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**INDUCING JEALOUSY AND INTIMATE PARTNER VIOLENCE
AMONG YOUNG ADULTS**

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Inducing Jealousy and Intimate Partner Violence among Young Adults

Abstract

Jealousy is a robust predictor of intimate partner violence; yet few studies have explored the ways in which individuals induce jealousy in intimate relationships. Using data from the Toledo Adolescent Relationships Study (TARS), we examined correlates and consequences of jealousy induction – the occurrence whereby individuals intentionally seek to incite jealousy from their intimate partners. Drawing on data from 892 young adults, we found that in addition to qualities of the intimate relationship, including control attempts and verbal conflict, being male and familial background characteristics (i.e., family structure, harsh parenting, and parental support) significantly influenced individuals' engagement in jealousy induction. Jealousy inducing behaviors also contributed to the odds of experiencing intimate partner violence after accounting for familial background characteristics, intimate relationship qualities and sociodemographic factors (i.e., age, race, gender). We discussed potential mechanisms linking these relationship dynamics and suggestions for future research.

Key words: intimate partner violence, jealousy induction, family background, relationship qualities, gender

Jealousy Induction and Intimate Partner Violence among Young Adults

Experiencing jealousy is common for individuals in intimate relationships, and may be particularly intense during adolescence and young adulthood when many individuals have more limited relationship experience (Attridge, 2013; Pines & Aronson, 1983) and relationship instability is high (Halpern-Meehin, Manning, Giordano, & Longmore, 2013). Moreover, feeling jealous is associated with perpetrating intimate partner violence (Caldwell, Swan, Allen, Sullivan, & Snow, 2009; Fenton & Rathus, 2010; Foran & O'Leary, 2008). Given its association with violence and other potentially deleterious outcomes including fostering doubt and uncertainty about the relationship's future (Bevan, 2004, 2011; White, 1980), it is often presumed that individuals wish to avoid making their partners jealous (Bevan, 2004; Caldwell et al., 2009). Yet, social psychologists and interpersonal communications researchers (e.g., Fleischmann, Spitzberg, Andersen, & Roesch, 2005; Mattingly, Whitson, & Mattingly, 2012; White, 1980) have found that the majority of individuals in intimate relationships, between 60% and 84%, on at least one occasion, have intentionally induced jealousy by talking about a past intimate partner, flirting with or dating others, or spending significant time with others while excluding intimate partners (Brainerd, Hunter, Moore, & Thompson, 1996; Cayanus & Booth-Butterfield, 2004; Sheets, Fredendall, & Claypool, 1997). Thus, although the prevalence of jealousy induction has been examined, research on predictors and consequences of jealousy induction is more limited.

Moreover, much of the prior research on jealousy induction has utilized small samples, usually college students (e.g., Brainerd et al., 1996; Cayanus & Booth-Butterfield, 2004; Fleischmann et al., 2005). Although the quality of the intimate relationship and other dynamics are undoubtedly central, individuals' familial and sociodemographic backgrounds may also be associated with jealousy induction. Yet, apart from gender, sociodemographic correlates largely have not been examined. Further, although the association between jealousy, more generally, and intimate partner violence is well established in the literature (e.g., Babcock, Costa, Green, & Eckhardt 2004; Caldwell et al., 2009; Fenton & Rathus, 2010; Foran & O'Leary, 2008), the various ways in which jealousy *induction* affects intimate violence experiences largely has been unexplored.

In the current study, we used data from the Toledo Adolescent Relationships Study (TARS) to examine whether (a) relational, familial background, and sociodemographic factors were associated with jealousy induction, and (b) jealousy induction was associated with self-reports of intimate partner violence among young adult women and men (n = 892, ages 22-29). Building on prior research, relationship factors expected to increase the odds of jealousy induction included control attempts, verbal conflict, infidelity, and a lack of perceived partner alternatives. Second, because individuals may endorse negative beliefs about intimate relationships learned in the family of origin, we considered whether familial background characteristics including harsh parenting and feelings of parental support were associated with jealousy induction. Third, we assessed whether sociodemographic background including gender, educational level, and employment status were associated with jealousy-inducing behaviors. Next, we examined the effect of jealousy induction on partner violence, controlling for relationship factors, familial background, and sociodemographic characteristics. This allowed us to assess whether jealousy induction was an independent correlate of partner violence or a component of a larger package of characteristics reflecting poor quality relationships.

Jealousy Induction

Jealousy occurs when one or both partners feel that their self-esteem, or the quality or continued existence of their intimate relationship has been threatened (White, 1980). Jealousy often revolves around concerns of partner infidelity and unavailability associated with perceived flirting or spending extended amounts of leisure time away from an intimate partner (Cyanus & Booth-Butterfield, 2004; Fleischmann et al., 2005; Whitson & Mattingly, 2010). Jealousy leads to feelings of uncertainty about the partner and the relationship, which may lead to further distress, withdrawal, conflict, and aggression (Bevan, 2004, 2011; Fleischmann et al., 2005; Guerrero, Hannawa, & Babin, 2011). Feeling hurt and angry over their partners' behaviors, individuals may intentionally induce jealousy for purposes of revenge or punishment (Whitson & Mattingly, 2010).

