Published in final edited form as:

Soc Sci Res. 2014 November ; 48: 77–89. doi:10.1016/j.ssresearch.2014.05.006.

Intimate Partner Victimization, Poor Relationship Quality, and Depressive Symptoms during Young Adulthood

Monica A. Longmore, Wendy D. Manning, Peggy C. Giordano, and Jennifer E. Copp

Department of Sociology, and the Center for Family and Demographic Research, Bowling Green State University, Bowling Green, OH 43403, 419-372-2408

Monica A. Longmore: mseff@bgsu.edu

Abstract

Examining longitudinal data from the Toledo Adolescent Relationships Study (TARS) ($n = 927$), we assessed associations between physical victimization by an intimate partner, indicators of poor relationship quality, and depressive symptoms among young adult men and women in casually dating, exclusively dating, cohabiting, and marital relationships. In zero-order models, we found that physical victimization increased depressive symptoms. In multivariate models, victimization was a risk factor for depressive symptoms with the inclusion of prior depressive symptoms, family factors reflecting the intergenerational transmission of violence, sociodemographic background, and relationship characteristics including union status. Yet with the additional inclusion of indicators of poor relational quality, victimization was not a significant predictor of depressive symptoms. Arguing and poor communication influenced victimization and depressive symptoms. The associations between victimization and depressive symptoms did not differ by gender, nor were the effects of poor relationship quality on depressive symptoms conditional on gender. Thus, depressive symptoms are similarly responsive to intimate partner victimization, and for both women and men these associations were not significant with the inclusion of indicators of poor relationship quality. Findings underscored that victimization often occurs within relationship contexts characterized by a range of negative dynamics; thus multifaceted relationship-centered prevention and intervention efforts are likely to be more useful than those focusing only on negative messages about the use of aggression with an intimate partner.

Keywords

intimate partner victimization; poor relationship quality; depressive symptoms; gender

1. Introduction

Over the past several decades, public and scholarly concern about intimate partner violence victimization led to research on its prevalence, precursors, and mental health consequences for women (e.g., Beydoun et al., 2012) and, to a lesser extent, men (e.g., Hines and Malley-

Morrison, 2001; Rhodes et al., 2009). The association between physical victimization and depressive symptoms, however, remains poorly understood leading some researchers to call for the need to distinguish between types and severity of violence (e.g., Carbone-Lopez et al., 2006; Graham et al., 2012; Sabina and Straus, 2008). Yet intimate partner violence is only one component of a constellation of indicators reflecting poor relationship quality (Giordano et al., 2010; Halpern-Meehin et al., 2013; Katz et al., 2002; Lawrence and Bradbury, 2007; Rhoades et al., 2010; Scott et al., 2011). We argued that to understand the effect of physical violence victimization on depressive symptoms, it should be examined in tandem with other negative relational dynamics, such as controlling behaviors and poor communication.

Indicators of poor relationship quality may signify an inability to negotiate conflict with intimate partners, which may affect well-being including increased depressive symptoms. Moreover, young adults with poor skills may be in jeopardy of relationship conflict escalating to physical aggression. We examined physical aggression victimization alongside other indicators of poor relationship quality as risk factors for depression.

Analyzing longitudinal data from a community sample of young adults, the Toledo Adolescent Relationships Study (TARS) (n = 927), in multiple regression models we examined whether physical victimization, and indicators of poor relationship quality (i.e., controlling behaviors, jealousy, arguing, poor communication, and obsessive love), influenced depressive symptoms. We controlled for other known correlates of both victimization and depressive symptoms such as prior depression, relationship characteristics including union status (i.e., casual dating, exclusive dating, cohabiting, and married), family violence while growing up, and sociodemographic characteristics. We anticipated that the inclusion of indicators of poor quality attenuated the effect of physical violence victimization on depressive symptoms.

2. Background

2.1 Intimate partner aggression

Intimate partner violence refers to behaviors that cause physical, psychological, or sexual harm to individuals in intimate relationships (World Health Organization, 2002). A highly contentious issue, however, concerns gender differences in intimate partner violence perpetration and victimization. Much prior research on the emotional sequelae of experiencing physical violence centered on victimized women. This is intuitive as hospital in-take records, crime surveys, police logs, and shelter data demonstrated that women typically are the victims of the most severe violence (e.g., Dobash and Dobash, 2004). Yet researchers examining survey data (e.g., Straus, 2008, 2010; Rhoades et al., 2010; Whitaker et al., 2007) including the TARS (e.g., Alvira-Hammond et al., in press; Johnson et al., 2014), and relying on the Revised Conflict Tactics Scale (CTS2) (Straus et al., 1996), found that many women reported that they were violent toward their partners or were involved in bidirectional or reciprocal violence suggesting that victims could be men as well as women. 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. Moreover, perpetration and victimization were correlated in many

community studies (e.g., Caetano et al., 2008; Gustafsson and Cox, 2012; Jennings et al., 2012; Rhodes et al., 2009) demonstrating that much violence is bidirectional. Prior findings from the fourth interview of the TARS data (Alvira-Hammond et al., in press), for example, were consistent with those from other community studies (e.g., Jennings et al., 2012) in that nearly half (49%) of respondents who reported a physical altercation with a partner indicated that it was bidirectional, versus 19% who reported perpetration only and 32% who reported victimization only. We note that these findings are the subject of some controversy, in part, because the CTS2 does not measure who initiated the various aggressive acts or the severity of the outcomes. We also note, however, that other scholarship (e.g., Rhoades et al., 2009), not based on the CTS2, and from men's perspectives reported that women were more likely to perpetrate violence. Thus, in the current study, we focus on the mental health consequences of victimization for both women and men.

