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**THE STRESS OF MOTHERHOOD AND
INTIMATE PARTNER AGGRESSION DURING EMERGING ADULTHOOD**

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THE STRESS OF MOTHERHOOD AND INTIMATE PARTNER AGRESSION DURING EMERGING ADULTHOOD

Abstract

Intimate partner aggression is a serious social and public health problem for women. Drawing on a contemporary population-based survey, the Toledo Adolescent Relationships Study (TARS), and the stress process framework, we compared emerging adult mothers' (mothers with one child and mothers with multiple children) and non-mothers' reports of physical aggression. We found that mothers with multiple children compared with non-mothers reported more frequent relationship aggression, suggesting that having multiple children in a relationship may be a stressor associated with violence. We also found daters with at least one child and cohabitators with multiple children compared to non-mothers reported greater frequencies of physical aggression, indicating relationship context matters. Our findings also indicate that above average levels of stress, mothers, regardless of number of children, compared with non-mothers have significantly higher frequencies of intimate partner aggression. These findings confirm motherhood is a stressful transition in emerging adulthood.

Keywords: motherhood, stress, multiple children, intimate partner aggression

THE STRESS OF MOTHERHOOD AND INTIMATE PARTNER AGRESSION DURING EMERGING ADULTHOOD

Although the stage in the life course referred to as emerging adulthood often is characterized as a period of self-exploration of identities, intimate relationships, and work roles (Arnett, 2004), parenthood is also an important and normative life event associated with the transition to adulthood. Sharon (2016), for example, found that among a sample of contemporary young adults ($n = 1, 133$) individualized markers of adulthood were meaningful, nevertheless, nearly 75% endorsed parenthood and taking caring of children as also meaningful, and 54% of her participants had attained this traditional marker of adulthood. These findings are consistent with national surveys demonstrating that in the U.S. about half of women (55%) become parents by age 29 (Martinez, Daniels, & Chandra, 2012), with the average age being 26.3 (Matthews & Hamilton, 2016). In spite of the normative nature of motherhood during emerging adulthood, researchers generally have concluded that the identity of being a mother is stressful (Nomaguchi & Milkie, 2003; 2020; Reveley, 2019). Theories of family functioning (e.g., Belsky & Kelly, 1994; Blake Berryhill, Soloski, Durtschi, & Reyes Adams, 2016; Cooper, McLanahan, Meadows, & Brooks-Gunn, 2009; Edin & Tach, 2011; Nomaguchi & Milkie, 2020) have further suggested that multiple children may increase stress due to challenges in accessing social and economic resources and the demands associated with parenting.

More recently, in the U.S. the unprecedented increase in rates of cohabitation among young adults and the rise in young adults' nonmarital fertility (Child Trends, 2016; Edin & Tach, 2011; Furstenberg 2014; Sassler & Lichter, 2020) has led to concerns among researchers and the general public about how the relationship context of childrearing (i.e., married, cohabiting, dating) in addition to affecting children, might affect mothers' well-being (Edin & Tach, 2011;

Halpern-Meekin & Turney, 2016) as well as indicators of relationship functioning including episodes of intimate partner aggression (Hellmuth, Gordon, Stuart, & Moore, 2013). These concerns may be warranted given the higher degree of stress reported with non-marital motherhood (Avison, Ali, & Waters, 2007; Burton & Hardaway, 2012). Although researchers have examined many consequences of motherhood for emerging adults including parenthood stress and work-family conflicts (Allen, Manning, Longmore, & Giordano, 2019), little attention has focused on whether motherhood itself, multiple children, and the relationship context of motherhood are associated with a critical indicator of relationship functioning, intimate partner aggression. Drawing on a contemporary population-based survey, the Toledo Adolescent Relationships Study (TARS), and the stress process framework, we compared emerging adult mothers' (mothers with one child and mothers with multiple children) and non-mothers' reports of physical aggression. We examined whether stress mediated the association between motherhood status and intimate partner aggression. Next, we assessed whether stress and union status moderated the association between motherhood and relationship aggression. This study built on previous work that focused solely on parenting stress among mothers (e.g., Allen et al. 2019) by comparing stress among mothers and non-mothers. Moreover, it is important to study intimate partner aggression because prior studies have found that rates of partner aggression are highest during emerging adulthood (Brown & Bulanda, 2008; Johnson, Giordano, Manning, & Longmore, 2015), and are higher among cohabiting compared to dating and married young women (Brown & Bulanda, 2008). Further, this paper extended existing work, which has shown that multiple children increase stress (e.g., Manning, Longmore, & Giordano, 2015; Tach, 2011) by considering whether multiple children are associated with intimate partner aggression.

