Published in final edited form as:
J Youth Adolesc. 2013 April ; 42(4): 500–517. doi:10.1007/s10964-013-9923-7.

Understanding Adolescent and Family Influences on Intimate Partner Psychological Violence During Emerging Adulthood and Adulthood

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Abstract

The intergenerational transmission of violence directed toward intimate partners has been documented for the past three decades. Overall, the literature shows that violence in the family of origin leads to violence in the family of destination. However, this predominately cross–sectional or retrospective literature is limited by self–selection, endogeneity, and reporter biases as it has not been able to assess how individual and family behaviors simultaneously experienced during adolescence influence intimate partner violence throughout adulthood. The present study used data from the Iowa Youth and Families Project (IYFP; N = 392; 52 % Female), a multi–method, multi–trait prospective approach, to overcome this limitation. We focused on psychological intimate partner violence in both emerging adulthood (19 – 23 years) and adulthood (27 – 31 years), and include self and partner ratings of violence as well as observational data in a sample of rural non-Hispanic white families. Controlling for a host of individual risk factors as well as interparental psychological violence from adolescence (14 – 15 years), the results show that exposure to parent–to–child psychological violence during adolescence is a key predictor of intimate partner violence throughout adulthood. In addition, negative emotionality and the number of sexual partners in adolescence predicted intimate partner violence in both emerging adulthood and adulthood. Exposure to family stress was associated positively with intimate partner violence in adulthood but not in emerging adulthood, whereas academic difficulties were found to increase violence in emerging adulthood only. Unlike previous research, results did not support a direct effect of interparental psychological violence on psychological violence in the next generation. Gender differences were found only in emerging adulthood. Implications of these findings are discussed in light of the current literature and future directions.

Keywords

intimate partner violence; longitudinal; multimethod; multitrait; parenting

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Authors' Contributions Given BL's interests in intimate partner violence, she participated in the design, conceptualization, analytic planning and the writing of this article. As an Investigator of FTP, TN has been an integral part in the design and coordination of all phases of this study as well as the development, conceptualization, and writing of this article. JS and TS were primarily responsible for data analyses.

Introduction

Recent empirical studies have turned to understanding precursors and consequences of intimate partner violence during the teen years. This is particularly important to understand as rates of teen dating violence increase over adolescence and remain high during emerging adulthood. Approximately one in four adolescents report dating violence each year (CDC, 2010); similarly, 23–38% of emerging adults report violence in their intimate partner relationships (Straus, 2004). During adulthood, national surveys show rates of physical intimate partner violence range from 17% to 39% (Plichta, 1996; Schafer et al., 1998; Straus & Gelles, 1990). A recent review of the literature shows that the peak for intimate partner violence occurs early – in late adolescence and young adulthood (Capaldi et al., 2012). The National Intimate Partner and Sexual Violence Survey shows an annual estimate of 4.2 million intimate partner violence related physical assaults, rapes, and stalking perpetrated against women and 3.2 million against men (Black et al., 2011).

Given the prevalence rates and negative consequences that intimate partner violence may have on an individual's well–being and future relationships, it is imperative to explore factors that may increase or reduce its occurrence during both the teen early adulthood years when rates are high. Indeed, research has argued that the period of emerging adulthood, which extends from the late teens to the mid-to-late 20s, is particularly salient as late teens and young adults explore and develop romantic relationships. During this life period, individuals are assessing what they want in a long-term romantic partner including figuring out acceptable and unacceptable traits and behaviors, such as intimate partner violence (Arnett, 2000; Fincham & Cui, 2011; Halpern-Meekin, Manning, Giordano, & Longmore, 2013).

However, little is known about the continuity of such relationships across time. For example, while we know that the mean rates of intimate partner violence tend to decrease over time in the general population, we know less about the continuity of violence across relationships. That is, the literature has focused on changes in violent behaviors occurring within a single romantic relationship over time rather than patterns of intimate partner violence for individuals in sequential relationships (i.e., across different partners). Such work can provide important insight into intraindividual stability in intimate partner violence (Shortt, Capaldi, Kim, Kerr, Owen & Feingold, 2012). It may be that individuals have continuity in intimate partner violence due to self –selection; individual factors that lead to assortative partnering. Adolescents and adults tend to select partners who are similar to themselves in terms of substance use and antisocial behavior, both of which are predictive of intimate partner violence (Kim & Capaldi, 2004; Shortt et.al., 2012). This assortative partnering, in turn, could serve to reinforce behavior patterns conducive to intimate partner violence. Moreover, previous experience with intimate partner violence may predict violence in subsequent romantic relationships (Schumacher & Leonard, 2005). However, little work has addressed the stability of intimate partner violence across relationships. Therefore, the purpose of the current study is to understand the influence of individual and family factors experienced during adolescence on intimate partner violence across emerging adulthood and adulthood, including both perpetration and victimization simultaneously.

Intimate Partner Violence

A variety of definitions has been used to understand intimate partner violence and many use only single item measures (NIJ, 2011; Capaldi et al., 2012). Intimate partner violence is manifested in multiple ways including physical, psychological, and sexual abuse by men and women toward romantic partners of the same or opposite gender. Physical violence ranges from mild contact (i.e., gentle pushing) to the extreme (e.g., severe beatings, or even death). Psychological abuse, often defined as psychological aggression, refers to severe sarcasm,

acting in an offensive or degrading manner toward another, ultimatums or threats, and restrictions (e.g., social isolation, financial control; O'Leary & Maiuro, 2001). Indeed, studies show that psychological and physical abuse are often correlated (Capaldi & Crosby, 1997; O'Leary & Maiuro, 2001) and may have a higher prevalence than physical violence in both community and high–risk samples (Capaldi et al., 2007; Lawrence et al. 2009; O'Leary 2001; Shortt et al., 2012). Therefore, the current study specifically examines adolescent predictors of psychological violence across emerging adulthood and adulthood.

Intergenerational Continuity in Psychological Violence

The current research is guided by the developmental–interactional model of romantic–partner directed aggression (i.e., Capaldi & Gorman–Smith, 2003), which proposes that social learning processes in the family of origin contribute to the development of an interpersonal style conducive to violence in intimate partner relationships. Adolescents may learn to behave violently towards romantic partners by watching their parents interact with each other. This socialization perspective is often referred to as the intergenerational transmission of violence (Straus et al., 1980; Capaldi & Clark, 1998; Cui, Durtschi, Donnellan, Lorenz, & Conger, 2010; Simons, Wu, Johnson, & Conger, 1995).

Furthermore, a key proposition of many models linking family processes with developmental outcomes is that parents' behaviors toward children are a more proximal influence on children's developmental outcomes relative to the influence of the interparental interactions (i.e., Cui & Conger, 2008). Thus, according to the developmental–interactional model of romantic–partner directed aggression, other family processes such as hostile parenting or parent–to–child psychological violence, will directly influence the adolescent's behaviors and development (Stith et al., 2000; Conger, Cui, Bryant, & Elder, 2000; Neppl, Conger, Scarmella & Ontai, 2009). The developmental–interactional model states that "direct treatment of the child by the parent is viewed as more central [than observational learning]" (Capaldi & Gorman– Smith, 2003, p. 248). For example, work by Capaldi and Clark (1998) shows that parents' behavior toward their children is more influential than simply witnessing violence between parents. In short, the spillover hypothesis speculates that negativity and hostility from parental relationship violence may spill over into parenting behaviors and the parent–child relationship (e.g., yelling, threatening, spanking, hitting; see Krishnakumar & Buehler, 2000). Thus, in this article, we test not only the influence of parental intimate partner violence but also the influence of parent–to–adolescent psychological violence on intimate partner violence in romantic relationships experienced in emerging adulthood and adulthood.

