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The family and peer origins of coercion within adult romantic relationships: A longitudinal multi-method study across relationships contexts

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Abstract

Using coercive strategies to resolve conflicts with romantic partners has toxic effects on relationships. Coercion predicts relationship dissatisfaction, instability, and intimate partner violence. The early adult romantic relationships model hypothesizes that such strategies first emerge within the family and continue to affect romantic relationships into adulthood. We tested whether adolescent antisocial behaviors and deviancy training with peers mediated between early disruptive parenting and adult romantic relationship coercion. Furthermore, we tested the impact of trauma in this longitudinal model. We studied 230 adults in committed relationships, whom we initially recruited and studied when they were age 11. We collected videotaped observations with friends (ages 16–17) and with intimate partners (ages 28 to 30). As hypothesized, disruptive parenting predicted antisocial behaviors and deviancy training with friends in adolescence, which in turn predicted coercion within intimate adult relationships. Moreover, disruptive parenting in early adolescence also directly predicted romantic partner coercion 15 years later. No significant effects were found for trauma. Findings suggest the promise of promoting healthy adult intimate relationships through early relationships with parents and friends.

Keywords

coercion; conflict; deviancy training; romantic relationships; parenting; observational studies	S

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Author Contributions

All authors developed the study concept and contributed to the study design. T. J. Dishion and S. McGill were in charge of the data collection. T. Ha and R. Otten performed the data analysis and all authors contributed to interpreting the data. T. Ha drafted the manuscript, and R. Otten and T. J. Dishion provided critical revisions. All authors approved the final version of the manuscript for submission.

Introduction

Initiating and maintaining healthy intimate relationships is an important developmental task in adulthood (Conger, Cui, Bryant, & Elder, 2000). Low-quality partner relationships result in emotional distress and increase risks for physical health problems (Holt-Lunstad, Smith, & Layton, 2010). Low-quality relationships are often coercive; containing conflicts fueled with anger, contempt, and interpersonal manipulation that become increasingly difficult for partners to resolve (Gottman, 1998). Although conflicts are common among couples, escalating patterns of coercion lead to both psychological and physical abuse, which in turn may hinder healthy family development across generations (Capaldi, Knoble, Shortt, & Kim, 2012). The most promising approach to decrease intimate partner violence is to intervene *before* the onset of coercion in romantic relationships (Whitaker et al., 2006). Prospective developmental studies can identify the risk factors of coercion in relationships, which informs preventive interventions (Lussier, Farrington, & Moffit, 2009). Therefore, we investigated the family and friendship origins of coercive romantic relationships in adulthood using longitudinal data collected in a community sample using direct observations of relationships.

Transactional models of development emphasize the long-term impact of experiences in the family of origin to social experiences in other ecological settings later in life (Sameroff, 1975). Specifically, the development of early adult romantic relationships model (DEARR; Bryant & Conger, 2002; Conger, Cui, Bryant, & Elder, 2000) hypothesized that relationships with parents would be the main predictor for the development and quality of romantic relationship. Parents who monitor and discipline their children in an effective manner promote positive family interactions and inhibits negative behaviors (Patterson, 1982), which are important for future relationships skills such as conflict management and regulation of negative affect. Indeed, Conger and colleagues (2000) showed that nurturing and involved parenting during early adolescence predicted later observed supportive and low coercive behaviors toward romantic partners in early adulthood. Even though prospective studies across developmental periods are limited, some other studies reported similar longitudinal results (Capaldi & Clark, 1998; Salvatore, et al., 2010; Waldinger & Schulz, 2016).

While direct relationships between early experiences with parents and future romantic relationship characteristics are important, it is likely that early socialization has a cascade of effects on the development of future romantic relationships (Overbeek, Stattin, Vermulst, Ha, & Engels, 2007). One important pathway might be through the development of antisocial behaviors. Disruptive parenting is characterized by parents who show less monitoring, low limit setting, and who use highly negative parenting strategies (Dishion, Ha, & Véronneau, 2012). These family relationships tend to be highly conflictual and by early adolescence parents eventually give up the parenting role (Patterson, 1982). This leaves a parenting vacuum and increases the likelihood for the development of antisocial behaviors.

Adolescent antisocial behaviors in turn increase the likelihood that adolescents will be engaged in deviant friendships. Relationships with friends become increasingly important over the course of adolescence. Adolescents select friends based on similarity and proximity. Antisocial adolescents select friends with similar antisocial characteristics; consequently,

they encourage one another to engage in antisocial and deviant acts. Previous studies found that peer socialization of antisocial behavior involves daily conversations with friends, often referred to as coercive joining or deviancy training (Dishion & Tipsord, 2011). The positive reinforcement of deviant and aggressive topics characterizes these friendship interactions. Although adolescents experience these relationships as enjoyable and rewarding, friends who engaged in high levels of deviant talk reported the highest rates of antisocial behavior (Piehler & Dishion, 2007).

Deviancy training in adolescent friendships can shape values and norms that underlie how adolescents interact with future adult romantic partners. Although limited research is available on how moment-to-moment interactions in adolescent friendships carry forward to adult romantic relationship dynamics, a handful of studies suggest that deviant friendships moderately predict relationship functioning in early adulthood (e.g., Capaldi, Dishion, Stoolmiller, & Yoerger, 2001; Shortt, Capaldi, Dishion, Bank, & Owen, 2003). In addition, Ha, Kim, Christopher, Caruthers, and Dishion (2016) found that coercive relationship talk with friends at age 16 predicted sexual coercion at ages 23 and 24 as indicated by arrest records and self-reports. It is harmful for adolescent friendships to encourage negative and objectifying discussions about romantic relationships, as these predict the use of coercive sexual strategies in adulthood. To date, it is unclear whether disruptive parenting in early adolescence predicts antisocial behaviors and deviancy training with friends in adolescence, which in turn predicts coercive strategies within romantic adult relationships.

