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Polyvictimization by Dating Partners and Mental Health Among U.S. College Students

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Studies on mental health effects of partner violence often ignore multiple victimizations or polyvictimization. The current study had several objectives: (a) examine the rate of physical, psychological, and sexual victimization and combinations of them (polyvictimization) among a sample of students at 19 U.S. colleges; (b) examine the association between victimization and depressive symptoms and posttraumatic stress (PTS) symptoms; and (c) examine the relation of polyvictimization to these mental health effects. A substantial number were polyvictims. As predicted, polyvictimization in almost all analyses was the strongest predictor of PTS symptoms for both men and women. Polyvictimization was a significant predictor of depressive symptoms for women. These findings highlight the importance of including polyvictimization in future work on the mental health effects of partner violence.

Keywords: posttraumatic stress disorder; depression; polyvictimization/multiple victimizations/complex trauma; college students

Physical, psychological, and sexual victimization of partners in dating, cohabiting, and marital relationships, which we will refer to as partner violence (PV), has many negative mental health consequences. Depressive symptoms and posttraumatic stress (PTS) are the two most prevalent mental health problems associated with PV (Campbell & Kendall-Tackett, 2004; Golding, 1999). However, despite evidence to the contrary (Green et al., 2000), studies of the mental health consequences of PV rarely take into account that victims of PV often suffer from multiple types of victimization (Finkelhor, Ormrod, & Turner, 2007; Hamby, 2003; Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995). We posit that this polyvictimization—that is, multiple types of victimization—might be associated with heightened negative mental health problems and in fact account for some of the relationship found between individual abuse types and mental health problems. The current study addresses these issues by examining the rates and types of specific victimization by a dating partner and also polyvictimization among U.S. college students and the relationship of separate victimization types and polyvictimization to depressive symptoms and PTS symptoms.

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PTS

PV victimization is associated with a heightened likelihood of experiencing posttraumatic stress disorder (PTSD). Rates of PTSD among women victimized by their partner ranged from 31% to 84% (for a reviews, see Golding, 1999; Jones, Hughes, & Unterstaller, 2001). This variability in estimates of PTSD is likely due to sampling different populations (community samples vs. shelter samples) as well as to differences between measures.

Physical, psychological, and sexual abuse are each associated with PTSD. The greater the frequency and severity of physical abuse, the more severe the PTS symptoms (Astin, Lawrence, & Foy, 1993; Coker, Weston, Creson, Justice, & Blakeney, 2005; Houskamp & Foy, 1991; Kemp, Green, Hovanitz, & Rawlings, 1995). For example, Astin et al. (1993) found that severity of violence exposure accounted for a significant amount of the variance in PTSD symptomatology. Among those high in exposure to violence, 60% reported PTSD, while 14% of low-exposure participants reported PTSD (Houskamp & Foy, 1991).

Studies of psychological abuse also find increased rates of PTSD (Bennett, Goodman, & Dutton, 1999; Cascardi, O'Leary, & Schlee, 1999; Coker et al., 2005; Kemp et al., 1995; Street & Arias, 2001) while controlling for other types of abuse. Dutton, Goodman, and Bennett (1999) included physical, emotional/verbal, and sexual abuse and injury as predictors of PTSD. Multivariate analyses showed that emotional/verbal abuse and level of injury significantly predicted PTSD. Finally, sexual abuse was also found to predict PTSD after controlling for physical abuse (Bennice, Resick, Mechanic, & Astin, 2003). Together these studies point to the importance of examining a variety of abuse tactics.

None of the previously mentioned studies, however, examined the potential overlap between victimizations. That is, while some compared victimization types by entering multiple types (e.g., physical, psychological, sexual) into analyses, they did not account for some participants being victimized in multiple ways. The polyvictimization of intimate partners may pose additional risk. A general population study on trauma exposure and PTSD found that among those who experience one type of trauma, 75% experience two or more (Kessler et al., 1995). Furthermore, Finkelhor et al. (2007) found that children exposed to four or more different types of victimizations were the most likely to experience anxiety after controlling for six victimization types. Thus, looking at multiple victimizations might yield a more accurate understanding of the predictors of PTSD.