Predictors of Intimate Partner Violence

In addition to the above social learning perspectives, ecological and developmental theories argue for the inclusion of ontogenetic or individual risks that may lead to intimate partner violence. Thus, we include both individual and family risk factors that have been shown to predict intimate partner violence (see Figure 1). Below we discuss the literature related to these risk factors in greater detail, beginning with individual–level factors and then turning to family– level factors.

Individual factors

Two classes of individual characteristics have been linked to intimate partner violence: risky behaviors and dispositional factors. First, a common predictor is *substance use* including drug and alcohol use; however, these associations may not be as strong or consistent as once thought (Caetano et al., 2005; Eaton et al.,2007; Feingold et al., 2008; Herrenkohl et al., 2007; Schluter et al., 2008; Schnurr & Lohman, 2008; Temple & Freeman, 2011). Second, early *sexual activity* including the number of partners has been linked to intimate partner

violence (Cleveland et. al., 2003; Halpern, Oslak, Young, Martin & Kupper, 2001; Maxwell, Robinson & Post, 2003; Roberts & Klein, 2003). Third, a multiplicity of research has shown a link between intimate partner violence and *antisocial behaviors* including hostility, delinquency, externalizing behaviors, and conduct problems (Andrews et al., 2000; Capaldi et al., 2001; Ehrensaft et al., 2004; Herrenkohl et al., 2007; Huesmann et al., 2009; Kim and Capaldi, 2004; Lussier et al., 2009; O'Donnell et al., 2006; White and Widom, 2003). Fourth, *self–esteem* has been linked cross–sectionally to intimate partner violence with mixed results (Capaldi & Crosby, 1997; Hazen et al., 2008; Whiting et al., 2009). Fifth, a very strong predictor of intimate partner violence is *association with deviant peers* (Arriaga & Foshee, 2004; Dishion et al., in press; Foshee et al., 2011; Gagné et al., 2005; Schnurr & Lohman, 2008; Miller et al., 2009; Williams et al., 2008). Sixth, disparate findings have been found between intimate partner violence and *academic difficulties* during adolescence (Cleveland et al., 2003; Herrenkohl et al., 2000; Schnurr and Lohman, 2008). Seventh, a link between personality types such as *negative emotionality* and intimate partner violence has been explored but the results do not lend consistent evidence (Hellmuth & McNulty, 2008).

Finally, the cadre of literature has shown disparate findings regarding *gender* as well. Past work supports a common misperception that males perpetrate intimate partner violence more than females (Foo & Margolin, 1995; Schwartz et al., 1997); however, in more recent years, females have been shown to perpetrate intimate partner violence more often than males (Archer, 2000, Feiring et al., 2002; Schluter et al., 2008; Kaura & Allen, 2004; Lichter & McCloskey, 2004; Schnurr & Lohman, 2008). In fact, recent studies show that men and women are equally likely to perpetrate intimate partner violence (Woodward et al., 2002). However, while women tend to perpetrate intimate partner violence more than men, women are still more likely to be seriously injured or murdered by their partners than are men (Archer, 2000). In addition to the inconsistency on mean–level gender differences of rates of intimate partner violence, research has shown conflicting indications as to whether the intergenerational transmission of violence differs by gender (Kalmuss, 1984; Kwong et al., 2003), with some studies finding an association for females, but not for males (e.g., Mihalic & Elliot, 1997), whereas others have found the association for males, but not females (e.g., O'Keefe, 1997).

Family factors

The most common risk factor for intimate partner violence is the intergenerational transmission of partner violence or exposure to intimate partner violence in the family of origin. In particular, it is common for adolescents to both witness intimate partner violence and be victims of parental abuse with co–occurrence rates as high as 80% (Saunders, 2003). Indeed, early intimate partner violence exposure during childhood increases intimate partner violence and adult intimate partner violence (Markowitz, 2001; McCloskey & Lichter, 2003; Moretti et al., 2006; Renner & Slack, 2006; Roberts et al., 2010; Rosenbaum & Leisring, 2003; Whitfield et al., 2003; Williams et al., 2001; Wolf & Foshee, 2003). However, nearly all findings are retrospective and only a handful of studies has been able to establish intergenerational transmission of intimate partner violence prospectively (Capaldi & Clark, 1998; Ehrensaft et al. 2003; Linder & Collins, 2005). Therefore, this study is in a unique position to assess the intergenerational transmission of partner violence prospectively across two generations of families.

Another family risk factor is parenting, specifically *parent–to–adolescent psychological violence* or psychologically abusive parenting. Mother–adolescent hostility (Allen et al., 1994; Nix et al., 1999) and father–adolescent hostility (Coley, 2003; Shek, 2005; Vazsonyi, 2003) have been associated positively with intimate partner violence. Specific to the data used for this article, Neppl et al. (2009) found that hostile parenting predicted adolescent externalizing behaviors which, in turn, led to hostile parenting during adulthood. In addition,

Lohman and Schnurr (2008) found that mother–child hostility was predictive of perpetration for Hispanic females, whereas father–child hostility was protective for Hispanic females.

Finally, exposure to stress, particularly *family and interparental stress*, has been explored as a predictor of intimate partner violence. For example, cross–sectional work has shown that financial stress was predictive of perpetration (Neff, Holamon, & Schluter, 1995; Slep, Foran, Heyman, & Snarr, 2010) In addition, life stressors such as work, stress, and parenting stress have all been associated with marital conflict and higher rates of intimate partner violence (Caetano, Ramisetty–Mikler, Caetano Vaeth, & Harris, 2007; Probst et al. 2008; Jasinski & Kantor, 2001; Jasinski, Asdigian, & Kantor, 1997). Thus, the literature supports the notion that exposure to stress is predictive of intimate partner violence. Beyond these family risk factors, the current study controls for family income as previous work shows that limited resources associated with higher rates of violence (Cunradi et al., 2002; O'Donnell et al., 2002).

Limitations of the current literature

As briefly noted above, previous work in the area of intimate partner violence is limited (NIJ, 2011; for review see Capaldi et al., 2012). For example, self–report measurement, with one to three items among both adult and adolescent samples, is the most common measurement strategy. Furthermore, no studies to date have included multi– modal measurement encompassing observational data or multi–informant data of intimate partner violence during adolescence, and only 5% of the adult studies included multi–modal intimate partner violence measures (Capaldi et al., 2012). Moreover, the majority of these studies do not separate measures of psychological violence from physical violence. While the majority of recent studies assesses both male–to–female and female–to–male intimate partner violence, only a handful include interviews from both members of the dyad (see Schnurr, Lohman, & Kaura, 2010), with 78% of the adult studies and 95% of the adolescent studies interviewing only one partner (Capaldi et al., 2012). Concerns associated with self–reported behaviors include underreporting due to social desirability (see Archer, 1999), discrepancies between partner and self–reports (Szinovacz & Egley, 1995), and the potential for inflating the associations between constructs (e.g., parental violence and subsequent partner violence) due to method biases (Lorenz, Conger, Simons, Whitbeck, & Elder, 1991).

