

**THE IMPLICATIONS OF VIOLENT AND CONTROLLING UNIONS FOR MOTHERS' MENTAL
HEALTH AND LEAVING IN FRAGILE FAMILIES**

Kate S. Adkins, Doctoral Student
Human Development and Family Science
The Ohio State University
135 Campbell Hall
1787 Neil Avenue
Columbus, OH 43210
adkins.271@osu.edu

Claire M. Kamp Dush
The Ohio State University

March 2007

Kamp Dush is grateful for support for this research from the National Institute of Child Health and Human Development (NICHD) (1K01HD056238). The Fragile Families study was funded by a grant from NICHD (#R01HD36916) and a consortium of private foundations and other government agencies. Persons interested in obtaining Fragile Families data should see <http://www.fragilefamilies.princeton.edu/data.asp> for further information.

ABSTRACT

We used two waves of the Fragile Families Study to examine links between controlling and violent unions and maternal mental health and dissolution. We found mothers in controlling-only unions as well as controlling and violent unions to have more symptoms of depression and anxiety, as well as greater odds of union dissolution, than mothers not experiencing violence or controlling unions. Over time, the magnitude of the increase in depressive symptoms was greatest for mothers in violent and controlling stable unions, followed by those in controlling-only stable unions, and lastly with mothers in stable unions not characterized by violence or control. Mothers who dissolved their violent and/or controlling unions also experienced an increase in depressive symptoms over time. Our results indicate negative consequences for mothers who both remain stable in or dissolve violent and/or controlling unions.

THE IMPLICATIONS OF VIOLENT AND CONTROLLING UNIONS FOR MOTHERS' MENTAL HEALTH AND LEAVING IN FRAGILE FAMILIES

Domestic violence continues to be one of the most important issues facing women today. Johnson (1996; 2006; Johnson & Ferraro, 2000) has continually called for an expanded definition of intimate partner violence, yet domestic violence researchers have been slow on the up-take. We use a nationally representative dataset of low-income urban couples to examine the association between control and violence as part of Michael Johnson's typologies of violence (1996; 2006; Johnson & Ferraro, 2000) with mental health concurrently and over time as well as the probability of union dissolution. Johnson has argued that there are differences in the causes, behaviors, and consequences of typologies of violence (Johnson & Ferraro, 2000; Johnson, 2006). Further understanding of how different types of violence impact mother's mental health and leaving violent unions can guide policy, interventions, and clinicians in their work with abused women.

Review of Literature

Intimate Partner Violence (IPV) and Mental Health

Research demonstrates severe health effects for women experiencing intimate partner violence (IPV) as compared to those without a history of IPV, such as higher rates of depression and lower mental health and social functioning (Bonomi, Thompson, Anderson, Reid, Carrell, Dimer, & Rivara, 2006; Coker, David, Arias, Desia, Sanderson, Brandt, & Smith, 2002), and poor health, substance use, chronic disease, chronic mental illness, and injury (Coker, et al., 2002). Not surprisingly, women with a history of or current IPV utilize healthcare at higher rates than do women without any IPV history, with utilization 20% higher even five years after the cessation of IPV and resulting in an estimated \$19.3 million in excess health care costs each year (Rivara, Anderson, Fishman, Bonomi, Reid, Carrell, & Thompson, 2007). A recent study estimated the lifetime prevalence rate for IPV to be 44%, with a one-year rate of 7.9% (Thompson, Bonomi, Anderson, Reid, Dimer, Carrell, & Rivara, 2006).

Different disciplines and theoretical perspectives call for the use of numerous and distinct criteria to refer to and define violence. Particularly, some define controlling behaviors as one aspect of violence while others categorize violence and control as two separate concepts. We follow the typologies of Michael Johnson (1995; 20006; Johnson & Ferraro, 2006) to conceptualize the types of intimate partner violence we examine.