At least two studies to date have looked at the effects of multiple types of victimizations among intimate partners. Researchers at the Centers for Disease Control and Prevention (Basile, Arias, Desai, & Thompson, 2004) looked at physical, sexual, psychological, and stalking violence as they relate to PTSD in the National Violence Against Women Survey. Specifically, they examined the extent to which each type of violence accounted for significant variance in PTSD when controlling for the others and the impact of multiple forms of PV. All four types of PV were individually predictive of PTSD symptomatology. Physical, psychological, and stalking violence remained significant predictors when entered simultaneously. In a separate analysis, researchers examined the effect of multiple forms of abuse by computing a dose variable that took into account the number of abusive strategies for each type of PV. The dose variable accounted for 32% of the variation in PTSD symptomatology and was a stronger predictor than the individual victimization types. Additionally, using a cluster analysis technique, Dutton, Kaltman, Goodman, Weinfurt, and Vankos (2005) found three patterns of abuse. The third pattern was characterized by high levels of physical violence, psychological abuse, stalking, and sexual violence and

was the pattern associated with the highest levels of PTSD. Of the above studies, only Basile et al. (2004) computed a variable that reflects polyvictimization.

Given the research to date, we know that PTSD is very common among PV victims and increases with severity of violence. More recent advances suggest that multiple types of abuse (polyvictimization) may pose a heightened risk for PTSD over and above the effects of each specific type of PV. This gap in the current literature is addressed in the present study by using traditional analyses (entering each form of victimization individually) and using polyvictimization as a predictor of PTSD. Furthermore, another limitation of previous research, lack of examination of male victims, is addressed. There is evidence to suggest that the same patterns found among female victims are also pertinent to male victims (Coker et al., 2005; Hines, 2006).

DEPRESSIVE SYMPTOMS

Depressive symptoms are strongly associated with PV victimization. Early studies of victimization pointed to the powerlessness and helplessness some battered women experience and the potential link to depressive symptoms (Walker, 1979). Since then, studies have confirmed the PV is associated with depressive symptoms (Gleason, 1993). As noted with PTSD, rates of depressive symptoms differ according to sampling methodologies and instruments used. Rates of depressive symptoms among help-seeking samples vary from 32% (Cascardi et al., 1999) to 74% (Dutton et al., 1999). Gleason (1993) reported abused and postabused women to be 9 to 11.5 times more likely to report depressive symptoms than women in a national random sample.

Physical, psychological, and sexual victimization each contributes to depressive symptoms (Coker et al., 2005). Dutton et al. (1999) examined the relation of physical, psychological, and sexual abuse as well as injury to depressive symptoms among court-involved women. While all were associated with depressive symptoms at the univariate level, at the multivariate level only psychological abuse remained predictive of depressive symptoms. Specifically, the dominance/isolation and emotional/verbal subscales of the Psychological Maltreatment of Women Inventory accounted for 27% of the variance in depressive symptoms. Looking at types of psychological victimization, Sackett and Saunders (1999) found that criticism, ignoring, and ridicule were strongly related to depressive symptoms. In that study, both psychological abuse and physical abuse uniquely contributed to depressive symptoms. Physical abuse but not emotional abuse was predictive of depressive symptoms among women with serious relationship problems (Campbell, Kub, Belknap, & Templin, 1997). Sexual victimization, specifically number of forced sex experiences, was also linked to depressive symptoms (Campbell & Soeken, 1999). Depressive symptoms are more common among those severely and/or frequently victimized (Campbell & Soeken, 1999; Cascardi & O'Leary, 1992; Cascardi et al., 1999; Coker et al., 2002; Dienemann et al., 2000).