Finally, the literature is limited in that 61% of adult studies and 55% of adolescent studies were cross sectional (Capaldi et al., 2012); thus, the vast majority of the literature has failed to utilize prospective designs that are not able to assess multiple risk factors of intimate partner violence simultaneously over time. The majority of this literature (see metaanalytic review, Stith et al.'s, 2000) has relied on retrospective accounts of violence in the family of origin (with notable exceptions such as work by Capaldi and her colleagues, e.g., Andrews, Foster, Capaldi, & Hops, 2000; Capaldi & Clark, 1998; Capaldi & Crosby, 1997). Given the prevalence rates and negative consequences that intimate partner violence may have on an individual's well–being and future relationships, as well as the current limitations of the existing literature, it is imperative to explore factors experienced during adolescence that may increase or reduce intimate partner violence during emerging adulthood and adulthood.

Research Innovation: The Current Study

The proposed study overcomes earlier limitations by using multi-trait multi-method data from a two–decade study of a cohort of adolescents now grown to adulthood. Across the two decades of the study, all participants have been assessed on multiple occasions using a measurement strategy that is both extensive (i.e., covers multiple domains of personal and social characteristics) and intensive (i.e., employs a multi–informant approach that includes self– reports, other family member reports, teacher reports, ratings by trained observers,

school records, public records, and a genome–wide assessment of participants). Thus, we are uniquely positioned to overcome limitations and are innovative in six important ways.

First, we used a multi–method, multi–agent approach to assess intimate partner violence across two generations. Second, both self–report and romantic partner report of partner violence were used for each generation. For these reports, both male–to–female and female–to–male intimate partner violence were employed. Thus, each variable of interest was assessed at multiple timepoints to increase the reliability of the measures (Conger et al., 2000; Cui & Conger, 2008). Third, both perpetration and victimization at the couple level were assessed; therefore, our understanding of how intimate partner violence emerges and is manifested in couples can be considered. Fourth, to address measurement biases, the present study used measures based on multiple informants (mother, father, adolescent, and the romantic partner of the adolescent now grown to adulthood), as well as trained observers' ratings, which have been shown to provide reliable estimates of hostile behaviors (Cui, Lorenz, Conger, Melby, & Bryant, 2005). Details regarding these assessments are found in our measures section. Fifth, we utilized prospective developmental models that simultaneously assess individual and family factors. Sixth, given discrepancies in the literature associated with mean differences in intimate partner violence as well as variations in pathways or predictors of intimate partner violence, we examined issues related to the gender of the adolescent.

Based on the aforementioned literature, five key hypotheses are addressed in this article. Our first hypothesis is that individual risks during adolescence will be linked positively to intimate partner psychological violence during both emerging adulthood and adulthood for victimization and perpetration (Hypothesis One). We also expect that exposure to parental intimate partner violence during adolescence will be related positively to intimate partner psychological violence during adulthood (Hypothesis Two). We further propose that exposure to parent–child psychological violence during adolescence will lead to intimate partner psychological violence, during emerging adulthood and adulthood (Hypothesis Three). Lastly, we speculate that exposure to family stress during adolescence will lead to intimate partner psychological violence (Hypothesis Four) and hypothesize that there will be continuity of intimate partner psychological violence across time (Hypothesis Five).

Method

Participants

Data come from the Iowa Youth and Families Project (IYFP). In the IYFP, data from the family of origin (N = 451) were collected annually from 1989 through 1992. Participants included the target adolescent age 13, their parents, and a sibling within 4 years of age of the target adolescent (217 females, 234 males). These two–parent families (451 mothers, 451 fathers) were originally recruited for a study of family economic stress in the rural Midwest. When interviewed in 1989, the target adolescent was in seventh grade (M age = 12.7 years; 236 females, 215 males). Participants were recruited from both public and private schools in eight rural Iowa counties. Due to the rural nature of the sample, there were few minority families (approximately 1% of the population); therefore, all of the participants were Caucasian. Seventy– eight percent of the eligible families agreed to participate. The families were primarily lower middle– or middle–class. In 1989, parents averaged 13 years of schooling and had a median family income of $33, 700. Families ranged in size from 4 to 13 members, with an average size of 4.94 members. Fathers' average age was 40 years, while mothers' average age was 38.

In 1994, the families from the IYFP continued in another project, the Family Transitions Project (FTP). The same target adolescents participated in the FTP to follow their transition

into adulthood. Beginning in 1995, the target adolescent (1 year after completion of high school) participated in the study with a romantic partner. The FTP has followed the target youth from as early as 1989 through 2007 (M target age = 32 years), with a 90% retention rate.

The present article includes targets who participated from adolescence through adulthood. The data were analyzed at the three developmental timepoints. The first was when the target adolescent was 14, 15, and 18 years old (1990, 1991, and1994). The second timepoint was during emerging adult when the target was 19, 21, and 23 years old (1995, 1997, and 1999). Finally, the last period occurred when the target was in adulthood at ages 27, 29, and 31 years (2003, 2005, and 2007). Throughout adulthood, targets participated with a romantic partner at the time of the visit. The romantic partner could include a boy/girlfriend, cohabitating partner, or a married spouse. Of the 451 original target adolescents, 392 (52% female) of them participated with a romantic partner at multiple points throughout adulthood and are included in the present analyses. Only 54 (14%) of the adolescents remained with the same romantic partner across all the assessments. Because missing cases on all variables were largely due to the unavailability of data for a specific wave rather than families no longer participating in the study, the present analyses used Full Information Maximum Likelihood (FIML) estimation processes to test predicted relationships (Allison, 2003) rather than deleting cases with any missing data.

Procedures

When the target was an adolescent, all of the families of origin were visited twice in their homes each year by a trained interviewer. Each visit lasted approximately two hours, with the second visit occurring within two weeks of the first visit. During the first visit, each family member (mother, father, target adolescent, and sibling closest in age to the target) completed questionnaires pertaining to subjects such as parenting, individual characteristics, and the quality of family interactions. During the second visit, family members participated in four structured interaction tasks that were videotaped. In the present analyses, we used observer ratings from three of those tasks. Task 1 (parent–child discussion) involved the parent and adolescent engaging in a conversation about family rules, events, and problems and lasted 30 minutes. Task 2 (problem solving interaction) lasted 15 minutes and involved all family members discussing and solving an issue they identified as problematic such as conflict over money or discipline. Task 3 (sibling discussion) was not part of the scope for this report and therefore not considered here. Task 4 (marital interaction) involved the parents (mothers and fathers) of the target adolescent engaging in a discussion of topics such as childrearing, employment, and other life events. Trained observers coded the quality of these interactions using the Iowa Family Interaction Rating Scales (Melby et al., 1998). These scales have been shown to demonstrate adequate reliability and validity (Melby & Conger, 2001).