Recently, there is increased attention to the impact of trauma on future interpersonal functioning. Trauma reflects a core socialization experience that impacts emotion regulation and is a well-established risk factor for maladaptation across a variety of domains throughout life (Cichetti & Toth, 2005). Although trauma is less investigated as a direct predictor of adult romantic relationships, it has been shown to predict involvement in highly coercive romantic relationships and friendships during adolescence (Feiring, Simon, & Cleland, 2009; Ha et al., 2016; Wekerle et al., 2009). Furthermore, experiencing trauma increases the risk of engaging in future crime and antisocial behaviors, such as deceit, substance use, aggression, and dishonesty (Lansford et al., 2002, 2007; Thornberry, Ireland, Smith, 2001). Therefore, we investigated the impact of early trauma as an additional socialization context in the development of coercion in future romantic relationships. Furthermore, we tested the effects of trauma on the development of adolescent antisocial behaviors and engagement in deviancy training with friends.

In this study, we used a longitudinal design with direct observations to study the developmental cascade for both males and females from disruptive parenting and trauma in early adolescence, to deviancy training in adolescent friendships, and to later coercion in romantic relationships during adulthood. We included adolescent antisocial behaviors as a mediator between disruptive parenting and later peer deviancy training. In addition, we explored the possibility that disruptive parenting and trauma directly predicted coercion in romantic relationships.

Method

Participants

This study was part of a larger project that implemented a randomized trial of the Family Check-Up, a family-centered intervention starting in middle school (FCU; Dishion & Kavanagh, 2003). The goal of the intervention was to reduce adolescent problem behavior and improve mental health by supporting family engagement and using assessment-driven feedback to motivate parents to improve their parenting practices, particularly in the areas of supervision, involvement, and management of their child's behavior. Half of the participants in the study sample were randomly assigned to the intervention. Although potential intervention effects were not a focus of this study, we controlled for intervention status in the results. Others have described the intervention and its effectiveness (e.g., Connell, Dishion, Yasui, & Kavanagh, 2007).

Participating youth (N = 998) were recruited in sixth grade from three middle schools in a metropolitan community in the northwestern United States and were followed across 10 waves of data collection until approximately age 28, with 83% retention. At the beginning of the study, research or school staff approached parents of all sixth-grade students in two cohorts to determine if they would want to participate; 90% consented. Research staff obtained parent consent and youth assent at each subsequent wave of data collection until youth turned 18, at which point youth provided consent directly.

For the current study, we examined data collected at seven different time points. Times 1 and 2 (T1-T2) correspond with ages 11 and 12 (sixth and seventh grade), Times 3 and 4 (T3-T4) correspond with ages 13 and 14 (eighth and ninth grade), Time 5 (T5) corresponds with ages 16 and 17 (10th and 11th grade), and Time 6 (T6) corresponds with age 19, and Time 7 (T7) corresponds with ages 28 to 30 (adulthood). We included data only from participants who were in a committed relationship at T7. If a participant reported being in a committed relationship (married, engaged, or living with a partner), we invited the participant and partner to participate together. In total, we recruited 421 couples, of which 371 completed surveys only, and 230 couples agreed to complete the T7 observational assessment. Thus, the current sample consisted of 228 heterosexual couples and 2 homosexual couples with complete data. The mean age of female participants was 28.54 (SD = 2.49); for males, mean age was 30.05 (SD = 2.76). The couples were ethnically diverse, with 49.6 % European American, 25.2 % African American, 7.4 % Latino/a, and 12.7 % mixed ethnicity. Most of the couples were in their relationships for two years or longer (88.6%) and a majority of couples was married (52.2%), with fewer reporting being engaged (16.2%) or living with their partners (28.5%). At T7, participants received \$50 for completing the survey and \$50 for engaging in the observations. This Relationship dynamics and young adult drug use and abuse study received approval from the Institutional Review Board of the Oregon Research Institute (protocol number 00000278).

Assessment Procedures

At T1 to T4, we collected data from youth via surveys administered at school in their classrooms. At T5 and T6, we collected data via surveys at home. At T5, youth also

participated in a videotaped peer interaction task with a same-sex, self-nominated friend between 14 and 21 years old with no familial relationship to the adolescent. Each dyad participated in a 45-minute, videotaped discussion covering eight topics, including planning an activity together, a current problem of the participant, a current problem of the peer, drug and alcohol use, goals for the next year, friends and peer groups, dating, and planning a party. We coded video interactions using two established coding systems. We coded each interaction in real time with the Noldus Observer Pro for duration and sequence of behaviors as defined in the Topic Code (Piehler & Dishion, 2004). The Topic Code contains two categories for talk used by members of the dyad: "following the rules" and "breaking the rules". We also coded periods in which participants were not speaking and when participants verbalized single word utterances of agreement or understanding that occurs during listening (e.g., "yeah," or "hmm").

Upon completion, coders provided global coder impressions of peer interaction dynamics (Dishion, Peterson, Piehler, Winter, & Woodworth, 2006). We randomly sampled approximately 15% of the data to assess that inter-rater agreement remained at least 80% for the real time coding ($\kappa = 0.79$) and 85% or more for global coder impressions.