Background

The time and energy demands of children, combined with the uncertainties of cohabitation, may result in great physical and emotional expenditures on the part of young mothers. Additionally, violence in dating, cohabiting, and marital unions especially affects young women (Breiding, Black, & Ryan, 2008), but may differ by relationship status. Brown and Bulanda (2008) found that cohabitators compared to married individuals reported higher odds of violence, which they argued may be due to the lower degree of commitment in cohabiting relative to marital unions. Further, evidence from studies based on mothers (Probst, Wang, Martin, Moore, Paul, & Samuels, 2008) and pregnant women (Hellmuth, Gordon, Stuart, & Moore, 2013), and research examining the burden of financial problems (Schwab-Reese, Peek-Asa, & Parker, 2016), have found that stress may play a significant role in predicting intimate partner aggression. The stress of motherhood, however, has received relatively little attention as a contextual risk factor for intimate partner aggression. It is important to study motherhood status because several scholars (e.g., Ehrensaft, Cohen, Brown, Smailes, Chen, Johnson, 2003; Shortt, Capaldi, Kim, Kerr, Owen, & Feingold, 2012) have argued that once violent patterns take hold, resolving conflict without the use of violence becomes more difficult, underscoring the critical need to identify contextual risk factors that are amendable to modification through intervention and prevention.

To elucidate the relationship between motherhood and intimate partner aggression, we used the stress process framework. Although a slight majority of American women become mothers during the life course stage of emerging adulthood, it is a stressful transition requiring intense investments in time, economic, psychological, and physical resources. We defined stress as a physiological reaction brought on by the individual's awareness of demands and pressures encountered in everyday life that are potentially threatening, worrisome or oppressive

(Aneshensel & Mitchell, 2014; Pearlin, 1989). Aneshensel and Mitchell (2014) have argued that stress is present when pressures are greater than the individual's skill and ability to handle or obtain the necessary resources to cope with the mounting demands. Researchers (e.g., Evenson & Simon 2005, Nomaguchi & Milkie 2003) comparing parents and non-parents found that parenthood often is associated with poorer relationship quality. A major shortcoming of much research, however, is that researchers often do not conceptualize and operationalize the mechanisms by which motherhood may have implications for indicators of poor relationship quality including intimate partner aggression.

Motherhood is a major life course event that can be challenging due to the uncertainties associated with the role. Becoming a mother literally changes a woman's identity (Reveley, 2019). Pearlin and colleagues (Pearlin 2010; Pearlin & Bierman, 2013; Pearlin, Menaghan, Lieberman, & Mullan, 1981; Pearlin & Scaff, 1994) and other scholars (e.g., Aneshensel & Mitchell, 2014; Avison et al., 2007; Kiecolt 1994; Umberson, Liu, & Reczek, 2008) theorizing on stress processes across different stages of the life course have provided a useful conceptual model for assessing whether, and why, motherhood may put young women at risk for poorer quality relationships as evidenced by intimate partner violence. The stress process model is considered to have three domains: (1) sources of stress, such as negative life events or chronic strains (e.g., motherhood status), (2) mediators/moderators of stress (e.g., multiple children, or union status) that can increase or decrease the undesirable effects of stress, and (3) manifestations or outcomes of stress (e.g., intimate partner violence). Importantly, this perspective emphasizes how "role occupancy" and contexts of family life are associated integrally with stress (Turner & Schieman, 2008), and that relational outcomes, such as physical

conflict, also are related intrinsically to role strains, and the availability of resources (e.g., being in a marital versus cohabiting or dating relationship) that amplify or diminish such strains.

The stress process framework often views specific life events, such as the transition to motherhood as having the potential to be stress-producing (Pearlin & Skaff, 1996; Turner & Schieman, 2008), and a number of empirical studies (e.g., Allen et al. 2019; Evenson & Simon 2005; Manning, Longmore, & Giordano, 2015; Nomaguchi & Milkie, 2003; Stewart 2007) have found that parenthood is a source of stress. Nomaguchi and Milkie (2003), for example, argued that although parenthood is rewarding, it is psychologically costly because of increased conflicts and frustrations, which lead to stress. Researchers have suggested that union status may matter for understanding motherhood and stress. Nomaguchi and Milkie (2003) reported that single, compared with married, mothers experienced more stressors due to their poorer financial situations and difficulties balancing work and home. Woo and Raley (2005), extending Nomaguchi and Milkie's study by emphasizing the importance of distinguishing cohabitation relative to single motherhood, found that cohabiting mothers reported a decline in well-being after the birth of the child. Evenson and Simon (2005) found that parenthood was associated with depressive symptoms for mothers and fathers. Some scholars (e.g., Shapiro & Steward, 2011; Stewart, 2007) have emphasized that step-parenthood, and others (e.g., Manning et al. 2015; Tach, 2011) have emphasized multipartner fertility, as especially stressful because these require defining and maintaining relatively unclear parenting roles. Manning and colleagues (2015) based on the TARS investigated the influence of parenting complexity (i.e., only shared children with partner, only non-shared children with partner, and both shared and non-shared children with partner) on relationship quality. Contrary to expectations, not parenting complexity, but multiple children (having more than one child) was associated with poorer relationship quality.

Building on this work, in the current analyses of mothers, we examined whether having one child versus multiple children was associated with greater frequency of intimate partner aggression.