From 1995 through 2007 the target adolescents, now adults, and their romantic partner participated in data collection. Each target adult and his or her romantic partner were visited biennially in their home by trained interviewers. During that visit, these adults completed a series of questionnaires, some of which addressed their romantic relationship. In addition to questionnaires, the target adult and his or her romantic partner participated in a videotaped 25– minute discussion task (Task 5) that was essentially the same as that used for their parents during adolescence. The means, standard deviations, and minimum and maximum scores for the interaction tasks as well as for all study variables are provided in Table 1.

Measures

Intimate Partner Psychological Violence Victimization: Partner psychological violence to adolescent (target) in emerging adulthood (age 19 – 23) and adulthood (age 27 – 31)—Partner psychological violence to adolescent (target) was measured with information from two reporters: target report of partner's behavior to the target and observer report of partner's behavior to the target. Target report of his/her partner's psychological violence included items such as asking how often during the past month his/her partner got angry at him/her, criticized him/her for his/her ideas, shouted or yelled at him/her because he/she was mad, or argued with him/her whenever he/she disagreed about something (Conger, 1988). Responses ranged from 1 = never to 7 = always for the 24 items (= .89 for emerging adulthood and .93 for adulthood).

Trained observers coded the degree to which the partner engaged in verbal attacks to the target adult during a videotaped discussion task (Task 5 described earlier). Verbal attack was defined as personalized and unqualified disapproval of another's personal characteristics and criticism of a global and enduring nature. Observer ratings were on a nine–point scale, but were recoded to seven point scales so as to have possible ranges equal to the target report. The percentage of agreement for the observed scales across the two timepoints were .82 and .81 respectively. The target self–report and observer rating of partner at each of the two timepoints were combined into three parcels which served as indicators for a latent variable; this process is explained further in the analysis section. Latent variables were created to represent partner psychological violence to target at both emerging adulthood and adulthood.

Perpetration: Adolescent (Target) psychological violence to partner in emerging adulthood (age 19 – 23) and adulthood (age 27 – 31)—Adolescent (target) psychological violence to partner was also measured with information from two reporters: partner report of target's behavior to the partner and observer report of target's behavior to their partner. Partner report of target's psychological violence included items such as asking how often during the past month the target got angry at the partner, criticized the partner for his/her ideas, shouted or yelled at the partner because he/she was mad, or argued with the partner whenever he/she disagreed about something (Conger, 1988). Responses ranged from 1 = never to 7 = always for the 24 items (= .88 for emerging adulthood and .93 for adulthood).

Trained observers coded the degree to which the target engaged in verbal attacks to their romantic partner during a videotaped discussion task (Task 5 described earlier). Verbal attack was defined in the same way as it was for victimization. Observer ratings were on a nine–point scale, but were recoded to seven point scales so as to have possible ranges equal to the partner report. The percentage of agreement for the observed scales across the two timepoints were .83 and .80 respectively. The partner self–report and observer rating of target at each of the two timepoints were combined into three parcels, which served as indicators for a latent variable. Latent variables were created to represent target psychological violence to partner at both emerging adulthood and adulthood.

Individual Risk Factors Experienced During Adolescence

Substance use problems (age 14 –15)—Adolescents reported how often problem behaviors occurred as a result of consuming alcohol or drugs during the past year. The measure was developed from diverse sources for the Family Transitions Project. Responses ranged from 1 = never to 4 = four or more times. Examples of problem behaviors included, "In the past year, how often did you get drunk?" and "In the past year, when drinking or using drugs, how often did you get into a fight?" A total of 11 items were combined and

averaged across the two assessments into a scale (= .87) which served as the sole indicator for a latent variable.

Sexual activity (age 14 – 15)—Targets reported the number of sexual partners they had in the past 12 months. Responses ranged from zero sex partners to more than 6 partners at both age 14 and age 15. The reports were summed to reflect the total number of sexual partners across the two timepoints into a scale (= .63) which served as the sole indicator for a latent variable.

Antisocial behaviors (age 14 – 15)—Adolescents reported their own antisocial behaviors using items from the Buss and Durkee (1957) hostility scale. Responses ranged from 1 = not at all to 5 = exactly, and included, “If someone hits me first, I let him have it” and “When I get mad, I say nasty things.” A total of seven items were averaged across the two timepoints into a scale (= .90) which served as the sole indicator for a latent variable.

Low self–esteem (age 14 – 15)—Target adolescent self–esteem was measured as a manifest variable using self–report. Adolescents completed Rosenberg’s (1965) self–esteem scale. Responses ranged from 1 = strongly agree to 5 = strongly disagree. A total of 10 items were combined and averaged across the two assessments into a scale (= .91) which served as the sole indicator for a latent variable.

Association with deviant peers (age 14 – 15)—Adolescents rated how many of their friends engaged in deviant behaviors such as run away from home, purposely damage or destroy property that did not belong to them, or use alcohol and drugs (Elliot, Huizinga, & Ageton, 1985). Responses ranged from 1 = none of them to 5 = all of them. A total of 17 items were combined and averaged across the two assessments into a scale (= .89) which served as the sole indicator for a latent variable.

Academic difficulties (age 14 – 15)—Grade point average (GPA) was measured as a manifest variable using target adolescent self–report. The adolescents reported their GPA on a scale from 00 = *F* to 10 = *A*, and the reports were averaged across timepoints into a scale (= .89) which served as the sole indicator for a latent variable

Negative emotionality (age 18)—The target’s personality was assessed using the Multidimensional Personality Questionnaire (MPQ) developed by Tellegen (e.g., Harkness, Tellegen, & Waller, 1995). An abbreviated 33–item informant report for the M*PQ* was used to obtain reports of adolescent personality from the parents. Mothers and fathers independently rated the adolescent on a 5–point scale by comparing their adolescent on a particular trait to other individuals of the same age and gender (1=Lowest 5%; 2=Lower 30%; 3=Middle 30%; 4=Higher 30%; 5=Highest 5%). The correlations between mother and father reports ranged from .40 for alienation to .47 for stress reaction, which indicated a reasonable amount of agreement, a result broadly consistent with existing personality research (e.g., Funder, 1999). Reports were combined into the negative emotionality superfactor for each parent, then averaged across mother and father responses (α = .80).

Target gender—Self–report of gender where (1 = *male*, 2 = *female*) was assessed at age 14.

Family Risk Factors Experienced During Adolescence

Interparental psychological violence (age 14 –15)—Interparental psychological violence was measured with three indicators: father report of his wife’s behavior to him, mother report of her husband’s behavior to her, and observer report of mother and father

behavior to each other. Spouse reports of psychological violence included items such as how often during the past month the spouse got angry at them, criticized them for their ideas, shouted or yelled at them because they were mad, or argued with them whenever they disagreed about something (Conger, 1988). Responses ranged from 1 = never to 7 = always. Internal consistency reliability was acceptable for father report of his wife (mean = .91) and mother report of her husband (mean = .93).

Observer report of interparental psychological violence was measured using task 2 (family problem solving interaction) and task 4 (marital interaction) as described above. Trained observers coded the degree to which the father and mother engaged in verbal attacks toward each other. Verbal attack was defined in the same manner as victimization and perpetration. Observer ratings were on a nine–point scale, but were recoded to seven point scales so as to have possible ranges equal to mother and father self– report. The percentage of agreement for the observed scales for father behavior to mother and mother behavior to father are .96 and .97 respectively. The father self–report, mother report, and observer rating of parent across the two interaction tasks were combined into three parcels, which served as indicators for a latent variable.