Johnson's Typologies

Johnson (1995; 20006; Johnson & Ferraro, 2006) began in 1995 describing differences between *patriarchal terrorism*, where mostly women are victimized with violent as well as controlling behaviors, and *common couple violence*, where both partners in a heterosexual couple engage in low-level, low severity, situational violence that does not escalate. Patriarchal terrorism is most often researched and discussed by feminist scholars, and is rooted in patriarchal idealism with traditions that husbands are to control their women. This form of violence is most often initiated and perpetrated by men against women and has a tendency to escalate over time. Common couple violence, on the other hand, is merely situational, arising from stress and tension in daily life and is meant to gain control only over a specific situation, not the relationship in general, and does not appear to escalate (Johnson, 1995). Activists for the family violence perspective have argued that women are committing acts of violence at rates similar to and in some studies higher than men, and these arguments have threatened the integrity of women's shelters and assistance programs (Johnson & Ferraro, 2000). In fact, Johnson's (1995) main argument for these two major distinctions is in the way research is collected, namely, that survey research elicits data from common couple violence where shelter and agency data collects information on patriarchal terrorism. He has argued that couples experiencing common couple violence are less likely to be involved in shelters or agency settings, seeing as violence in these relationships is low level, situational only, and infrequent. Conversely, survey data systematically biases against patriarchal terrorism as women may have fear of punishment from husbands for disclosing their abuse. For example, Caetano, Ramisetty-Mikler, and Field (2005)

conducted home-based interviews with both partners to answer questions about violence, and found most couples reporting violence had bidirectional IPV. It is not doubtful that wives in these interviews felt threatened to change their reports with their husbands in the room, and that information about intimate terrorism was lost. Johnson demonstrates this case in his 2006 study, where the majority of intimate terrorism in the study came from shelters and courts and situational couple violence dominated the survey end of the study. The types of violence elicited in these two different methodologies do not represent polar ends of a spectrum, but two different and distinct phenomena (Johnson, 1995; Johnson & Ferraro, 2000). Johnson later adds two supplementary types of violence, which he refers to as *violent resistant* and *mutual violent control* (2006). The defining nature between these types of violence is the issue of control. The four categories are summarized below:

Intimate Terrorism – one is controlling and violent and their partner is neither; severe forms of violence, initiated and perpetrated most often by men, escalates over time.

Violent Resistance – one is violent and non-controlling but their partner is violent and controlling ; violence by the individual is a means to combat the controlling/violent nature of the partner.

Mutual Violent Control – both individual and their partner are violent and controlling.

Situation Couple Violence – one is violent but non-controlling with a partner who is either violent and non-controlling or neither violent or controlling; situational, infrequent violence is initiated and perpetrated equally by men and women; does not escalate over time (Johnson, 2006).

Johnson's 2006 analysis of a late 1970's study using data from both survey and agency shows that 97% of intimate terrorism is perpetrated by husbands, 96% of violent resistance is committed by wives, and that husbands and wives are represented fairly equally in both situational couple violence and mutual violent control. Thus, although most intimate partner violence may be situational couple violence, these forms of violence are less severe, relatively

infrequent, and generally do not intensify over time. Additionally, intimate terrorism, the stereotypical and most publicized façade of family violence, is still present and perpetrated mostly by men against women, and involves both violent and controlling aspects of abuse. Many current studies unfortunately ignore the controlling aspect of violence (Kenney & McLanahan, 2006; Fertig, Garfinkel, & McLanahan, 2007).

Controlling Behavior

Controlling behavior is hypothesized to result from feelings of insecurity or losing power on the part of the perpetrator. Using the Fragile Families and Child Well-Being data, the data from which this study draws, Fertig, Garfinkel, & McLanahan (2007) found that for non-coresident dating couples, the mother's probability of experiencing violence is higher in cities with stricter child support enforcement. Therefore, perpetrators of violence may be reacting to their lack of control in the larger structural and societal systems through the use of controlling and/or violent tactics in their romantic relationships.