Yet, under some conditions, individuals' jealous feelings, expressions, and actions may lead to improvements in relationships (Fleischmann et al., 2005; Guerrero et al., 2011; Sheets et al., 1997). For example, one potential response to jealousy is constructive communication, such as compensatory restoration, which includes spending more time with the jealous partner, or integrative communication, such as increased expressions of love and affection. Both partners may also engage in more frequent discussions of personal feelings and understandings about the specific jealousy-inducing situation, as well as the relationship as a whole (Guerrero et al., 2011). Thus, individuals may involuntarily experience feelings of jealousy, but they may also intentionally induce jealousy believing this strategy will help to retain the partner as well as improve the relationship (Sheets et al., 1997; Whitson & Mattingly, 2010).

Although explaining underlying motivations are critical for conceptualizing jealousy induction, it is also important to understand relationship qualities, which may lead intimate partners to view inducing jealousy as a viable relationship dynamic. Researchers have found that individuals are most likely to induce jealousy when their expectations for equity, such as equal expressions in caring are not met, or when they experience especially strong attachment toward a partner (Cyanus & Booth-Butterfield, 2004; Goodboy, Horan, & Booth-Butterfield, 2012). Jealousy induction occurs most often in relationships of shorter duration that are characterized by high levels of conflict (e.g., frequency of fighting), lower levels of affection (e.g., saying "I love you" and complimenting partner), perceived relationship alternatives (e.g., feeling as if needs for intimacy and companionship could be fulfilled by an alternative relationship) and greater attachment avoidance and anxiety (e.g., pulling away from partner or feeling as if partner does not care) (Cyanus & Booth-Butterfield, 2004; Goodboy et al., 2012; Mattingly et al., 2012; Whitson & Mattingly, 2010). Sexual infidelity is intuitively important because of its association with feeling jealous (Cyanus & Booth-Butterfield, 2004; Fleischmann et al., 2005; Whitson & Mattingly, 2010), but has not been examined as a correlate of jealousy induction. Sexual infidelity is important to examine because it illustrates that jealousy induction may be a response to objective behaviors that are detrimental to the relationship.

Regarding sociodemographic background, apart from gender differences (women compared with men are found to induce jealousy at higher rates) (e.g., White, 1980; Whitson & Mattingly, 2010), sociodemographic variation in jealousy-inducing behaviors remains largely unexplored. Yet, because jealousy induction is only one of several ways in which jealous emotions may be experienced in intimate relationships, correlates found in prior work to be associated with jealousy and infidelity, more generally, are examined. For instance, younger individuals were more likely to report jealousy (Pines & Aronson, 1983); and employed individuals, those whose parents were never married, and African American and Hispanic compared with European American individuals, were more likely to be sexually non-exclusive in their intimate relationships (Allen et al., 2005; Maddox et al., 2013), which can lead to jealousy. Additionally, in past studies and reviews of the literature, scholars have examined education, parenthood, and union status (i.e., dating, cohabiting or married) as correlates of sexual infidelity (Allen et al., 2005; Mark, Janssen & Milhausen, 2011; Treas & Giesen, 2000), although findings are inconsistent. In a systematic review, Blow and Hartnett (2005) concluded that the presence of children may increase relationship investment and therefore reduce the likelihood of infidelity. Yet, they also reported that children may increase relationship stress and lower relationship satisfaction, both of which led to increased odds of sexual infidelity. Overall then, given the consistent relationship between perceived or actual infidelity and feelings of jealousy, sociodemographic correlates may also aid in the prediction of jealousy induction.

Finally, individuals' family backgrounds may be associated with jealousy induction (Mattingly et al., 2012; Whitson & Mattingly, 2010), jealousy in general (Sharpsteen & Kirkpatrick, 1997), and overall relationship quality (Collins & Read, 1990; Longmore et al., 2014; Simpson, 1990). Relevant to the current examination, Mattingly and colleagues (2012) found that negative attachment styles reflected in anxiety over abandonment and discomfort with closeness are key components in the prediction of jealousy induction and also have their roots in the family of origin. Attachment styles result from early life experiences with primary caregivers, including learning that significant others are predictable and trustworthy, that the self is lovable and competent, and that relationships with significant others are

rewarding and worthwhile (Bowlby, 1982). However, when primary caregivers do not socialize children in a nurturing manner, children's social skills in initiating and maintaining healthy relationships with others are inhibited (Dutton, 1994; Dutton, Starzomski, & Ryan, 1996). As a result, such individuals may experience higher levels of relationship conflict, negative communication styles, partner mistrust, fears of partner abandonment, violence, and overall decreased relationship satisfaction (Busby, Holman, & Walker, 2008; Wolf & Foshee, 2003; Wolfe, Wekerle, Scott, Straatman, & Grasley, 2004). To account for experiences with primary caregivers, we included measures of harsh parenting and parental support during adolescence.