Unfortunately, the studies that examined various types of victimization at the multivariate level entered each independently without taking into account that participants might fall in multiple categories (physically, psychologically, and/or sexually abused). Additionally, only one study examined the effects of victimization on depressive symptoms among men. That study indicates that all forms of PV were associated with depression for both men and women (Coker et al., 2005).

THE CURRENT STUDY

The current study has three main objectives: (a) examine the rate of physical, psychological, sexual victimization, and polyvictimization among U.S. college men and women; (b) examine the influence of each individual victimization type on depressive symptoms and PTS symptoms; and (c) examine the effect of polyvictimization on depressive symptoms and PTS symptoms. We define polyvictimization as two or more types of victimization in the past year. Given that severity of one individual type of abuse is associated with increased mental health problems, we expect that polyvictimization will also be associated with increased mental health problems. Furthermore, the importance of each individual type of victimization is expected to decrease when co-occurring abuse is taken into account. Polyvictims are expected to be most at risk for depressive symptoms and PTS.

METHOD

Procedure and Participants

This study is part of a larger study, the International Dating Violence Study (IDVS; for more information, see http://pubpages.unh.edu/~mas2). Members of the IDVS consortium collected data in their classes. The majority of classes were introductory-level psychology, sociology, and criminal justice studies courses. The purpose of the study was explained and students were asked to participate anonymously. They were also informed that the questionnaire included sensitive questions about relationships, experiences, attitudes, beliefs, and sexual experiences. Questionnaires were distributed, and students had roughly an hour to complete the questionnaire. Each consortium member's institutional review board approved the procedure.

Data analyzed for the current study come from 19 sites in the United States. The states represented in the sample are Illinois, Indiana, Louisiana, Mississippi, New Hampshire, New York, Ohio, Pennsylvania, Tennessee, Texas, and Utah. Other data came from Washington, DC. The percentage of students who chose to participate and deposited a completed questionnaire ranged from 20% to 100%, with 80% of sites with response rates above 65%. In total, 5,550 questionnaires were completed.

Data Quality Control. The completed questionnaires were examined for response sets ($n = 77$) and questionable response patterns (e.g., reporting an injury from dating violence but not reporting an assault, cases with an implausibly high rate of severe victimization). About 7% ($n = 386$) of the cases were identified as questionable and were removed from the sample. Students who did not complete the measure of dating aggression or who reported that they were not currently or recently (i.e., in the past year) involved in a romantic relationship were eliminated from the analyses ($n = 554$). The final sample consists of 4,533 respondents who were in a relationship that lasted at least a month in the past year. Demographic characteristics of the sample are shown in Table 1.

Measures

PTS Symptoms. The questionnaire for the IDVS included the Personal and Relationship Profile (Straus, Hamby, Boney-McCoy, & Sugarman, 1999; Straus & Mouradian, 1999). This is a 23-scale instrument designed for research on factors associated with PV,

TABLE 1. Demographic Characteristics of Sample

	Men (n = 1,473)	Women (n = 3,060)
Mean age	21.6	21.7
Mean year in school	14.4	14.4
Mean years father educated	13.6	13.2
Mean years mother educated	13.4	13.2
Relationship length in months	12.6	14.6
Percent in same-sex relationship	4.3	2.2
Relationship type (%)		
Dating	85.5	81.1
Engaged	6.7	7.8
Married	6.8	9.9
Cohabiting	1.0	1.2
Mean posttraumatic stress symptoms (*SD*)[a]	40.4 (15.30)	41.9 (18.0)
Mean depressive symptoms (*SD*)	26.3 (16.32)	25.0 (15.9)

[a] *SD* = standard deviation.

one of which is PTS symptoms. The PTS scale contains eight items that are derived from the American Psychiatric Association (1994) diagnostic criteria for PTSD. These items include those that pertain to avoidance of a traumatic memory (e.g., I avoid doing anything that reminds me of terrible things that happened to me), emotional arousal caused by a traumatic event (e.g., I am constantly looking for signs of danger), and reexperiencing of a traumatic event (e.g., Terrible things have happened to me that I remember over and over). It is important to note that the traumatic event is not necessarily victimization by a romantic partner. Participants indicated on a 4-point scale (1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree) the extent to which they agreed with each item. The items were then summed and divided by the number of items in the scale to obtain a mean PTS symptoms score, ranging from 1 to 4. Scores were then rescaled on a 1–100 scale. Reports of preliminary psychometric properties of this scale indicate that it has good validity and internal consistency reliability (Straus et al., 1999). For the current study, the overall alpha coefficient was .74.