Other researchers have emphasized mediators of stress, including whether parents lived together (e.g., Cooper, McLanahan, Meadows, and Brooks-Gunn, 2009). Nomaguchi, Brown, and Leyman (2017) found that union status was associated with fathers' participation in parenting, which then influenced maternal stress. In this paper, we argued that union type (dating, cohabitation, marriage) may be an important moderator in the association between motherhood and intimate partner violence.

Many studies have emphasized the third component of the stress process model demonstrating that stress, irrespective of its source, often is manifested in lower quality relationships and increased odds of intimate partner aggression (e.g., Brown & Bulanda, 2008). Thus, each of these three components (sources, mediators/moderators, and outcomes) of the stress process model typically have been studied separately. In this paper, we applied this conceptual model to motherhood status, one versus multiple children, union status, and intimate partner aggression.

Motherhood and Mutual Intimate Partner Aggression During Emerging Adulthood

Although much prior work has examined the consequences of intimate partner aggression for children's outcomes (e.g., Bair-Merritt, Blackstone, & Feudtner, 2006; Carlson, 2000; Evans, Davies, & DiLillo, 2008; Yoo & Huang, 2013), and much research has examined the presence of children as a control variable, significantly less work has emphasized the mechanisms by which motherhood, itself, is associated with intimate partner aggression. Further, many scholars examining intimate partner aggression and the implications for mothers and children have used convenience samples (e.g., Evans, Davies, & DiLillo, 2008) and have focused on battered

women in shelters or women who have experienced intimate terrorism (Johnson, 1995; Walker & Lenore, 2009), which refers to male-to-female aggression in which men dominate the relationship through coercive controlling tactics (Johnson, Leone, & Xu, 2014). More recently, researchers have examined violence that occurs in population-based samples, such as the TARS. Population-based surveys provide an opportunity to study situational couple violence or violence that arises from the general stresses of every day family life (Johnson, 2005; Probst et al., 2008; Smith Slep, Foran, Heyman, & Snarr, 2010). Moreover, in contrast to shelter samples, examining population-based samples allow researchers assess women in mutually violent relationships, which is the most common type of violence.

Although several studies (e.g., Cano, 2001; 2003; Langer, Lawrence, & Barry, 2008; Frye & Karney, 2006; Seltzer & Kalmuss, 1988) have found associations between stressful events and intimate partner aggression, they have not examined emerging adulthood – a stage in the life course associated with experiencing intimate partner violence (Brown & Bulanda, 2008; Dardis, Dixon, Edwards, Turchik, 2015; Perkins, 1997). Research on wide age ranges of mothers have included the presence of children largely as a control variable and have showed mixed results. National crime statistics and some researchers (e.g., Fox, Benson, DeMaris, & Van Wyk, 2002; Kershner, Long, & Anderson, 1998; Melzer 2002; Vest, Catlin, Chen, & Brownson, 2002) have reported that the presence of children increased the risk of relationship violence. For example, based on the National Crime Victimization Survey (NCVS, 1993-2010), among households with one adult woman and children, the rate of intimate partner violence was more than six times higher than households with one adult woman and no children (Catalano, 2012). Yet others have found no association (e.g., Cunradi, Caetano, & Schafer, 2002; Hutchison &

Hirschel, 2001). Thus, the varied results of many prior studies suggest that further exploration is needed to compare the reports of emerging adult mothers and non-mothers.

Population-based datasets focusing on young adults, such as the Adolescent to Adult Health Study (Add Health), also have reported mixed results. That is, the presence of children is not consistently associated with intimate partner aggression (e.g., Berger, Wildsmith, Manlove, & Steward-Streng, 2012; Brown & Bulanda, 2008; Roche, Ensminger, Lalongo, Poduska, & Kellam, 2006; Tillyer & Wright, 2014). Further, children as a risk factor is excluded from some studies of partner violence using this same data source (e.g., Fletcher, 2010; Renner & Whitney, 2010; Wiersma, Cleveland, Herrera, & Fischer, 2010) Thus, it is difficult to draw conclusions regarding motherhood as a critical factor associated with intimate partner aggression based on many of the recent studies of emerging adults.

Studies based on the Add Health, nevertheless, have permitted a range of analyses examining important correlates of intimate partner aggression among contemporary emerging adults. Berger et al. (2012) using wave 3 of the Add Health, (respondents ages 18-28) found that about half of married individuals with children reported violence in the past year compared to a third of married individuals with no children. Similarly, 63% of daters with children reported violence compared to 31% of daters with no children. Among cohabiting individuals, children did not increase the odds of intimate partner violence. Yet, this study did not distinguish between mothers and fathers so it is unclear how motherhood influenced intimate partner aggression. Moreover, since results were bivariate other factors associated with parenthood including stress were not examined. Additionally, a comparison of one child versus multiple children was not examined. In the current study, we expected that multiple children would be associated with higher frequencies of intimate partner aggression.