Current Study

Previous literature has identified a number of relationship dynamics that are key predictors of intimate partner violence. These factors include jealousy (Caldwell et al., 2009; Foran & O'Leary, 2008; Giordano, Soto, Manning, & Longmore, 2010), control (Babcock, Costa, Green & Eckhardt, 2004; Caldwell et al., 2009), verbal conflict (Giordano et al., 2010; Hamby & Sugarman, 1999), and infidelity (Fenton & Rathus, 2010; Giordano et al., 2010). Yet, to date, whether these relationship dynamics increased the likelihood of jealousy induction largely has remained unexplored. For instance, although studies of jealousy often included suspicions or actual knowledge of partner infidelity (Caldwell et al., 2009), as well as irritability over the time a partner spends with same- or opposite-sex others (Foran & O'Leary, 2008), the processes by which jealousy comes to exist are not clear. More specifically, jealousy may be due to partners' objective behaviors such as infidelity or, conversely, it may be intentionally induced by individuals aiming to seek revenge, punish their partner, retain their partner, or even improve the relationship.

In the present study, we hypothesized that intentional inducement of jealousy increased violence in individuals' intimate relationships. Additionally, we explored whether jealousy induction was correlated with partner violence both before and after additional negative relationship dynamics were taken into account. Finally, we analyzed whether jealousy induction continued to affect individuals'

likelihood of self-reported partner violence once harsh parenting, parental support (e.g., Dutton et al., 1996; Palazzolo, Roberto, & Babin, 2010; Renner & Whitney, 2012; Simon & Furman, 2010) and sociodemographic factors were taken into account. We also sought to add to the literature on close relationships by examining whether sociodemographic factors and individuals' familial backgrounds added to the likelihood of engaging in jealousy inducing behavior. Likewise, we placed particular emphasis on sexual infidelity in predicting jealousy induction, a construct often unexamined in previous literature but which is known to be associated with jealous emotions (Cayanus & Booth-Butterfield, 2004; Fleischmann et al., 2005; Whitson & Mattingly, 2010). In doing so, the present study improved our understanding of one potential way in which jealous emotions and expressions come to exist in intimate relationships (i.e., through individual characteristics and familial processes or qualities of the current intimate dyad) and, in turn, how jealousy affected experiences of intimate violence.

Data

The TARS study is based on a stratified random sample of 1,321 adolescents in the 7th, 9th, and 11th grades in 2001 and their caregivers in Lucas County, Ohio. Devised by the National Opinion Research Center, the stratified random sample included over-samples of African American and Hispanic adolescents, and school attendance was not a requirement for inclusion in the study. The geographic area of Lucas County is similar to U.S. Census data (2010) on the national population with regard to race and ethnicity, family income, and education.

Data were originally collected to investigate the influence of parents, peers, and intimate partners on adolescents' and young adults' intimate and sexual behaviors. At the first interview (2001), individuals were, on average, 15 years of age. The second interview was conducted in 2002, the third interview in 2004, fourth interview in 2006-2007, and fifth interview in 2011-2012, when individuals were, on average, 16, 18, 20, and 25 years old, respectively. By the fifth interview, there were 1,021 individuals, with a retention rate of 77 percent of the first interview. Our analyses were based primarily on the fifth interview, but we drew on earlier interviews to establish socioeconomic and familial background.

The analytic sample included all individuals reporting on a current or recent relationship (i.e., “non-daters” were dropped from the analyses, $n = 94$). Among the 927 respondents who were in a current or recent relationship, we excluded 24 with missing data on either dependent variable (i.e., jealousy induction or partner violence) as well as those missing data on more than half the items used to construct familial backgrounds and intimate relationship qualities ($n = 11$). The final analytic sample included 892 respondents (402 male and 490 female respondents).

Measures

Dependent variables. *Jealousy induction*, a five item scale, asked individuals how often they behaved in the following ways to make their partners jealous: “I tell him [her] someone talked to me or tried to get my number,” “I leave or post pictures of me with other people for him [her] to find,” “I talk about how attractive other people are,” “I talk about past intimate relationships,” and “I compare him [her] to past partners.” Response categories ranged from 1 “never” to 5 “very often” and were combined for a range of 5-25 ($\alpha = 0.84$).

Intimate partner violence with the current or recent partner, included 24 items from the Revised Conflict Tactics Scale (CTS2) (Straus, Hamby, Boney-McCoy, & Sugarman, 1996). In the present study we emphasized any violence, so 12 items assessed perpetration and 12 assessed victimization experiences. If respondents reported experiencing any of the 24 items, they were coded as 1, and 0 otherwise. Only those individuals reporting having never experienced any form of partner violence in the relationship (76% of the sample) were coded as 0.

Demographic characteristics. *Age*, measured in years at the time of the fifth interview, ranged between 22-29 years, with a mean 25.4. *Gender* was dichotomized with male coded as 0, and female coded as 1. *Race*, measured with two dichotomous variables, included African American and Hispanic, with European American serving as the comparison category. *Gainful activity*, assessed educational and employment status (Alvira-Hammond, Longmore, Manning, & Giordano, 2014), was coded as 1 if the respondent was either employed full-time or enrolled in school at the time of the fifth interview, and 0

otherwise. *Parental status* was a dichotomous variable coded 1 indicating that the individual had at least one child, and 0 otherwise.

