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**PHYSICAL AND PSYCHOLOGICAL VICTIMIZATION, STRAINED
RELATIONSHIPS, AND YOUNG ADULTS' DEPRESSIVE SYMPTOMS**

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ABSTRACT

Interpersonal violence peaks during the early adult years and may have implications for the well-being of female and male victims. Drawing on relational theory and data from the Toledo Adolescent Relationships Study (TARS) (n = 984), we examined associations between intimate partner victimization, indicators of strained relationships, and depressive symptoms. In zero-order models, we found that both physical and psychological victimization increased depressive symptoms. Including strained relationship measures attenuated the effects of physical and psychological victimization on depression. Moreover, the effect of physical victimization is significant at above average levels of respondent control, respondent jealousy, and obsessive love. The associations between both types of victimization and depressive symptoms did not differ by gender, nor were the effects of relationship strain conditional on gender. These findings contribute to our understanding of the links between victimization and well-being.

Over the past several decades, public and scholarly concern about intimate partner violence (IPV) has led to research on its prevalence, precursors, and mental health consequences for women and, to a lesser extent, men (Archer, 2002; Beydoun, Beydoun, Kaufman, Lo, & Zonderman, 2012). The nature of the association between IPV and mental health, however, remains poorly understood leading several recent studies (e.g., Carbone-Lopez, Kruttschnitt, & MacMillan, 2006; Graham, Bernards, Flynn, Tremblay, & Wells, 2012; Sabina & Straus, 2008) to conclude that the severity and/or experience of multiple types of victimization needs to be considered. Yet negative relationship dynamics such as arguing, controlling behaviors, and miscommunication, also, affect well-being (Segrin, Powell, Givertz, & Brackin, 2003; Stanley, Markman, & Whitton, 2002; Vujeva & Furman, 2011). Moreover, prior research found that stressful dynamics play a role in violent dating relationships (e.g., Katz, Kuffel, & Coblenz, 2002; Giordano, Soto, Manning, & Longmore, 2010; Halpern-Meekin, Manning, Giordano, & Longmore, 2013; Rhoades, Stanley, & Markman, 2010; Scott et al. 2011). To date few studies have considered how a range of relationship factors, including IPV, influence depressive symptoms among both men and women. We relied on insights from relational theory to draw connections between gender, victimization, strained relationships, and depression. We examined whether physical and psychological victimization influenced depression in general, as well as once we accounted for relationship strains, prior depression, and sociodemographic factors.

Much of the prior research on the emotional sequelae of abuse centered on victimized women. This is intuitive as hospital records, crime surveys, police logs, and shelter samples reflected that women typically are the victims of the most severe forms of violence (e.g., Dobash & Dobash, 2004). Nevertheless, many community studies found that women often perpetrate or are involved in reciprocal violence. Whitaker, Haileyesus, Swahn, and Saltzman (2007)

analyzing the Longitudinal Study of Adolescent Health (Add Health) found that women comprised 70% of perpetrators reporting nonreciprocal violence, demonstrating the importance of examining both women and men's victimization experiences. Analyzing longitudinal data from the Toledo Adolescent Relationships Study (TARS) (n = 984), we focused on young adults involved in a range of intimate relationships (e.g., casual and exclusive dating, cohabiting, and married). We examined whether physical victimization, psychological victimization, and indicators of strained relationships (i.e., controlling behaviors, jealousy, arguing, poor communication, obsessive love, and lack of relationship alternatives) were associated with well-being in their own right, and whether the associations between both types of victimization and depressive symptoms might be explained, in part, by indicators of strained relationships. Further, we tested whether (1) the indicators of strain exacerbated the effects of victimization on depressive symptoms, and (2) the relationships between victimization and depression were conditional on gender. Next, building on Anderson's (2013) call to attend to "why does gender matter" with respect to IPV, we assessed whether the effects of some relational strains on the victimization-depression association might be stronger for women.

BACKGROUND

Intimate partner violence, which refers to behaviors that cause physical, psychological, or sexual harm (Krug et al., 2002), is common among young adults. Estimates from Add Health indicated that 25% of unmarried women and men, ages 18-24, experienced relationship violence (Halpern, Spriggs, Martin & Kupper, 2009). Similarly, Rhoades et al. (2010) estimated that about 35% of young adults (n = 1,278), ages 18-35, experienced relationship violence in the past year. Sabina and Straus (2008) found that more than half of their sample of college daters (n = 4,533) reported physical victimization. These high estimates underscore the need to understand

the consequences of IPV during emerging adulthood (Arnett, 2004), a stage in the life course in which the critical developmental task is learning to interact in intimate relationships.

One consequence of IPV victimization may be poorer psychological health (e.g., Beydoun et al. 2012; Carbone-Lopez et al., 2006; Graham et al. 2012; Sabina & Straus, 2008). Yet associations between victimization and well-being warrant further study. Coercive control dynamics may distinguish subtypes of physical violence perpetration (e.g., Anderson, 2002; Ansara & Hindin, 2011; Dobash & Dobash, 2004; Felson & Outlaw, 2007; Langhinrichsen-Rohling, 2010), which may differentially affect well-being. For example, Johnson and Ferraro (2000) distinguished intimate terrorism, which refers to patterns of violence, isolation, and intimidation perpetrated against female partners, from more common situational couple violence.

Many studies and reviews of the literature reporting strong negative effects of victimization examined aggression fitting the description of intimate terrorism (e.g., Ansara & Hindin, 2011; Beydoun et al. 2012; Leone, Johnson, Cohan, & Lloyd, 2004). As such, these studies focused on female victimization. Although both women and men may be victims of intimate partner violence, fewer studies focused exclusively on men's victimization.

Nevertheless, existing studies (e.g., Hines, Brown, & Duning, 2007; Mills, Avegno, & Haydel, 2005; Reid et al. 2008; Simonelli & Ingram, 1998), literature reviews (e.g., Hines & Maley-Morrison, 2001; Randle & Graham, 2011), and a recent annotated bibliography (e.g., Fiebert, 2012) concluded that victimization increases depressive symptoms for men. Yet such studies may not reflect the experiences of many young adults, most of whom are not married, nor do these studies control for prior well-being, or compare the effects of IPV for men and women.

Reciprocal Victimization

Community studies that examined reciprocal or situational violence typically focus on aggression sparked by specific episodes of conflict or disagreement, and allow us to compare well-being consequences of victimization for men and women. Analyses of the National Violence Against Women Survey (NVAWS), based on 16,000 cohabiting or married adults, ages 18-65, found that physical and psychological abuse increased depressive symptoms for both men and women (e.g., Coker et al. 2002). Fergusson, Horwood, and Ridder (2005), specifically analyzing young adults (n = 828), also reported that relationship violence influenced men and women's depressive symptoms. Further, Johnson, Giordano, Longmore and Manning (in press) examining TARS found that any violence (i.e., perpetration, victimization, or mutual) from early adolescence through young adulthood increased depressive symptoms for both men and women.

Yet some studies found that victimized women, compared with men, reported *greater* depression (e.g., Anderson, 2002; Carbone-Lopez, 2006; Sabina & Straus, 2008). Sabina and Straus (2008) concluded that polyvictimization (i.e., combinations of physical, psychological, and sexual victimization) was associated with greater depression for female college students. Similarly, Carbone-Lopez et al. (2006) examining the NVAWS found that physical victimization, stalking, and sexual coercion had greater negative effects on women's well-being.

In the current study, we expected that victimization would impair both men and women's well-being; however, we also assessed whether women would be more emotionally vulnerable to victimization. Women's emotional vulnerability, reflected in greater depressive symptoms, is consistent with a basic premise of relational theory (e.g., Leadbeater, Blatt, & Quinlan, 1995; Leadbeater & Way, 2001), which is that women, more so than men, demonstrate a relational orientation, and that disruptions or conflicts in interpersonal relations are more harmful for them.

Psychological Victimization

Physical and psychological victimization likely occur together, yet often are not examined in the same studies. Studies that included both often characterize psychological victimization, as derogatory, ridiculing, or threatening interactions – tactics that attack self-worth – and found that such interactions negatively affect well-being (e.g., Coker, Smith, McKeown, & King, 2000; Coker et al., 2005; Hammock & O’Hearn, 2002; Katz, Carino, & Hilton, 2002). Coker et al. (2000) found that 88% of women (n = 1,152) reported physical and psychological victimization. Yet 25% experienced only psychological victimization, the deleterious effects of which, the authors argued, would be misattributed to physical violence if not examined.