It is challenging to make strong conclusions from this body of work because of the inclusion of one or both genders, differences by union status, variation in the operationalization of intimate partner aggression, subsamples of economically disadvantaged respondents, and the use of non-random samples. Drawing on a population based sample, the Toledo Adolescent Relationships Study (TARS), we compared the reports of frequency of intimate partner violence among emerging adult women (ages 22-29) based on their motherhood status. We considered important factors, such as one versus multiple children, and type of relationship (married, cohabiting, dating). We expanded on prior work by incorporating the notion of stress to understand and explain the relationship between the presence and number of children and intimate partner aggression. We argued that, not only the presence of children, but multiple children are stressors, which may lead to relationship aggression.

We included several correlates of relationship aggression. Scholars have found that race/ethnic minorities, compared with White respondents, reported higher odds of perpetrating violence (Frias & Angel, 2005; Huang, Son, & Wang, 2010; Sampson, Morenoff, & Raudenbush, 2005). Other scholars have demonstrated that age is associated with intimate partner aggression (Kim, Laurent, Capaldi, & Feingold, 2008). Researchers (Foshee, Benefield, Ennett, Bauman, & Suchindran, 2004; Halpern, Oslak, Young, Martin, & Kupper, 2001) have reported that individuals raised in two-parent family households are less likely to experience intimate partner violence than those in other family structures. Exposure to parental violence during childhood is associated with higher levels of intimate partner aggression (Linder & Collins, 2005). Researchers (Franklin & Kercher, 2012; Golden, Perreira, & Durrance, 2013) have shown that employment or being in school is protective against intimate partner aggression, thus lack of employment is associated with an increased risk of intimate partner aggression.

Cohabitors have reported higher levels of intimate partner aggression compared to individuals who are married or dating (Berger et al., 2012; Brown & Bulanda, 2008). Individuals in relationships of longer duration are more likely to experience intimate partner violence (Dardis et al., 2015). Last, we controlled for being in a current versus most recent relationship.

Current Study

We assessed whether motherhood status was associated with self-reports of intimate partner aggression, and whether among mothers, one versus multiple children was associated with aggression. Given that substantial research (e.g., Jennings, Piquero, & Reingle, 2012; Johnson, Giordano, Longmore, & Manning, 2014; Tillyer & Wright, 2014) and recent reviews of the literature (Hardesty & Ogolsky, 2020) have emphasized the overlap and high correlation between perpetration and victimization, we examined frequency of any violence because in preliminary analyses, the TARS data were consistent with other community studies in that nearly 64% of the sample reporting any violence indicated that it was mutual, versus 18% reporting perpetration only and 19% reporting victimization only.

We drew on the notion of general stress to assess the association between motherhood and intimate partner aggression in young adulthood. We compared emerging adult mothers' (mothers with one child and mothers with two or more children) and non-mothers' reports of physical aggression. This allowed for a better understanding of the role of the presence of children in relationship aggression. We examined whether general stressors (composite scale of eight stress indicators) mediated the association between parental status and intimate partner aggression. Next, we assessed whether stress and union status moderated the association between motherhood and relationship aggression. We expected that the presence of children would add stress to a relationship, which would result in mothers, compared to non-mothers, exhibiting

greater frequency of intimate partner aggression. Furthermore, we expected that respondents with more overall stress would report greater frequency of aggression, and that the association between motherhood status and relationship aggression would be explained by this overall measure of stress. We also expected motherhood to be associated with intimate partner aggression for women who were in nonmarital relationships compared to their married counterparts.

The current study has a number of important strengths that enable us to take the next step in understanding links between stressful contexts and intimate partner aggression. The individuals in the current study comprised a population-based community study, compared to existing studies based on convenience samples. The study started in early adolescence and, thus, provides important bridging information between studies of teen dating violence and studies with adult samples. Further, this study was unique in examining the interactive effects between the contextual factors of motherhood status, one versus multiple children, and union status on intimate partner aggression, and we were able to determine whether the effect of motherhood variables on intimate partner aggression was moderated by stress.

Data

We examined longitudinal data from the Toledo Adolescent Relationships Study (TARS). TARS included emerging adults' responses to extensive questions on relationship aggression, and covariates associated with motherhood. Approximately 45% of the sample was young adult mothers, which makes comparisons to non-mothers possible. The data are based on a stratified random sample of the year 2000 enrollment records of 1,321 adolescents and their parents/guardians (interviewed separately) in Lucas County, Ohio. Although the sample is regional, the geographic area of Lucas County is similar to U.S. Census data (2010) on the

national population with regard to race/ethnicity, median family income, and educational levels. At the fifth interview, there were 1,021 respondents, with an age range of 22 – 29 years; this is 77% of the sample from the first interview (age range of 12 – 19 years). The analytic sample is comprised of female respondents from the fifth interview with the exception of respondents who were in a same sex relationship (N = 15) or who do not report on a current or most recent partner (n=29). We also excluded one respondent who reported her age at first birth relatively early (11 years old) compared to the rest of the sample. We imputed the mean or mode for cases missing on independent variables. The low frequency (less than 5%) of missing cases did not warrant the use of elaborate strategies for handling missing data. The final sample consisted of 503 female respondents of which 230 are mothers, and 273 non-mothers. The TARS data are suitable for this study because they provided detailed measures on relationship stressors, dynamics, aggression and factors associated with motherhood in young adulthood.

