinal characteristics were not related to disclosure receipt. Specifically, victim empathy, confidence in helping, and victim blame were not related to odds of receiving a disclosure at follow-up. Although we expected survivors would be more likely to disclose to individuals who had more empathy and confidence, and less victim blame, it is possible that survivors do not consistently have insight into these beliefs, especially in a college environment where expressing victim blame openly is likely

discouraged. Interestingly, the opposite direction was also not supported; that is, having disclosure experience at Time 1 did not lead to increases in confidence or empathy, or decreases in victim responsibility. One might expect that having experience might increase one's feelings of self-efficacy or might lead to changes in perceptions of victims. This does not appear to be supported in the present study. It is possible, however, that any potential effect of receiving a past disclosure at Time 1 already led to changes in Time 1 attitudes (such that these did not change significantly with additional time).

Limitations

There are some limitations to the present study. First, there were few individuals who received only sexual assault disclosures ($n=42$); therefore, results comparing the type of disclosure received at Time 2 (i.e., sexual assault compared with IPV) could not be tested. In addition, given the high degree of overlap among variables (e.g., forms of victimization, gender), multivariate models were not tested; thus, the relative contribution of various predictors is unclear. In addition, though the sample had some diversity with respect to sexual orientation and gender, there was limited racial/ethnic diversity, limiting our ability to explore racial/ethnic- or age-related differences in receipt of disclosures. Future studies on diverse campuses are thus needed to ensure that the present results are generalizable to other populations and contexts. Some measures (e.g., confidence, empathy, responsibility) were assessed with single items. IPV and sexual assault victimization were assessed via nonstandard, dichotomous measures; standardized measures should be used in future research, and further evidence of validity is needed. Attitudinal variables were assessed via researcher-created items, one item each; therefore, reliability and validity have not been established. Finally, though this study was the first to our knowledge to examine prospective predictors of receiving sexual and IPV disclosures, the 6-month interim may have been insufficient to detect effects; future designs with longer follow-up periods are recommended.

Research Implications

Despite the previously mentioned limitations, the present study is novel in its exploration of predictors of subsequent disclosure experiences, and the results present several implications for future research. First, given that approximately one in eight participants received both sexual assault *and* IPV disclosures, studies should move beyond assessing disclosures of just one form of violence and try to determine what is unique and common to receiving sexual assault versus IPV disclosures. Gendered beliefs and expectations may affect disclosures and reactions to survivors of each form of violence; these norms should be explored further in future research (Ullman et al., 2020). Additional factors not studied here, such as relationship closeness, proximity, and network density, have been associated with disclosure of sexual assault in previous studies (Dworkin et al., 2016) and are also important to explore in the context of both sexual and IPV disclosures. In addition, personality traits, such as expressive traits, could be assessed as predictors of receiving disclosures. Along these lines, it will be important to replicate these findings among adults outside of a college environment, given that college student survivors may be more likely to be in close proximity to and ongoing contact with a wide range of peers, which could permit more selectivity in choosing a disclosure recipient. From the survivors' perspective, it will

be important to explore whether factors associated with being a disclosure recipient in the present study are consistent with survivors' self-reported reasons for choosing to disclose to certain individuals. For example, future research should assess whether survivors were aware that the disclosure recipient had a history of victimization or were experiencing heightened levels of psychological symptoms (e.g., PTSD or depressive symptoms), and whether these factors influenced their decision to disclose to that individual. Some disclosures may not be offered voluntarily (Ullman et al., 2020); additional research is needed to explore predictors and outcomes of such disclosures and how they might differ from voluntary disclosures. In addition, the context in which individuals receive disclosures must be better understood, including the level of disclosure detail, the relationship between the survivor and the disclosure recipient, the setting in which they are told (e.g., while intoxicated or sober, in front of others or privately), and how disclosures unfold over time. All these factors are critical to understand to help support providers manage these contexts (e.g., what to do when the disclosure recipient or survivor is drunk and disclosing) and to increase realism of programming efforts to improve disclosure experiences and social reactions.