At T7, we collected data from the original participants via surveys administered either through the mail or online. We invited those who were married, engaged, or living with a partner to participate together. Part of this assessment was a videotaped, couple interaction task consisting of seven topics, which included planning an activity, relationship challenges, how they met, jealousy, and substance use. Observational assessments followed standardized scripts and took place in the project office (N = 189), at the couples' residence (N = 3), or online via Zoom (N = 38). We coded couple interactions using two different coding methods. First, we evaluated videos in real time using the Relationship Affect Coding System (Peterson, Winter, Jabson, & Dishion, 2008), capturing nonverbal and verbal behaviors. Codes include negative and positive verbal expressions and directives, types of talk, interpersonal cooperation, and positive and negative contact. Second, coders provided global impressions using a coding system designed to reflect couple dynamics (Panza, Ha & Dishion, 2014). Random samples of approximately 20% of the data were used for inter-rater agreement, which remained at least at 80% for the real time coding (κ = 0.80), and 85% or more for global coder impressions.

Measures

Disruptive Parenting (T1, T2, ages 11 and 12).—We measured this latent variable by aggregating the youth reports on family relationships at ages 11 and 12, using three scales to measure family relationships (Dishion et al., 2012). *Family Conflict* included five items reflecting the frequency with which family members engaged in conflict behaviors, such as getting angry or arguing at the dinner table. We scored each item on a scale ranging from 0 (never) to 7 (more than seven times; $\alpha = .77$ and .81). *Parent Monitoring Knowledge* included five items asking the youth how often their parents knew what they were doing away from home. Items ranged from 1 (never or almost never) to 5 (always to almost always; $\alpha = .85$ and .87). *Positive Family Relations* included six items measuring supportive

family dynamics and scored on a scale ranging from 1 (*never true*) to 5 (*always true*; $\alpha = .89$ and .90). Further analyses included mean scores for each scale.

Antisocial behaviors (T1, T2 & T3, T4, ages 11 to 14).—Antisocial behaviors was a latent variable based on adolescents' self-reports of their problem behaviors during the previous month by responding to nine items at ages 13 and 14 (T3 and T4). Adolescent completed the same measure at age 11 and 12 (T1 and T2), of which the mean score was included as a control variable. This measure included antisocial behaviors, such as intentionally hitting or threatening, spending time with gang members as friends, hit someone at school, carrying weapons, and staying out all night without parental permission. Each item's score ranged from 1 (never) to 6 (more than 20 times), and the items were averaged to yield a global score of antisocial behaviors ($\alpha = .74$ and .68).

Peer deviance (T3, age 13).—This was included as a control variable and was measured at ages 13 (Dishion, Ha, & Veronneau, 2012). A mean score of the following two items was used in the analyses. Teachers rated each student on one item asking about their perception of the students' involvement with deviant peers (i.e., hangs around with troublemakers), with scores ranging from 1 (never, almost never) to 5 (always, almost always). We also used one item from the self-report survey asking participants whether they had spent time with gang members as friends during the past month, with scores ranging from 1 (never) to 20 (more than 20 times).

Deviancy training with peers (T5, age 16).—Deviancy training with peers was a latent variable based on three observational indicators: shallow talk, coercive joining, and deviancy training (Ha et al., 2016). We measured shallow talk with six global coder impressions, rating each member of the dyad to what extent they discussed superficial or objectifying qualities of a (potential) partner, made negative or abusive statements about potential dating partners, and mentioned engaging in risky sexual behavior. Each item scored on a 9-point scale (ranging from not at all to very much). A mean score of both dyad members of all items measured shallow talk ($\alpha = .81$). We based *coercive joining* on global coder impressions of each member of the dyad (Van Ryzin & Dishion, 2013). Participants were rated on dominant behavior, hostile or abusive references toward others, and obscene language and gestures. Each item had a 9-point scale (ranging from not at all to very much). Ratings from both members of the friendship dyads measured coercive joining ($\alpha = .75$). Deviancy training was coded in real time. We coded all verbal and nonverbal behaviors that were not appropriate to the setting or task or that violated community or societal rules as deviant talk, including references to all illegal activities, those causing purposeful physical or emotional harm to someone else, and behaviors that were inappropriate to this particular setting (e.g., crude gestures or songs and talking about or doing gross activities). We created a percent duration score of deviant talk, which is the percentage of the total time an individual engaged in deviant talk. The averaged percent duration scores for each member of the dyad formed an overall percent duration score for the dyad. A larger percentage of the interaction devoted to discussing deviant topics reflects more extensive deviancy within the dyad.

Retrospective recall of lifetime trauma (T6, age 19).—At age 19, participants were asked to recall their history of maltreatment from family or other sources throughout childhood (Goldberg & Freyd, 2006). A latent construct was based on the adolescent's report of the frequency of physical, emotional, and sexual abuse before the age of 18 (Ha et al., 2016). Physical abuse was measured with three questions that assessed the number of times they (1) were attacked by someone close, (2) witnessed someone very close injured by another person, and (3) witnessed someone very close attack a family member, with all three occurrences resulting in bruises, burns, or physical injury. Emotional abuse was measured with four questions that assessed the number of times (1) they were emotionally or psychologically mistreated, (2) a family member betrayed their trust, (3) they were abandoned or rejected by a parent or caregiver, and (4) they witnessed someone close committing suicide or being killed. Sexual abuse was measured with two questions that assessed the number of times (1) they were forced to have some form of sexual contact (such as touching, oral sex, or penetration) with someone close, and (2) they were forced to have some form of sexual contact with someone not close. Response categories for all questions were 0 (no abuse), 1 (once), 2 (2–5 times), and 3 (6–10 times), and a mean score was calculated for physical, emotional, and sexual abuse. Cronbach's alphas were .71, .95, and . 74 respectively.