Although some research suggested that psychological victimization may be *more* detrimental to well-being than some acts of physical aggression (e.g., Follingstad, Wright, Lloyd, & Sebastian, 1991), others (e.g., Hammock & O’Hearn, 2002) argued that this conclusion is premature because few studies compared psychological alongside physical victimization. Thus, an additional objective was to assess whether psychological victimization influenced depression in general, as well as once we accounted for physical victimization.

We also examined the association between gender, psychological victimization, and depressive symptoms. Some scholarship examining depressive symptoms found that men are more likely to experience psychological than physical aggression (e.g., Coker et al. 2005). Nevertheless, in an extensive review Pico-Alfonso (2005) argued that psychological victimization was the major cause of distress among victimized women. We concluded that men may be more likely to be victims of psychological aggression, yet given women’s greater relational orientation, such aggression would have a stronger effect on their well-being.

Strained Relationships and Well-Being

Simon and Barrett (2010) found that young adults experiencing strain or negative interactions with intimate partners reported greater depressive symptoms. Similarly, research found negative associations between victimization and general measures of relationship quality (e.g., McKenry, Julian, & Gavazzi, 1995; Katz, Kuffel, & Coblenz, 2002), as well as specific indicators of quality (e.g., Babcock, Costa, Green, & Eckhardt, 2004). Other studies (e.g., Copp, Giordano, Longmore, & Manning, in press; Rhoades et al., 2010) found that a perceived lack of alternatives is a primary reason for staying in violent dating relationships.

Building on these findings, we argued that the dynamics associated with strained relationships are central to the manner in which young adults respond to experiences of physical and psychological victimization. Individuals' perceptions of the stresses and strains in their intimate relationships, especially with regard to controlling behaviors and feelings of jealousy, key correlates of IPV, may provide insights into their well-being in addition to self-reports of victimization. We examined six indicators of strained relationships associated with both IPV and well-being: (1) controlling behavior, (2) jealousy, (3) arguing about the nature of the relationship itself, (4) poor communication, (5) obsessive love, and (6) a perceived lack of relationship alternatives. Moreover, consistent with Flynn and Graham's (2010) conceptualization, we distinguished self-attributions of controlling and jealous behaviors from the individual's perceptions of the partner's controlling behavior and jealousy. Our key research question asked whether physical and psychological victimization explain variation in levels of depression once we account for these indicators of strained relationships. Moreover, might some of these indicators exacerbate the effects of physical and psychological victimization on depressive symptoms? Responding to Anderson's (2013) call to better explicate the role of

gender in intimate partner violence, we described conditions under which the associations between the indicators of strain, victimization, and depression may be stronger for women compared with men.

First, controlling behavior refers to attempts to monitor or change others, and such attempts may underlie intimate terrorism (e.g., Anderson, 2002, Johnson & Ferraro, 2000; Stets & Hammond, 2002; Tanha, Beck, Figueredo, & Raghavan, 2010), but may also be associated with reciprocal violence. Moreover, feeling controlled is associated with psychological distress (Brehm & Brehm, 1981). We examined perceptions that the partner attempts to control the individual's behavior (e.g., Giordano et al., 2010), and that the individual tries to control the partner's behavior (e.g., Felson & Outlaw, 2007; Stets & Hammond, 2002).

Although conceptualizations of intimate terrorism emphasized men's attempts to control women, the desire to control others is not gender-specific. Studies of reciprocally violent couples found that each partner tries to control the other, and this does not differ by gender (e.g., Felson & Outlaw, 2007; Stets & Hammond, 2002). Thus, we expected that, both, partner's and the individual's control attempts would (a) be associated positively with depressive symptoms, (b) mediate some of the effects of victimization on depressive symptoms; and (c) exacerbate the deleterious effects of physical and psychological victimization on depressive symptoms.

Second, jealousy and allegations of sexual infidelity are triggers for both intimate partner violence (e.g., Felson & Outlaw, 2007) and depression (Mathes, Adams, & Davies, 1985). We expected that both young adults' self-attributions and attributions of partners' jealousy would increase depressive symptoms. We also expected that both self and partner's attributions of jealousy would intensify the deleterious effect of victimization on depressive symptoms. Consistent with studies (e.g., Harris, 2002) reporting no gender differences in the

experience of jealousy we did not expect that relationships would be conditional on gender.

Third, arguing about the nature of the relationship may affect depression because emerging adulthood is a life stage in which many individuals are attempting to develop a deeper sense of intimacy with significant others (Arnett, 2004). In this quest, much conflict likely focuses on the relationship itself. Because relational theory (e.g., Amaro, Raj, & Reed, 2001) emphasized that ‘bumps’ in the relationship are especially difficult for women, we examined whether for women, compared with men, arguing would exacerbate the effects of both physical and psychological victimization on depressive symptoms.

Fourth, poor communication refers to a range of experiences and perceptions of verbal interactions, such as not knowing what to say to a partner, and one or both partners feel awkward expressing their feelings to the other (Giordano et al., 2010). Rhoades et al. (2010) concluded that poor communication made it difficult for intimate partners to relate well to each other. We expected that poor communication would be associated with depressive symptoms, and would mediate some of the influence of victimization on depression. Consistent with the premise of relational theory regarding the significance of intimacy and connection for women, we anticipated that poor communication would amplify the deleterious effects of physical and psychological victimization on women’s depressive symptoms.

Fifth, obsessive love refers to feelings of intense preoccupation with another, regardless of whether that feeling is mutual (Hatfield & Sprecher, 1986, p. 385). We expected that obsessive love would be associated positively with depressive symptoms. Additionally, physical and psychological victimization may be especially disillusioning for young adults who experience feelings of obsessive love. Although relational theory has argued that due to gendered socialization, women place a higher value on romantic love than do men (Amaro et al.,

2001), obsessive love is not gender-specific. We anticipated that obsessive love would amplify the deleterious effects of physical and psychological victimization on depression.

Sixth, perceived lack of relationship alternatives refers to whether respondents believe that romantic alternatives to their relationship exist, and is one reason that women remain in violent relationships (e.g., Copp et al., in press; Rhoades et al., 2010). We expected that a lack of relationship alternatives would positively influence depressive symptoms, and would exacerbate the effect of victimization. We anticipated that among women, a perceived lack of alternatives would amplify the deleterious effects of physical and psychological victimization on depression.

Current Investigation

Research has reported elevated rates of depressive symptoms among victims of intimate partner violence. In the current investigation, we examined whether physical victimization, psychological victimization, and indicators of strained relationships were associated with well-being in their own right, and whether the associations between both types of victimization and depressive symptoms might be explained, in part, by indicators of strained relationships. Further, we tested whether (a) specific indicators of strain exacerbated the effects of victimization on depressive symptoms, and (b) the relationships between victimization, strained relationship indicators, and depression were conditional on gender. We also examined whether physical and psychological victimization had independent effects on depression. Our work moves beyond prior studies in four key ways. First, a limitation of many prior studies includes the use of highly selected, largely female, and often small samples gathered from shelter, hospital, and police records. Such studies tended to focus on the most severe physical violence as opposed to examining variation in violence. Additionally, many prior studies measured only

whether physical victimization occurred. By failing to account for psychological victimization, studies may have over-attributed adverse well-being solely to physical violence.

Second, perhaps the biggest limitation of prior work is the lack of a range of indicators of strained relationships, apart from violence, which may also influence young adults' well-being. Many studies based on the Add Health and the NSVAW suffer from this limitation. Other investigations examined general relationship quality or a particular quality (e.g., communication), but did not systematically explore whether indicators of strained relationships collectively influenced depressive symptoms. Recognizing the complex dynamics of intimate relationships, we examined how controlling behavior, jealousy, arguing about the relationship, poor communication, obsessive love, and a perceived lack of relationship alternatives influenced depressive symptoms. Moreover, our indicators of controlling behavior and jealousy reflected the distinction between self-attributions and attributions of the partner's behavior, which may differentially affect well-being. Lastly, based on insights from relational theory, we attempted to address Anderson's (2013) call to better explicate why gender may affect intimate partner violence by assessing whether the effects of some relationship strains on the victimization-depression association might be stronger for women compared with men.

Third, previous research failed to control for prior well-being as well as many key sociodemographic factors. In light of young adult women's generally higher self-reports of depression (e.g., Child Trends, 2012), and because distressed individuals often select into relationships in which victimization or mutual violence is likely (e.g., Miller, 2010; Silverman, Raj, Mucci, & Hathaway, 2001; Vest et al., 2002), we controlled for prior depressive symptoms. By not including prior well-being many studies (e.g., Carbone-Lopez et al., 2006; Sabina & Straus, 2008) failed to adequately control for potential selection and confounding factors. We

also accounted for family structure and neighborhood poverty while growing up, mother's education (a proxy for social class), age, and race/ethnicity, all of which influence risk of victimization as well as depressive symptoms (Johnson et al., in press). We included religiosity as a personal resource (Smith, McCullough, & Poll, 2008), which may be especially relevant for individuals experiencing relationship violence (DeWalt et al., in press).