Prevention and Clinical Implications

Based on the present research, there are several implications for practice. First, although women are more frequent recipients of disclosure, previous research studies indicate that men provide more negative and fewer positive reactions than do women (Ahrens & Campbell, 2000; Iles, Waks, Atwell Seate, Hundal, & Irions, 2018); thus, training for men remains critical and may show even greater impact. Centering survivors' voices in developing interventions to target disclosures is critical; Kirkner, Lorenz, and Ullman's (2017) qualitative research assessing survivor recommendations for disclosure underscores the importance of training individuals in general victim advocacy practices, such as ensuring some sense of survivor autonomy, reaffirming that it was not their fault, using active listening skills, and expressing empathy. Therefore, interventions geared toward any support provider should include these listed best practices and skill-building techniques. Next, given that survivors of violence and those with higher symptoms of PTSD and/or depression are disproportionately likely to receive disclosures, it is critical that programs be trauma-informed, addressing histories of previous victimization, including a focus on burnout/compassion fatigue and creating healthy boundaries around disclosure, coping with trauma reminders, and how to seek help when needed for trauma sequelae.

It is encouraging that disclosure experience does not appear to increase distress (i.e., PTSD or depressive symptoms) over time. That is, disclosure itself, although potentially distressing for recipients at the time of disclosure, does not appear to have long-term negative psychological effects. However, certain groups may be more likely to experience postdisclosure distress. For example, some previous research studies have found that those with closer relationships with the survivor expressed more distress (Christiansen et al., 2012; Milliken, Paul, Sasson, Porter, & Hasulube, 2016), and some research studies suggest that survivors with a personal history of victimization report more distress after disclosures than do individuals without victimization histories (Banyard et al., 2010; though other research has not found differences in distress based on victimization history; e.g., Milliken et al., 2016). Nevertheless, Kirkner and colleagues (2018) suggested the need for support

groups designed for disclosure recipients that provide education on the emotional effects of disclosures and the commonality of experiencing some degree of distress initially (i.e., secondary stress). That said, exploring outcomes of social support interventions among survivors is important to ensure they are effective and do not lead to increased distress over shorter intervals. Ideally, such programs could be beneficial to fellow survivors while encouraging a survivor's own posttraumatic growth—supporting survivors, but also oneself.

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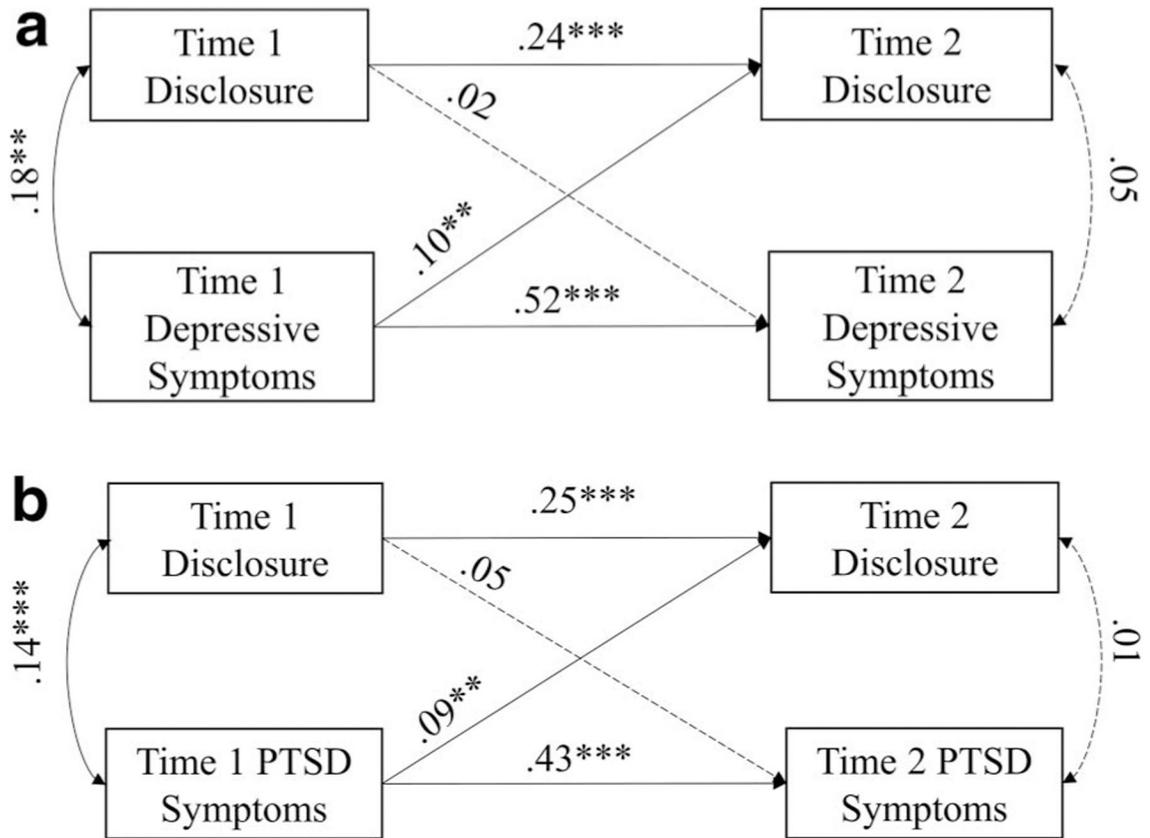


Figure 1.