In community studies, young adults' reports of experiencing intimate partner aggression are remarkably common. Estimates from the Add Health ($n = 4,134$) indicated that 25% of unmarried women and men, ages 18-24, reported physical victimization by a relationship partner (Halpern et al., 2009). Similarly, Rhoades et al. (2010) found that about 35% of young adults ($n = 1,278$), ages 18-35, reported being physically victimized by an intimate partner 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. Given its prevalence, assessing the effects of victimization on well-being is critical because depressive symptoms may interfere with individuals' abilities to function well in subsequent intimate relationships (LaGreca et al., 2008; Sandberg-Thoma and Kamp Dush, 2014; Vujeva and Furman, 2011). Learning to get along in intimate relationships without resorting to violence to gain control over a partner or to get one's way (Felson, 2002) is a critical skill set that has life-long consequences.

2.2 Victimization and depressive symptoms

Some prior research has examined associations between being a victim of intimate partner aggression and depressive symptoms, but there are still gaps in the literature. Although not exclusively examining young adults, researchers analyzing 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 men and women (e.g., Coker et al., 2002). Fergusson, Horwood, and Ridder (2005), specifically analyzing young adults ($n = 828$), also found that victimization increased men and women's depressive symptoms. Further, Johnson et al. (2014) concluded that any intimate partner aggression (i.e., self-reports of perpetration, victimization, or bidirectional) from early adolescence through young adulthood increased depressive symptoms for both men and women. Thus, based on these studies one conclusion that could be drawn is that victimization leads to depressive symptoms. The reviewed studies, however, did not account for prior well-being, and a full roster of other known correlates of both intimate partner aggression and depressive symptoms, and most importantly, other indicators of poor quality relationships.

It is critical to control for prior depressive symptoms especially in light of 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, 2011; Silverman et al., 2001; Vest et al., 2002). By not including prior well-being, some studies (e.g., Carbone-Lopez et al., 2006; Sabina and Straus, 2008) failed to adequately control for potential selection and confounding factors. Thus, it is not clear that net of prior depression, intimate partner victimization leads to greater depressive symptoms. In our study, we addressed this gap by including prior depressive symptoms in our models.

Additionally, the bulk of prior studies of intimate partner violence victimization and psychological well-being did not include relationship characteristics, such as union status, known to influence both intimate partner aggression and depressive symptoms. Much research that examined adults, for example, focused on married individuals as opposed to also considering cohabiting and dating respondents. Emphasizing marital aggression is problematic because the median age of first marriage in the U.S. is in the late twenties (27 for women and 29 for men) (U.S. Census Bureau, 2013), but intimate partner aggression peaks in the early twenties (Brown and Bulanda, 2008; Cui et al., 2013). A handful of studies that moved beyond a sole focus on marriage showed that the degree of commitment indicated by union status (casual dating, exclusive dating, cohabitation, and marriage) influenced intimate partner violence (Cui et al., 2013; Hammock and O'Hearn, 2002; Margol et al., 1998). Based on the Add Health data, for example, researchers found that young adults who lived together (married or cohabiting) compared with those who were dating reported greater odds of physical aggression (Brown and Bulanda, 2008; Cui et al., 2013). Union status is not only associated with intimate partner violence, but also related to subjective well-being (Brown and Booth 1996; Lamb et al., 2003; Kurdeck, 1991). Kamp Dush and Amato (2005) using the Marital Instability Over the Life Course study found that married individuals reported the highest levels of subjective well-being, followed by cohabitators, those in steady dating relationships, and then casual daters. In addition, other relationship characteristics that should be examined include number of children in the home and relationship duration, both of which increased the odds of victimization (Vest et al., 2002) and depressive symptoms (Child Trends, 2012) in prior studies. Thus, union status, number of children, and relationship duration are contextual variables examined in this study.

Exposure to family violence is a correlate for both intimate partner aggression and depressive symptoms. Researchers examining young adults (e.g., Arriaga and Foshee, 2004; Ehrensaft et al., 2003; Franklin and Kercher, 2012; Linder and Collins, 2005; Silverman and Williamson, 1997) found that witnessing violence between parents and experiencing coercive parenting while growing up influenced individuals' reports of their own violence perpetration and victimization. In a recent assessment, Foshee and colleagues (2011) concluded that corporal punishment, relative to witnessing parental violence, had a greater influence on adulthood intimate partner violence. Relevant here, Straus and Kantor (1994) found that corporal punishment of adolescents by parents was a risk factor for depression. Similarly, Chapman and colleagues (2004) reported that adverse childhood experiences including family violence and coercive parenting increased the risk of adulthood depression. As such, we controlled for witnessing parental violence and coercive parenting, family factors which account, in part, for the intergenerational transmission of violence and increased risk for depressive symptoms.