Coercive Relationship Talk with Romantic Partners (T7, ages 28 to 30 years)

Coercive relationship talk with romantic partners included three observational indicators: Coercion, Commitment, and Negative/Hostile Interactions. Negative/Hostile Interactions represented the real time coding of negative exchanges between partners. We included all affective, physical, and verbal codes that indicate negativity, tension, and aggression, creating a percent duration score of Negative/Hostile Interactions, the percentage of the total time an individual engaged in negative interactions. Scores between partners were highly correlated (r = .59, p < .001) and aggregated across partners. In total, 8 global ratings measured coercion for each partner separately. Coercion measures the extent to which partners dismiss, invalidate, criticize, put down, or show contempt for each other. Scores between partners were highly correlated (r = .69, p < .001; $\alpha = .91$ and .89) and we thus averaged both partners' scores for further analyses. We measured commitment using global impressions of each partner and measured an orientation on the future, commitment, and trust. Each item had a 9-point scale (ranging from not at all to very much); the scores between members of the dyad highly correlated (r = .91, p < .001; $\alpha = .77$ and .78), and we thus averaged both partners' scores for further analyses. We tested if coercion, commitment, and negative/hostile interactions differed by location of assessment. Independent t-tests showed that couples who were assessed in the lab showed higher levels of coercion (M=2.90, SD = 1.33) as compared to the home assessments via Zoom (M = 2.40, SD = 1.08), t(228) = 2.25, p = .026. No significant differences were found for commitment, and negative/ hostile interactions.

Strategy for Analyses

Analyses included testing descriptive statistics for all study variables. The longitudinal mediation model with latent constructs (Figure 1) was tested using Mplus software (Version 7, Muthén & Muthén, 2015). Specifically, we tested whether disruptive parenting at T1 and

T2 would directly predict coercive relationship talk with romantic partners 17 years later at T7. Additionally, we tested indirect mediation paths in which disruptive parenting predicted antisocial behaviors at T3 and T4, which predicted deviancy training with friends at T5. In turn, deviancy training with friends was tested a direct predictor of coercive relationship talk with romantic partners at T7. We included lifetime trauma as a predictor of each concept in the longitudinal mediation model to test whether it could be an alternative explanation for coercive relationship talk in romantic relationships. In addition, we controlled for antisocial behavior at T1 and T2 and peer deviancy at T3 and T4 in the model. Based on MacCullum, Browne, and Sugawara (1996), the power to test the proposed structure equation model was more than .95. We also calculated the power for detecting the 3-path mediation model, which was close to .60 (Taylor, MacKinnon, & Tein, 2008). This is considered low to sufficient power. Therefore, the current study is underpowered to test moderation of gender and intervention. Gender and intervention status were included as baseline covariates in the model. To determine model fit, we used the Comparative Fit Index (CFI, critical value .90; Kline, 1998), Tucker Lewis Index (TLI, critical value .90, Kline, 1998), and the Root Mean Squared Estimate of Approximation (RMSEA, critical value .08; Byrne, 2001). We used the default WLSMV (Weighted Least Squares Means and Variances; Muthén, du Toit, & Spisic, 1997) estimator, which is suitable for continuous skewed data. Within the structural model, the function (MODEL INDIRECT) with a Bayesian approach was used to test the significance of mediation effects (Yuan & MacKinnon, 2009). Attrition analyses, comparing those who participated in the observation to the original sample, showed that none of the study variables were associated with missingness. Therefore, missing data was handled by full information maximum likelihood (FIML) based on the missing at random assumption.

Results

Preliminary Analyses

Table 1 displays descriptive statistics for the main study variables. Skewness (cutoff < 2) and kurtosis (cutoff < 7) were within the acceptable range for most variables, except for lifetime physical and sexual abuse, the antisocial behavior measures at T2, T3, and T4, spent time with gang members as friends at T3, deviancy training at T5, and negative/hostile interactions at T7. Multivariate outlier analyses identified no influential cases. Attritional analyses comparing the non-dating group with the dating group and comparing couples who participated in the observation and the group who declined the observation showed no significant differences on all study variables.

Correlations between the Study Variables

The bivariate correlations among variables are shown in Table 2. The indicators for disruptive parenting, lifetime trauma, antisocial behaviors, deviancy training with peers, and coercive relationship talk with romantic partners, were generally significantly correlated in the expected direction. Overall, boys were more likely to be involved in aspects of deviancy (e.g., antisocial behavior, deviancy training with peers).

Factor Loadings of the Latent Variables

Disruptive parenting consisted of three indicators, family conflict (λ = .58), parental monitoring (λ = -.73), and positive family relations (λ = -.55). The latent variable lifetime trauma consisted of the indicators physical abuse (λ = .72), emotional abuse (λ = .82), and sexual abuse (λ = .28). The antisocial behavior latent variable consisted of two indicators, antisocial behaviors at T3 (λ = .73) and at T4 (λ = .61). Three indicators were used for deviancy training with peers, shallow talk (λ = .82), rule breaking behavior (λ = .71) and deviancy training (λ = .88). Finally, coercive relationship talk with romantic partners consisted of three indicators: negative/hostile interaction (λ = .60), coercion (λ = .93), and commitment (λ = -.76). Lambda's were all statistically significant.

Structural Equation Model with Main Findings

Figure 1 shows the main findings of the analyses. The model had overall good model fit to the present data, $\chi^2(108) = 196.117$, p < 0.001, RMSEA = .060, CFI = .916, and TLI = .885. Disruptive parenting at ages 11 and 12 significantly predicted antisocial behavior at ages 13 and 14, while controlling for antisocial behavior at age 11–12. In turn, antisocial behavior predicted deviancy training at age 16, while controlling for peer deviance at age 13. As hypothesized, individuals who engaged in deviancy training were more likely to have romantic relationships characterized by coercion in adulthood at ages 28 to 30. In addition, disruptive parenting directly predicted romantic coercion in romantic relationships. Lifetime trauma was positively related to disruptive parenting and antisocial behaviors at age 11–12, but unrelated to any of the other main study variables.