Fourth, the bulk of prior studies of intimate partner violence victimization and psychological well-being focused on married individuals. Yet the mean age of first marriage in the U.S. is 26 for women and 28 for men (U.S. Census, 2012), and much relationship violence occurs significantly earlier in the life course (Cui, Gordon, Ueno, & Fincham, 2013; Johnson et al., in press). Rather than focusing on marriage, degree of commitment (Cui et al., 2013; Hammock & O'Hearn, 2002; Margol, Moffit, Caspi, & Silva, 1998) reflected in relationship status (casual dating, exclusive dating, cohabitation, and marriage) may be an important contextual variable for understanding victimization during young adulthood. For example, in the Add Health, those living together (married or cohabiting) reported greater odds of IPV (Cui et al. 2013). Moreover, Amato and Dush (2005) found that married individuals reported the highest levels of subjective well-being, followed by cohabitators, those in steady dating relationships, and then casual daters. We also examined number of children in the home and relationship duration, factors that increase the odds of victimization (Vest, Caitlin, Chen, & Brownson, 2002) and depressive symptoms (Child Trends, 2012), and assessed whether individuals reported on their current or most recent relationship.

METHOD

Data

This study analyzed data from the Toledo Adolescent Relationships Study (TARS), a longitudinal study of 1,321 Toledo-area adolescents who were in 7th, 9th, and 11th grade in the fall of 2000. The stratified random sample, drawn from school enrollment records of seven Toledo-area school districts, totaling 62 schools, in Lucas County, Ohio, over-sampled Black and Hispanic students. Unlike other data sets that necessitated students to be in school for inclusion in the sample, TARS only required students to be registered, allowing truant or otherwise absent students to participate. Respondents participated in structured in-home interviews through the computer-assisted personal interview (CAPI) technique using pre-loaded computer questionnaires. Separately, a parent/guardian answered questionnaires with questions about the individual as well as the focal child. There were four complete waves of data. We re-interviewed students one, three, and five years after the first interview. Eighty-three percent of the original sample participated in the fourth interview, the focus of the current study. These data offer unique insight into links between victimization and well-being by including indicators of victimization and a range of strained relationship measures in a diverse sample. All variables were from the fourth interview except prior depressive symptoms (from the third interview), mother's education (from the parent questionnaire), and family structure and poverty level, which were measured at the first interview.

The analytic sample consisted of 1,006 respondents who reported a current/most recent intimate partner relationship at the time of the fourth interview. We next limited the sample to only Black, White, and Hispanic respondents, excluding 21 who reported "other" as their race ($n = 985$). Finally, we limited the sample to respondents with valid data on depressive symptoms, and excluded only one respondent. These restrictions resulted in a final analytic sample of 984 respondents, ages 17 to 24, with a mean age of 20.4 years. The TARS data were from a

stratified, random sample; thus, each respondent had a unique probability of inclusion. We calculated survey weights based on the probabilities, which allowed us to transform point estimates into values that were more representative of a national sample.

Measures

Depressive symptoms, measured using a six-item version of the Center for Epidemiological Studies' depressive symptoms scale (CES-D) (Radloff, 1977), asked respondents how often each of the following statements was true during the past seven days: (1) "you felt you just couldn't get going;" (2) "you felt that you could not shake off the blues;" (3) "you had trouble keeping your mind on what you were doing;" (4) "you felt lonely;" (5) "you felt sad;" and (6) "you had trouble getting to sleep or staying asleep." Responses ranged from 1 (*never*) to 8 (*every day*). The summed scale ranged from 6 to 48, with a mean score and standard deviation of 14.48 and 30.2, respectively ($\alpha = .82$). (Variables displayed in Table 1).

Physical victimization referred to the frequency of *any* physical victimization in the current or most recent relationship, based on four items from the Revised Conflict Tactics Scale (Straus & Gelles, 1990). The prompt stated, "During this relationship, how often has/did [partner]:" "throw/n something at you," "push/ed, shove/d, or grab/bed you," "slap/ped you in the face or head with an open hand," or "hit you." For each item, we recorded responses as 1 (*never*) to 5 (*very often*). We summed the responses to obtain a weighted frequency score. The scale ranged from 1 to 16, with a mean and standard deviation of 1.21 and 8.8, respectively ($\alpha = .88$). We logged the sum to correct for skewness in the multivariate analyses.

Psychological victimization was a three-item weighted summed scale. We asked respondents how often had their partner, "ridiculed or criticized your values or beliefs," "put down your physical appearance," and "put you down in front of other people." Responses

were 1 (*never*) to 5 (*very often*). The summed weighted frequency scale ranged from 3 to 15, with a mean score and standard deviation of 4.36, and 7.1, respectively ($\alpha = .81$).

Respondent's control attempts consisted of two items: "I sometimes try to control what [name] does," and "I always try to change [name]." Responses were 1 (*strongly disagree*) to 5 (*strongly agree*), and scores ranged from 2 to 10, with a mean score and standard deviation of 4.27 and 6.9, respectively. *Partner's control attempts* reflected the respondent's agreement with the following two statements: (1) "[name] sometimes tries to control what I do," and (2) "[name] always tries to change me," with a mean of 4.18 with a standard deviation of 7.1.

Respondent's jealousy was a single item stating, "When [name] is around other guys/girls, I get jealous." Responses were 1 (*strongly disagree*) to 5 (*strongly agree*), with a mean of 2.72 and standard deviation of 4.3. *Partner's jealousy* was a similar item assessing the respondent's level of agreement with the following statement: "When I am around other guys/girls, [name] gets jealous." The mean was 3.1 with a standard deviation of 4.6.

Arguing about the relationship asked the extent of agreement with the following three items: how often "did you and [name] have disagreements or arguments;" "have disagreements about your relationship;" and "have disagreements about seeing other people?" Responses were 1 (*never*) to 5 (*very often*). The summed scale ranged from 3 to 15, with a mean and standard deviation of 7.36 and 10, respectively ($\alpha = .85$).

Poor communication was a six-item summed scale based on Power and Hutchinson's (1979) communication apprehension scale. We asked respondents about their extent of agreement with the following statements: (1) "Sometimes I don't know quite what to say to [name];" (2) "I would be uncomfortable having intimate conversations with [name];" (3) "Sometimes I find it hard to talk about my feelings with [name];" (4) "Sometimes I feel I need to

watch what I say to [name];” (5) “Sometimes I find it hard to talk about sexual matters with [name];” and (6) “Sometimes I do not tell [name] things because he/she will get mad.”

Responses were 1 (*strongly disagree*) to 5 (*strongly agree*). We calculated scores as the sum of the six items, with a range of 6 to 28, with a mean and standard deviation of 13.79 and 16.8, respectively ($\alpha = .79$).

Obsessive love included items from Hatfield and Sprecher’s (1986) passionate love scale. A recent meta-analysis of measures of love (Graham, 2011) reported that Hatfield and Sprecher’s original scale combined aspects of companionate with obsessive love so we examined two items reflecting obsessive love. We asked respondents about their extent of agreement with the following statements: (1) “The sight of [name] turns me on;” and (2) “[name] always seems to be on my mind.” Responses were 1 (*strongly disagree*) to 5 (*strongly agree*). We calculated scores as the sum of the two items, with a range of 2 to 10, and a mean and standard deviation of 7.63 and 6.3, respectively ($\alpha = .70$).

Perceived lack of relationship alternatives included the following two items: (1) “I could find another girl [guy] as good as [name] is,” and (2) “It’s likely there are other girls [guys] I could be happy with.” Responses were 1 (*strongly disagree*) to 5 (*strongly agree*) (reverse coded), with a mean of 5.9 and a standard deviation of 7.9.

Gender, a dichotomous variable, indicated whether the respondent was female (49.69 %). *Age* was the difference between date of birth and the fourth interview date, with a mean of 20.35. *Race/ethnicity* consisted of three categories: White (reference group, 68.03 %), Black (24.56%) and Hispanic (7.05%). *Family structure*, from the respondent’s first interview asked, “During the past 12 months, who were you living with most of the time?” Respondents selected one of 25 categories, which we collapsed into four categories: two biological parents (reference group,

51.27%), single parent (22.69%), stepparents (13.35%), or ‘other family’ including living with other family members or foster care (12.70%). *Mother’s education* included less than high school (10.65 %), high school graduate (reference group, 31.8 %), some college (34.6 %), or college or more (22.8 %). *Neighborhood poverty* was from U.S. census data at the time of the first interview, and indicated the “percent of population living below the poverty level” in the respondent’s census tract while growing up. We substituted missing cases with the mean of 14.5%. *Religiosity*, based on a single item, asked the respondent, “How important is your spiritual life?” Responses were 1 (*not at all important*) to 5 (*very important*), with a mean of 3.14 and a standard deviation of 4.9.