Sociodemographic characteristics also influence both violence victimization and depressive symptoms. Age, race/ethnicity, social class background, family structure, neighborhood poverty while growing up, educational level and employment status are associated with the risk of victimization as well as depressive symptoms (Johnson et al., 2014), and religiosity (Smith et al., 2003) may be an especially relevant personal resource for victimized individuals (DeWall et al., 2012). We controlled for these factors in our analyses.

2.3 Gender, intimate partner aggression, and depressive symptoms

Does aggression by an intimate partner lead to depressive symptoms for both women and men? Beydoun et al.'s (2012) recent meta-analysis of 37 studies of women who experienced relationship violence concluded that there was a moderate to strong association between physical violence victimization and (a) depressive symptoms, (b) major depressive disorder, and (c) postpartum depression. Although studies have emphasized male perpetration, existing studies exclusively examining men's victimization (e.g., Hines and Malley-Morrison, 2001; Rhodes et al., 2009; Simonelli and Ingram, 1998), studies examining bidirectional violence (e.g., Coker et al., 2002; Fergusson et al., 2005; Johnson et al., 2014), literature reviews of male victimization (e.g., Randle and Graham, 2011), and a recent annotated bibliography of research on men as victims (Fiebert, 2012) concluded that physical victimization increased men's depressive symptoms. Thus, based on these studies and literature reviews, we expected that physical violence victimization adversely affected women and men's depressive symptoms.

A second question not adequately addressed in the literature is whether victimization has comparable effects on men and women's depressive symptoms. Although studies have examined this question, there are problems with some operationalizations of victimization. Some researchers, for example, concluded that victimized women, compared with men, reported *greater* depression (e.g., Carbone-Lopez et al., 2006; Sabina and Straus, 2008). Sabina and Straus (2008) found that polyvictimization (i.e., combinations of physical, psychological, and sexual victimization) had a greater effect on depression for female compared with male college students. Similarly, Carbone-Lopez et al. (2006) examining the NVAWS reported that their measure of victimization (i.e., physical victimization, stalking, and sexual coercion) had greater negative effects on women compared with men's well-being.

Men, however, are less often the victims of stalking (Logan et al., 2000) and rarely the victims of female sexual coercion (Baumeister et al., 2002; Longmore et al., 2014). Additionally, such findings may be less applicable to situational couple or bidirectional violence, which does not typically refer to stalking or sexual coercion. Yet some scholars (e.g., Stoppard, 2000) have argued that women, compared with men, are more relationally oriented. A basic premise of relational theory (e.g., Leadbeater et al., 1995; Leadbeater and Way, 2001) is that due to this greater relational orientation, conflicts in interpersonal relations are more harmful to women compared with men. This perspective would suggest that victimization has a stronger effect on women's depressive symptoms. Yet based on the empirical literature as a whole, we expected that victimization had similarly adverse effects on depression for women and men.

2.4 Poor relationship quality and depressive symptoms

Although it is important to account for the influences of prior depression, relationship characteristics, family violence, sociodemographic background, and gender, poor relationship quality is central to experiences of physical victimization, and the manner in which individuals emotionally respond to victimization. Moreover, despite the well-documented literature on the prevalence of intimate partner violence and its impact on well-being, especially depression, little quantitative research has included other negative aspects of relationships that might mediate the effects of victimization on well-being. The current study addressed this gap by investigating the influence of poor relationship quality on depressive symptoms. Relying on prior work on intimacy and close relationships, we examined the following five indicators of poor relationship quality associated with intimate partner aggression: (1) controlling behavior (Babcock et al., 2004; Stets and Hammond, 2002; Tanha et al., 2010); (2) poor communication (Babcock et al., 2004; Rhoades et al., 2010); (3) jealousy (Giordano et al., 2010; Kerr and Capaldi, 2011); (4) arguing (Choi and Marks, 2008); and (5) obsessive love (Lewis et al., 2002). Consistent with Flynn and Graham's (2010) conceptual framework for understanding victims' explanations for violence, our indicators of controlling behavior and jealousy assessed if effects differed depending on whether these behaviors and feelings were attributed to the self or the partner.

Our view is that individuals with weaker relationship skills have a greater risk of conflict escalating to the point of physical aggression. Thus, aggression is part of a package of troubled dyadic behaviors, and individuals in a poor quality relationship may be more likely to experience small issues turning into physical altercations. We anticipated finding support for the following five associations. First, because feeling controlled increases psychological distress (Brehm and Brehm, 1981), we expected that partner's control attempts positively influenced depressive symptoms. Conversely, trying to control a partner implies dissatisfaction so we expected that the individual's controlling behavior was also a risk factor for depression.

Second, jealousy is a trigger for both intimate partner violence (e.g., Giordano et al., 2010; Kerr and Capaldi, 2011) and depressive symptoms (e.g., Mathes et al., 1985) so we expected that feeling jealous increased depressive symptoms. Moreover, Bevan (2011) found that the romantic partner's expression of jealousy had negative psychological consequences for the individual including feelings of uncertainty, guilt, fear, and distress. By extension, we expected that partner's jealousy was a risk factor for depressive symptoms. It is unclear, however, for both controlling behaviors and jealousy, whether self-attributions or partner attributions had a greater effect on depression.