(a) Hypothesis 4: Longitudinal associations between depressive symptoms and disclosure.

** $p < .01$. *** $p < .001$. Dashed lines indicate nonsignificant paths. Model $\chi^2(4) = 4.89$,

$p = .298$. CFI = .998, RMSEA = .016 (90% CI [.000, .056], $p = .909$). R^2 : Time 2 any

disclosure = .080; Time 2 depressive symptoms = .278. (b) Hypothesis 4: Longitudinal

associations between PTSD symptoms and disclosure. ** $p < .01$. *** $p < .001$. Dashed

lines indicate nonsignificant paths. Model $\chi^2(4) = 4.26$, $p = .372$. CFI = .999, RMSEA =

.009 (90% CI [.000, .053], $p = .934$). R^2 : Time 2 any disclosure = .077; Time 2 PTSD =

.197. CFI = comparative fit index; RMSEA = root mean square error of approximation; CI =

confidence interval; PTSD = posttraumatic stress disorder.

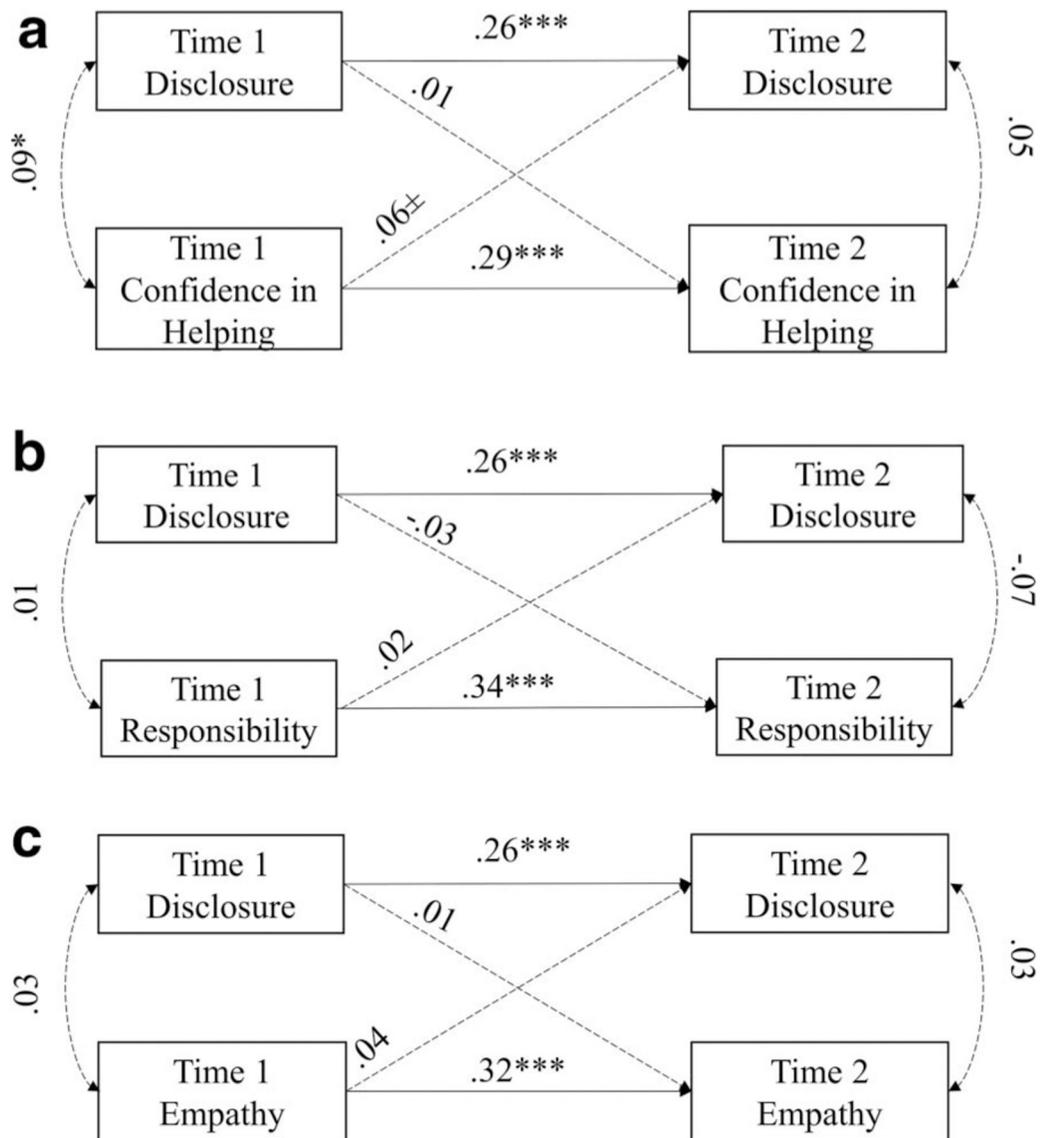


Figure 2.

(a) Hypothesis 5: Longitudinal associations between confidence and disclosure. $\pm p < .10$. * $p < .05$. *** $p < .001$. Dashed lines indicate nonsignificant paths. Model $\chi^2(4) = 2.44$, $p = .655$. CFI = 1.00, RMSEA $< .001$ (90% CI [.000, .041], $p = .982$). R^2 : Time 2 any disclosure = .073; Time 2 confidence = .104. (b) Hypothesis 5: Longitudinal associations between perceptions of victim responsibility for violence and disclosure. * $p < .05$. *** $p < .001$. Dashed lines indicate nonsignificant paths. Model $\chi^2(4) = 12.86$, $p = .012$. CFI = .947, RMSEA = .051 (90% CI [.021, .083], $p = .431$). R^2 : Time 2 any disclosure = .070; Time 2 responsibility = .117. (c) Hypothesis 5: Longitudinal associations between victim empathy and disclosure. * $p < .05$. *** $p < .001$. Dashed lines indicate nonsignificant paths. Model $\chi^2(4) = 3.34$, $p = .503$. CFI = 1.00, TLI = 1.02, RMSEA < 0.001 (90% CI [.000, .047], $p = .963$). R^2 : Time 2 any disclosure = .071; Time 2 empathy = .103. CFI = comparative fit index; RMSEA = root mean square error of approximation; CI = confidence interval.

Table 1

Demographics (N = 1,268)

| Variable | <i>n</i> | <i>M (SD)/%</i> |
|--|----------|-----------------|
| Age | 1,265 | 19.64 (1.23) |
| Gender | | |
| Woman | 866 | 68.5% |
| Man | 391 | 30.9% |
| Gender variant and/or gender queer | 5 | 0.40% |
| Self-identify (e.g., "transgender male") | 3 | 0.20% |
| Decline to answer | 3 | 0.20% |
| Year in college | | |
| First | 359 | 28.3% |
| Second | 307 | 24.2% |
| Third | 306 | 24.1% |
| Fourth and beyond | 196 | 23.4% |
| Race/ethnicity | | |
| White | 1,144 | 91.2% |
| Asian/Asian American | 57 | 4.5% |
| Black/African American | 18 | 1.4% |
| American Indian or Alaska Native | 3 | 0.2% |
| Multiracial | 33 | 2.6% |
| Hispanic/Latino | 63 | 5.0% |
| Sexual orientation | | |
| Heterosexual/straight | 111 | 88.0% |
| Bisexual | 81 | 6.4% |
| Not sure | 18 | 1.4% |
| Gay | 16 | 1.3% |
| Pansexual | 14 | 1.1% |
| Lesbian | 9 | 0.7% |
| Asexual | 8 | 0.6% |
| Other (e.g., demisexual) | 5 | 0.4% |
| Parental income (% >\$75,000) | 455 | 59.8% |
| Tuition: Parent/guardian pays at least part | 596 | 68.0% |
| Room/board: Parent/guardian pays at least part | 562 | 64.3% |