With respect to the covariates (not depicted in the model), females showed lower levels of antisocial behavior at age 11-12 (r=-.22, p=0.001) and lower levels of deviancy training at age 16 (Standardized B=-0.29, p<0.001). Participants in the intervention condition showed lower levels of disruptive parenting (r=-0.19, p=0.021).

Finally, the mediation model was significant (Standardized B = -0.041, SE = 0.023, 95% CI = [-0.089, -0.001], p = 0.001) indicating that antisocial behaviors and deviancy training with friends indirectly predicted the longitudinal associations from disruptive parenting to romantic coercion with romantic partners.

Discussion

The current study investigated the family and friendship origins of coercive romantic relationships in adulthood. Using a longitudinal sample of male and female participants followed from early adolescence into adulthood, we found that disruptive parenting predicted higher levels of coercion in adult romantic relationships. However, the strongest prediction was indirect, in which disruptive parenting predicted higher levels of antisocial behaviors in early adolescence. High levels of antisocial behavior predicted future deviancy training within friendships, which in turn was associated with more use of coercive strategies with intimate partners. The longitudinal findings held after taking lifetime trauma into account. These results clearly support a developmental perspective on coercion in adult romantic relationships, with problematic relationships with peers and parents as important

socialization agents for conflict resolution and relationship functioning. Importantly, we found these results using a prospective design with multiple methods of measuring coercive relationships, which is less subjective to reporter and recall bias.

These findings support previous studies showing that individuals bring their own unique developmental histories into current partner relationships (Salvatore et al., 2011; Waldinger & Schulz, 2016). Specifically, early nurturing relationships with parents affect future partner relationships as far reaching as into late life by promoting conflict resolution skills (Bryant & Conger, 2002; Conger, Cui, Bryant, & Elder, 2000). Previous longitudinal studies showed direct associations between parent-adolescent conflict and partner relationship quality at ages 25 and 37 (Overbeek et al., 2007), and between deviant peer engagement and later aggression toward a partner and sexual coercion (Capaldi et al., 2001; Ha et al., 2016). Our results advance this important body of literature by taking into account previous relationship experiences with both parents and friends that socialize adolescents into future coercive romantic relationships. This underscores the importance of relationship experiences before people form committed relationships.

These findings are in line with transactional models of development and highlight the continuity of dysfunctional relationships across development. Transactional models of development theorize that children derive thoughts, feelings, and behaviors about their future intimate relationships via observation, imitation, and modeling of the daily interactions with parents early in life (Sameroff, 1975). In the case of disruptive parenting, families repeatedly show interactional processes consisting of negative reinforcement of children's aversive interpersonal behavior (e.g., whining, shouting, and arguing; Patterson, 1982), which increases the likelihood of the development of future coercive styles in romantic relationships (Capaldi & Clark, 1998). Our results may point toward additional mechanisms in which adolescents' antisocial behaviors contribute to the active selection of deviant relational environments. This involves daily conversations with friends about deviant and aggressive topics, which was found to be highly stable across different friends (Dishion & Owen, 2002). These friendships provide a breeding ground for the active selection of romantic partners who are similar in problem behaviors and deviancy during adolescence (Rhule-Louie & McMahon, 2007), increasing the potential network of deviant friends and future romantic partners (Kreager, Molloy, Moody, & Feinberg, 2016).

Lifetime trauma was not predictive of future coercion with romantic partners. However, physical abuse, which was part of the lifetime trauma construct, was correlated with coercive relationship talk with romantic partners. The overall low level of lifetime trauma might have limited the predictive value for future coercion in romantic relationships. This is in contrast to previous studies, which have found that trauma is predictive of antisocial behaviors, problematic peer relationships, sexual promiscuity, and intimate partner violence (Feiring, Simon, & Cleland, 2009; Ha et al., 2016; Wekerle et al., 2009). Unfortunately, lifetime trauma was measured retrospectively at age 19, a limited range of traumatic experiences was measured, and trauma was only measured from self-report versus multiple sources and informants. This likely decreased the accurate measurement of trauma (Cicchetti & Toth, 2005). Importantly, this also prohibited us from investigating heterogeneity in this sample as some participants may have successfully coped and resolved their trauma. Additionally, we

did not directly assess emotion regulation. Emotion dysregulation has been identified as an important mechanism linking trauma and interpersonal problems. For example, not being able to regulate one's own emotions or to recognize negative affect was found to predict victimization and peer rejection (Rogosch, Cicchetti, & Aber, 1995). Future studies will benefit from a stronger measurement of trauma and prospectively linking it to interpersonal functioning in romantic relationships.

This study has some methodological strengths, such as the prospective design covering two developmental periods from early adolescence to adulthood and using multiple methods to capture relationship dynamics across the family, peer, and romantic partner context. However, we also note the study's limitations. Because of the observational measurement of romantic partner coercion, we conducted these analyses on a subsample of committed couples in adulthood. Therefore, these results may not generalize to those who are unable to maintain committed relationships or who frequently transition between relationships. These groups might be at highest risk for engaging in coercive relationships. Furthermore, while friends and romantic partners of participants were included to measure dyadic coercion and deviancy training, we were unable to study the selection of friends and romantic partners, which limits conclusions about selection and influence effects. Unfortunately, this study was underpowered to test for moderation effects. A larger sample size would enable the test of gender differences and intervention effects. Additionally, the measurement of lifetime trauma was retrospective and sexual trauma showed a low factor loading on the latent construct. The measure of antisocial behaviors did not specifically distinguish between instances of dating violence or general antisocial behaviors, which could have confounded the current results. Finally, while we measured coercive interaction processes within adult couples using observations, we were unable to link this to future intimate partner violence. Coercion theory would predict that coercion between romantic partners would lead to low relationship satisfaction and a high likelihood of intimate partner violence.