Parent–to–adolescent psychological violence (age 14 –15)—Parent psychological violence to the adolescent was measured with three indicators: Target adolescent report of father behavior to him/her, target adolescent report of mother behavior to him/her, and observer report of mother and father behavior to the adolescent. Adolescent report of father and mother psychological violence included asking the adolescent how often during the past month their father and mother got angry at him/her, criticized him/her for his/her ideas, shouted or yelled at him/her because she was mad, or argued with him/her whenever she disagreed about something (Conger, 1988). Responses ranged from 1 = never to 7 = always. Internal consistency reliability was acceptable for adolescent report of father (mean = .87) and mother (mean = .86).

Observer report of parental psychological violence to the adolescent was measured using Task 1 (parent–child discussion interaction). Trained observers coded the degree to which the father and mother engaged in verbal attacks with the adolescent. Verbal attack was defined and coded in the same manner as the previous observational tasks. Observer ratings were on a nine– point scale, but were recoded to seven point scales so as to have possible ranges equal to adolescent self– report. The percentage of agreement for the observed scales for father behavior to adolescent and mother behavior to adolescent are .92 and .95 respectively. The adolescent self–report of father, adolescent self–report of mother, and observer rating of parent behavior were combined into three parcels, which served as indicators for a latent variable.

Family income (age 14)—Mother and father self–report of family per capita income was assessed in 1990 and 1991. The mean family per capita income across waves was divided by 1,000 for the ease of analysis and interpretation in this study. It should be noted that family per capita income included negative values because some families had negative net farm income.

Family stress (age 15)—To assess dimensions of family stress, we took an approach similar to Sameroff (Sameroff, 1998; Sameroff, Seifer, Barocas, Zax, & Greenspan, 1987) and Furstenburg (Furstenberg, Cook, Eccles, Elder, & Sameroff, 1999) and used 1991 measures of economic pressure, parental psychological distress, and parent hostility to construct an index of family stress. To create the family stress index score for each family, we first created five continuous scales of family stress (cannot make ends meet, financial cutbacks, parental anxiety, parental depression, and parental hostility). Then each of the five

scales was dichotomized so that the quarter of the sample reporting the most family stress on that scale was assigned to the high family stress category for that scale (coded 1) and the remaining 75% of the sample was assigned to the low family stress category for that scale (coded 0). Most scales, however, did not allow for an exact 25% and 75% split, which resulted in 22.5% to 27.7% of the sample being assigned to the high stress category across all five scales. The five dichotomized scales were then averaged to make the family stress index, which ranged from zero to one. The family stress index had a mean of .27 and a standard deviation of .31. Approximately 44% of the sample fell into the low family stress category on all five items, while about 6% of the sample was in the high family stress category for all items. A brief description of each of the six scales, the percentage of the sample in the high and low family stress groups for each of the six components, and the mean score for the high and low family stress groups for each component is provided in the Appendix.

Analyses

To test our overall conceptual model (Figure 1), we utilized multi–level structural equation models. When evaluating the fit of structural models to the data, we used several types of indicators. We used the standard chi–square index of statistical fit that is routinely provided under maximum likelihood estimation of parameters. We also used two indices of practical fit, the root mean square error of approximation (RMSEA; Browne & Cudeck, 1993) and the Tucker – Lewis index (TLI; Tucker & Lewis, 1973). RMSEA values under .05 indicate close fit to the data, values between .05 and .08 represent reasonable fit (Hu & Bentler, 1999). For the TLI, fit index values should be greater than .90, and preferably greater than . 95, to consider the fit of a model to data to be acceptable.

Our hypotheses related to the structural model, and prior work suggests that use of multi–item parcels as indicators for latent variables is defensible in such situations (Bandalos & Finney, 2001; Marsh & O'Neill, 1984). Use of parcels in these circumstances addresses rater effects and reduces the number of estimated paths in the model. A domain–representative approach to parcel construction treats information from each reporter as equally valid and unit–weights the raters by distributing their information across the parcels. Following the procedures outlined by Kishton and Widaman (1994), domain representative parcels were created, which allowed rater– specific variance and variance common across raters to contribute to the latent factor.

For purposes of illustration, we created the three manifest variables that served as indicators for the latent factor 'perpetration of psychological violence during emerging adulthood' in the following way. We began with 15 items assessing target psychological violence toward the romantic partner during emerging adulthood (12 items from the romantic partner, and three observer ratings). We randomly selected four romantic partner items and one observer rating. We first averaged the four romantic partner items so that the parcel would contain equal proportions of variance from both reporters, then we averaged the romantic partner items with the observer rating to create our first parcel. From the remaining 10 items, we randomly selected four items from romantic partner, and one observer rating, which we averaged in like manner to create the second parcel. The remaining five items were similarly averaged into a third parcel. Each of these parcels, as well as all other parcels, had an aggregate reliability of .65 or higher.

Results

Correlations and Descriptive Statistics

Descriptive statistics for all study variables are presented in Table 1, and correlations are presented in Table 2. Consistent with Hypothesis 1, there was considerable stability from emerging adulthood to adulthood for victimization (r = .34 for males, .47 for females), and perpetration (r = .17 for males, .53 for females). Victimization and perpetration were significantly correlated at both emerging adulthood (r = .78 for males, .70 for females) and adulthood (r = .68 for males, .69 for females). The patterns of associations were generally supportive of the theoretical model, and justified the formal model testing that follows.

Model Tests

We used Mplus Version 7 (Muthén & Muthén, 2006) to estimate the model using full information maximum likelihood estimation, first focusing on the measurement model, then turning to the structural paths predicted by our theoretical model. We ran analyses testing for measurement invariance across males and females, in order to test whether the latent variables could be considered equivalent across the two groups. A series of analyses demonstrated weak factorial invariance across gender for the latent variables (see Meredith, 1993). In addition, in the following model tests we evaluated gender differences in findings for targets and their romantic partners. There were no significant differences by gender; therefore we report the results for the combined sample.

Our attempts to fit a model with target perpetration and victimization by target separately were unsuccessful due to the high correlations between perpetration and victimization at each timepoint. One of the principal reasons we used different reporters of victimization and perpetration was to eliminate shared–method variance and thereby decrease the association between the two constructs. Nevertheless, the data suggested that even in the absence of shared– method variance, both victimization by target and target perpetration of psychological violence were most appropriately conceptualized in this sample as indicators of the same variable. Consequently, we modeled higher–order latent variables of target psychological violence using the latent constructs for victimization and perpetration as indicators. This model showed an acceptable fit, χ^2 = 137.58, df = 48, p < .001, TLI = .941, RMSEA = .055, and was the model used for our primary analyses. All covariates were added to this model, and then chi–square difference tests were used to trim the model. Nonsignificant paths were set to zero (which did not significantly worsen model fit), resulting in a final model fit of: χ^2 = 317.37, df = 174, p < .001, TLI = .949, RMSEA = .046. All manifest loadings had standardized loadings of λ = .40 or higher. The coefficients for this model are presented in Table 3.