Familial background. *Family structure* during adolescence, measured with three dichotomous variables included single-parent, stepparent, and other family type, with two biological parents serving as the comparison category. *Harsh parenting* was assessed at the first interview using one item, which asked individuals, “When you and your parents disagree, how often do they push, slap, or hit you?” Response categories ranged from 1 “never” to 6 “two or more times a week”. However, due to the skewed distribution of responses, in which the majority (78%) of individuals reported no physical maltreatment by their parents, the measure was dichotomized with 1 indicating that individuals experienced harsh parenting at least once, and 0 otherwise.. *Parental support* during adolescence was measured by individuals’ level of agreement to six statements: “My parents give me the right amount of affection,” “My parents trust me,” “My parents sometimes put me down in front of other people” (reverse coded), “My parents seem to wish I were a different type of person” (reverse coded), and “I feel close to my parents.” Response categories ranged from 1 “strongly disagree” to 5 “strongly agree.” Scores ranged from 5-25 ($\alpha = 0.83$).

Relationship qualities. *Duration* assessed relationship length, which ranged from less than one year to 14 years. *Current relationship* was a dichotomous variable indicating whether the individual reported on a current or most recent relationship, with current coded as 1, and most recent coded as 0. *Union status* was measured by two dichotomous variables, cohabiting and married, with individuals in dating relationships serving as the comparison group. *Partner control attempts* was measured by individuals’ level of agreement with two statements: “X sometimes wants to control what I do,” and “X always tries to change me.” Responses ranged from 1 “strongly disagree” to 5 “strongly agree” and were combined for a range of 2-10 ($\alpha = 0.85$). *Individual control attempts* measured individuals’ level of agreement with how often they try to control or change their intimate partner, with a possible score of 2-10 ($\alpha = 0.79$). *Verbal conflict* was based on three items assessing the frequency of verbal conflict present in the relationship: “How often do you and X have disagreements or arguments,” “...yell or shout at each

other,” and “...have disagreements about your relationship?” Response categories ranged from 1 “never” to 5 “very often” and were combined for a range of 3-15 ($\alpha = 0.89$). *Lack of perceived partner alternatives* was based on individuals’ level of agreement to the following statements: “I could find another guy/girl as good as X is,” and “It’s likely there are other guys/girls I could be happy with.” Responses ranged from 1 “strongly disagree” to 5 “strongly agree” and were combined for a range of 2-10 ($\alpha = 0.79$). *Partner infidelity* was assessed by how often the individual and partner fought because “He/she cheated on me” and “I thought he/she cheated on me”; how often their partner “threatened to have an affair with someone else” and “has seen another guy/girl”; and how often the individual “thinks X was physically involved with other guys/girls.” Responses to all five items ranged from 1 “never” to 5 “very often” and were combined for a possible range of 5-25 ($\alpha = 0.83$). Parallel questions were used to measure *Individual infidelity*, with a range of 5-25 ($\alpha = 0.74$).

Analytic Strategy

In the first analysis, we used ordinary least squares (OLS) regression to examine the sociodemographic, familial and relational correlates of inducing jealousy in the context of an intimate relationship. We estimated zero-order models, followed by a series of nested multivariate models. The first multivariate model regressed jealousy induction on sociodemographic measures (i.e., age, gender, race, gainful activity, and parental status), and the second model added familial background factors (i.e., family structure, harsh parenting, and parental support during adolescence). Models 3 and 4 then included qualities of the intimate relationship. Partner and individual infidelity were added in a separate model from the other relationship qualities because we expected that jealous behaviors would be most strongly correlated with infidelity.

In the second analysis, we used logistic regression to assess the association of jealousy induction on the odds of experiencing partner violence, once sociodemographic characteristics, familial background factors, and other qualities of the intimate relationship have been taken into account. We estimated zero-order models, followed by a series of nested multivariate models. Variables were entered in the same

order as the OLS regression predicting jealousy induction, with the inclusion of jealousy induction as an additional independent variable. The first model regressed partner violence on sociodemographic characteristics, and model 2 added the key independent variable, jealousy induction. The third model added familial background factors, followed by the inclusion of intimate relationship qualities in models 4 and 5 to assess whether the initial impact of jealousy induction on partner violence was further affected by the inclusion of these two domains.

Results

In Table 1, we presented the means and percentages of the total sample for each of the independent and dependent variables. Individuals' average age was 25.4 years old, and slightly more than half of the respondents were female. Approximately two-thirds of the sample was European American, gainfully active at the time of the interview, and just over 40% were parents. In regard to individuals' familial backgrounds, approximately 54% were raised in two-biological parent households, and just over 22% reported experiencing harsh parenting. On average, respondents also reported a high degree of perceived parental support. Turning to qualities of the intimate relationship, individuals reported on relationships that were, on average, 2.72 years in length, with a slight majority reporting on dating unions (46%) compared with cohabiting (32%) and married unions (23%). On average, respondents reported relatively high quality relationships, rating such negative qualities as control attempts, conflict and infidelity relatively low. Finally, in regard to the two dependent variables, respondents reported, on average, relatively few jealousy inducing behaviors, and approximately 24% of the sample reported experiencing any partner violence in their intimate relationship.