Depressive Symptoms. The Personal and Relationships Profile also includes a scale to measure depressive symptoms. Depressive symptoms were defined as disturbances in mood, dysphoric cognitions, and somatic disturbances (Davidovich, 1990; Flournoy & Wilson, 1991; Julian & McKenry, 1993). The scale includes eight items, for example, "I usually wake up feeling pretty good" (reverse scored) and "I have thought about killing myself." Participants indicated on a 4-point scale (1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree) the extent to which they agreed with each item. The items were then summed and divided by the number of items in the scale to obtain a mean depressive symptoms score, ranging from 1 to 4. Scores were then rescaled on a 1–100 scale. For the current study, the overall alpha coefficient was .82.

Victimization. The Revised Conflict Tactics Scales (CTS2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996) was used to measure physical assault (12 items), psychological aggression (eight items), and sexual coercion (seven items). Respondents are asked how many times each act occurred in the past year. Some of the items within each scale

are categorized as severe. That is, they refer to acts that are more serious or can result in greater injury (Straus, 1990). Because severe violence is considered a unique phenomenon with a different etiology (Johnson & Ferraro, 2000), all analyses were replicated for both total partner violence and severe violence. For each of these three types of victimization, dummy variables were created for any victimization and for being a victim of severe abuse by a partner in the past year.

The CTS2 measures both the behavior of the respondent and the behavior of the respondent's partner by asking symmetrical questions about conflict tactics. For the purposes of the current study, only responses concerning partners' behavior are analyzed. That is, only reported victimization is analyzed. Prevalence rates report the percentage of the sample that reported one or more instances of the acts in each scale in the past year. The prevalence rate for total psychological victimization was about 75%, indicating a partial ceiling effect. Thus, we decided to use the 80th percentile of frequency of victimization (which ranged from 0 to 175) or any severe psychological victimization to identify psychologically victimized men and women.

Social Desirability Scale. Given that some participants might not be willing to disclose sensitive information, we controlled for the tendency to avoid reporting socially undesirable behavior. Participants indicated the degree to which they agreed with the 13 items of the Social Desirability scale of the Personal and Relationships Profile (Straus & Mouradian, 1999; Straus et al., 1999). The items ask about behaviors and emotions that are slightly undesirable but true of most people, such as "I sometimes try to get even rather than forgive and forget." The more items a respondent denies, the more likely a respondent will avoid reporting partner violence. Participants indicated on a 4-point scale (1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree) the extent to which they agreed with each item. A mean social desirability score was computed for each respondent. For the current study, the overall alpha coefficient was .72.

Control Variables. In addition to social desirability, we controlled for four demographic variables that might be associated with the outcome variables—relationship length, time since the relationship ended, age, and socioeconomic status—all of which are known to be related to PV and its effects.

Analyses

Prevalence Rates. To address the first research goal, the prevalence rate of physical, psychological, and sexual victimization was computed. This analysis, as well as the others, was done separately for men and women and for total and severe victimization. Next, to examine the rate of multiple victimizations or polyvictimization, we computed the amount of overlap among victimizations.

Effect of Individual Types of PV. To examine the influence of each individual type of victimization on PTS and depressive symptoms, we ran regressions entering only one type of victimization at a time along with the control variables. This was replicated for total and severe levels of the three victimization types, separately for men and women, totaling 12 regressions for PTS and 12 for depressive symptoms.