Measures

Dependent Variables

Intimate Partner Aggression, measured during emerging adulthood, average age 23 (fifth interview) included responses to 12 items from the Revised Conflict Tactics Scale (Straus, Hamby, Boney-McCoy, & Sugarman, 1996). Consistent with much research that has demonstrated the commonality of bidirectional physical violence (see Hardesty & Ogolsky 2020 and Nowinski & Bowen, 2012 for extensive reviews), we measured physical aggression (victimization and perpetration) using a summed scale of twenty-four items based on the revised Conflict Tactics Scale (CTS2). Respondents were asked whether they had done (or experienced) any of the following to (from) their current or most recent partner: (1) “thrown something,” (2) “twisted arm or hair,” (3) “used a knife or gun,” (4) “punched or hit with something that could

hurt,” (5) “choked,” (6) “slammed against a wall,” (7) “beat up,” (8) “burned or scalded on purpose,” (9) “kicked,” (10) “pushed, shoved, or grabbed,” (11) “slapped in the face or head with an open hand,” and (12) “hit.” Responses included (1) “never,” (2) “hardly ever,” (3) “sometimes,” (4) “often,” or (5) “very often.” The sum of respondent’s perpetration and victimization scores reflected the frequency of any violence. The summed scale is the most exhaustive measure of intimate partner aggression for this sample, given a majority of those reporting any violence reported both perpetration and victimization. Most of the sample did not report any violence, resulting in a skewed scale. We then logged the intimate partner aggression scale to address this skewness. The non-logged sum scale ranged from 0 to 24 (Cronbach alpha = .94).

Independent Variables

Motherhood status was a categorical variable based on number of children. A respondent who reported no children was coded “0” for not being a parent. Respondents who reported 1 child were coded “1” for being a parent with one child, and “2” for having 2 or more children.

General stress, a continuous measure created by factor analysis, based on the perceived stress questionnaire by Bell and Lee (2002), assessed how stressed the respondent has been over the past 2 years due to: (1) “own health,” (2) “health of family members,” (3) “work/employment,” (4) “living arrangements,” (5) “school,” (6) “money/finances,” (7) “relationship with partner,” (8) “relationship with parents,” (9) “relationship with other family members,” and (10) “relationships with friends.” Responses ranged from 1 = “not at all stressed” to 5 = “extremely stressed” (Cronbach alpha = .84).

Sociodemographic characteristics. Several sociodemographic variables were included in the multivariate models. *Race/ethnicity* was comprised of four dichotomous variables, White,

Black, Hispanic and Other, with White as the contrast category. *Age*, a continuous measure of the respondent's age reported at wave 5, ranged from 22-29 years. *Family structure during adolescence* was a series of nominal variables measured at wave 1, which included: two married biological parents (contrast group), single parent, stepfamily, and "other" family (e.g., living with relatives or foster care). *Socioeconomic* status was measured using *mother's education* taken from the parent questionnaire and categorized as: less than high school, high school (contrast group), some college, and college or more.

Witnessing parental violence. We included a four-item retrospective measure derived from the CTS2 (Straus et al., 1996), which asked at wave 5, "how often did either one of your parents:" (1) "throw something at the other," (2) "push, shove, or grab the other," (3) "slap the other in the face or head with an open hand," and (4) "hit the other" (Cronbach alpha = .97). Responses ranged from (1) never to (5) very often.

Adult status characteristics. *Education attainment* is comprised of four categories that indicated the respondent's education level: (1) less than high school, (2) high school (contrast group), (3) some college, and (4) college or more. The respondent's employment status was categorized as full-time, part-time and unemployed (contrast category).

Relationship characteristics included union status, current or most recent relationship, and duration. *Union status*, a nominal variable indicated whether the respondent is married, cohabiting or dating (contrast category). A dichotomous variable indicated whether a respondent is referring to a *current or most recent* (contrast category) intimate relationship. In addition, a continuous indicator of *relationship duration* was created based on two questions. Respondents were first asked the length of time they have been together with their partner. Responses ranged from less than a week to a year or more. Second, respondents who reported relationships for

more than a year were then asked the length of their relationship with their partner. These two questions were combined for a measure of duration in years.

Analytic Strategy

Table 1 presents weighted percentages, means and standard errors for the full analytic sample, young adult mothers with one child, mothers with two or more children and non-mothers. The continuous nature of the logged intimate partner violence scale and the generalized stress independent variable warranted the use of ordinary least squares (OLS) regression techniques for prediction analyses. We examined the association between motherhood status and frequency of intimate partner aggression accounting for family background and socioeconomic indicators. These results are presented in Table 2. Due to the importance of union status we also examine whether the associations between motherhood and intimate partner aggression differed for dating, cohabiting, and married women. We then determined if stress was an important mechanism by including a cross-product term of stress (stress centered) and motherhood status to assess potentially interacting processes.