Standardized coefficients from the final model that reached statistical significance are presented in Figure 2. Regarding Hypothesis One, negative emotionality and sexual activity during adolescence both predicted higher levels of psychological violence during emerging adulthood as well as adulthood. Academic difficulties and gender positively predicted violence in emerging adulthood only. However, the individual risk factors of substance use, antisocial behaviors, low self–esteem, and associations with deviant peers were not statistically significant. We did not find support for Hypothesis Two, in that exposure to parental intimate partner violence during adolescence did not predict later intimate partner psychological violence in either emerging adulthood or adulthood. However, Hypothesis Three was supported; parent– child psychological violence during adolescence predicted intimate partner psychological violence, during emerging adulthood and adulthood. Consistent with Hypothesis Four, exposure to family stress during adolescence predicted intimate partner psychological violence. Family stress was the only predictor to show a

lagged or 'sleeper' effect, predicting psychological violence only in adulthood, but not in emerging adulthood. And finally, we found support for Hypothesis Five that psychological violence between romantic partners (defined as both victimization and perpetration) showed stability from emerging adulthood to adulthood ($\beta = .28$, SE = .06).

Discussion

The intergenerational transmission of violence directed toward intimate partners is well documented (e.g., Kalmuss, 1984; Kwong, Bartholomew, Henderson, & Trinke, 2003; Straus, Gelles, & Steinmetz, 1980). However, this predominately cross–sectional and retrospective literature is limited with self–selection, endogeneity, and reporter biases as it has not been able to assess how individual and family behaviors simultaneously experienced during adolescence influence intimate partner violence across time. The current study attempts to overcome some of these limitations by prospectively assessing a multitude of individual and family risk factors for intimate partner violence in both emerging adulthood and adulthood. We assessed psychological intimate partner violence as it has been shown to be highly prevalent, relatively stable, largely bidirectional, and has a severe impact (e.g., Carney & Barner, 2012; Lawrence, Yoon, Langer, & Ro, 2009; O'Leary & Maiuro, 2001; Shortt et al., 2012; Taft et al., 2006). Furthermore, it has been identified as a predictor of physical violence in romantic relationships (e.g., Capaldi, Kim, & Shortt, 2007; Frye & Karney, 2006). Thus, understanding predictors of psychological intimate partner violence to be targeted in prevention programs may in turn, reduce rates of subsequent physical violence, and ultimately reduce the often damaging and costly physical and psychological consequences of physical intimate partner violence.

This article also overcomes limitations of the literature in that victimization and perpetration often are assessed independently rather than simultaneously. Past literature that addresses these events separately obscures patterns where partners both perpetrate violence towards a partner and experience victimization. Thus, we tested models where victimization and perpetration were assessed separately using self–reports and models where we created a latent–class dyadic couple variable of intimate partner violence using a combination of self, partner, and observation reports. Those that used a combination of reporters, including the observational data, were the most robust models. We discuss the results of the models and the implications for prevention and future research below.

Using a multi–method multi–trait prospective longitudinal approach, the current study tested five hypotheses related to the developmental–interactional model (i.e., Capaldi & Gorman–Smith, 2003) of intimate partner violence across time, romantic partners, and generations. We found significant stability in intimate partner violence from emerging adulthood to adulthood, even though over 80% of the targets in this sample changed romantic partners over this period. This suggests that intimate partner violence is a behavioral pattern that is recreated across subsequent relationships. After controlling for a host of individual risk factors as well as interparental psychological violence, the results show the continuity of psychological violence across adulthood. We also find that exposure to parent–to–child psychological violence during adolescence is a key predictor of later intimate partner violence. Because intimate partner violence was operationalized at the dyadic level, these findings hold for perpetration as well as victimization.

We acknowledge that some might object to our decision to combine victimization and perpetration into a single variable. A possible objection would be that while correlated, the two variables are functionally nonequivalent, and have different antecedents. However, as can be seen in Table 2, the pattern of correlations reflect how victimization and perpetration were not consistently different in terms of their correlation with other variables.

Furthermore, the standardized loadings onto the second–order latent factor were quite robust (ranging from .76 to .91) suggesting that the variables were very highly correlated after removing measurement error. The fact that there was no shared method variance across the two variables further strengthens the argument that these variables may be best thought of as indicators of a variable operationalized at the dyadic level. Although personal characteristics affect which role a person assumes in a relationship characterized by intimate partner violence (perpetrator or victim), and likely contribute to intimate partner violence carrying forward to later relationships, at its core, intimate partner violence appears to be a characteristic of a relationship, not an individual.

Contrary to expectations, the results did not support the intergenerational transmission of violence. Several studies have suggested that parental behavior toward the youth may be more predictive of youth violence than exposure to parental intimate partner violence (Capaldi and Clark, 1998; Conger, Cui, Bryant, & Elder, 2000; Neppl et al., 2009; Krishnakumar & Buehler, 2000; Stith et al., 2000). Indeed, findings suggest that parent–to–adolescent psychological violence, which may be seen as a form of psychologically abusive parenting, is particularly detrimental and is predictive of similar forms of violence in their emerging adult and adult romantic relationships. It may be true that, at the simple correlation level, both witnessing and experiencing parental violence or abuse in the family of origin are associated with later acts of intimate partner violence. However, when a host of individual and family risk factors are simultaneously assessed, parenting is shown to have a very critical role in the development of intimate partner violence. Other studies have found that when a child experiences parent–to– adolescent aggression, in comparison to witnessing interparental aggression, being exposed to parental aggression is associated more directly with subsequent intimate partner violence (see Ehrensaft et al., 2003; Marshall & Rose, 1988).

In addition, findings suggest that exposure to family stress was a “sleeper effect” as it was associated with intimate partner violence in adulthood but not in emerging adulthood. That is, experiences(or dimensions) of family stress such as economic pressure, parental psychological distress, and parent trait hostility may not spillover to intimate partnerships until later on in adulthood. In contrast, we found evidence that individual risk factors were related more proximally with violence in intimate partnerships during emerging adulthood. While a multitude of individual risk factors were assessed, negative emotionality and the number of sexual partners in adolescence were found to increase significantly intimate partner violence in emerging adulthood and adulthood. On the other hand, academic difficulties were found to increase violence in emerging adulthood only. Together, these findings suggest developmentally–specific causes of intimate partner violence, which merit attention in future work in this area.

Finally, the present study found that females perpetrated higher levels of intimate partner psychological violence than males in emerging adulthood but not in adulthood. This is consistent with previous work that suggests that females are more aggressive than males in marriages and relationships (e.g., Steinmetz, 1977; Straus et al., 1980). However, when testing whether the overall model and the processes or predictors of intimate partner violence varied for males and females, we found no statistically significant differences (Kalmuss, 1984; Kwong et al., 2003. Thus, the interpretation of these gender differences should not overshadow that men, on average, are able to inflict more physical damage on women in violent intimate relationships.

Despite the above findings, this study is not without limitations. For example, the sample was limited in terms of ethnic and racial diversity, geographic location (rural Iowa), and family structure (all adolescent children lived with their biological parents). However, other

findings from this sample have been replicated in more diverse samples (Conger et al., 2002; see Conger & Donnellan, 2007). In addition, while intimate partner violence was generally low in this sample, the prevalence rates are comparable to those in national surveys (e.g., Straus & Gelles, 1986). Therefore, our findings are fairly representative of community samples but may not be generalized to high risk families (Capaldi & Clark, 1998).