Third, poor communication refers to a range of experiences and perceptions of verbal interactions, such as not knowing what to say to a partner, or feeling awkward when expressing feelings to the partner (Giordano et al., 2010). We expected that poor communication influenced depressive symptoms. Fourth, based on prior research (e.g., Caldwell et al., 2009; Choi and Marks, 2008; Follingstad et al., 1991; Hettrich and O'Leary, 2007; LaGreca and Harrison, 2005), we expected that arguing increased depressive symptoms. Fifth, obsessive love refers to feelings of intense longing for another, regardless of whether the feelings are reciprocated. Although meta-analyses concluded that love

positively influenced relationship satisfaction (Graham, 2011), anxious romantic attachment characterized by obsessive love (Desrosiers et al., 2014) increased depression. Thus, we expected that obsessive love influenced depressive symptoms. In sum, in the current study we expected that these indicators of poor quality mediated the ‘harm’ to well-being associated with intimate partner victimization.

3. Current Investigation

We examined the extent to which physical aggression victimization alongside other emotionally unhealthy dynamics influenced young adults’ depressive symptoms. Specifically, we expected that in bivariate analyses, intimate partner aggression as well as indicators of poor relationship quality positively influenced depressive symptoms. We also expected that victimization influenced depressive symptoms in multivariate models that included prior depressive symptoms, relationship characteristics including union status, family violence while growing up, and sociodemographic background. Next, we examined whether indicators of poor quality mediated the association between victimization and depressive symptoms controlling for the other correlates. This mediation model suggests that victimization is associated with poor relationship quality, which in turn predisposes individuals to depressive symptoms. Thus, we expected that aggressive acts by a partner lead to depressive symptoms through their impact on relationship quality. Moreover, other relationship characteristics, and adolescent experiences with family violence, which are risk factors for victimization in adulthood, are also expected to contribute to depressive symptoms. Additionally, this study allowed us to statistically control for earlier levels of depressive symptoms. We then tested whether the effects of intimate partner aggression and indicators of poor quality were associated with depressive symptoms in a comparable manner for men and women. We anticipated that victimization was associated with depressive symptoms for both men and women, while acknowledging that the literature on women’s relational orientation, conceptualized women as being affected more so than men by relationship conflict.

Our work moved beyond prior studies in several key ways. First, a limitation of prior research was the lack of a range of indicators of poor relationship quality, apart from victimization, which likely influenced young adults’ well-being. Many studies based on the Add Health and the NSVAW suffered from this limitation. Recognizing the complex dynamics of intimate relationships, we examined controlling behavior, jealousy, arguing, poor communication, and obsessive love. Moreover, we assessed whether self-attributions or attributions of partner’s controlling behaviors and jealousy had stronger effects on depressive symptoms. Additionally, because there is controversy regarding distinctions between victimization versus mutual violence (e.g., Straus, 2010), in supplemental analyses we examined whether the effect of victimization on depressive symptoms differed for respondents who were *only* victims compared to those in *mutually* violent relationships.

We considered whether men and women’s physical victimization experiences similarly influenced depressive symptoms. Although some researchers have examined whether victimization had stronger effects for women than men, the operationalization of victimization made it difficult to assess whether effects were stronger for women.

Summarizing, although nearly three-fourths of young adults are involved in intimate relationships (Child Trends, 2012), knowledge of physical victimization along with other relational factors associated with depressive symptoms is limited. The current investigation attempted to examine ways in which relationship quality has implications for young adults' well-being.

4. Method

4.1 Data

We 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 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 required students to attend classes 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 a computer-assisted personal interview (CAPI) technique using questionnaires pre-loaded on laptop computers. Separately, a parent/guardian answered questionnaires about themselves as well as the focal child. Over 90% of parent/guardian respondents were mothers. We interviewed individuals one, three, five, and ten years after the first interview for five complete interviews. Seventy-seven percent of the original sample participated in the fifth interview, the focus of the current study. All variables were from the fifth interview except prior depressive symptoms (from the fourth interview), mother's education (from the parent questionnaire at the time of the first interview), and family structure, neighborhood poverty level, and coercive parenting (from the first interview).

Based on the fifth interview, the analytic sample consisted of 950 respondents who reported a current or most recent (in the last year) intimate partner relationship. By including current and most recent relationships in the last year, our definition of relationship is consistent with other studies (e.g., Rhoades et al., 2010) focusing on young adults. We next limited the sample to Black, White, and Hispanic respondents, excluding 22 who reported "other" as their race ($n = 928$) because there were too few cases to analyze. 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 927 respondents, ages 22-29, with a mean age of 25.43 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.

4.2 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 and standard deviation of 14.35 and 7.93, respectively ($\alpha = .84$) (see Table 1). *Prior depressive symptoms* had a mean score and standard deviation of 14.40 and 7.56, respectively ($\alpha = .83$).

Physical victimization referred to the frequency of *any* physical victimization in the current or most recent relationship in the past year, based on twelve items from the Revised Conflict Tactics Scale (CTS2) (Straus et al., 1996). The prompt stated, “During this relationship, how often has/did [partner]:” “throw/n something at you,” “push/ed, shove/d, or grab/bed you,” “twist/ed your arm or hair,” “use/d a knife or gun on you,” “punch/ed or hit you with something that could hurt,” “choke/d you,” “slam/med you against a wall,” “beat you up,” “burn/ed or scald/ed you on purpose,” “kick/ed 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 60, with a mean and standard deviation of 2.28 and 6.18 respectively ($\alpha = .91$). We logged the sum to correct for skewness in the multivariate analyses.