Relationship status, based on relationship histories measured at the fourth interview included, dating exclusively (reference group, 60%), casual dating (13 %), cohabiting (21%), and married (6%). *Current relationship* indicated that the respondent reported on the current (70%) or the most recent (30%) relationship. *Relationship duration* ranged from 1 (“less than a week”) to 8 (“a year or more”). The mean relationship duration was approximately 6.62, indicating that on average respondents were in their relationships approximately 6-12 months. *Number of children* indicated how many children the respondent had, based on the number of pregnancies/partner pregnancies reported. Twenty-four percent of the sample reported having children, with a range of 0-5 children.

Analytic Strategy

Table 1 included weighted percentages, means, and standard deviations for the entire sample, and by physical victimization experience (yes, no). We used these data to describe the sample as a whole, and to compare characteristics of physical violence victims and non-victims. We included a correlation matrix in Appendix Table A1 to show all bivariate associations

between the victimization scales, depressive symptoms scale, strained relationship indicators, and sociodemographic as well as relationship characteristics.

Table 2 included zero order models examining the influence of physical victimization and the other independent variables on depressive symptoms. In Model 1, we examined the association between physical victimization, prior depressive symptoms, and sociodemographic and relationship characteristics on depressive symptoms. Model 2 added the strained relationship indicators and assessed their effects on depressive symptoms as well as their mediating influence on the association between physical victimization and depressive symptoms. Table 3, Models 1, 2, and 3 examined the moderating influence of strained relationship indicators individually (significant interactions shown). We calculated cross-product terms of each of the strained relationship variables with physical victimization individually to determine whether specific indicators of strained relationships moderated the association between victimization and depressive symptoms. We centered the variables used in the interactions before taking their cross-products (Frazier, Tix, & Barron, 2004). Table 4 included the same models as Table 2 substituting psychological for physical victimization. In Table 5, we examined whether physical and psychological victimization had independent effects on depressive symptoms.

RESULTS

Descriptive Analysis

Table 1 included descriptive statistics for comparing physically victimized (32.6%) and non-victimized respondents (67.4%). (In multivariate analyses, physical victimization is a continuous variable). Physically victimized individuals reported significantly higher (a) depressive symptoms, (b) psychological victimization, and (c) prior depressive symptoms.

Additionally, physically victimized compared with non-victimized respondents were significantly higher on all of the strained relationship indicators except obsessive love. Physically victimized compared with non-victimized respondents were more likely to be male, less likely to be White, and more likely to be Black or Hispanic. A greater percentage of physically victimized respondents reported having lived in single parent families relative to non-victimized respondents. Neighborhood poverty rates during their adolescence were higher for victimized relative to non-victimized respondents. A greater percentage of victimized respondents were not dating exclusively, reported cohabiting, and on average, were in relationships of longer duration.

[Table 1 about here]

Physical Victimization and Depressive Symptoms

In Table 2, we presented results for the OLS regression of physical victimization and indicators of strained relationships on depression. In the zero-order model, physical victimization and prior depressive symptoms positively influenced current depressive symptoms. In the zero-order models, all of the strained relationship qualities influenced depression. Women relative to men, and Black compared with White young adults reported higher levels of depressive symptoms. Having lived in a step-parent or “other” family structure during adolescence, relative to living with two biological parents, increased young adults’ depressive symptoms. Mothers’ self-reports of less than a high school educational level and neighborhood poverty during the formative years of adolescence positively influenced respondents’ depression. Whether respondents reported on a current as opposed to a most recent relationship negatively influenced depressive symptoms, and number of children positively influenced depression.

In Table 2, Model 1 presented the OLS regression for the association between physical

victimization and depressive symptoms, controlling for prior depression, sociodemographic and relationship characteristics. Both physical victimization and prior depressive symptoms positively influenced current depression controlling for the other known correlates. Of the sociodemographic characteristics, only gender (female) significantly influenced depressive symptoms. Those reporting on a current versus recent relationship reported lower depression.

[Table 2 about here]

Model 2 introduced the indicators of strained relationships as a block, and respondents' jealousy and obsessive love positively influenced depressive symptoms controlling for the other variables in the model. Additionally, this model allowed us to assess whether the six indicators mediated the effect of physical victimization on depressive symptoms. Net of these indicators, physical victimization did not significantly affect depressive symptoms. Further analyses (available from authors) found that, specifically, the inclusion of arguing and poor communication to the model reduced physical victimization to non-significance. Thus, arguing about the relationship and poor communication, which are both correlated with physical victimization at the bivariate level (see appendix Table 1A), mediated the association between physical victimization and depression. Finally, in supplemental analyses (available from authors), we examined whether the effect of victimization on depression differed for respondents who were *only* victims compared to those in *mutually* violent relationships, and found that the effect of victimization on depression was not significantly different between these two groups.

In Table 3, we assessed the moderating role of strained relationships on victimization and depression. We initially interacted all of the strained relationship indicators with physical victimization, and some were not statistically significant indicating a similar effect of victimization across levels of those relational qualities. We found three significant positive

interactions: (1) physical victimization and respondent's controlling behavior; (2) physical victimization and respondent's jealousy; and (3) physical victimization and respondent's obsessive love, shown in Models 1, 2, and 3, respectively. These interaction models demonstrated that the main effects of physical victimization were not significantly associated with depressive symptoms at average levels of respondent's controlling behavior, jealousy, and obsessive love, respectively, net of other factors. The significant interactions indicated that greater, that is, above average, attempts to control one's partner, feelings of jealousy, and obsessive love, respectively, exacerbated the effects of physical victimization on depression.

[Table 3 about here]

Psychological Victimization and Depressive Symptoms

The analyses in Table 4 focused on the associations between psychological victimization, strained relationships, and depressive symptoms. Approximately 47.8% of respondents reported experiencing psychological victimization in their current/most recent relationship. At the zero order, psychological victimization positively influenced depressive symptoms. This relationship persisted net of prior depressive symptoms, sociodemographic, and other relationship characteristics shown in Model 1.

In Model 2, respondent's jealousy, obsessive love and a perceived lack of relationship alternatives were positively associated with depressive symptoms. Similar to the findings for physical victimization, however, the inclusion of strained relationship qualities reduced the association between psychological victimization and depressive symptoms to non-significance. Supplemental analyses showed that the respondents' attempts to control the partner, perceptions that the partner attempts to control the individual, arguing about the relationship itself, and poor communication each explained the effect of psychological victimization on depressive

symptoms. Thus, two of the same factors (i.e., arguing and poor communication) that explained the association between physical victimization and depression also mediated the relationship between psychological victimization and depression. Self attributions and attributions of the partner's controlling behaviors, however, also play a role in the link between psychological victimization and depressive symptoms.

[Table 4 about here]

To test the moderating effect of strained relationships on the association between psychological victimization and depressive symptoms, we examined cross-product terms of each of the strained relationship variables with psychological victimization individually. In contrast to the results for physical victimization, none of the interactions were significant (not shown). Thus, psychological victimization exerted a similar effect on depressive symptoms across levels of these relationship factors.

Physical Victimization, Psychological Victimization and Depressive Symptoms

The next goal of this investigation was to determine the extent to which psychological victimization contributed to the variation in depressive symptoms beyond that explained by physical victimization. Models in Table 5 included both physical and psychological victimization. Model 1 showed that physical and psychological victimization independently and positively influenced depressive symptoms. Model 2 included prior depressive symptoms, and the effect of psychological victimization on depressive symptoms was no longer significant. Thus, the influence of psychological victimization on depressive symptoms was accounted for by prior depressive symptoms. The correlation matrix (Appendix Table A1) showed a positive association between prior depressive symptoms and psychological victimization. In Model 3, including measures of strained relationships reduced the effect of physical victimization to non-

significance (as in Table 2). Supporting the results discussed above, including strained relationship measures attenuated the effects of physical victimization and psychological victimization on depressive symptoms. The strained relationship measures were salient predictors of depressive symptoms and including psychological victimization did not significantly contribute to the overall fit of the model after accounting for prior depression.