[Insert Table 1 about here]

We presented the OLS regression of individuals' self-reported jealousy induction in Table 2. The zero-order models indicated that, consistent with prior research, relationship-specific factors were significant correlates of jealousy induction and operated in the expected directions. Control attempts, partner and individual infidelity, and verbal conflict were associated with jealousy inducing behaviors at

the bivariate level. Perceiving a lack of partner alternatives was associated with fewer jealousy inducing behaviors. Married and cohabiting individuals, compared with those in dating relationships, and those in longer relationships also reported fewer jealousy inducing behaviors. Individuals exposed to harsh parenting and lower levels of parental support reported a higher frequency of jealousy inducing behaviors. Likewise, individuals raised in family structures other than two biological parents reported higher frequency of jealousy induction. Finally, women and individuals who were gainfully active (employed full-time or enrolled in school) reported lower frequency of jealousy induction; and African American, compared with European American respondents, reported increased levels of jealousy induction.

[Insert Table 2 about here]

Turning next to the nested models, in model 1 we regressed jealousy induction on individuals' sociodemographic characteristics. The results remained similar to the zero-order models. Specifically, women, compared to men, experienced a 0.555 unit decrease in jealousy induction, and African American, compared with European American, individuals experienced a 1.180 unit increase in jealousy induction. Being gainfully active, compared with those individuals who were neither employed or going to school full-time, was associated with fewer jealousy inducing behaviors.

In models 2 and 3 we examined whether familial and relational factors affect jealousy induction, controlling for sociodemographic characteristics. Individuals raised in a stepparent family, compared with a two biological-parent family, experienced a 0.675 unit increase in jealousy induction. Individuals who reported harsh parenting, compared with those who reported no harsh parenting, experienced a 0.457 unit increase ($p < 0.10$) in frequency of jealousy induction. Each unit increase in parental support decreased jealousy inducing behaviors by 0.120 units. However, once qualities of individuals' intimate relationships were included in model 3, the effect of harsh parenting was reduced to nonsignificance. Specifically, the inclusion of individual control attempts ($\beta = 0.381, p < 0.001$) and the presence of verbal conflict in the relationship ($\beta = 0.262, p < 0.001$) significantly reduced the association between familial background factors and jealousy induction. Yet, even with the addition of intimate relationship qualities, the effect of parental support remained a significant and negative predictor of jealousy inducing behaviors ($\beta = -0.065,$

$p < 0.05$) Partners' control attempts and individuals' lack of perceived partner alternatives were not significant correlates of jealousy inducing behaviors in the multivariate analyses. Individuals in cohabiting and married unions, compared to dating unions, reported fewer jealousy inducing behaviors, at 0.579 and 0.969 units, respectively. Relationship duration and whether the respondent reported on a current or most recent relationship were not significant predictors of frequency of jealousy inducing behaviors. Finally, the inclusion of familial and relationship factors reduced the effects of being African American and gainfully active to nonsignificance.

The final model, model 4, added both partner and individual infidelity. As noted, these two relationship qualities were added separately as infidelity was expected to be more strongly correlated with jealousy induction than other characteristics of the intimate relationship. Both partner and individual infidelity were significant and positive predictors of jealousy induction. Each unit increase in partner's infidelity led to a 0.146 unit increase in frequency of jealousy inducing behaviors, and each unit increase in respondent infidelity increased the frequency of jealousy inducing behaviors by 0.148 units.

In Table 3 we presented the logistic regression of partner violence. Consistent with prior research, zero-order results indicated that African American and Hispanic, compared with European American individuals, were significantly more likely to report partner violence. Individuals not raised in two biological parent households, and those who were parents reported a significantly higher risk of violence in their intimate relationships. Respondents who were gainfully active, being either enrolled in school or working full-time, were significantly less likely to report any partner violence. Individuals in relationships of longer duration and those who were cohabiting were more likely to report partner violence. The relationship indicators were associated with IPV. Jealousy induction, partner and individual control attempts, verbal conflict, lack of perceived partner alternatives, and both partner and individual infidelity were significant correlates of partner violence at the zero-order level. Finally, harsh parenting increased the odds of partner violence, and each unit increase in parental support decreased such odds. There was no statistically significant difference in partner violence between those individuals reporting on a current versus most recent relationship, nor those in dating versus marital relationships.

[Insert Table 3 about here]

Turning to the multivariate results, in model 1 we regressed partner violence on sociodemographic characteristics. Similar to the zero-order results, both African American and Hispanic individuals' risk of experiencing violence in their intimate relationships was significantly higher than European Americans, at 74% and 100%, respectively. Gainful activity was a negative correlate of partner violence, whereby individuals who were enrolled in school or employed full-time were about 42% less likely to report violence in their intimate relationships. Finally, parenthood increased the risk of partner violence by about 71%.