Respondent’s control attempts (Giordano et al., 2010) 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 4.05 and 1.86, respectively. *Partner’s control attempts* reflected the respondent’s level of 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 4.13 and a standard deviation of 2.09.

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 2.49 and standard deviation of 1.16. *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 2.87 with a standard deviation of 1.27.

Arguing referred to 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 7.17 and 2.73, respectively ($\alpha = .89$).

Poor communication was a five-item summed scale based on Powers and Hutchinson’s (1979) communication apprehension scale. We asked respondents 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];” and (5) “Sometimes I find it hard to talk about sexual matters with [name].” Responses were 1 (*strongly disagree*) to 5 (*strongly agree*). Scores were the sum of the five items, with a range of 5 to 25, and a mean and standard deviation of 10.85 and 4.37, respectively ($\alpha = .81$).

Obsessive love included the following two items: (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*), with a mean of 7.76 and a standard deviation of 1.79.

Union status, based on relationship histories included casual dating (8.52%), dating exclusively (reference group, 35.81%), cohabiting (32.36%), and married (23.30%). *Current relationship* indicated that the respondent reported on the current (79.94%) or the most recent (20.06%) relationship in the past year. *Relationship duration* ranged from 1 (“less than a week”) to 8 (“a year or more”). The mean relationship duration was approximately 7.15 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. Forty-one percent of the sample reported having children, with a range of 0-6 children.

Witnessing parental violence is based on the respondent’s retrospective report at the fifth interview in which we asked, “How often did either one of your parents:” “throw something at the other,” “push, shove, or grab the other,” “slap the other in the face or head with an open hand,” and “hit the other” ($\alpha = .92$). We dichotomized scores (1 = yes) to indicate any parental violence. Over 31% recalled witnessing parental violence.

Coercive parenting is measured using a single item from the first interview when respondents were adolescents. We asked, “When you and your parents disagree about things, how often do they push, slap, or hit you?” Responses ranged from 1 (*never*) to 6 (*two or more times a week*). Due to the highly skewed nature of responses, we dichotomized this variable to indicate any reports of parental coercion (1 = yes). About 22% reported parental coercion.

Gender, a dichotomous variable, indicated whether the respondent was female (54.48%). *Age* was the difference between date of birth and the fourth interview date, with a mean of 25.43. *Race/ethnicity* consisted of three categories: White (reference group, 67.31%), Black (21.36%) and Hispanic (11.33%). *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, 53.51%), single parent (21.04%), stepparents (13.48%), or ‘other family’ including living with other family members or foster care (11.97%). *Mother’s education*, from the parent interview, included less than high school (10.79%), high school graduate (reference group, 32.47%), some college (33.33%), or college or more (23.41%). *Respondent’s education* included less than high school (8.20%), high school graduate (reference group, 21.90%), some college (41.21%) and college or more (28.69%). *Respondent’s employment* included unemployed (24.81%), part-time (19.20%), and full-time (reference, 55.99%). *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 14.08. *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 3.10 and a standard deviation of 1.34.

4.3 Analytic Strategy

Table 1 included weighted percentages, means, and standard deviations for the full sample, and by physical victimization experience (yes, no). We used these data to compare characteristics of victims and non-victims of partner aggression. For multivariate analyses, we used Ordinary Least Squares regression (OLS). Table 2 included zero order models (first column) examining the influence of physical victimization and the other independent variables on depressive symptoms. In the multivariate analyses, 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 indicators of poor quality and assessed their effects on depressive symptoms as well as their mediating influence on the association between physical victimization and depressive symptoms. For interaction effects, we calculated cross-product terms of physical victimization and gender (male) to determine whether victimization had a comparable or dissimilar effect on depressive symptoms for men and women. We centered the variables used in the interactions before taking their cross-products (Frazier et al., 2004).

5. Results

5.1 Descriptive Analysis

Table 1 included descriptive statistics for comparing physically victimized (20.50%) and non-victimized respondents (79.50%). (In multivariate analyses, physical victimization is a continuous variable.) Physically victimized individuals reported significantly higher (a) current depressive symptoms, and (b) prior depressive symptoms. Additionally, physically victimized compared with non-victimized respondents were significantly higher on all indicators of poor relationship quality. Higher percentages of victimized respondents were not dating exclusively, reported cohabiting, and on average, were in relationships of longer duration. Victimized respondents reported having more children than did non-victimized respondents.

Physically victimized respondents were more likely to report witnessing parental violence and to report experiencing coercive parenting. Additionally, they were 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 and 'other' family structures during their adolescence. Physically victimized respondents were more likely to report being unemployed and less likely to report full-time employment. Neighborhood poverty rates during adolescence were higher for victimized relative to non-victimized respondents. Physically victimized respondents were less likely to have a mother with some college or greater level of education and more likely to have a mother with a high school education or less.

5.2 Intimate partner aggression and depressive symptoms

In the multivariate analyses, we assessed whether physical victimization explained variation in levels of depressive symptoms once we accounted for other indicators of poor relationship quality, and controlled for known correlates of intimate partner aggression and depressive

symptoms. In Table 2, we presented zero-order and OLS multiple regression models of physical victimization and indicators of poor relationship quality on depressive symptoms.