Results

Descriptive Statistics

In Table 1 we presented weighted descriptive statistics for the analytic sample, and t-test results comparing mothers with one child (23%) and mothers with two or more children (23%) to non-mothers (55%). Mothers compared to non-mothers reported higher mean levels of intimate partner aggression. Women with two or more children indicated more frequent intimate partner aggression than women with only one child. The full sample reported, on average, relatively low levels of general stress (1.24 on a 1-5 range). Mothers with two or more children reported higher levels of stress compared to mothers with 1 child (1.23 vs. 1.16). In terms of relationship indicators, fewer mothers, compared to non-mothers, were in dating relationships (approximately

37% mothers with one child and 35% mothers with two or more children compared to 50% without children). Similar shares of mothers (nearly 30% mothers with one and mothers with two or more children) and non-mothers (32%) were in cohabiting relationships. A higher percentage of mothers (mothers with one child – 33%; mothers with two or more children 37%) compared to non-mothers (18%) were married.

[Table 1 about here]

Predicting Frequency of Intimate Partner Aggression.

Zero-order analyses in Table 2 showed that being a mother (one or two children) was associated with a higher frequency of intimate partner aggression. Higher levels of stress were positively associated with intimate partner aggression. In terms of sociodemographic characteristics, Black and Hispanic, compared with White respondents reported greater frequency of intimate partner aggression. Respondents who grew up in a single parent, step-parent, or other family structure compared with individuals who grew up in a two-biological parent home reported higher levels of intimate partner aggression. Having a mother with less than a high school education, compared with high school education, was associated with greater frequency of intimate partner aggression, while having a mother with a college or more education was protective against intimate partner aggression. Testing adult status characteristics showed that having a college or more education and being either full-time or part-time employed were protective against intimate partner aggression. The relationship indicators showed that cohabitators reported a higher frequency of intimate partner aggression than daters and respondents who reported on a current versus a most recent relationship reported lower levels of intimate partner aggression. Relationship duration was not related to frequency of intimate partner aggression.

[Table 2 about here]

Multiple regression results in model 2 showed that controlling for general stress, having children remains associated with more frequent intimate partner violence. Moreover, increased levels of stress were positively associated with intimate partner aggression. Thus, stress does not appear to mediate the association between motherhood and intimate partner aggression.

Model 3 demonstrated and supported our hypothesis that net of the demographic, socioeconomic, and family background factors having two or more children, compared with having none, was associated with increased levels of intimate partner aggression. The motherhood effect (one child) was explained by the respondent's mother's educational attainment. Further, increased levels of stress were associated with increased levels of intimate partner aggression. In this model 24% of the variation in intimate partner violence was explained by the covariates. Given the importance of union status in prior work, we tested whether motherhood had a similar effect for dating, cohabiting, and married mothers. As our hypothesis predicted, the interaction was significant (Table 3). Among daters, having one child was associated with more frequent intimate partner aggression than daters without children. Cohabiting mothers with 2 or more children reported more frequent intimate partner aggression than cohabiting women without children (marginally significant). Among married women, we observed no differences according to motherhood status.

Motherhood, Stress and Intimate Partner Aggression

To determine how stress may operate as a mechanism explaining associations between motherhood and intimate partner aggression we tested interaction models between stress and motherhood status. For ease of interpretation we present Figure 1. At average levels of stress, mothers with two or more children compared with non-mothers have significantly higher

frequencies of intimate partner aggression. At above average levels of stress, parents (regardless of number of children) compared with non-mothers have significantly higher frequencies of intimate partner aggression. At low levels of stress are no significant differences according to motherhood status. Thus, stress is a key pathway explaining the association between motherhood and intimate partner aggression.

[Figure 1 about here]

Discussion

In this article, we reviewed the literature on motherhood in emerging adulthood and its relationship to intimate partner aggression. The data allowed us to examine factors related to motherhood, such as, number of children, the relationship context within which motherhood occurred and indicators of relationship functioning, i.e., relationship aggression. Our work built on prior research by examining the interactive effects between motherhood status and union status on intimate partner aggression. We also determined whether the effect of motherhood on intimate partner aggression was moderated by stress. Furthermore, we applied the stress process framework to understand better the findings observed.

Consistent with prior research (Allen et al., 2019; Turner & Schieman, 2008), we found motherhood a source of stress that produces poor relationship outcomes, i.e., relationship aggression. A greater percentage of mothers compared to non-mothers have experienced any form of intimate partner aggression. Further examination of the association between motherhood and relationship aggression showed that net of several explanatory variables, mothers are more likely to experience relationship aggression when compared to non-mothers. We found this association was especially salient for mothers who had two or more children. These results are important as they highlight that the status of motherhood is a stressful transition in emerging

adulthood. Similar to studies that show that multiple children increases stress (Manning et al., 2015), number of children, a source of stress, is associated with intimate partner aggression. As young women occupy new roles, i.e., motherhood coupled with intimate relationships, they may experience role strains, which amplify stress in their relationships.