[Table 5 about here]

Gender, Victimization, and Depressive Symptoms

Consistent with other studies, women reported higher levels of depressive symptoms than did men. Based on relational theory we expected victimization to have a stronger influence on depressive symptoms among women than men. A final set of analyses examined whether the impact of physical and psychological victimization on depressive symptoms was a function of gender (available from authors). The interaction terms were not statistically significant suggesting similar effects of physical victimization and psychological victimization for male and female respondents. Thus, for men and women, physical and psychological victimization similarly influenced depressive symptoms.

Lastly, we examined three-way interactions to assess whether the effects of relationship strains on the (physical and psychological) victimization-depression association were stronger for women, and the interactions were not significant, again suggesting that the effects of relational strains did not differ for men and women. Thus, our expectations that arguing and poor communication would have stronger effects for women were not supported.

DISCUSSION

Depressive symptoms are among the most common health complaints, and intimate partner violence victimization is a risk factor. The high prevalence of violence during emerging

adulthood underscores the need to understand its consequences, and depressive symptoms are a likely outcome. Consistent with prior work, in bivariate analyses, physical and psychological victimization were positively associated with depressive symptoms. The results of the current study, however, highlighted the importance of taking the broader relationship context of these behaviors into account. We focused on strained relationships qualities and found in multivariate analyses that respondent's jealousy and obsessive love increased depressive symptoms; yet physical victimization did not affect depressive symptoms. Specifically, accounting for arguing and poor communication attenuated the association between physical victimization and depression. Thus, it appears a constellation of negative relationship qualities are tied to depressive symptoms and physical victimization is linked in important ways to relationship strains.

Our results show that relationship strains are associated with depressive symptoms. Furthermore, significant interactions indicated that attempts to control one's partner, jealousy, and obsessive love, respectively, exacerbated the effects of physical victimization on depression. These findings suggest that relationship strains and physical victimization do not operate independently and that the negative implication of physical victimization is greatest in relationships with the greatest strains.

Regarding psychological victimization and depressive symptoms, we found that respondent's jealousy, obsessive love and a perceived lack of relationship alternatives were positively associated with depressive symptoms. Similar to the findings for physical victimization, however, the inclusion of strained relationship qualities reduced the association between psychological victimization and depressive symptoms to non-significance. Supplemental analyses showed that respondent's attempts to control the partner, perceptions that

the partner attempts to control the individual, arguing about the relationship itself, and poor communication each explained the effect of psychological victimization on depression. While respondent's controlling behaviors explain the association between psychological victimization and violence, the same is not true for physical victimization. Thus, controlling behaviors appear to take a toll in a different way for each type of victimization. Similar to the models that included physical victimization, respondent's jealousy, poor communication, and obsessive love positively influenced depressive symptoms. Thus, although much literature has emphasized the importance of focusing on issues of control, (e.g., Anderson, 2002; Ansara & Hindin, 2011; Felson & Outlaw, 2007; Langhinrichsen-Rohling, 2010; Leone et al., 2004), our study demonstrated that other negative relationship dynamics also need to be considered and are central to assessments of the implications and correlates of victimization.

While both types of victimization were associated with depressive symptoms in separate models, they appear to operate independently when included in a joint model. In other words, these two types of victimization are correlated, but each is positively associated with depressive symptoms. As in the prior models strained relationship qualities explained the associations between victimization in the joint model.

Moreover, victimization is associated with depressive symptoms in a similar manner for both men and women. We hypothesized that victimization would have a greater influence for women than men, and that some of the indicators of strained relationships (e.g., arguing, poor communication) would matter more so with respect to women's depressive symptoms. However, in our study this was not the case. This finding challenges the notions established in the literature about differential implications of intimate violence for men and women.

There are several limitations to our current study. First, although these findings contribute to our understanding of depressive symptoms, they do not provide a sense of emotional well-being of young adults who experienced violence over time. Second, for some individuals, the episode of intimate partner violence that is the focus of this study may not be the most serious incident. Moreover, there are other types of abuse such as stalking or sexual coercion that others found to affect depressive symptoms in general, but more so for women (e.g., Carbone-Lopez, 2006; Sabina & Straus, 2008), but were not examined in the current study. A next step is to assess whether strained relationships operate in the same manner with regard to stalking or sexual coercion, and whether in such relationships we would find gender differences. Fourth, the timing of the violent incident likely also matters. For example, among women, there is evidence that first episode of violence triggers depression (Campbell & Soeken, 1999; Silva, McFarlane, Soeken, Parker, & Reel, 1997). Fifth, many women in abusive relationships experienced past child abuse, past intimate partner violence, and economic hardship resulting in cumulative abuse experiences (Pico-Alfonso, 2005), which may exert even stronger effects on depressive symptoms. Future research should examine whether strained relationship qualities buffer the effects of cumulative abuse. Perhaps the greatest limitation, however, is that we cannot assess severity of physical injury with these data. It is very likely that the extent of injury would influence depressive symptoms, and that we might find gender differences. We are currently collecting data, which will allow us to incorporate whether medical attention was necessary among those reporting IPV.

Although the findings may not generalize to more severe types of recurrent abuse, they speak to common couple violence, which is a key precursor or correlate to more serious forms of violence. Many programmatic efforts target adolescents and young adults and recognize the

importance of interrupting these patterns of behavior before they become more serious and firmly entrenched. The findings of the current study suggest the potential utility of designing programs and curricula that address a range of relationship dynamics and concerns, including but not limited to physical and psychological victimization. These other elements of strain and imbalance may be psychologically harmful in their own right, and often are related to a constellation of negative dynamics that include physical and psychological victimization. Findings also suggest that some of these broader relationship 'strains' appear to exacerbate the negative effects of victimization, results which also support the development of a more multi-faceted approach to prevention and intervention. This study contributed to the current body of literature by providing a lens on the link between victimization and depression that situates victimization within the relationship. Consistent with this perspective is the notion that violence, and relationship strains are processual, operating in tandem, and not separate events. That is, it is unlikely to find relationships in which violence occurs and the other relationship strains do not exist. For example, physically victimized compared with non-victimized respondents were significantly higher on all of the strained relationship indicators except obsessive love. Such relational processes are deeply rooted in the intimate relationship and should be considered together.

REFERENCES

- Amaro, H., Raj, A. Anita Raj, & Reed E. (2001). Women's sexual health: The need for feminist analyses in public health in the decade of behavior. *Psychology of Women Quarterly*, 25, 324-334.
- Amato, P., & Dush, C. (2005). Consequences of relationship status and quality for subjective well-being. *Journal of Social and Personal Relationships*, 22, 607-627.
- Anderson, K. L. (2002). Perpetrator or Victim? Relationships between intimate partner violence and well-being. *Journal of Marriage and Family*, 64, 851-863.
- Anderson, K. L. (2013). Why do we fail to ask "Why" about gender and intimate partner violence? *Journal of Marriage and family*, 75, 314-318.
- Ansara, D. L., & Hindin, M. J. (2011). Psychosocial consequences of intimate partner violence for women and men in Canada. *Journal of Interpersonal Violence*, 26, 1628-1645.
- Archer, J. (2002). Sex differences in physically aggressive acts between heterosexual partners: A meta-analytic review. *Aggression and Violent Behavior*, 7, 313-351.
- Arnett, J. J. (2004). *Emerging adulthood: The winding road from the late teens through the twenties*. New York: Oxford University Press.
- Babcock, J. C., Costa, D. M., Green, C. E., & Eckhardt, C. (2004). What situations induce intimate partner violence? A reliability and validity study of the proximal antecedents to violent episodes (PAVE) Scale. *Journal of Family Psychology*, 18, 433-442.
- Beydoun, H. A., Beydoun, M. A., Kaufman, J. S., Lo, B., & Zonderman, A. B. (2012). Intimate partner violence against adult women and its association with major depressive disorder, depressive symptoms and postpartum depression: A systematic review and meta-analysis. *Social Science & Medicine*, 75, 959-975.