In the zero-order models (first column), physical victimization and prior depressive symptoms positively influenced current depressive symptoms. All of the indicators of poor quality, except obsessive love, influenced depressive symptoms in the expected directions. Both indicators of the intergenerational transmission of family violence, witnessing parental violence and coercive parenting, were associated with higher levels of depressive symptoms. Cohabiting as well as married respondents, compared with those in exclusive dating relationships, experienced lower levels of depressive symptoms. Respondents who were in a current relationship and had longer relationship durations experienced lower levels of depressive symptoms. Greater numbers of children were positively associated with depressive symptoms at the bivariate level. Regarding sociodemographic characteristics, 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. Respondents’ who had at least a college degree reported lower levels of depressive symptoms than their counterparts with a high school degree. Full-time employment was associated with lower levels of depressive symptoms. Respondents who experienced neighborhood poverty during the formative years of adolescence had higher levels of depressive symptoms.

In Table 2, model 1 presented the OLS multiple regressions for the association between physical victimization and depressive symptoms, controlling for prior depression, relationship characteristics, family violence, and sociodemographic characteristics. Both physical victimization and prior depressive symptoms positively influenced current depressive symptoms controlling for the other known correlates. Regarding union status, married respondents had lower levels of depressive symptoms than young adults exclusively dating. Respondents who were in an on-going or current relationship reported lower depressive symptoms than those who reported on a recent relationship. Witnessing parental violence was positively associated with depressive symptoms. Of the sociodemographic characteristics, only working full-time, compared with being unemployed, was associated with lower depressive symptoms.

Model 2 introduced the indicators of poor relationship quality as a block, and respondents’ reports of arguing, poor communication, and obsessive love were associated with higher levels of depressive systems controlling for the other variables in the model. Additionally, this model allowed us to assess whether the poor quality indicators mediated the effect of physical victimization on depressive symptoms. Net of these indicators, physical victimization did not significantly affect depressive symptoms. Specifically, the inclusion of arguing and poor communication to the model reduced physical victimization to non-significance (available from authors). Arguing and poor communication are both significantly correlated with physical victimization at the bivariate level (Pearson correlations are .47 and .38, respectively), suggesting that they lead to physical victimization and depressive symptoms. Finally, in supplemental analyses (available from authors), we examined whether the effect of victimization on depressive symptoms differed for

respondents who were *only* victims compared to those in *mutually* violent relationships, and found that the effect of victimization on depressive symptoms was not significantly different between these two subgroups.

5.3 Gender, victimization, and depressive symptoms

In the multivariate models, women did not report higher levels of depressive symptoms than did men. We tested whether victimization had a stronger influence on depressive symptoms among women than men. The interaction terms were not statistically significant suggesting similar effects of physical victimization for male and female respondents. Thus, for men and women, physical victimization similarly influenced depressive symptoms. Next, we examined whether the associations between poor quality indicators and depressive symptoms differed for men and women. None of the interaction terms (available from authors) reached statistical significance, suggesting that negative relationship dynamics had a similar effect on depressive symptoms for men and women.

6. Discussion

Depressive symptoms are among the most common health complaints, and intimate partner victimization is thought to be a risk factor. The high prevalence of violence among intimate partners underscores the need to understand its consequences including depressive symptoms. Consistent with prior work, in bivariate analyses, physical victimization was positively associated with depressive symptoms. Physical victimization was also associated with depressive symptoms in the model that only included prior depressive symptoms, relationship characteristics, family violence, and sociodemographic characteristics. The results of the current study, however, highlighted the importance of taking the broader relationship context of these behaviors into account. We focused on indicators of poor relationship quality and found in multivariate analyses that respondent's self-reports of arguing, poor communication and obsessive love positively influenced depression symptoms; yet physical victimization did not significantly affect depressive symptoms. Specifically, accounting for arguing and poor communication attenuated the association between physical victimization and depressive symptoms. Although much literature emphasized the importance of focusing on partners' controlling behaviors, (e.g., Anderson, 2002; Ansara and Hindin, 2011; Langhinrichsen-Rohling, 2010; Leone et al., 2004), our study demonstrated that other negative relationship dynamics also need to be considered as correlates of victimization.

Moreover, intimate partner victimization is associated with depressive symptoms in a similar manner for both men and women. Some prior research found that intimate partner victimization had a greater influence for women than men; however, in our study this was not the case. This may be due to differences in the operationalization of victimization; our measure did not include sexual coercion and stalking. Although some scholars studying the social causes of depressive symptoms (e.g., Stoppard, 2000) emphasized that women's greater relational focus makes them more susceptible to relationship problems. Based on our findings, our view is that the effects of physical victimization on depressive symptoms are confirmed for women and men.

There are several limitations to the current study. First, although these findings are important, they do not provide a sense of emotional well-being of young adults who experienced intimate partner aggression victimization over time. Second, for some individuals, the episode of intimate partner victimization 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 not examined in the current study that others found to affect depressive symptoms (e.g., Carbone-Lopez et al., 2006; Sabina and Straus, 2008). We are currently examining whether poor relationship quality operates in the same manner with regard to sexual coercion. Fourth, the timing of the violent incident likely also matters. For example, among women, there is evidence that the first episode of violence triggers depression (Campbell and Soeken, 1999; Silva et al., 1997). Fifth, many women and men in violent 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 poor relationship qualities buffer the effects of cumulative abuse.