Recent research lends support to Johnson's incorporation of controlling behavior in his definitions. Thompson, Bonomi, Anderson, Reid, Dimer, Carrell, & Rivara (2006) find that 11.9% of all women surveyed reported at least one form of IPV, and more than three quarters of these also experienced controlling behaviors. Controlling behavior is the most common form of abuse perpetrated against women, according to their study (2006). Additionally, Coker and colleagues (2002) find that women experiencing abuse of their power and control were more likely to have depressive symptoms when compared to verbal abuse.

Intimate Partner Violence and Relationship Status

Research on intimate partner violence has historically been conducted with married partners. However, recent literature has shown alarming rates of violence within cohabiting and dating relationships as well; in fact, some studies find cohabiting relationships to be more violent than marriage (Brownridge, 2004; Cherlin, Burton, Pert, & Purvin, 2004; Kenney & McLanahan, 2006; Shackelford, 2001). Other research further suggests differences in mental health by

relationship status whereby cohabiters reported higher measures of mental health (Deklyen, Brooks-Gunn, McLanahan, & Knab, 2006) and lower indices of relationship quality (Carlson, 2007; Marcussen, 2005) than did their married counterparts. Therefore, we examine both cohabiting and married couples and take into account marital status in our models.

Turning to our hypotheses, we expect mothers in more severe violent relationships (distinguished by no violence, controlling-only unions, and violent *and* controlling unions) to exhibit higher levels of depression and anxiety concurrently and over time.

Hypothesis 1: We expect to find a higher likelihood of depressive and anxious symptoms for mothers in the controlling-only and violent *and* controlling unions as compared to mothers experiencing no violence or control, consistent with prior research (Thompson et al., 2006; Coker et al., 2002).

Hypothesis 2: Mothers in these more severe groups will have greater odds of dissolving their unions as compared to mothers not experiencing control or violence.

Hypothesis 3: We expect to find mothers in more severely violent unions to have greater odds of increasing their number of depressive and anxious symptoms over time.

Hypothesis 4: We predict that mothers who dissolve their controlling or violent unions will experience a reduction in depression and anxiety symptoms over time.

Overall, we hope to add to the field of existing literature by examining mental health outcomes and different types of intimate violence in hopes of aiding policy workers and mental health professionals to properly diagnose and treat violently different individuals, couples, and families. To do this, we replicate Johnson's (1995; 2006; Johnson & Ferraro, 2000) typology of violence in a contemporary, nationally representative dataset. Secondly, we examine the impact of IPV on both cohabiting and marital unions. Finally, we examine the effects of these different typologies on various outcomes, including mental health and dissolution, so as to adequately identify and intervene with the populations who have the highest risk and are most severely impacted by family violence. Indeed, Johnson (2006) states, "Situational couple violence, intimate terrorism, violent resistance, and mutual violent control simply cannot have the same causes, developmental trajectory, consequences, or prognosis for effective intervention." (p.

1013). It is imperative to distinguish between these groups when discussing IPV, developing policy and intervention, as well as in evaluating treatment (Johnson, 2008).

Data and Methods

This research uses the Fragile Families study, a study of new unwed mothers and fathers and their children. The baseline data includes a sample of 4,898 mothers and fathers ($n = 3830$) who had children (3,711 nonmarital and 1,187 marital) in the US between 1998 and 2000. The study over sampled births to unmarried couples and is nationally representative of non-marital births in large US cities. Both mothers and fathers were interviewed in the hospital shortly after their child's birth with follow-up interviews conducted when the child was one and three years olds (see Reichman, Teitler, Garfinkel, & McLanahan, 2001 for a detailed discussion).

We rely on mothers' reports of her and the fathers' characteristics and behaviors. Therefore, we chose to deal with same-reporter bias as opposed to non-response bias due to the fact that there is much missing data (25% at baseline) from the fathers in the sample, and those missing are more likely to be disadvantaged (Teitler, Reichman, & Sprachman, 2003).