Similar to research that suggest a higher degree of stress in non-marital motherhood (Avison, et. al., 2007), we found that union status moderated the relationship between motherhood status and intimate partner aggression. While prior research showed greater levels of intimate partner aggression among cohabitators compared to married or dating individuals (Berger et al., 2012), it was unclear whether the presence of children had implications for women in intimate relationships. However, we found among dating young adults, mothers with one child had significantly higher levels of intimate partner aggression compared to non-mothers. Cohabiting mothers with multiple children also reported more frequent episodes of intimate partner aggression. These analyses build on previous research (e.g., Berger et al., 2012; Brown & Bulanda, 2008) and underscored number of children and union status as critical factors in understanding the frequency of intimate partner aggression. These results supported our hypothesis that the presence of children acts as a stressor, thereby increasing the likelihood of aggression in young adult intimate relationships. Consistent with the stress process model, we suggest that having a child in young adulthood and the relationship context of the mother matters. Worth noting is the precarious nature of non-marital relationships as women enter a major life transition of motherhood, an additional source of stress, which intensifies existing strains with an intimate partner, and leads to experiencing and perpetrating relationship violence. Moreover, similar to prior research (e.g., Nomaguchi & Milkie, 2003; Woo & Raley, 2005) this

study emphasized mothers' well-being in young adulthood and points to a growing need relationship building programs.

This study offered new contributions by examining the stress among mothers and non-mothers, the effect of multiple children, and, the context of the relationship. Although this study contributes to the field of intimate partner aggression, the sample used in the study is a regional sample from Lucas County, OH. This is a limitation of the study, but although the sample is regional, the sociodemographic characteristics of the sample respondents reflect the U.S. population. Future work may benefit from considering couple-level data, to further understand the stressors encountered in a relationship, and to gain a male perspective.

Table 1. Means/Percentages and Standard Errors for Intimate Partner Aggression, Sociodemographic Characteristics, Adult Status Characteristics, and Relationship Characteristics for the Full Sample and by Parenthood (n = 503)

	Full Sample (n = 503)			Mothers with 1 child (n = 108)	Mothers with 2 or more children (n = 122)	Non- mothers (n = 273)
Dependent variables	Mean/Percent age	SE	Range			
Intimate Partner Aggression	1.58	.18	0-24	1.76 ^c	3.24 ^b	.82
Independent variables						
General stress	1.24	.02	1-5	1.16	1.23	1.27
<i>Sociodemographic characteristics</i>						
Race						
(White)	68.43			64.95 ^{ac}	48.19 ^b	78.31
Black	21.94			26.21 ^a	37.11 ^b	13.85
Hispanic	6.82			5.56 ^c	13.49 ^b	4.56
Other	2.60			3.29	1.21	2.90
Age	25.24	.08	22-29	25.18 ^c	25.68 ^b	25.09
Family structure						
(Two biological parents)	49.72			42.26 ^{ac}	27.31 ^b	62.15
Single parent	21.63			22.89	28.62 ^b	18.20
Step-parent	14.31			16.12	19.36 ^b	11.46
Other	14.33			18.73 ^a	24.71 ^b	8.19
<i>Socioeconomic status</i>						
Mother's education						
(Less than HS)	10.34			12.50 ^{ac}	24.20 ^b	3.67
High school	33.71			40.81 ^c	28.38	33.00
Some college	32.73			37.71	32.96	30.57
College or more	23.22			8.97 ^a	14.45 ^b	32.77
<i>Family violence</i>						
Witnessing parental violence	1.40	.04	1-5	1.51 ^a	1.60 ^b	1.26
<i>Adult status characteristics</i>						
Education						
Less than HS	7.96			12.06 ^a	18.06 ^b	2.06
(High school)	18.80			26.72 ^a	26.20 ^b	12.44
Some college	43.49			47.15	49.94 ^b	39.30
College or more	29.74			14.07 ^{ac}	5.81 ^b	46.19
Respondent's Employment						
(Unemployed)	27.68			26.16 ^c	46.26 ^b	20.57
Full-time employment	49.34			44.22 ^a	31.37 ^b	58.94
Part-time employment	22.98			29.62	22.37	20.49
<i>Relationship characteristics</i>						

Union status						
Dating	43.49			37.34 ^a	34.68 ^b	49.71
Cohabiting	30.73			29.62	28.09	32.29
Married	25.78			33.04 ^a	37.23 ^b	18.00
Current relationship	83.30			89.38	81.31	81.61
Duration	3.22	.12	0.08-11	3.91 ^a	3.76 ^b	2.71
<i>Motherhood status</i>						
Mother				22.59	22.77	54.64

[^] p < .1; *p < .05; ** p < .01; *** p < .001;

a – mothers with 1 child significantly different from non-mothers

b – mothers with 2 children significantly different from non-mothers

c – significantly different from mothers with 2 children

Source: Toledo Adolescent Relationships Study – Wave 5

Table 2. Ordinary Least Squares Regression for the Association between Motherhood Status, Sociodemographic Characteristics, Adult Status Characteristics, Relationship Characteristics and Intimate Partner Aggression (n=503)