In model 2 we added the key independent variable, jealousy induction. Jealousy induction was a significant predictor of partner violence. Specifically, each unit increase in jealousy induction increased individuals' odds of experiencing any partner violence by approximately 25%. Familial background characteristics were added in model 3 to test the hypothesis that familial upbringing would influence partner violence. Unlike the zero-order findings, only living in a single-parent household, in comparison to a two-biological parent household, was a significant predictor of intimate partner violence in multivariate analyses (OR = 1.956, $p < 0.001$). Conversely, harsh parenting, parental support, and stepparent and other family types were not significant predictors of intimate violence with the inclusion of jealousy induction and other demographic correlates in the model.

To test whether the effect of jealousy induction on partner violence acted independently of other relationship qualities, respondents' relationship qualities were added in models 4 and 5. Partner and individual infidelity were reserved for the final model. Each unit increase in partner control attempts increased the risk of any partner violence by about 23%, and individuals' own control attempts increased the risk of any partner violence by approximately 14%. Each unit increase in verbal conflict increased the odds of any intimate relationship violence by 22%. Finally, those in cohabiting versus dating unions were more likely to report experiencing any partner violence, at approximately 90%. Reporting on a current versus most recent relationship, being in a married versus dating union, or perceiving a lack of partner alternatives were not significant correlates of partner violence reports. Most noteworthy, however, is that

jealousy induction remained a significant ($p < 0.001$) correlate of any partner violence, even with the inclusion of these additional relationship qualities

In the final model, model 5, we included partner and individual infidelity to test whether these two constructs served to mediate the effect of jealousy induction on partner violence. Partner infidelity was a significant correlate of intimate partner violence ($p < 0.001$), whereby each unit increase in partner infidelity led to 18% higher odds of reporting any partner violence. Individual infidelity, on the other hand, was not a statistically significant correlate of any partner violence. Again, even with the inclusion of these additional relationship qualities, jealousy induction remained a significant predictor of violence in individuals' intimate relationships. Finally, in examining the remaining covariates in model 5, we found that individuals living in a single-parent or "other" family type during adolescence, compared to those in two biological parent households, were at an increased risk of partner violence experiences, as were those in cohabiting versus dating relationships. Gainful activity remained a significantly negative correlate of partner violence.

Conclusion

The results of our analyses illustrated two significant findings in regard to jealousy induction. First, when analyzing individuals' jealousy inducing behaviors, it is important to examine factors that are unique and internal to the intimate dyad, as well as factors that are external to the intimate relationship. Consistent with prior research examining relationship-specific dynamics (Cyanus & Booth-Butterfield, 2004; Goodboy et al., 2012; Mattingly et al., 2012; Whitson & Mattingly, 2010), results from our first analysis indicated that individuals in relationships marked by lower relationship quality, as evidenced by control attempts and verbal conflict, were significantly more likely to engage in jealousy inducing behaviors. Similarly, relationships characterized by lower levels of commitment, as evidenced by a dating versus cohabiting or marital status, were also characterized by greater frequency of jealousy induction.

We also found that both partner's and the individual's own infidelity was positively associated with greater frequency of jealousy inducing behaviors, controlling for other relationship qualities.

In addition to these relationship-specific factors, our results demonstrated that jealousy-inducing behaviors were linked to individuals' family experiences. In particular, individuals who lived in a family structure other than two biological parent families, and those who reported lower levels of parental support during adolescence, were more likely to report greater frequency of intentionally inducing jealousy with their intimate partners. Thus, although qualities of the intimate relationship were key in precipitating jealousy concerns, individuals reared by dysfunctional parenting practices may be especially sensitive to these concerns. Such a finding is also critical in building on intergenerational transmission literatures in regard to relationship discord. Often, this literature is narrowly focused on direct transmission processes in which the instability adult children experience in their own relationships can be conceptualized as a direct imitation of unstable relationship characteristics demonstrated by parents. Yet, as evidenced here, this process may also be indirect. Specifically, individuals' perceptions that their parents do not accept and support them may lead individuals to view relationships as less rewarding and trustworthy. It is these negative views, which then lead to relationship instability, in the form of jealousy induction, conflict and even violence.

Although the current study focused only on adolescent familial background characteristics in influencing jealousy induction and violent experiences within intimate relationships, this pattern of results could be extended to consider how family interactions in adulthood influence well-being (Johnson, Giordano, Manning, & Longmore, 2011). Further future research could explore the importance of peers. We know that peer relationships are central to child and adolescent development (McLean & Jennings, 2012; Newman, Lohman, & Newman, 2007; Waldrip, Malcolm, & Jensen-Campbell, 2008), and that adolescent friendship quality, as measured by open communication, presence of conflict and feeling accepted by friends, is a significant correlate of adolescent dating violence (Linder & Collins, 2005). Prior research also demonstrates that there is often continuity in the types of relationships formed within familial and peer domains, where individuals reared in hostile families are likely to form friendships with

similarly hostile peers (Cook, Buehler, & Fletcher, 2012). Yet, it is not entirely implausible that individuals with dysfunctional parental backgrounds could go on to develop prosocial relationships within the peer domain, learning healthy relationship maintenance strategies as a result. This suggests that an incorporation of friendship qualities may explain further variation in individuals' jealousy inducing behavior. Similarly, in developing more multifaceted portraits of attachment styles and their influence on the initiation and maintenance of healthy relationships, it may be wise to also explore such domains as the school and workplace environments, the larger neighborhood context, and any other contextual domain where individuals may develop meaningful relationships with others.