Nevertheless, these results imply that disruptive parenting in early adolescence leads to coercive romantic relationships in adulthood through the development of problem behaviors and ineffective conflict management with friends. It is within the family context that adolescents learn interpersonal skills and competencies that foster success in later peer and romantic relationships. Our results underscore the importance of including familial and peer relationships into intervention efforts to promote the development of healthy and supportive adult romantic relationships.

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References

Byrne BM (2001). Structural equation modeling: Perspectives on the present and the future. International Journal of Testing, 1, 327–334. doi:10.1080/15305058.2001.9669479

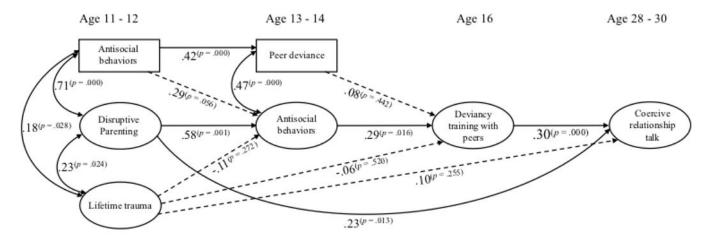
Bryant CM, & Conger RD (2002). An intergenerational model of romantic relationship development In Vangelisti AL, Reis HT, & Fitzpatrick MA (Eds.), Stability and change in relationships (pp. 57–82). New York, NY: Cambridge University Press.

- Capaldi DM, Dishion TJ, Stoolmiller M, & Yoerger K (2001). Aggression toward female partners by at-risk young men: the contribution of male adolescent friendships. Developmental Psychology, 37, 61–73. doi:10.1037/00121649.37.1.61 [PubMed: 11206434]
- Capaldi DM, & Clark S (1998). Prospective family predictors of aggression toward female partners for at-risk young men. Developmental psychology, 34, 1175–1188. doi: 10.1037//0012-1649.37.1.61 [PubMed: 9823503]
- Capaldi DM, Knoble NB, Shortt JW, & Kim HK (2012). A systematic review of risk factors for intimate partner violence. Partner Abuse, 3, 231–280. doi: 10.1891/1946-6560.3.2.231 [PubMed: 22754606]
- Cicchetti D, & Toth SL (2005). Child maltreatment. Annual Review of Clinical Psychology, 1, 409–438. http://d/oi.org/10.1146/annurev.clinpsy.1.102803.144029
- Conger RD, Cui M, Bryant CM, & Elder GH (2000). Competence in early adult romantic relationships: a developmental perspective on family influences. Journal of Personality and Social Psychology, 79, 224–237. doi:10.1037/15223736.4.1.411a [PubMed: 10948976]
- Connell AM, Dishion TJ, Yasui M, & Kavanagh K (2007). An adaptive approach to family intervention: linking engagement in family-centered intervention to reductions in adolescent problem behavior. Journal of Consulting and Clinical Psychology, 75, 568–579. doi:http://0.1037/0022-006X.75.4.568 [PubMed: 17663611]
- Dishion TJ, & Kavanagh K (2003). Intervening in adolescent problem behavior: A family-centered approach. New York, NY: Guilford Press.
- Dishion TJ, & Owen LD (2002). A longitudinal analysis of friendships and substance use: Bidirectional influence from adolescence to adulthood. Developmental Psychology, 38, 480–491. doi:10.1037/0012-1649.38.4.480 [PubMed: 12090479]
- Dishion TJ, & Tipsord JM (2011). Peer contagion in child and adolescent social and emotional development. Annual Review of Psychology, 62, 189–214. doi: 10.1146/annurev.psych. 093008.100412
- Dishion TJ, Ha T, & Véronneau MH (2012). An ecological analysis of the effects of deviant peer clustering on sexual promiscuity, problem behavior, and childbearing from early adolescence to adulthood: An enhancement of the life history framework. Developmental Psychology, 48, 703–717. doi: 10.1037/a0027304 [PubMed: 22409765]
- Dishion TJ, Peterson J, Piehler TF, Winter C, & Woodworth D (2006). Peer interaction task coder impressions questionnaire Unpublished manuscript, University of Oregon, Child and Family Center.
- Feiring C, Simon VA, & Cleland CM (2009). Childhood sexual abuse, stigmatization, internalizing symptoms, and the development of sexual difficulties and dating aggression. Journal of Consulting and Clinical Psychology, 77, 127–137. 10.1037/a0013475 [PubMed: 19170459]
- Foshee VA, Bauman KE, & Linder GF (1999). Family violence and the perpetration of adolescent dating violence: Examining social learning and social control processes. Journal of Marriage and the Family, 331–342. doi: 10.2307/353752
- Goldberg LR & Freyd JJ (2006). Self-reports of potentially traumatic experiences in an adult community sample: Gender differences and test-retest stabilities of the items in a Brief Betrayal-Trauma Survey. Journal of Trauma & Dissociation, 7, 39–63. doi:10.1300/J229v07n03_04
- Gottman JM (1998). Psychology and the study of marital processes. Annual Review of Psychology, 49, 169–197. doi: 10.1146/annurev.psych.49.1.169
- Ha T, Kim H, Christopher C, Caruthers A, & Dishion TJ (2016). Predicting sexual coercion in early adulthood: The transaction among maltreatment, gang affiliation, and adolescent socialization of coercive relationship norms. Development and Psychopathology, 28, 707–720. doi: 10.1017/S0954579416000262 [PubMed: 27427801]
- Holt-Lunstad J, Smith TB, & Layton JB (2010). Social relationships and mortality risk: a meta-analytic review. PLoS medicine, 7, e1000316. doi:10.1371/journal.pmed.1000316. [PubMed: 20668659]