- Brehm, J. W., & Brehm, S. 1981. Psychological reactance: A theory of freedom and control. Mahwah, NJ: Erlbaum.
- Campbell, J. C., & Soeken, K. L. (1999). Women's responses to battering over time: An analysis of change. *Journal of Interpersonal Violence, 14*, 21-40.
- Carbone-Lopez, K, Candice Kruttschnitt, C., & MacMillan, R. (2006). Patterns of intimate partner violence and their associations with physical health, psychological distress, and substance use. *Public Health Rep., 121*, 382-392.
- Child Trends. (2012). Young adults depression. Retrieved from www.childtrendsdatabank.org/?q=node/325.
- Coker, A. L., Davis, K. E., Arias, I., Desai, S., Sanderson, M., Brandt, H. M., & Smith, P. H. (2002). Physical and mental health effects of intimate partner violence for men and women. *American Journal of Preventive Medicine, 23*, 260-268.
- Coker, A. L., Weston, R., Creson, D. L., Justice, B., & Blakeney, P. (2005). PTSD symptoms among men and women survivors of intimate partner violence: The role of risk and protective factors. *Violence and Victims, 20*, 625-643.
- Coker, A. L., Smith, P. H., McKeown, R. E., & King, M. J. (2000). Frequency and correlates of intimate partner violence by type: Physical, sexual, and psychological battering. *American Journal of Public Health, 90*, 553-559.
- Copp, J. E., Giordano, P. C., Longmore, M. A., & Manning, W. D. (in press). Stay/leave decision-making in violent and non-violent dating relationships. *Journal of Interpersonal Violence*.

- Cui, M., Gordon, M., Ueno K., and Fincham, F. D. (2013). The continuation of intimate partner violence from adolescence to young adulthood. *Journal of Marriage and Family*, *75*, 300-313.
- DeWall, C. N., Lambert, N. M., Pond, R. S., Kashdan, T. B., & Fincham, F. D. (in press). A grateful heart is a non-violent heart: Cross-sectional, experience sampling, longitudinal, and experimental Evidence. *Social Psychological and Personality Science*.
- Dobash, R. P., & Dobash, R. E. (2004). Women's violence to men in intimate relationships. *British Journal of Criminology*, *44*, 324-349.
- Frazier, P. A., Tix, A. P., & Barron, K. E. (2004). Testing moderator and mediator effects in counseling psychology research. *Journal of Counseling Psychology*, *51*, 115-134.
- Felson, R B., & Outlaw, M. C. (2007). The control motive and marital behavior. *Violence and Victims*, *22*, 387-407.
- Fergusson, D., M., Horwood L. J., & Ridder, E. M. (2005). Partner violence and mental health outcomes in a New England birth cohort. *Journal of Marriage and Family*, *67*, 1103-1119.
- Fiebert, M. S. (2012). References examining assaults by women on their spouses or male partners: An annotated bibliography. Retrieved from <http://www.csulb.edu/~mfiebert/assault.htm>.
- Flynn, A., & Graham, K. (2010). 'Why did it happen?' A review and conceptual framework for research on perpetrators and victims' explanation for intimate partner violence. *Aggression and Violent Behavior*, *15*, 239-251.
- Follingstad, D. R., Wright S., Lloyd, S., & Sebastian, J. A. (1991). Sex differences in motivations and effects in dating violence. *Family Relations*, *40*, 51-57.

- Graham, J. S. (2011). Measuring love in romantic relationships: A meta-analysis. *Journal of Social and Personal Relationships, 28*, 748-771.
- Graham, K., Bernards, S., Flynn, A., Tremblay, P. F., & Wells, S. (2012). Does the relationship between depression and intimate partner aggression vary by gender, victim-perpetrator role, and aggression severity. *Violence and Victims, 27*, 730-743.
- Giordano, P. C., Soto, D. A., Manning, W. D., & Longmore, M. A. (2010). The characteristics of romantic relationships associated with teen dating violence. *Social Science Research, 39*, 863-874.
- Halpern, C. T., Spriggs A. L., Martin, S. L., & Kupper, L. L. (2009). Patterns of intimate partner violence victimization from adolescence to young adulthood in a nationally representative sample. *Journal of Adolescent Health, 45*, 508-516.
- Halpern-Meehin, S., Manning, W. D., Giordano, P. C., and Longmore, M. A. (2013). Relationship churning, physical violence, and verbal abuse in young adult relationships. *Journal of Marriage and Family, 75*, 2-12.
- Hammock, G., & O'Hearn, R. (2002). Psychological aggression in dating relationships: Predictive models for males and females. *Violence and Victims, 17*, 525-540.
- Hatfield, E. & Sprecher, S. (1986). Measuring passionate love in intimate relationships. *Journal of Adolescence, 4*, 467-482.
- Harris, C. R. (2002). Sexual and romantic jealousy in heterosexual and homosexual adults. *Psychological Science, 13*, 7-12.
- Hines, D. A., J. Brown, J., & Dunning, E. (2007). Characteristics of callers to the domestic abuse helpline for men. *Journal of Family Violence, 22*, 63-72.
- Hines, D. A., & Maley-Morrison, K. (2001). Psychological effects of partner abuse against men,

- a neglected research area. *Psychology of Men and Masculinity*, 2, 75-85.
- Johnson, M. P., & Ferraro, K. J. (2000). Research on domestic violence in the 1990's: Making distinctions. *Journal of Marriage and the Family*, 62, 948-963.
- Johnson, W. L., Giordano, P. C., Longmore, M. A., & Manning, W. D. in press. Developmental trajectories of intimate partner violence and depressive symptoms. *Journal of Health and Social Behavior*.
- Katz, J., Carino, A., and Hilton, A. (2002). Perceived verbal conflict behaviors associated with physical aggression and sexual coercion in dating relationships: A gender-sensitive analysis. *Violence and Victims*, 17, 93-109.
- Katz, J. Kuffel, S. W., & Coblenz, A. (2002). Are there gender differences in sustaining dating violence? An examination of frequency, severity, and relationship satisfaction. *Journal of Family Violence*, 17, 247-271.
- Krug, E. G., Dahlberg, L. L, Mercy, J. A., Zwi, A. B., & Lozano, R. (2002). *The world report on violence and health*. Geneva, Switzerland: World Health Organization.
- Langhinrichsen-Rohling, J. (2010). Controversies involving gender and intimate partner violence in the United States. *Sex Roles*, 62, 179-193.
- Leadbeater, B. J., Blatt, S. J., & Quinlan, D. M. (1995). Gender-linked vulnerabilities to depressive symptoms, stress, and problem behaviors in adolescents. *Journal of Research on Adolescence*, 5, 1-29.
- Leadbeater, B. J., & Way, N. (2001). *Growing Up Fast: Transitions to Early Adulthood of Inner-City Adolescent Mothers*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Leone, J. M., Johnson, M. P., Cohan, C. L., & Lloyd, S. E. (2004). Consequences of Male Partner Violence for Low-Income Minority Women. *Journal of Marriage and Family*,

- 66, 472-490.
- Margol, L., Moffitt, T. E., Caspi, A., & Silva, P. A. (1998). Hitting without a license: testing explanations for differences in partner abuse between young adult daters and cohabitators. *Journal of Marriage and Family, 60*, 41-55.
- Mathes, E. W., Adams, E., & Davies, R. M. (1985). Jealous: loss of relationship rewards, loss of self-esteem, depression, anxiety, and anger. *Journal of Personality and Social Psychology, 48*, 1552-1561.
- McKenry, P. C., Julian, T. W., & Gavazzi, S. M. (1995). Toward a biopsychosocial model of domestic violence. *Journal of Marriage and Family, 57*, 307-320.
- Miller, L. M. (2010). Physical abuse in a college setting: A study of perceptions and participation in abusive dating relationships. *Journal of Family Violence, 26*, 71-80.
- Mills, T., Avegno, J., & Haydel, M. (2006). Male victims of partner violence: Prevalence and accuracy of screening tools. *Journal of Emergency Medicine, 31*(4), 447-452.
- Pico-Alfonso, M. A. (2005). Psychological intimate partner violence: the major predictor of posttraumatic stress disorder in abused women. *Neuroscience and Biobehavioral Reviews, 29*, 181-193.
- Powers, W. G., & Hutchinson, K. (1979). The measurement of communication apprehension in the marriage relationship. *Journal of Marriage and the Family, 41*, 89-95.
- Randle, A. A., & Graham C. A. (2011). A review of the evidence on the effects of intimate partner violence on men. *Psychology of Men & Masculinity, 12*, 97-111.
- Radloff, L. S. (1977). The CES-D Scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement, 1*, 385-481.
- Reid, R. J., Bonomi, A. E., Rivara, F. P., Anderson, M., Fishman, P. A., Carrell, D. S., &