Effect of Polyvictimization. To investigate the unique effect of polyvictimization, we ran the regression analyses in two ways. The first way represents the approach used in the majority of articles published on PTS and depressive symptoms. That is, all three of types of victimization were used as predictor variables. The second analysis added dummy variables to measure physical victimization only, psychological victimization only, sexual

victimization only, any two forms of victimization, and all three forms of victimization. We hypothesized that polyvictimization would be more strongly predict PTS and depressive symptoms than individual abuse types. Again, regressions were run separately for men and women and for total and severe victimization; control variables were used for all analyses. This totaled eight regressions for PTS and eight regressions for depressive symptoms.

RESULTS

Rates of Victimization

Table 2 shows the percentage of men and women who experienced each type of victimization for both total and severe levels. The most frequent type of victimization for men and women was psychological aggression. The most frequent type of severe victimization for men and women was also psychological aggression. More than half the sample experienced at least one form of victimization, and about one-quarter of the sample experienced at least one form of severe victimization.

The percentage who experienced specific types of victimization and combinations of victimization types among the part of the sample who reported victimization is presented in Table 3. In total, 53% of victimized men and 51.5% of victimized women experienced polyvictimization defined as two or more victimizations types within the prior year. The most frequent victimization combination was psychological, physical, and sexual victimization for both men (21.3%) and women (21.3%). The second most frequent profile was psychological only for men (17.4%) and sexual victimization only for women (21.1%).

The bottom panel of Table 3 reports the victimization profile among the part of the sample who experienced a severe victimization. About half the severe victimization reported for both men (50.5%) and women (49.7%) was psychological only. The second most frequent profile reported was severe psychological and physical victimization (20.4% for men and 24.5% for women). Among those severely victimized, about one-third reported severe polyvictimization (29.1% for men and 31.7% for women).

TABLE 2. Prevalence of Victimization by Sex and Severity

	% of Men	% of Women
Total		
Psychological aggression	34.4	34.4
Physical assault	30.6	28.1
Sexual coercion	28.7	27.8
Any victimization	54.1	54.6
	% of Men	% of Women
Severe		
Psychological aggression	19.5	18.8
Physical assault	11.3	10.7
Sexual coercion	2.5	2.2
Any severe victimization	24.6	23.2

TABLE 3. Victimization Type for Victimized Men and Women, Total and Severe

	% of Men (n = 672)	% of Women (n = 1,533)
Total		
Psychological, physical, and sexual	21.3	21.3
Psychological only	17.4	17.0
Sexual only	17.0	21.1
Psychological and physical	16.1	14.2
Physical only	12.6	10.4
Psychological and sexual	8.8	10.4
Physical and sexual	6.8	5.7
Any polyvictimization	53.0	51.5
	% of Men (n = 309)	% of Women (n = 656)
Severe		
Psychological only	50.5	49.7
Psychological and physical	20.4	24.5
Physical only	18.8	16.2
Psychological, physical, and sexual	6.1	4.6
Sexual only	1.6	2.4
Psychological and sexual	1.6	1.8
Physical and sexual	1.0	.8
Any polyvictimization	29.1	31.7

Bivariate Regressions

Table 4 shows the results of the regressions for each individual type of victimization. The left side of the top panel shows that each type of total victimization predicted PTS for both men and women. The lower panel shows that severe psychological victimization significantly predicted PTS among men but not severe physical or severe sexual. For women, severe physical victimization and severe psychological victimization predicted PTS but not severe sexual victimization.

With regard to depressive symptoms, the right sections of Table 4 show that each type of victimization (physical, psychological, and sexual for both total and severe) predicted depressive symptoms for women. However, for men, only total psychological victimization was a significant predictor of depressive symptoms.

Multivariate Regressions

The multivariate regression for PTS in the upper-left panel of Table 5 shows that, holding physical and sexual victimization constant, psychological victimization is a significant predictor of PTS for men. For women, physical and sexual victimization significantly predicted PTS.