Like many other studies based on survey data, a limitation of our study is the sole reliance on the conflict tactics scale (CTS2) to assess physical aggression. As such, our study suffers from the weaknesses inherent in this measure. A meta-analysis (Archer, 2002) examining gender differences in community studies using the CTS2 concluded that men were likely to engage in more severe and women less severe acts of physical aggression. Women who report being physically aggressive tend to endorse both minor and severe violent acts from the CTS, yet men who are physically aggressive tend to endorse the severe violent acts. It is possible that if we focused solely on severe acts of violence we would find associations with depressive symptoms. Additionally, the over-reliance on the CTS2 is problematic because it restricts the operationalization of aggression, so it is unclear whether other operationalizations would result in different findings. Although it should be noted that Rhodes et al.'s (2009) analysis of men's reports of physical victimization, not relying on the CTS2, found significant associations with depressive symptoms. Our research will continue to look at the associations between intimate partner aggression, poor quality, and well-being with other measures. We are currently in the process of collecting narrative data from 50 couples, which may help us to understand how severity of violent acts may affect well-being.

Additionally, we cannot assess severity of physical injury, or recurrent aggression with these data. It is very likely that the extent of injury would influence depressive symptoms. We are currently collecting qualitative data, which will allow us to incorporate whether medical attention was necessary. Although the findings may not generalize to more severe types of recurrent abuse, they speak to situational couple or mutual violence. Many programmatic efforts target adolescents and young adults and recognize the importance of interrupting these patterns of behavior before they become more 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 aggression. These other elements of poor quality and imbalance may be psychologically harmful in their own right, and often link to a constellation of negative dynamics that include physical victimization. This study contributed to the current body of literature by

providing a lens on the link between intimate partner aggression and depression that situates victimization within the relationship. Consistent with this perspective is the notion that aggression, and indicators of poor quality relationships are processual, operating in tandem, and not likely separate events. That is, it is unlikely to find relationships in which violence occurs and the other indicators of poor quality do not exist. For example, physically victimized compared with non-victimized respondents were significantly higher on all of the poor relationship qualities. Such processes are deeply rooted in the intimate relationship and should be considered together as possibly reflecting young adults' challenges with a key developmental task –learning to get along with an intimate partner.

Acknowledgments

This research was supported by grants from The Eunice Kennedy Shriver National Institute of Child Health and Human Development (HD036223) and the National Institute of Justice, Office of Justice Programs, U. S. Department of Justice (Award Nos. 2009-IJ-CX-0503 and 2010-MU-MU-0031), and in part by the Center for Family and Demographic Research, Bowling Green State University, which has core funding from The Eunice Kennedy Shriver National Institute of Child Health and Human Development (R24HD050959). The opinions, findings, and conclusions or recommendations expressed in this publication are those of the authors and do not necessarily reflect the official views of the Department of Justice or National Institutes of Health.

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Highlights

- Prevalence of violence underscores need to understand its consequences for well-being
- At the bivariate level victimization is positively associated with depression
- Poor relationship quality explains association between victimization and depression
- Control attempts and jealousy exacerbate the effect of victimization on depression

Table 1

Means/Percentages and Standard Deviations for Indicators of Poor Relationship Quality, Relationship and Sociodemographic Characteristics for Full Sample and by Physical Aggression Victimization Status

Variables	Full Sample (n = 927)		Victim (n = 190)		Not-victim (n = 737)	
	M	SD	M		M	
Physical Victimization				20.5%		79.5%
Depressive symptoms	14.35	7.93	17.49 ***		13.54	
Physical victimization	2.28	6.18	11.13 ***		0.00	
Prior depressive symptoms	14.40	7.56	16.44 ***		13.88	
<i>Poor Relationship Quality</i>						
Control						
Respondent control	4.05	1.86	5.14 ***		3.77	
Partner control	4.13	2.09	5.65 ***		3.74	
Jealousy						
Respondent jealousy	2.49	1.16	2.99 ***		2.36	
Partner jealousy	2.87	1.27	3.52 ***		2.71	
Arguing	7.17	2.73	9.47 ***		6.58	
Poor communication	10.85	4.37	13.41 ***		10.19	
Obsessive love	7.76	1.79	7.49 *		7.83	
<i>Relationship Characteristics</i>						
Union status						
Dating casually	8.52%		8.95%		8.41%	
Dating exclusively	35.81%		27.89% *		37.86%	
Cohabiting	32.36%		41.58% **		29.99%	
Married	23.30%		21.58%		23.74%	
Current relationship	79.94%		76.84%		80.73%	
Most recent relationship	20.06%		23.16%		19.27%	
Duration	7.15	1.30	7.37 **		7.09	