- Thompson, R. S. (2008). Intimate partner violence among men: Prevalence, chronicity, and health effects. *American Journal of Preventive Medicine, 34*, 478-485.
- Rhoades, G. K., Stanley, S. M., & Markman, H. J. (2010). Should I stay or should I go? Predicting dating relationship stability from four aspects of commitment. *Journal of Family Psychology, 24*, 543-550.
- Sabina, C., & Straus, M. A. (2008). Polyvictimization by dating partners and mental health among U.S. college students. *Violence and Victims, 23*, 667-682.
- Scott, M. E., Steward-Streng, M. A., Manlove, J., Schelar, E., & Cui, C. (2011). *Characteristics of young adult sexual relationships: Diverse, sometimes violent, often loving*. Child trends, Research Brief 2011-01, 18.
- Segrin, C., Powell, H. L., Givertz, M., & Brackin, A. (2003). Symptoms of depression, relational quality, and loneliness in dating relationships. *Personal Relationships, 10*, 25-36.
- Silva, C., McFarlane, J., Soeken, K., Parker, B., & Reel, S. (1997). Symptoms of post-traumatic stress disorder in abused women in a primary care setting. *Journal of Women's Health, 6*, 543-52.
- Simon, R. W., & Barrett, A. E. (2010). Nonmarital romantic relationships and mental health in early adulthood: Does the association differ for women and men? *Journal of Health and Social Behavior, 51*, 168-182.
- Smith, T. B., McCullough, M. E., & Poll, J. (2003). Religiousness and depression: evidence for a main effect and the moderating influence of stressful life events. *Psychological Bulletin, 129*, 614-636.
- Stanley, S. M., Markman, H. J., & Whitton, S. W. (2002). Communication, conflict, and

- commitment: Insights on the foundations of relationship success from a national survey. *Family Process*, *41*, 659-675.
- Stets, J., & Hammond, S. A. (2002). Gender, control, and marital commitment. *Journal of Family Issues*, *23*, 3-25.
- Straus, M. A., & Gelles, R. J. (1990). *Physical Violence in American Families: Risk Factors and Adaptations to Violence in 8,145 Families*. New Brunswick, NJ: Transaction Publishers.
- Tanha, M., Beck, C. J. A., Figueredo, A. J., & Raghavan, C. (2010). Sex differences in intimate partner violence and the use of coercive control as a motivating factor for intimate partner violence. *Journal of Intimate Violence*, *25*, 1-19.
- U.S. Census Bureau. (2012). Sex by marital status for the population 15 years and over (B12002). 2010 American Community Survey 1-Year Estimates. Retrieved from American Factfinder on June 25, 2012.
- Vest, J. R., Tegan K. C., Chen, J. J., & Brownson, R. C. (2002). Multistage analysis of factors associated with intimate partner violence. *American Journal of Preventive Medicine*, *22*, 156-164.
- Vujeva, H. M., & Furman, W. (2011). Depressive symptoms and romantic relationship qualities from adolescence through emerging adulthood: A longitudinal examination of influences. *Journal of Clinical Child & Adolescent Psychology*, *40*, 123-134.
- Whitaker, D. J., Haileyesus T., Swahn, M., and Linda S. Saltzman. (2007). Differences in Frequency of Violence and Reporting Injury Between Relationships With Reciprocal and Non-Reciprocal Intimate Partner Violence. *American Journal of Public Health*, *97*, 941-947.

Table 1. Means/Percentages and Standard Deviations for Strained Relationship Qualities, Sociodemographic, and Relationship Characteristics for Full Sample and by Physical Victimization Status

Variables	Full Sample (n = 984)		Victim (n = 319)		Not-victim (n = 665)
	M	SD	M		M
				32.60%	67.40%
Depressive symptoms	14.48	30.2	16.19	***	13.65
Physical victimization	1.21	8.8	3.69		--
Psychological victimization	4.36	7.1	5.76	***	3.68
Prior depressive symptoms	14.63	28.2	15.56	**	14.17
<i>Strained Relationship Qualities</i>					
Control					
Respondent control	4.27	6.9	5.12	***	3.85
Partner control	4.18	7.1	5.34	***	3.62
Jealousy					
Respondent jealousy	2.72	4.3	3.02	***	2.58
Partner jealousy	3.10	4.6	3.56	***	2.88
Arguing	7.36	10.0	8.96	***	6.58
Poor communication	13.79	16.8	15.92	***	12.76
Obsessive love	7.63	6.3	7.53		7.68
Lack alternatives	5.90	7.9	5.43	***	6.13
<i>Sociodemographic Characteristics</i>					
Gender (Female)	49.69%		35.84%	***	56.40%
Age	20.35	6.5	20.39		20.33
Race					
White	68.03%		59.27%	***	72.80%
Black	24.56%		30.92%	**	21.48%
Hispanic	7.05%		9.81%	*	5.72%
Family structure					
Two biological parents	51.27%		43.80%	***	54.89%
Single parent	22.69%		23.98%		22.06%
Step-parent	13.35%		18.61%	***	10.79%
Other	12.70%		13.61%		12.26%
Mother's education					
Less than HS	10.65%		14.94%	***	8.57%
High school	31.80%		34.65%		30.53%
Some college	34.60%		33.07%		35.34%
College or more	22.88%		17.34%	**	25.56%
Neighborhood poverty	14.34	53.3	15.71	*	13.67
Religiosity	3.14	4.9	3.12		3.15
<i>Relationship Characteristics</i>					
Relationship status					
Dating casually	12.95%		12.82%		13.01%
Dating exclusively	59.97%		53.82%	**	62.95%
Cohabiting	21.17%		25.63%	*	19.00%
Married	5.91%		7.73%		5.04%
Current relationship	69.88%		69.23%		70.19%
Most recent relationship	30.12%		30.77%		29.81%
Duration	6.62	6.6	6.94	***	6.47
Number of children	0.24	2.1	0.27	**	0.22

Source: Toledo Adolescent Relationships Study

Table 2. Coefficients for the OLS Regression of Physical Victimization and Strained Relationship Qualities on Depressive Symptoms (n=984)

	Zero Order		Model 1		Model 2	
	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>SE B</i>
Physical victimization	1.42***	0.26	1.08***	0.24	0.48	0.28
Prior depressive symptoms	0.53***	0.03	0.50***	0.03	0.47***	0.03
<i>Strained Relationship Qualities</i>						
Control						
Respondent control	0.97***	0.13			0.26	0.15
Partner control	0.87***	0.13			0.10	0.16
Jealousy						
Respondent jealousy	1.46***	0.21			0.50*	0.22
Partner jealousy	0.73***	0.20			-0.17	0.20
Arguing	0.55***	0.09			0.06	0.11
Poor communication	0.39***	0.06			0.12	0.06
Obsessive love	0.30*	0.15			0.47**	0.14
Lack alternatives	-0.38**	0.12			-0.22	0.12
<i>Sociodemographic Characteristics</i>						
Gender ^a	1.06*	0.51	1.12*	0.47	1.17*	0.48
Age	0.05	0.14	0.07	0.13	0.05	0.13
Race ^b						
Black	1.65**	0.61	-0.04	0.71	-0.00	0.70
Hispanic	1.24	0.82	0.47	0.77	0.20	0.76
Family structure ^c						
Single parent	0.87	0.64	-0.35	0.59	-0.22	0.59
Step-parent	2.50**	0.77	0.88	0.69	0.94	0.68
Other	1.63*	0.80	0.03	0.73	0.27	0.72
Mother's education ^d						
Less than HS	2.01*	0.87	0.50	0.79	0.69	0.78
Some college	0.71	0.63	0.50	0.54	0.44	0.53
College or more	-0.75	0.70	-0.12	0.63	-0.16	0.62
Neighborhood poverty	0.06*	0.02	0.02	0.02	0.01	0.02
Religiosity	0.22	0.20	0.27	0.18	0.25	0.18
<i>Relationship Characteristics</i>						
Relationship status ^e						
Dating casually	1.09	0.79	0.15	0.71	0.09	0.70
Cohabiting	0.28	0.64	-0.66	0.61	-0.59	0.60
Married	0.28	1.05	-0.09	0.99	0.17	0.98
Current relationship ^f	-1.97***	0.56	-2.36***	0.52	-1.97***	0.53
Duration	-0.01	0.15	0.03	0.14	-0.07	0.15
Number of children	1.20***	0.44	0.71	0.45	0.58	0.44
<i>R</i> ²			.29		.33	
<i>F</i> for change in <i>R</i> ²					5.90***	

Note: The reference categories were as follows: ^a Male, ^b White, ^c Two biological parents, ^d High school, ^e Dating exclusively, and ^f Most recent relationship.