The regression in the top right-hand panel adds polyvictimization to the independent variables and shows that three victimizations is a significant predictor of PTS for men over and above the effect of the separate types of victimization. For women, assault and sexual victimization and both two and three victimizations were significant predictors of

TABLE 4. Bivariate Regressions Predicting Posttraumatic Stress (PTS) and Depressive Symptoms

	PTS		Depressive Symptoms	
Predictor Variable	Male	Female	Male	Female
		Total Victimization		
Physical	.07**	.12***	.04	.10***
Psychological	.09**	.09***	.07**	.10***
Sexual	.07*	.09***	.02	.06***
		Severe Victimization		
Physical severe	.05	.09***	.02	.10***
Psychological severe	.08**	.10***	.04	.10***
Sexual severe	.02	.01	.04	.06***

Note. Control variables were age, length of relationship, time since relationship ended, socioeconomic status, and social desirability scale score.
*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

TABLE 5. Results From Regression Analyses to Predict PTS

Individual Victimization Types			Polyvictimization Groups		
Predictors	β Men	β Women	Predictors	β Men	β Women
			Total		
Any physical	.04	.09***	Physical only	.02	.06***
Any psych.	.06*	.04	Psych. only	.04	.02
Any sexual	.04	.06**	Sexual only	.02	.05**
			Two victimizations	.05	.09***
			Three victimizations	.08**	.12***
	R^2 = .14***	R^2 = .17***		R^2 = .15***	R^2 = .16***
			Severe		
Severe physical	.03	.07***	Physical only	.01	.05**
Severe psych.	.07*	.08***	Psych. only	.04	.05**
Severe sexual	–.01	–.02	Sexual only	.01	–.02
			Two victimizations	.06*	.11***
			Three victimizations	.02	.01
	R^2 = .14***	R^2 = .16***		R^2 = .15***	R^2 = .16***

Note. Control variables were age, length of relationship, time since relationship ended, socioeconomic status, and social desirability scale score.
*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

TABLE 6. Results From Regression Analyses to Predict Depressive Symptoms

Individual Victimization Types			Polyvictimization Groups		
Predictors	β Men	β Women	Predictors	β Men	β Women
			Total		
Any assault	.01	.07***	Assault only	–.02	.02
Any psych.	.07*	.06**	Psych. only	–.01	.04*
Any sexual	.01	.03	Sexual only	–.01	.04*
			Two victimizations	.05	.09***
			Three victimizations	.02	.10***
	R^2 = .16***	R^2 = .24***		R^2 = .18***	R^2 = .23***
			Severe		
Any assault	–.00	.07***	Assault only	–.00	.05**
Any psych.	.03	.07***	Psych. only	.00	.05**
Any sexual	.04	.04*	Sexual only	–.01	.01
			Two victimizations	.02	.09***
			Three victimizations	.04	.06***
	R^2 = .16***	R^2 = .24***		R^2 = .18***	R^2 = .24***

Note. Control variables were age, length of relationship, time since relationship ended, socioeconomic status, and social desirability scale score.
* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

PTS, net of the other variables in the model. Comparing the regression with polyvictimization to the regression without polyvictimization (upper-left panel) shows that when polyvictimization was included in analyses, psychological victimization dropped from significance for men and polyvictimization was the only significant predictor of PTS for men. For women, including polyvictimization decreased the beta weights of physical and sexual victimization but did not drop them from significance. For women, two and three victimizations were the strongest predictors of PTS, net of the effects of the separate types of victimization.

The bottom panels of Table 5 use severe victimizations as predictors of PTS. For men, severe psychological victimization significantly predicted PTS. For women, severe physical and severe psychological victimization predicted PTS. The right-bottom panels presents results from the regression using polyvictimization groups. For men, two severe victimizations was a significant predictor of PTS. For women, severe physical victimization, severe psychological victimization, and two victimizations were significant predictors of PTS. Comparing across the regressions with and without polyvictimization in the equation, severe psychological victimization dropped from significance for men when polyvictimization was included. Instead, two victimizations were significant. For women, severe physical and severe psychological remained significant, although they dropped in predictive ability. Furthermore, two severe victimizations significantly predicted PTS.