In terms of future research, the current study only assessed psychological intimate partner violence. Therefore, future studies should explore whether these relationships hold for physical violence as well as sexual violence. In addition, other relationship factors such as acceptability of violence, relationship satisfaction, relationship type and length as well as variations in relationship structures across sexual orientations should also be explored. Finally, future studies should assess rates of perpetration and victimization for more than two timepoints. Person– oriented approaches, such as growth curves, and latent class analyses, should be utilized in future work to elucidate patterns of co–occurring victimization and perpetration for individuals overtime. Person-oriented approaches also could address variations in intimate partner violence across relationships (i.e., stability and instability), including the importance of churning (Halpern-Meekin et. al., 2013). Furthermore, understanding how the individual and family risk factors assessed in the present study influence these patterns of behaviors is also needed.

Despite these limitations, the present study contributes to the literature by examining individual and family predictors of psychological violence using a prospective, multi–informant design. The findings point to a robust connection between parent–to–child psychological violence and intimate partner relationships in both emerging adulthood and adulthood; thus supporting the notion that experiences in the family of origin are linked to how individuals approach subsequent romantic relationships. These results can be used to assist in comprehensive empirically informed prevention programs that aim to reduce intimate partner violence, which largely have been underdeveloped (Ehrensaft et al., 2003; Shortt et. al., 2012). In particular, programs that reduce violent behaviors in the family of origin, particularly parent–to–adolescent psychological violence and family stress, ultimately may reduce intimate partner violence in adulthood. Furthermore, programs that decrease risky sexual behaviors or provide services to youth with negative emotionality might serve as useful targets for preventing psychological violence in future romantic relationships. In addition, prevention programs that include school experiences that enhance the academic achievement of students may lead to more positive romantic relationships in emerging adulthood, which is a key period for intimacy development. Other work has shown the importance of school factors in reducing the perpetration of emerging adult intimate violence (Schnurr & Lohman, 2008). Taken together, these results argue that human service professionals working with victims or perpetrators of intimate partner violence in adulthood need to think systematically and comprehensively to understand the influences that early experiences have on adult current behaviors in romantic relationships.

Acknowledgments

This research is currently supported by grants from the Eunice Kennedy Shriver National Institute of Child Health and Human Development, the National Institute of Mental Health, and the American Recovery and Reinvestment Act (HD064687, HD051746, MH051361, and HD047573). The content is solely the responsibility of the authors and does not necessarily represent the official views of the funding agencies. Support for earlier years of the study also came from multiple sources, including the National Institute of Mental Health (MH00567, MH19734, MH43270, MH59355, MH62989, and MH48165), the National Institute on Drug Abuse (DA05347), the National Institute of Child Health and Human Development (HD027724), the Bureau of Maternal and Child Health (MCJ–109572), and the MacArthur Foundation Research Network on Successful Adolescent Development Among Youth in High–Risk Settings. A special thank you is extended to the children, caregivers, and families who have graciously participated in this study and given us access to their lives for so many years.

Appendix: The Family Stress Index

Percent of the Sample in the High Family Stress Category on Each Family Stress Item and Mean Scores for the High and Low Stress Groups on Each of the Six Measures

	%	High Stress		Normal Stress	
Measure of family stress	**high stress**	**M**	**SD**	**M**	**SD**
1. Can't make ends meet	24.8	2.50	1.06	-0.46	1.03
2. Financial cutbacks	23.3	8.90	1.97	2.44	2.02
3. Parental anxiety	22.5	1.64	0.66	1.05	0.07
4. Parental depression	25.4	1.97	0.51	1.21	0.16
5. Parental hostility	27.7	1.80	0.53	1.15	0.11
6. Marital hostility	24.7	2.19	0.61	0.74	0.40

[1] *Can't make ends meet* assessed families' ability to pay monthly bills, and is the average of two standardized items. Observed scores range from –3.71 to 5.03, with higher scores indicating greater economic pressure. Nearly 25% of the sample fell into the high stress category for this measure.

[2] *Financial cutbacks* assessed whether families made significant cutbacks in daily expenditures because of limited resources. There is a maximum of 15 possible financial cutbacks. Families in the high stress category (23.3%) reported making almost four times as many cutbacks as families in the low stress category.

[3] *Parental anxiety* was assessed with the Anxiety subscale of the Symptom Checklist-90-Revised (SCL-90-R; Derogatis, 1983). Scores in the sample ranged from 1 to 4.8. Families scoring 1.25 or more were assigned to the high stress category (22.5%).

[4] *Parental depression* was assessed with the Depression subscale of the SCL-90-R (Derogatis, 1983). Observed scores ranged from 1 to 4.69. Families scoring more than 1.54 were assigned to the high stress category (25.4%). 5. *Parental trait hostility* was assessed with the Hostility subscale of the SCL-90-R (Derogatis, 1983). Scores in the sample ranged from 1 to 4.67. Families scoring 1.42 or more were assigned to the high stress category (27.7%).

Biosketches

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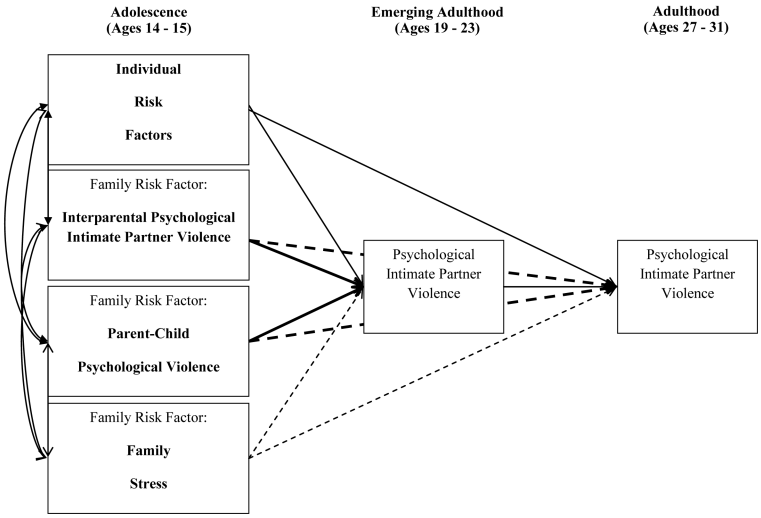
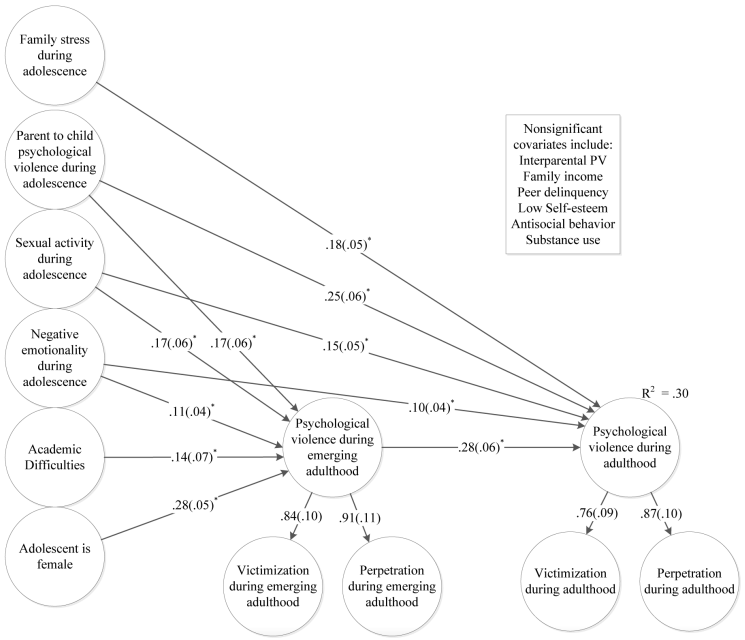


Figure 1. Conceptual Model

Note: Individual risk factors assessed include substance use, sexual activity, antisocial behaviors, self–esteem problems, association with deviant peers, academic difficulties, negative emotionality, and gender. The intergeneration transmission of intimate partner violence is shown by the bold dashed lines while the influence of parent–to–adolescent psychological violence is shown by the bold lines. The effects of family stress are shown by the non–bolded dashed lines.