Table 2

Descriptive Statistics and Binary Logistic Regression Results Comparing Time 2 Nonrecipients (n = 386) and Time 2 Disclosure Recipients (n = 481), Controlling for Treatment Group

| Variable | T2 disclosure recipient | | | | | | Wald | p | OR [95% CI] | % Class | R ² |
|--|-------------------------|---------------|-----|---------------|-------------|-------|-------------------|------|-------------|---------|----------------|
| | No | | Yes | | M (SD) or % | n | | | | | |
| | n | M (SD) or % | n | M (SD) or % | | | | | | | |
| Demographic variables | | | | | | | | | | | |
| Gender (man) (ref: woman) | 127 | 33.20% | 113 | 23.60% | 10.37 | .001 | 0.61 [0.45, 0.82] | 57.2 | .018 | | |
| Sexual minority (ref: sexual majority) | 34 | 9.00% | 59 | 12.50% | 2.95 | .086 | 1.48 [0.95, 2.32] | 55.5 | .006 | | |
| Mental health and violence experience variables | | | | | | | | | | | |
| T1 disclosure recipient (either SA or IPV) | 187 | 48.70% | 355 | 73.80% | 56.78 | <.001 | 3.01 [2.26, 4.01] | 63.8 | .090 | | |
| T1 SA disclosure recipient | 56 | 14.60% | 137 | 28.50% | 23.29 | <.001 | 2.35 [1.66, 3.32] | 55.5 | .039 | | |
| T1 IPV disclosure recipient | 165 | 43.00% | 330 | 68.60% | 56.53 | <.001 | 2.93 [2.21, 3.87] | 63.5 | .089 | | |
| T1 Lifetime any victimization | 106 | 28.00% | 209 | 44.00% | 23.08 | <.001 | 2.03 [1.52, 2.71] | 56.6 | .038 | | |
| T1 Lifetime P/V IPV victimization | 102 | 26.90% | 206 | 43.50% | 24.73 | <.001 | 2.09 [1.56, 2.80] | 56.6 | .041 | | |
| T1 Lifetime SA victimization | 85 | 22.30% | 201 | 42.40% | 38.80 | <.001 | 2.64 [1.94, 3.58] | 57.7 | .064 | | |
| T1 Lifetime physical IPV victimization | 29 | 7.70% | 61 | 12.90% | 6.11 | .013 | 1.80 [1.13, 2.86] | 55.5 | .012 | | |
| T2 any victimization | 39 | 10.50% | 92 | 19.70% | 13.03 | <.001 | 2.10 [1.40, 3.14] | 55.6 | .023 | | |
| T2 P/V IPV victimization | 39 | 10.5% | 92 | 19.70% | 13.12 | <.001 | 2.11 [1.41, 3.15] | 55.5 | .023 | | |
| T2 SA victimization | 18 | 4.70% | 61 | 12.80% | 15.26 | <.001 | 2.96 [1.72, 5.11] | 55.6 | .029 | | |
| T2 physical IPV victimization | 7 | 1.9% | 20 | 4.3% | — | — | — | — | — | | |
| T1 PTSD symptoms | 381 | 11.66 (13.75) | 477 | 15.33 (15.71) | 12.77 | <.001 | 1.02 [1.01, 1.03] | 56.8 | .024 | | |
| T1 Depressive symptoms | 377 | 5.78 (4.72) | 477 | 7.19 (5.39) | 16.03 | <.001 | 1.06 [1.03, 1.09] | 56.3 | .030 | | |
| Attitudinal variables | | | | | | | | | | | |
| T1 Confidence | 382 | 3.89 (0.95) | 479 | 4.03 (0.91) | 5.49 | .019 | 1.19 [1.03, 1.38] | 56.0 | .010 | | |
| T1 Empathy | 378 | 4.21 (1.08) | 475 | 4.30 (0.96) | 1.56 | .212 | 1.09 [0.95, 1.24] | 56.6 | .004 | | |
| T1 Victim responsibility | 382 | 1.68 (1.00) | 480 | 1.73 (1.10) | 0.37 | .545 | 1.04 [0.92, 1.18] | 55.7 | .002 | | |

Note. T1 = Time 1; T2 = Time 2; OR = odds ratio; CI = confidence interval; % Class. = classification percentage; R² = Nagelkerke's R²; ref = reference group; SA = sexual assault; IPV = intimate partner violence; P/V = psychological/verbal; PTSD = posttraumatic stress disorder. Reference group for violence experience variables is the lack of that variable (i.e., did not receive disclosure, was not victimized). Dashed fields indicate lack of analysis due to low power. Percentages represent the percent of individuals who were (or were not) disclosure recipients. Percentages/means are unadjusted for

treatment group; however, *p* values and *ORs* are based on binary logistic regression including treatment group as a covariate, as treatment group was not a significant moderator in any of the models. Significant constructs (i.e., *p* < .01) are bolded.

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