Depressive symptoms results in Table 6 show that total psychological victimization predicted depressive symptoms for men holding the other victimizations constant (top-left panel). For women, both total physical and psychological victimization predicted depressive symptoms. The upper-right panel of Table 6, which includes polyvictimization groups as predictors, yielded slightly different results. For men, none of the groups predicted depressive symptoms. For women, psychological victimization alone, sexual victimization alone, and both polyvictimization groups predicted depressive symptoms. The two polyvictimization groups more strongly predicted depressive symptoms than the single-victimization groups.

Turning to severe victimization (bottom panels of Table 6) shows that for men, none of the individual victimizations or polyvictimization groups predicted depressive symptoms. For women, all three of the individual severe victimization types predicted depressive symptoms. However, the analysis in the bottom-right panel of Table 6 shows that when polyvictimization is added to the model, severe physical victimization alone, severe psychological victimization alone, and the two polyvictimization groups predicted depressive symptoms for women. Comparing the analyses with and without polyvictimization for women, the predictive ability of severe physical, psychological, and sexual victimization decreased, and the two polyvictimization groups most strongly predicted depressive symptoms.

DISCUSSION

This study examined the extent to which 4,533 male and female university students experienced physical assault, psychological aggression, and sexual coercion by a dating partner; the extent to which these three types of victimization overlapped, which we called polyvictimization; and the relationship of victimization by a dating partner to PTS symptoms and depressive symptoms.

Rate and Profiles of Victimization

The percentage who were physically assaulted by a dating partner (about 30%), and the approximately equal rates of victimization of men and women in this study are consistent with more than 100 studies conducted in the past 25 years (Amar & Gennaro, 2005; Fiebert, 2004; Straus & International Dating Violence Research Consortium, 2004; Sugarman & Hotaling, 1989). Also consistent with previous research is the fact that these rates are at least three times higher than the rates found by several nationally representative household surveys (Kessler, Molnar, Feurer, & Appelbaum, 2001; Straus & Gelles, 1990). The high rates reflect primarily the youthfulness of student samples (Stets & Straus, 1989). A significant amount of severe victimization was also found, with severe psychological victimization being the most common. These acts, which include destruction of property and being threatened to be hit, might also reflect the lack of control some young adults exhibit.

In contrast to most previous research, this study examined psychological and sexual victimization in addition to physical victimization and found that when all three are considered, more than half the sample reported at least one of the three types of PV within the prior year. For both males and females, about one out of five victimized university students were victims of all three types of PV. Thus, the results of this study add to previous knowledge by showing that polyvictimization is frequent. Moreover, a substantial number were

victims of severe PV and severe polyvictimization: about 30% of those who experienced at least one form of severe victimization. This significant amount of polyvictimization is an important finding, as it points out the limited effectiveness of studying or treating one type of victimization in isolation.

Predictors of PTS

We hypothesized that polyvictims would be more at risk for PTS symptoms and depressive symptoms than students who were victims of only one of these types of PV and that polyvictimization would explain more of the variance than would be explained by including each of the three types of victimization in the model tested. Two approaches were used. The first approach, which represents the majority of research in this area, examined all three types of victimization in the same model. The second approach added to the model variables to identify polyvictims (two types and three types of victimization).

As predicted, polyvictimization in almost all analyses was the strongest predictor of PTS for men and women. Risk for PTS for women is associated with both single forms of victimization and polyvictimization. The strongest predictor of PTS was three victimizations, again pointing to the compounded risk associated with polyvictimization. Polyvictimization was the only significant predictor of PTS for men. A similar pattern was found among severe victimization types, with polyvictimization as the strongest predictor for both men and women.