Therefore, given the bias and small size of the father we use only mother reports.

In this study, we only draw data from mothers who were either cohabiting or married to the father of their child and were present at year 1 ($n = 2639$). Marriage and cohabitation at 1 year were pulled from the question: *What is your relationship with [father] now? Are you married, romantically involved, separated/divorced, just friends, or not in any kind of relationship?* Marriage was coded as a response of *married*. Cohabiting was measured as being *romantically involved* as well as reporting living together *all or most of the time* in response to the question *Are you and [father] currently living together all or most of the time, some of the time, rarely, or never?* At year 1, 1,254 (48.27%) of mothers report being married and 1,344 (48.27%) of our sample are cohabiting.

Independent Variables

Violence was coded at both 1 and 3 years for mothers who answered *Sometimes* or *Often* (rather than *Never*) to at least one of the following questions about their partner, *He slaps or kicks you; He hits you with his fist or an object that could hurt you; He tries to make you have sex or do sexual things you don't want to do;* or answered yes to *Were you ever cut, bruised, or seriously hurt in a fight with the child's father?*

Control was coded at both 1 and 3 years for mothers answering *Sometimes* or *Often* to at least one of the following questions about their partner: *He insults or criticizes you or your ideas; He tries to keep you from seeing or talking with your friends or family; He tries to prevent you from going to work or school;* or *He withholds money, makes you ask for money, or takes your money.* In an effort to make distinctions between types of intimate partner violence, we created three groups of violent unions: non-violent and non-controlling ($n = 1448$), controlling-only unions ($n = 1123$), and controlling and violent unions ($n = 127$). We did examine violent-only relationships, however the sample size ($n = 26$) was far too small to appropriately conduct analyses; therefore, these observations were dropped from our analyses. The small number of violent-only observations, however, indicates the high percentage of violent unions that also include controlling behaviors (83% in this data).

We coded relationship dissolution two ways: first, we explore mothers who report a downgrade in status with the fathers. That is, mothers who reported being married to the father of their child at Year 1 but not at Year 3; mothers stating they no longer live with the father *all/most of the time* by Year 3 were also included in this group. We excluded from our analyses mothers whose relationships experienced a downgrade but also reported having a romantic relationship with the fathers. This was an important distinction to make and compare, since we found 105 mothers who were longer cohabiting or married but still romantically involved, perhaps taking a break from the live-in relationship but not from the relationship in general. Therefore, by the 1-year survey, 5% of married couples and 29% of cohabiting couples met our criteria for dissolution, and 10% of married couples and 38% of cohabiting couples dissolved by year 3.

Dependent Variables

We utilized continuous measures of depression and anxiety for our indicators of mental health. Symptoms of depression coded at both years 1 and 3 used diagnostic criteria from the Composite International Diagnostic Interview – Short Form (CITI-SF). Scoring of the CITI-SF matches the *Diagnostic and Statistical Manual of Disorders, Fourth Edition* (DSM-IV, American Psychological Association, 2000) diagnostic criteria for major depressive episode. Depression items included, *During the past 12 months, has there ever been a time when you felt sad, blue, or depressed for two or more weeks in a row? Has there ever been a time lasting two weeks or more when you lost interest in most things like hobbies, work, or activities that usually give you pleasure? Did you feel more tired out or low on energy than usual? Did you gain or lose weight without trying? Did you have a lot more trouble concentrating than usual?* The continuous coding of depression consisted of eight items, some of which are mentioned previously (alpha = 0.88 at Year 1 and 0.90 at Year 3). Participants received a value of 1 for a *yes* response to each symptom, and the sum of these items became their score. It is important to note that respondents who did not report experiencing the first two symptoms (feeling depressed or experiencing a loss of interest), the original questionnaire skipped them past the rest of the questions. We therefore have a skewed distribution of both depression and anxiety, which we account for with negative binomial regression and explain in more detail in our methods.