Gender is a significant correlate of jealousy induction in individuals' intimate relationships. Specifically, the results presented here indicate that males are significantly more likely to induce jealousy than are females. Although this finding does run counter to past studies which have incorporated gender in their analysis of jealousy induction (White, 1980; Whitson & Mattingly, 2010), it is noteworthy that this gender difference only holds when all five items are included in our measure of jealousy induction. In particular, when the item, "I talk about how attractive other people are" is removed from the scale, there are no significant differences between males' and females' self-reported jealousy induction. Such discrepant findings lead to the conclusion that the types of jealousy inducing strategies most often utilized in intimate relationships may be split across gender lines. Future research is needed to further explore these variations and understand the potential mechanisms by which males and females are motivated to choose certain jealousy induction behaviors over others.

A key finding in the present study is that jealousy induction is a significant and independent correlate of violence experienced within intimate relationships, even after accounting for traditional family-of-origin characteristics, a variety of additional relationship qualities, and both individual- and relationship-level controls. In other words, although jealousy induction is undoubtedly part of a wide array of negative constellations present in intimate relationships, it continues to remain significant even when multiple other characteristics of the intimate dyad and individual are taken into account. This finding thus builds on prior research examining the link between jealousy and partner violence by

establishing one of the potential ways in which such jealousy arises in the first place. Although jealousy is often the result of partners' objective behaviors, such as infidelity, within a relationship, our study also supports the possibility that jealousy may be intentionally brought into the relationship. Such is especially likely to occur when individuals face additional barriers to healthy relationships, such as the presence of verbal conflict and control attempts, fear of partner abandonment and availability, and general issues with trust and attachment. As such, individuals may induce jealousy due to the belief that jealous emotions will result in partner retention and relationship improvement, even if, in reality, their relationships may ultimately suffer from such strategies. Conversely, jealousy induction may be a retaliatory response to partners' objective and hurtful misconduct in the relationship. The potential of this idea, and its relationship to partner violence, may be extended in future research to look at individuals' underlying motives for jealousy inducing behaviors. For instance, it may be that individuals engaging in jealousy induction for purposes of revenge or punishment are also those most likely to experience violence in their relationships due to more aggressive or adverse ways of handling interpersonal difficulties. Conversely, for individuals hoping to retain their partner or improve the relationship, it may be that jealousy induction leads to partner violence via partners' negative reactions to elicited feelings of jealousy. These potential pathways also suggest the usefulness of longitudinal data in future research in order to better parse out the causal nature of the relationship between jealousy induction and partner violence.

Although this study moves our understanding of intimate partner violence forward, a limitation of the current study is the regional nature of the sample, although basic comparisons indicate that the large metropolitan area we focused on is similar to the U.S. as a whole on several basic demographic characteristics, including estimates of race and ethnicity, family status and income, and education. A second limitation is that individual reports were used for partner violence, encompassing instances of both perpetration and victimization, as well as for all of the relationship qualities measured in the present study. Although issues of under- or over-reporting are possible with any self-reported data, this may be especially the case here given the absence of partner reports in the current dataset. Finally, given that the current study utilizes cross-sectional measurements of jealousy induction and partner violence, we cannot

make causal inferences. Although intuitively jealousy induction would seem to be a likely precursor to partner violence, it may also be that individuals engage in jealousy induction for purposes of revenge or punishment after experiencing violence with their intimate other. Thus, future research efforts should replicate the findings presented here with nationally representative, longitudinal or couple-level data if feasible.

Although continued research is needed to further understand the precursors and consequences of jealousy induction in intimate relationships, the current study makes several strides to improve upon past research efforts. Through the inclusion of individual sociodemographic and familial background characteristics, the results presented here indicate that factors external to the intimate dyad influence individuals' propensity for engaging in jealousy inducing behaviors. The current study also contributes to previous research concerning the relationship between jealousy and partner violence, establishing that one of the potential ways jealousy may arise in intimate relationships is through intentional inducement by one or both partners. Such findings provide support for further examination of the various ways in which jealousy occurs between intimate partners and how, in turn, this jealousy leads to the manifestation of physical violence.