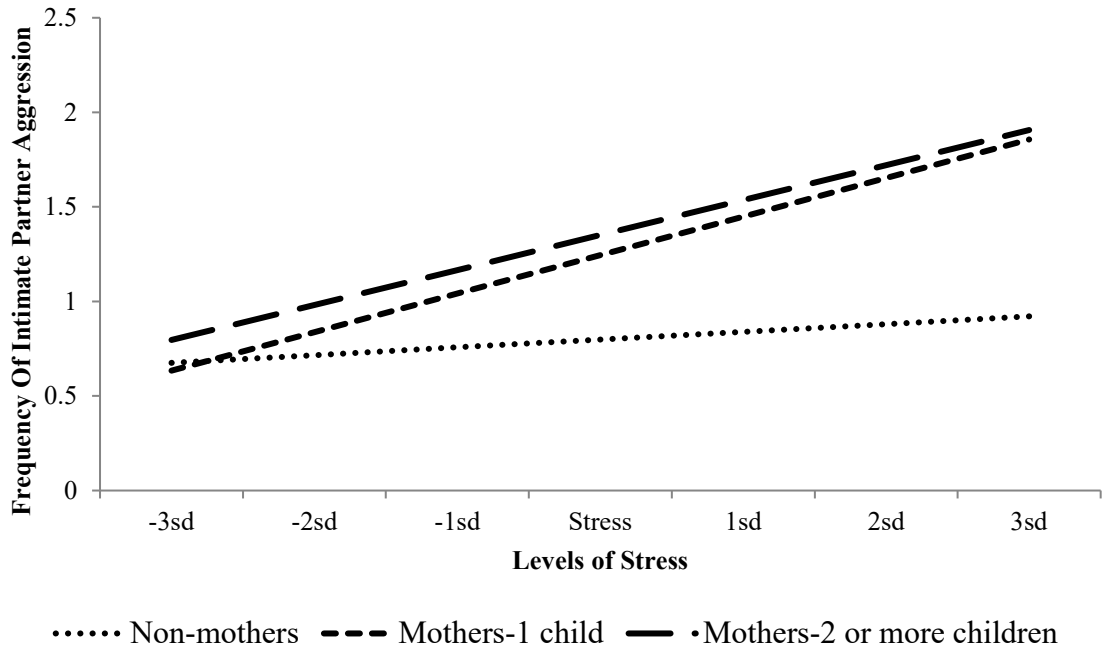
	Zero Order	Model 2	Model 3
<i>Motherhood status</i>			
(Non-mothers)			
Mother (1 child)	.21*	.25**	.05
Mother (2 or more)	.52***	.54***	.22*
General stress	.40***	.43***	.29***
<i>Sociodemographic Characteristics</i>			
Race			
(White)			
Black	.37***		.10
Hispanic	.35**		.09
Other	.06		-.02
Age	-.02		-.02
<i>Family Factors</i>			
Family structure			
(Two bio parents)			
Single parent	.41***		.23*
Step-parent	.19^		-.05
Other	.46***		.14
<i>Socioeconomic Status</i>			
Mother's education			
(High school)			
Less than HS	.36**		.08
Some college	.06		.04
College or more	-.20^		-.03
<i>Family Violence</i>			
Witnessing parental violence	.31***		.20***
<i>Adult Status Characteristics</i>			
Education			
(High school)			
Less than HS	.23		.09
Some college	-.15		-.09
College or more	-.51***		.18
Respondent's Employment			
Full-time employment	-.41***		-.21*

Part-time employment	-.22*	-.11
<i>Relationship Characteristics</i>		
Union status (Married)		
Dating	-.02	-.08
Cohabiting	.21*	.18^
Current relationship	-.27**	-.28**
Duration	.01	.03
R ²		.11
		.24

^ p < .1; * p < .05; ** p < .01; *** p < .001

Source: Toledo Adolescent Relationships Study, Wave 5

Figure 1.0. The Moderating Effect of Stress on the Frequency of Intimate Partner Aggression



Stress is centered

SD – refers to standard deviation

^p <.1; * p < .05; ** p < .01; *** p < .001

Source: Toledo Adolescent Relationships Study, Wave 5

Table 3. Ordinary Least Squares Regression Coefficients Predicting Intimate Partner Aggression: A Test of the Moderating Effect of Union Status (N=503).^a

Predictor	Full Model	
	b	SE
Parent – 1 child	-.17	.16
Parent – 2 or more children	.06	.16
Dating	-.27 [^]	.15
Cohabiting	.11	.14
Parent-1 child*Dating	.61 ^{**}	.21
Parent -2 or more children*Dating	.23	.21
Parent-1 child*Cohabiting	-.05	.23
Parent-2 or more children*Cohabiting	.23	.22

^a Full Model includes controls for sociodemographic characteristics (race/ethnicity, age, family structure, mother's education), adult status characteristics, and relationship characteristics (union status and duration).

[^]p<.1; * p < .05; ** p < .01; *** p < .001

Source: Toledo Adolescent Relationships Study, Wave 5

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