Measures of anxiety were also coded continuously at both the baseline and final waves. Assessment of anxiety includes the following items, among others: *Did you have a time in the past 12 months when you worried a lot more than most people would in your situation? Did/Do you find it difficult to stop worrying? Did/Do you have different worries on your mind at the same time? How often did/do you find it difficult to control your worry? Were you also keyed up or on edge?* The anxiety coding consists of seven total items, including those mentioned previously (alpha = 0.94 at baseline and 0.93 at the final wave). Using this coding, we find that

29.91% of our mothers at baseline have at least one symptom of anxiety with about 5.51% experiencing multiple symptoms of anxiety. These numbers for anxiety were consistent for our mothers at the final wave, 36.33% reporting at least one symptom and 6.58% experiencing multiple symptoms.

Control Variables

In our analyses we controlled for various demographic variables, including marital status, mothers' age in years, race, education, and employment status. Mothers' marital status, age, race, education, and employment status are all self-reported observations. Mothers' cohabitation status was coded as (1) cohabiting and (0) married. Mothers' age was coded continuously by years, and we code race and education dichotomously for the following groups: white, black, and Hispanic and less than high school, high school diploma or equivalent, and at least some college education. Employment status refers to mothers as having participated in regular work for pay in the week before their interview date (1) or not participating in regular work (0).

We account for fathers' employment status as this can potentially be related to total income of the family unit and potentially the mothers' mental health. We gave a value of 1 for a yes answer and 0 for answering no to the question *Is father (of the shared child) current working*. For this item we used mothers' responses and replace those with missing values from the fathers' reports. For an additional measure of income status, we control for welfare use as measured by the mother (1) used welfare in the last year and (0) not using welfare in the last year. To assess other indicators of employment status, we controlled for mothers' educational involvement, giving a value of 1 to those mothers who were currently in school. We assigned a value of 1 to mothers who had completed education since our baseline wave, a potential indicator of improvement in their socioeconomic status. Additionally, we accounted for the number of children residing in the household giving us information about the potential burden on finances. This variable was coded as biological or step-children living in the home who were under 18

using a household roster. These last variables together supply comprehensive indicators of the family socioeconomic status without using income, which had a large amount of missing data.

We controlled for mothers' perception of their available support, which may change during or after a separation when mothers live with family or rely on family for financial or childcare assistance. Our variable for support, which was measured at both waves 2 and 3, includes the following items: *Could you count on someone to loan \$200 in the next year? Could you count on someone to loan \$1000 in the next year? Could you count on someone to provide a place to live in the next year? Could you count on someone to help with emergency child care? Could you count on someone to co-sign for a loan for \$1000? Could you count on someone to co-sign for a loan for \$5000?* These items were combined in our support scale if they answered yes to these questions. Respondents received a zero for each item if they responded "no" or "don't know", since it is the perception of support we were interested in evaluating (alphas 0.96 at year 1 and 0.99 at year 3).

Additionally, literature suggests religious involvement can be a protective factor against stress and mental health (Lee, 2007; Watlington and Murphy 2006). Watlington and Murphy (2006) found higher levels of religious involvement to be associated with fewer depressive symptoms, fewer posttraumatic stress symptoms and higher levels of social support for a group of African American women survivors of domestic violence. Considering the high minority population of our sample (70.32%) and the importance of this association, we included religious involvement in our controls. This variable is coded incrementally from 0-5. Scores indicate attendance (0) "never" attending religious services, (1) attending less than once a year, (2) a few attendances per year, (3) a few times in a month, (4) one time per week, (5) more than once a week. Therefore, a higher score on this variable indicates a higher level of involvement.

When examining change in status over time, we construct a multinomial variable, with (0) indicating mothers who remained in non-controlling and non-violent unions over the two waves, (1) mothers who remained in controlling-only unions, (2) mothers staying stable in

violent and controlling unions, (3) those leaving from, or dissolving, violent and/or controlling unions, and (4) mothers dissolving relationships which were not violent or controlling (dissolving-only).