Table 1: Descriptive Statistics for Independent and Dependent Variables

	Means and Percentages	Ranges
Individual Characteristics		
Age	25.39	22-29
Female	54.93	
Male	45.07	
European American	66.93	
African American	19.84	
Hispanic	10.99	
Gainful Activity	64.8\0	
Parental Status	40.92	
Familial Background		
Two-biological Parents	54.48	
Single Parent	21.30	
Stepparent	13.90	
Other Family	10.31	
Harsh parenting	22.31	
Parental Support	20.38	5-25
Relationship Qualities		
Relationship Duration	2.72	0-14
Current Relationship	79.60	
Most Recent Relationship	20.40	
Dating	45.74	
Cohabiting	31.61	
Married	22.65	
Partner Control Attempts	4.13	2-10
Individual Control Attempts	4.04	2-10
Verbal Conflict	7.18	3-15
Lack of Perceived Partner Alternatives	6.07	2-10
Partner Infidelity	6.97	5-25
Individual Infidelity	6.88	5-25
Dependent Variables		
Jealousy Induction	7.13	5-25
Partner Violence	23.77	

N = 892. Means reported where ranges are shown; remaining measurements are sample percentages.

Table 2: OLS Prediction of Jealousy Induction with Individual and Relationship Factors

	Zero Order	Model 1	Model 2	Model 3	Model 4
Individual Characteristics					
Age	-0.079	-0.067	-0.078	-0.013	-0.011
Female (<i>male</i>)	-0.545**	-0.555**	-0.570**	-0.323 [^]	-0.430*
<i>Race (white)</i>					
African American	1.235***	1.180***	0.966***	0.166	-0.100
Hispanic	0.483	0.481	0.350	-0.005	-0.015
Gainful Activity	-0.540*	-0.428*	-0.349 [^]	-0.141	-0.115
Parental Status	0.093	-0.098	-0.283	-0.193	-0.307
Familial Background					
<i>Family Structure (biological parents)</i>					
Single Parent	0.743**		0.427	0.113	0.019
Stepparent	0.823**		0.675*	0.549*	0.392
Other Family	0.982**		0.523	0.566 [^]	0.625*
Harsh Parenting	0.860***		0.457 [^]	0.141	0.279
Parental Support	-0.153***		-0.120***	-0.065*	-0.063*
Relationship Qualities					
Relationship Duration	-0.117***			-0.049	-0.061
Current Relationship (<i>most recent</i>)	-1.188***			-0.358	-0.259
<i>Union status (dating)</i>					
Cohabiting	-0.408 [^]			-0.579*	-0.492*
Married	-1.341***			-0.969**	-0.783*
Partner Control Attempts	0.439***			0.056	0.005
Individual Control Attempts	0.595***			0.381***	0.363***
Verbal Conflict	0.406***			0.262***	0.163***
Lack of Perceived Partner Alternatives	-0.245***			0.016	0.068
Partner Infidelity	0.334***				0.146***
Individual Infidelity	0.394***				0.148***
Intercept		9.165***	11.630***	5.973***	4.582**
R ²		0.041	0.076	0.250	0.289

N = 892. Reference group italicized in parentheses.

[^] *p* < 0.10; * *p* < 0.05; ** *p* < 0.01; *** *p* < 0.001

Table 3: Logistic Regression Prediction of Partner Violence on Individual and Relationship Factors

	Zero Order	Model 1	Model 2	Model 3	Model 4	Model 5
Individual Characteristics						
Age	0.984	0.975	0.990	0.997	0.969	0.967
Female (<i>male</i>)	0.873	0.787	0.892	0.857	1.019	0.852
<i>Race (white)</i>						
African American	2.192***	1.735**	1.358	1.122	1.022	0.824
Hispanic	2.374***	1.998**	1.895*	1.803*	1.646^	1.621
Gainful Activity	0.528***	0.585***	0.619**	0.630**	0.610*	0.613*
Parental Status	1.988***	1.711**	1.885***	1.765**	1.010	0.873
Familial Background						
<i>Family Structure (biological parents)</i>						
Single Parent	2.547***			1.956**	1.764*	1.689*
Stepparent	1.527^			1.038	0.853	0.785
Other Family	2.552***			1.568	1.769^	2.095*
Harsh Parenting	1.691**			1.273	1.265	1.289
Parental Support	0.947*			1.006	1.014	1.019
Relationship Qualities						
Duration	1.088***				1.077^	1.074^
Current Relationship (<i>most recent</i>)	0.902				1.321	1.701^
<i>Union status (dating)</i>						
Cohabiting	2.081***				1.900**	1.981**
Married	1.346				1.504	1.512
Individual Jealousy Induction						
Partner Control Attempts	1.258***		1.250***	1.244***	1.163***	1.129***
Individual Control Attempts	1.506***				1.232***	1.206***
Verbal Conflict	1.539***				1.141*	1.148*
Verbal Conflict	1.470***				1.222***	1.163***
Lack of Perceived Partner Alternatives	0.844***				0.957	0.988
Partner Infidelity	1.305***					1.184***
Individual Infidelity	1.267***					1.006
Intercept		0.595	0.069*	0.437*	0.004***	0.002***
Pseudo R2		0.048	0.123	0.135	0.268	0.293

N = 892. Results reported in odds ratios. Reference group italicized in parentheses.

^ *p* < 0.10; * *p* < 0.05; ** *p* < 0.01; *** *p* < 0.001

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