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

Source: Toledo Adolescent Relationships Study

Table 3. The Moderating Effects of Strained Relationship Qualities on Physical Victimization and Depressive Symptoms (n=984)

	Model 1		Model 2		Model 3	
	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>SE B</i>
Physical victimization	0.24	0.29	0.33	0.28	0.50	0.27
Prior depressive symptoms	0.47***	0.03	0.47***	0.03	0.47***	0.03
<i>Strained Relationship Qualities</i>						
Control						
Respondent control	0.20	0.15	0.28	0.15	0.26	0.15
Partner control	0.12	0.16	0.06	0.16	0.09	0.16
Jealousy						
Respondent jealousy	0.51*	0.22	0.44	0.22	0.48*	0.22
Partner jealousy	-0.13	0.20	-0.11	0.20	-0.20	0.20
Arguing	0.05	0.11	0.07	0.11	0.07	0.11
Poor communication	0.13*	0.06	0.13*	0.06	0.13*	0.06
Obsessive love	0.45**	0.14	0.45**	0.14	0.47**	0.14
Lack alternatives	-0.21	0.12	-0.21	0.12	-0.20	0.18
<i>Sociodemographic Characteristics</i>						
Gender ^a	1.18*	0.48	1.07*	0.48	1.14*	0.48
Age	0.05	0.13	0.05	0.13	0.04	0.13
Race ^b						
Black	0.03	0.70	0.03	0.70	0.09	0.70
Hispanic	0.19	0.76	0.28	0.76	0.21	0.76
Family structure ^c						
Single parent	-0.24	0.58	-0.20	0.58	-0.20	0.58
Step-parent	0.91	0.68	0.96	0.68	0.99	0.68
Other	0.37	0.71	0.38	0.71	0.28	0.71
Mother's education ^d						
Less than HS	0.55	0.78	0.66	0.78	0.66	0.78
Some college	0.41	0.53	0.37	0.53	0.38	0.53
College or more	-0.19	0.62	-0.20	0.62	-0.17	0.62
Neighborhood poverty	0.02	0.02	0.01	0.02	0.01	0.02
Religiosity	0.27	0.18	0.24	0.18	0.25	0.18
<i>Relationship Characteristics</i>						
Relationship status ^e						
Dating casually	-0.11	0.70	0.08	0.70	0.08	0.70
Cohabiting	-0.58	0.60	-0.61	0.60	-0.57	0.60
Married	0.28	0.98	0.22	0.98	0.07	0.98
Current relationship	-2.00***	0.53	-1.91**	0.53	-1.86***	0.53
Duration	-0.07	0.15	-0.08	0.15	-0.07	0.15
Number of children	0.52	0.44	0.50	0.44	0.54	0.44
Victimization x Respondent control	0.36**	0.12				
Victimization x Respondent jealousy			0.56**	0.18		
Victimization x Obsessive love					0.35**	0.13
<i>R</i> ²		.33		.33		.33

Note: The reference categories were as follows: ^a Male, ^b White, ^c Two biological parents, ^d High school, ^e Dating exclusively, and ^f Most recent relationship. Victimization, Respondent control, Respondent jealousy, and Obsessive love were centered at their means. * $p < .05$. ** $p < .01$. *** $p < .001$

Source: Toledo Adolescent Relationships Study

Table 4. Coefficients for the OLS Regression of Psychological Victimization and Relationship Qualities on Depressive Symptoms (n=984)

	Zero Order		Model 1		Model 2	
	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>SE B</i>
Psychological victimization	0.62***	0.13	0.32**	0.12	-0.02	0.14
Prior depressive symptoms			0.50***	0.03	0.48***	0.03
<i>Strained Relationship Qualities</i>						
Control						
Respondent control					0.26	0.15
Partner control					0.16	0.16
Jealousy						
Respondent jealousy					0.52*	0.22
Partner jealousy					-0.16	0.20
Arguing					0.12	0.11
Poor communication					0.13*	0.06
Obsessive love					0.46**	0.15
Lack alternatives					-0.23*	0.12
<i>Sociodemographic Characteristics</i>						
Gender ^a			0.78	0.46	0.99*	0.47
Age			0.04	0.13	0.04	0.13
Race ^b						
Black			0.27	0.71	0.09	0.70
Hispanic			0.67	0.78	0.24	0.77
Family structure ^c						
Single parent			-0.35	0.60	-0.24	0.59
Step-parent			1.03	0.69	1.02	0.68
Other			0.10	0.73	0.27	0.72
Mother's education ^d						
Less than HS			0.81	0.79	0.84	0.77
Some college			0.53	0.55	0.43	0.53
College or more			-0.16	0.64	-0.20	0.63
Neighborhood poverty			0.02	0.02	0.01	0.02
Religiosity			0.27	0.18	0.24	0.18
<i>Relationship Characteristics</i>						
Relationship status ^e						
Dating casually			0.19	0.71	0.09	0.70
Cohabiting			-0.49	0.61	-0.48	0.60
Married			0.07	1.00	0.26	0.98
Current relationship ^f			-2.34**	0.52	-1.93***	0.53
Duration			0.06	0.15	-0.06	0.15
Number of children			0.59	0.45	0.52	0.44
<i>R</i> ²		.02		.28		.32
<i>F</i> for change in <i>R</i> ²						56.80***

Note: The reference categories were as follows: ^a Male, ^b White, ^c Two-parent family, ^d High school, ^e Dating exclusively, and ^f Most recent relationship.

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

Source: Toledo Adolescent Relationships Study

Table 5. Coefficients for the OLS Regression of Physical Victimization, Psychological Victimization, and Relationship Qualities on Depression (n=984)

	Model 1		Model 2		Model 3		Model 4	
	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>SE B</i>
Physical victimization	1.06** *	0.31	0.94***	0.27	1.00***	0.28	0.56	0.29
Psychological victimization	0.33*	0.16	0.09	0.14	0.07	0.14	-0.12	0.15
Prior depressive symptoms			0.51***	0.03	0.50***	0.03	0.48***	0.03
<i>Strained Relationship Qualities</i>								
<i>Control</i>								
Respondent control							0.25	0.15
Partner control							0.12	0.16
<i>Jealousy</i>								
Respondent jealousy							0.52*	0.22
Partner jealousy							-0.17	0.20
<i>Arguing</i>								
Poor communication							0.08	0.11
Obsessive love							0.13*	0.06
Lack alternatives							0.44**	0.15
							-0.23	0.12
<i>Sociodemographic Characteristics</i>								
Gender ^a					1.13	0.47	1.16*	0.48
Age					0.07	0.13	0.06	0.13
<i>Race^b</i>								
Black					-0.03	0.71	-0.04	0.71
Hispanic					0.47	0.77	0.17	0.76
<i>Family structure^c</i>								
Single parent					-0.36	0.59	-0.22	0.59
Step-parent					0.87	0.69	0.96	0.68
Other					0.04	0.73	0.26	0.72
<i>Mother's education^d</i>								
Less than HS					0.53	0.79	0.66	0.78
Some college					0.51	0.54	0.42	0.53
College or more					-0.11	0.63	-0.17	0.62
Neighborhood poverty					0.02	0.02	0.01	0.02
Religiosity					0.27	0.18	0.24	0.18
<i>Relationship Characteristics</i>								
<i>Relationship status^e</i>								
Dating casually					0.15	0.71	0.07	0.70
Cohabiting					-0.67	0.61	-0.58	0.60
Married					-0.09	0.99	0.17	0.98
<i>Current relationship^f</i>								
Duration					-2.34***	0.52	-1.96***	0.53
Number of children					0.02	0.14	-0.07	0.15
					0.70	0.45	0.59	0.44
<i>R²</i>		.03		.26		.29		.33
<i>F for change in R²</i>								5.93***

Note: The reference categories were as follows: ^a Male, ^b White, ^c Two-parent family, ^d High school, ^e Dating exclusively, and ^f Most recent relationship.

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

Appendix Table A1. Pearson Correlation Coefficients for all Variables (n = 984)

	1	2	3	4	5	6	7	8	9	10	11	12
1. Depressive symptoms	--											
2. Physical victimization	.17***	--										
3. Verbal aggression	.15***	.54***	--									
4. Prior depressive symptoms	.50***	.09**	.13***	--								
5. Respondent control	.23***	.33***	.33***	.14***	--							
6. Partner control	.21***	.45***	.49***	.13***	.65***	--						
7. Respondent jealousy	.21***	.19***	.23***	.14***	.30***	.23***	--					
8. Partner jealousy	.11***	.27***	.26***	.09**	.29***	.38***	.36***	--				
9. Arguing	.19***	.45***	.46***	.11***	.42***	.43***	.26***	.35***	--			
10. Poor communication	.22***	.36***	.41***	.14***	.42***	.54***	.22***	.24***	.34***	--		
11. Obsessive love	.06*	-.03	-.17***	.02	-.01	-.10**	.21***	-.01	-.04	-.20***	--	
12. Lack alternatives	-.10**	-.16***	-.23***	.00	-.15***	-.25***	-.07*	-.17***	-.20***	-.31***	.30***	--