Note.. *p < .05.

Figure 2.
Statistical Model

Table 1

Descriptive Statistics for Study Variables (N = 392)

Variables	M	SD	Min	Max
Intimate Partner Psychological Violence				
Emerging Adulthood Victimization[A] (1995, 1997, 1999)				
Observer report	1.42	0.70	1.00	5.00
Target report of Partner	2.49	0.83	1.00	6.75
Adulthood Victimization[B] (2003, 2005, 2007)				
Observer report	1.54	0.83	1.00	5.33
Target report of Partner	2.37	0.84	1.00	5.00
Emerging Adulthood Perpetration [A] (1995, 1997, 1999)				
Observer report	1.49	0.78	1.00	7.00
Partner report of Target	2.39	0.82	1.00	5.00
Adulthood Perpetration[B] (2003, 2005, 2007)				
Observer report	1.67	0.89	1.00	5.00
Partner report of Target	2.37	0.79	1.00	5.25
Individual Risk Factors from Adolescence [C]				
Substance Use Problems	1.06	0.16	1.00	2.27
Sexual Activity	0.16	0.70	0.00	10.00
Antisocial Behavior	2.68	0.74	1.00	4.86
Low Self–Esteem	1.97	0.56	1.00	3.80
Association with Deviant Peers	1.26	0.26	1.00	2.71
Academic Difficulties	3.48	2.08	0.00	9.50
Negative Emotionality[D]	1.56	4.94	3.40	0.53
Family Risk Factors from Adolescence [C]				
Interparental Psychological Violence (1991, 1992)				
Observer report	1.07	0.16	1.00	2.50
Father report of Wife	2.60	0.89	1.00	6.00
Mother report of Husband	2.42	1.00	1.00	6.75
Parent–to–adolescent Psychological Abuse (1991, 1992)				
Observer report	1.19	0.39	0.50	4.00
Target report of mother	2.77	0.94	1.00	6.38
Target report of father	2.62	0.98	1.00	6.50
Family Income (1991, 1992)	8.79	5.63	−15.08	41.30
Family Stress	0.58	0.94	−1.10	3.30

[A] *Notes*. Ages 19 – 23,

[B] Ages 27 – 31,

[C] Ages 14 – 15,

[D] Age 18, PV = Psychological violence.

Table 2

Correlations among Variables Used in Analyses

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Intimate Partner Violence in Emerging Adulthood															
1. Victimization[A]	–	.78	.34*	.16	.18	–.03	.09	.09	.00	–.12	.16†	.15†	.31*	–.06	.10
2. Perpetration[A]	.70	–	.23†	.17	.21	.11	.18†	.14	.08	.15	.19†	.03	.18*	–.01	.03
Intimate Partner Violence in Adulthood															
3. Victimization[B]	.47*	.37*	–	.68*	.07	.23*	.18*	.38*	.04	.22*	.23*	.22*	.48*	–.20*	.23*
4. Perpetration[B]	.39*	.53*	69*	–	.22	.22*	.44*	.30*	.33*	.37*	.40*	.37*	.40*	–.15†	.33*
Individual Risk Factors from Adolescence [C]															
5. Substance use	.16†	.22*	.21*	.28*	–	.44*	.29*	.33*	.80*	.37*	.13*	–.11	.18	–.33*	.08
6. Sexual activity	.33*	.34*	.25*	.26*	.50*	–	.21*	.10	.31*	–.10	.02	.04	.13†	.01	–.03
7. Antisocial behaviors	.16*	.13	.19*	.16*	.36*	.21*	–	.29*	46*	.28*	.34*	.16*	.40*	.02	.09
8. Low self–esteem	.17*	.16*	.08	.17*	.83*	.12†	.50*	–	.22*	–.41*	.66*	.16*	.52*	–.02	.26*
9. Assoc. Dev. Peers	.15†	.14†	.15*	.08	.10	.40*	.18*	.13†	–	.33*	.23*	.11	.28*	–.14*	.14*
10. Academic Difficulties	.23*	.40*	.23*	.32*	.19*	.28*	.01	–.18*	.09	–	.36*	.10	.22*	–26*	.25*
11. Neg. Emotionality[D]	.26*	.22*	.21*	.31*	.18*	.12†	.24*	.16*	.71*	.40*	–	.18*	.42*	–.11	.23*
Family Risk Factors from Adolescencec															

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
12. Interparental PV	.08	.11	.12	.14†	.04	.04	.03	.04	−.04	−.08	.32*	–	.36*	−.07	.30*
13. Parent–to–adolescent PV	.28*	.18*	.32*	.31*	.34*	.19*	.39*	.50*	.27*	.14†	.38*	.17*	–	−.02	.15*
14. Family Income	−.07	−.19*	−.15*	−.14†	−.09	.04	−.06	−.05	.05	−.16*	−.12	.06	.02	–	−.33*
15. Family Stress	.16*	.13†	.18*	.16*	.12	.04	−.10	.12†	−.02	.24*	.01	.36*	.03	−.35*	–

[A] *Notes.* Ages 19 – 23,

[B] Ages 27 –31,

[C] Ages 14–15,

[D] Age 18, PV = Psychological violence. Coefficients for males are above diagonal.

* p < .05,

† p < .10

Table 3

Structural Equation Modeling Coefficients

Direct paths from Figure 2	Emerging Adulthood Psychological Violence	Adulthood Psychological Violence
Individual Risk Factors		
Substance Use	0.25(0.15)	0.12(0.14)
Sexual Activity	0.17(0.06)*	0.15(0.05)*
Antisocial Behavior	0.03(0.08)	0.10(0.08)
Low Self–Esteem	−0.02(0.08)	−0.09(0.07)
Association with Deviant Peers	−0.23(0.14)	−0.14(0.15)
Academic Difficulties	0.14(0.07)*	0.07(0.07)
Negative Emotionality	0.11(0.04)*	0.10(0.04)*
Female	0.28(0.05)*	0.14(0.08)
Family Risk Factors		
Interparental Psychological Violence	0.01(0.05)	0.07(0.06)
Parent–to–Adolescent Psychological Violence	0.17(0.06)*	0.25(0.06)*
Family Income	−0.02(0.06)	−0.03(0.06)
Family Stress	−0.02(0.06)	0.18(0.05)*
Emerging Adulthood Psychological Violence		0.28(0.06)*

Note. Standard errors appear in parentheses.

*$p < .05$.