- Kline RB (1998). Principles and practice of structural equation modeling. NY: Guilford Press.
- Kreager DA, Molloy LE, Moody J, & Feinberg ME (2016). Friends first? The peer network origins of adolescent dating. Journal of Research on Adolescence, 26, 257–269. doi: 10.1111/jora.12189 [PubMed: 27134511]
- Lansford JE, Dodge KA, Pettit GS, Bates JE, Crozier J, & Kaplow J (2002). A 12-year prospective study of the long-term effects of early child physical maltreatment on psychological, behavioral, and academic problems in adolescence. Archives of Pediatrics & Adolescent Medicine, 156, 824–830. doi:10.1001/archpedi.156.8.824 [PubMed: 12144375]
- Lansford JE, Miller-Johnson S, Berlin LJ, Dodge KA, Bates JE, & Pettit GS (2007). Early physical abuse and later violent delinquency: A prospective longitudinal study. Child Maltreatment, 12, 233–245. doi: 10.1177/1077559507301841 [PubMed: 17631623]
- Lussier P, Farrington DP, & Moffitt TE (2009). Is the antisocial child father of the abusive man? A 40-year prospective longitudinal study on the developmental antecedents of intimate partner violence. Criminology, 47, 741–780. doi: 10.1111/j.1745-9125.2009.00160.x
- MacCallum RC, Browne MW, & Sugawara HM (1996). Power analysis and determination of sample size for covariance structure modeling. Psychological methods, 1, 130–149.
- Muthén B, du Toit SHC, & Spisic D (1997). Robust inference using weighted least squared and quadratic estimating equations in latent variable modeling with categorical and continuous outcomes. Unpublished Technical Report. Los Angeles, CA: Muthén & Muthén.
- Muthén LK, & Muthén BO (1998-2016). *Mplus user's guide,* seventh edition. Los Angeles, CA: Muthén & Muthén.
- Overbeek G, Stattin H, Vermulst A, Ha T, & Engels RCME (2007). Parentchild relationships, partner relationships, and emotional adjustment: A birth-tomaturity prospective study. Developmental Psychology, 43, 429–437. doi:10.1037/0012-1649.43.2.429 [PubMed: 17352550]
- Panza KE, Ha T, & Dishion TJ (2014). *Romantic Relationship Rating System (RRR-s) for young adults.* Unpublished measurement instrument. Phoenix, AZ: Arizona State University.
- Patterson GR (1982). Coercive family process (Vol. 3). Eugene, OR: Castalia Publishing Company.
- Peterson J, Winter C, Jabson J, & Dishion TJ (2008). Relationship affect coding system. Unpublished coding manual, University of Oregon, Child and Family Center, Eugene, OR.
- Piehler TF, & Dishion TJ (2004). The conversation topic code. Unpublished coding manual, University of Oregon, Child and Family Center, Eugene, OR.
- Piehler TF, & Dishion TJ (2007). Interpersonal dynamics within adolescent friendships: Dyadic mutuality, deviant talk, and patterns of antisocial behavior. Child Development, 78, 1611–1624. doi: 10.1111/j.1467-8624.2007.01086.x [PubMed: 17883451]
- Rhule-Louie DM, & McMahon RJ (2007). Problem behavior and romantic relationships: Assortative mating, behavior contagion, and desistance. Clinical Child and Family Psychology Review, 10, 53–100. doi: 10.1007/s10567-0060016-y [PubMed: 17318381]
- Rogosch FA, Cicchetti D, & Aber JL (1995). The role of child maltreatment in early deviations in cognitive and affective processing abilities and later peer relationship problems. Development and Psychopathology, 7, 591–609.doi.10.1017/S0954579400006738
- Salvatore JE, Kuo SIC, Steele RD, Simpson JA, & Collins WA (2011). Recovering from conflict in romantic relationships: A developmental perspective. Psychological Science, 22, 376–383. doi: 10.1177/0956797610397055 [PubMed: 21245491]
- Sameroff A (1975). Transactional models in early social relations. Human Development, 18, 65–79. doi:10.1159/000271476
- Shortt JW, Capaldi DM, Dishion TJ, Bank L, & Owen LD (2003). The role of adolescent friends, romantic partners, and siblings in the emergence of the adult antisocial lifestyle. Journal of Family Psychology, 17, 521–533. doi:10.1037/0893-3200.17.4.521 [PubMed: 14640802]
- Taylor AB, MacKinnon DP, & Tein JY (2008). Tests of the three-path mediated effect. Organizational Research Methods, 11, 241–269. doi:10.1177/1094428107300344
- Thornberry TP, Ireland TO, & Smith CA (2001). The importance of timing: The varying impact of childhood and adolescent maltreatment on multiple problem outcomes. Development and psychopathology, 13, 957–979. [PubMed: 11771916]

Van Ryzin MJ, & Dishion TJ (2013). From antisocial behavior to violence: A model for the amplifying role of coercive joining in adolescent friendships. Journal of Child Psychology and Psychiatry, 54, 661–669. doi: 10.1111/jcpp.12017 [PubMed: 23130651]

- Waldinger RJ, & Schulz MS (2016). The long reach of nurturing family environments: links with midlife emotion-regulatory styles and late-life security in intimate relationships. Psychological Science, 27, 1443–1450. doi:10.1177/0956797616661556 [PubMed: 27634005]
- Wekerle C, Leung E, Wall AM, MacMillan H, Boyle M, Trocme N, & Waechter R (2009). The contribution of childhood emotional abuse to teen dating violence among child protective services-involved youth. Child Abuse & Neglect, 33, 45–58. doi: 10.1016/j.chiabu.2008.12.006 [PubMed: 19167066]
- Whitaker DJ, Morrison S, Lindquist C, Hawkins SR, O'Neil JA, Nesius AM, ... & Reese LR. (2006). A critical review of interventions for the primary prevention of perpetration of partner violence. Aggression and Violent Behavior, 11, 151–166. doi:10.1016/j.avb.2005.07.007
- Yuan Y, & MacKinnon DP (2009). Bayesian mediation analysis. Psychological methods, 14, 301–322. doi:10.1037/a0016972 [PubMed: 19968395]



Note. Estimates are standardized. Gender and treatment, are covariates not depicted in the model but described in the text.