Variables	Full Sample (n = 927)		Victim (n = 190)	Not-victim (n = 737)
	M	SD	M	M
Physical Victimization				
<i>Family Violence</i>				
Witnessing parental violence	31.28%		52.63% ***	25.78%
Parental coercion	22.44%		31.05% **	20.22%
<i>Sociodemographic Characteristics</i>				
Gender (Female)	54.48%		50.53%	55.50%
Age	25.43	1.83	25.41	25.43
Race				
White	67.31%		52.11% ***	71.23%
Black	21.36%		30.00% **	19.13%
Hispanic	11.33%		17.89% **	9.63%
<i>Family structure</i>				
Two biological parents	53.51%		34.74% ***	58.34%
Single parent	21.04%		32.63% ***	18.05%
Step-parent	13.48%		14.74%	13.16%
Other	11.97%		17.89% **	10.45%
<i>Mother's education</i>				
Less than HS	10.79%		15.79% *	9.50%
High school	32.47%		36.84%	31.34%
Some college	33.33%		35.26%	32.84%
College or more	23.41%		12.11% ***	26.32%
<i>Respondent's education</i>				
Less than HS	8.20%		12.11% *	7.19%
High school	21.90%		27.89% *	20.35%
Some college	41.21%		47.37%	39.62%
College or more	28.69%		12.63% ***	32.84%
<i>Respondent's employment</i>				

Variables	Full Sample (n = 927)		Victim (n = 190)	Not-victim (n = 737)
Physical Victimization			20.5%	79.5%
	M	SD	M	M
Unemployed	24.81%		39.48% ***	21.03%
Part-time	19.20%		17.89%	19.54%
Full-time	55.99%		42.63% ***	59.43%
Neighborhood poverty	14.08	14.14	18.62 ***	12.90
Religiosity	3.10	1.34	2.96	3.13

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

Source: Toledo Adolescent Relationships Study

Table 2

Coefficients for the OLS Regression of Physical Aggression Victimization and Poor Relationship Quality on Depressive Symptoms (n=927)

	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>	<i>B</i>	<i>SE B</i>	<i>B</i>
Physical victimization	1.46***	0.21	0.90***	0.21	-0.00	0.22			
Prior depressive symptoms	0.44***	0.03	0.35***	0.03	0.31***	0.03			
<i>Poor Relationship Quality</i>									
Control									
Respondent control	1.03***	0.14			0.21	0.14			
Partner control	0.86***	0.12			-0.20	0.15			
Jealousy									
Respondent jealousy	1.60***	0.22			0.32	0.22			
Partner jealousy	1.29***	0.21			-0.06	0.21			
Arguing	0.92***	0.09			0.66***	0.11			
Poor communication	0.58***	0.06			0.32***	0.07			
Obsessive love	0.11	0.15			0.44***	0.13			
<i>Relationship Characteristics</i>									
Union status ^a									
Dating casually	0.26	0.98	-0.88	0.91	-0.89	0.86			
Cohabiting	-3.34***	0.68	-1.14	0.62	-1.28*	0.58			
Married	-1.29*	0.62	-2.46***	0.73	-2.57***	0.69			
Current relationship ^b	-2.88***	0.64	-1.33*	0.63	-0.25	0.61			
Duration	-0.52**	0.20	-0.04	0.21	-0.42*	0.20			
Number of children	0.58*	0.24	0.16	0.26	0.03	0.25			
<i>Family Violence</i>									
Witnessing parental violence	3.49***	0.55	1.47**	0.55	1.52**	0.52			
Parental coercion	1.45*	0.62	-0.34	0.57	-0.55	0.54			
<i>Sociodemographic Characteristics</i>									

	Zero Order			Model 1			Model 2		
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>
Gender ^c	0.57	0.52	0.46	0.49	0.64	0.48			
Age	-0.13	0.14	0.13	0.14	0.13	0.13			
Race ^d									
Black	2.63***	0.64	0.29	0.77	-0.55	0.74			
Hispanic	0.18	0.83	-1.42	0.82	-1.34	0.77			
Family structure ^e									
Single parent	0.61	0.67	-0.90	0.63	-1.22*	0.60			
Step-parent	2.27**	0.79	0.89	0.73	0.69	0.70			
Other	1.65*	0.83	-0.15	0.79	0.10	0.75			
Mother's education ^f									
Less than HS	1.32	0.91	0.16	0.86	0.44	0.81			
Some college	0.65	0.64	0.46	0.58	0.46	0.55			
College or more	-0.73	0.71	0.27	0.69	0.38	0.65			
Respondent's education ^g									
Less than HS	1.34	1.05	0.14	0.98	0.32	0.93			
Some college	0.34	0.68	0.08	0.63	0.31	0.60			
College or more	-2.65***	0.73	-0.86	0.77	-0.65	0.73			
Respondent's employment ^h									
Part-time	-0.99	0.78	-0.23	0.72	-0.70	0.69			
Full-time	-3.46***	0.62	-1.26*	0.61	-1.45*	0.57			
Neighborhood poverty	0.06***	0.02	0.00	0.02	0.01	0.02			
Religiosity	0.10	0.19	0.10	0.19	-0.05	0.18			
<i>R</i> ²				.25		.34			

Note: The reference categories were as follows:

^aDating exclusively,

^bMost recent relationship,

^cMale,

d White,
 e Two biological parents,
 f High school,
 g High school, and
 h Unemployed.
* $p < .05$.
** $p < .01$.
*** $p < .001$
Source: Toledo Adolescent Relationships Study