Two other studies that examined concepts similar to polyvictimization found support for increased risk for PTSD and depressive symptoms. Dutton et al. (2005) found that those with high levels of physical, psychological, sexual, and stalking abuse were most at risk for PTSD and depressive symptoms. Basile et al. (2004) computed a dose variable including physical, sexual, psychological, and stalking violence. As the "dose" of PV increased, there was increased likelihood of PTSD. These studies and the current study point to the need of examining various forms of victimization.

Predictors of Depressive Symptoms

Polyvictimization was a significant predictor of depressive symptoms for women but not for men. For men, only psychological victimization significantly predicted depressive symptoms. This unexpected finding could be due to the fact that men are less susceptible to depressive symptoms than women. However, in this study mean depressive symptoms score for men was similar to women's. Nonetheless, other studies have found a diminished psychological impact of PV among males (Stets & Straus, 1990). Perhaps men process victimization in a way that protects them from depressive symptoms. Depressive symptoms among male victims of PV need further investigation.

For women, the multivariate analysis found that both individual types of victimization and polyvictimization were significant predictors of depressive symptoms. For total victimization, psychological victimization alone, sexual victimization alone, and polyvictimization were significant. For severe victimization, severe physical victimization alone, severe psychological victimization alone, and severe polyvictimization were significant. Across total and severe victimization, polyvictimization was the strongest predictor of depressive symptoms.

The results for the individual types of victimizations are in line with prior research. Other studies found that psychological abuse is closely related with depression (Coker et al., 2002; Dutton et al., 1999; Sackett & Saunders, 1999). Severe physical abuse has

also been associated with depression (Campbell et al., 1997; Cascardi & O'Leary, 1992; Cascardi et al., 1999; Dutton et al., 2005). The novel finding in regard to polyvictimization underscores the need to consider the additional risk posed by multiple victimizations.

Limitations

Although a large sample was used for the current study, the number within each particular type of victimization profile became quite small for some profiles. This is particularly true for severe sexual victimization only and two severe victimizations. Thus, analyses that used these groups as predictors may have been insignificant because of the limited number of cases. Furthermore, to better understand mental health risks associated with victimization, it would be best to inquire about other victimizations (e.g., childhood, rape by a stranger, stalking, and so on) that would provide a more complete picture of victimization history. Another important aspect not included is subjective interpretation of victimization, which might greatly influence mental processing of victimization and in turn susceptibility to PTS and depressive symptoms. In addition, it is important to understand the factors that might protect victims of PV from PTSD and depressive symptoms.

CONCLUSIONS

This study provides evidence of the importance of examining polyvictimization both in research and in clinical practice. Polyvictimization was a better predictor of PTS and depressive symptoms than any of the individual types of victimization. Research and clinical practice in this area would be improved by examining a wide range of victimizations and the extent of polyvictimization.

An important finding is that the rates and types of polyvictimization are strikingly similar for men and women. Although the fact that there are about as many male victims of PV as female has been established by more than 100 studies, the psychological effects for men has been largely uninvestigated. This study found that the relation of victimization to PTS symptoms and depressive symptoms is less for men than for women. The greater physical injury from PV experienced by women might be attributed to the larger average size and strength of men, but that does not apply to the greater psychological injury of women. Another possibility is that an attack by a man arouses more fear. Research is needed on the processes explaining the greater psychological injury experienced by female victims of PV.

For both men and women, if researchers and practitioners ask only about physical assault, they are likely to underestimate the likelihood of negative mental health risks from PV. Hospitals and the health care system in general could provide another point of intervention by including assessments for all three forms of PV when women and men present with mental health conditions that might be due to PV (Campbell & Kendall-Tackett, 2004). Victims of PV would be greatly helped by early linkage to mental health services that might mitigate the substantial negative mental health consequences of PV.

Because of the overlap in physical, psychological, and sexual victimization, research and clinical practice that considers only one type of victimization is likely to overestimate the importance of each specific type of victimization by itself. The results showing that maltreatment of a partner often involves a combination of types of victimization and that polyvictimization is more closely rated to mental health problems suggest that these various forms of PV converge to debilitate the victim and lead to or exaggerate the mental and physical health consequences of PV.

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