Figure 1.

Standardized results of the three-path mediation analyses: antisocial behavior and deviancy training with peers as mediators of the effect of disruptive parenting in early adolescence on romantic coercion with romantic partners in adulthood. Gender and treatment are covariates and not depicted in the model.

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Table 1

Descriptive statistics for study variables

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Variables	M	SD	Skewness	Kurtosis
Disruptive Parenting		-		
Family conflict T1	1.03	1.04	1.32	1.33
Family conflict T2	0.93	0.96	1.68	3.93
Parental monitoring T1	4.15	0.87	-1.45	2.08
Parental monitoring T2	4.14	0.82	-1.01	0.37
Positive family relations T1	3.64	1.00	-0.71	-0.15
Positive family relations T2	3.46	1.05	-0.34	-0.74
Lifetime Trauma				
Physical abuse T1	0.33	0.70	2.40	4.99
Emotional abuse T1	0.41	0.56	1.53	1.74
Sexual abuse T1	0.16	0.47	3.57	13.94
Antisocial behaviors				
Antisocial behavior T1	1.39	0.51	1.91	3.49
Antisocial behaviors T2	1.37	0.48	2.26	6.99
Antisocial behaviors T3	1.34	0.46	3.21	15.39
Antisocial behaviors T4	1.33	0.43	2.35	7.52
Peer deviance				
Hangs around with troublemakers T3	0.04	1.03	1.15	0.14
Spent time with gang members as friends T3	06	0.85	3.32	11.79
Deviancy training with peers				
Shallow talk T5	4.96	2.54	1.25	1.42
Coercive joining T5	2.06	0.77	1.27	2.21
Deviancy training T5		0.10	2.46	7.65
Coercive Relationship Talk				
Negative/hostile interactions T7	0.07	0.11	2.92	10.13
Coercion T7	2.81	1.30	1.31	1.92
Commitment T7	6.76	1.50	-0.86	0.37

Table 2

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Correlations among study variables

																	ŀ	,			
	1	2	3	4	s.	9	7	»	6	10	11	12	13	14	15 10	16 17	18	19	20	21	22
1. Gender	;																				
2. Treatment	03	1																			
3. Family conflict T1	04	03	ı																		
4. Family conflict T2	00.	07	.39 **	;																	
5. Parental monitoring T1	.10	90:	29 **	08	1																
6. Parental monitoring T2	.10	13	21 **	20*	.40 **	ı															
7. Positive family relations Tl	.13	.12	40 **	24 **	.39 **	.34 **	;														
8. Positive family relations T2	90:	.03	26	35 **	.21	** 24.	.54 **	ı													
9. Physical abuse T1	12	* 41.	.03	Π.	05	09	1.1	13	1												
10. Emotional abuse T1	.05	.10	.12	Π.	09	.01	09	10	60:	1											
11. Sexual abuse T1	.05	.01	80.	.21 **	07	14	03	.05	** 81.	.27 **	1										
12. Antisocial behavior T1	22 **	03	.39 **	.16*	52 **	32 **	17*	13		60:	.18 **	1									
13. Antisocial behavior T2	***************************************	03	.38 **	** 94.	35 **	** 44	16*	27 **	.12	.12	.27 **	.58 **	1								
14. Antisocial behavior T3	16*	02	.20**	.28 **	36 **	31 **	* 41	26 **	60:	.02	°. 00:	.45 **	.45 **	1							
15. Antisocial behavior T4	-111	01	.26 **	.24 **	34 **	32 **	22*	30 **	.07	.05	03	.40 **	.46 **	* 44.	1						
16. Hangs around with troublemakersT3	12	05	80.	00	26 **	***************************************	12	13	.13	.05	80	.28 **	*81.	.30 **	.29 **						
17. Spent time with gang members T3	02	04	.21	80.	23 **	20 **	09	14	.05	.01	.07	.35 **	.34 **	.48 **	1. *81.	* 71.					
18. Shallow talk age T5	26**	.05	02	.15	18*	12	03	10	60:	02	10.	** 61.	.16*	.27 **	. 27 ** TS.	.23 ** .07	1				
19. Deviancy training T5	29	.05	07	.12	12	09	.07	07	.21 **	.07	.10	.14	80:	.29 **	.18*	.23 ** .06	5 .59 **	**			
20. Coercive joining T5	30 **	01	01	.14	07	10	02	10	.02	07	60	.16*	.14	.25 **	.24 **	.33 **03	03 .72 **	** 63	+		
21. Negative interactions T7	13*	.00	.05	00.	03	08	08	11	.21 **	.10	01	H.	.17*	03	1. ** 91.	.18 * .06	5 .19 **	60· **	.20 **	ı	
22. Coercion T7	05	80.	.12	.10	13	***************************************	06	17 *	* 41.	80.	.05	** 81.	.17*	Ξ.	.18	.27 ** .07	7 .26 **	** .11	.29 **	.57 **	1

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	23. Commitment T7	Note.

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*	<i>b</i> <	