Changes in continuous measures of depression and anxiety were coded in the following way: (0) maintaining no symptoms at both waves, (1) maintaining the same number of symptoms over both waves (2) experiencing an increase in symptoms between waves, and (3) experiencing a decrease in symptoms between waves, or having clinical depression or anxiety at the first wave but not meeting criteria at the next wave.

All other variables which can change over time and had values at both waves were used to create change variables, which was constructed by subtracting their score at baseline from their score at our final wave. The only variables which do not or should not vary over time and thus were not included in our multinomial logistic regressions were race, age (2 years difference for all women) and education level (changes in education level were measured by schooling variables).

Analytic Plan

We run three different sets of models to examine the association between mental health and intimate partner violence in our sample. We begin by examining the association between type of violent union (i.e. no violence or control, controlling only, or violent and controlling) and depressive and anxious symptoms at year 1. Control variables in these models included mothers' age, race, and education which were measured at baseline, and their marital status, employment status, school status, welfare use, total children in care, perceived social support, religious involvement, and fathers' employment status, measured at year 1. We use negative binomial regression to examine the association between type of violent union and the count variables number of depressive symptoms and number of anxious symptoms. These count variables were skewed toward 0 and have over-dispersion (the variance of the variable is greater than its mean; variance = 1.84; mean = 0.61 for anxiety; variance = 3.59; mean = 0.92 for depression at year 1).

Therefore, rather than using OLS regression as is standard with continuous variables that are normally distributed, we used a negative binomial regression. Following Fomby and Cherlin (2007), the interpretation of the negative binomial regression is slightly different from an OLS regression such that for any continuous covariate x_k in the model, such as perceived social support, a unit change in x_k changes the expected count of the outcome, Y , such as clinical depression, by a factor of e^β , holding all other variables constant. We report both the β and the exponentiated β (e^β), and we discuss the exponentiated β or odds ratios in the text (See Fomby and Cherlin, 2007, for an application of negative binomial regression to family data and Long and Freese, 2006, for a technical discussion).

We next examine the role of type of violent union in predicting the dissolution of unions between years 1 and 3. We use simple logistic regression to predict union dissolution and again discuss the exponentiated coefficients. Control variables included mothers' marital status, age, race, education, employment status, school status, welfare use, total children in care, perceived social support, religious involvement, and fathers' employment status all measured at year 1.

Our final set of models examined the change in mental health between years 1 and 3 by type of violent union and the stability of violent union. Control variables in these models included only time-varying co-variates because the outcome was the change in mental health. Control variables included change in: mothers' employment status, school status, welfare use, number of children in the home, perceived social support, religious involvement, and fathers' employment status. To examine the change in mental health over time and account for observed heterogeneity, we utilized fixed effects regression, where time-variant characteristics can be examined as part of the model. The general equation for a fixed effects model is as follows (Allison 2006):

$$y_{it} = \mu_t + \beta x_{it} + \gamma z_i + \alpha_i + \varepsilon_{it}$$

Within the above equation, y_{it} is the mental health outcome for each individual measured at two time points. μ_t is the intercept for each point in time. β represents the vector of coefficients for

the predictor variables (x_{it}) that vary over time. γ represents the vector of coefficients for the predictor variables (z_i) that do not vary over time. α_i and ε_{it} are both error terms. α_i represents all unobserved variation that effects y that is constant over time. Conversely, ε_{it} represents any random variation for each individual at each time point.

Because we are using two waves of data in our analysis, our fixed effects analysis will consist of two equations, which are as follows:

$$y_{i1} = \mu_1 + \beta x_{i1} + \gamma z_i + \alpha_i + \varepsilon_{i1}$$

$$y_{i2} = \mu_2 + \beta x_{i2} + \gamma z_i + \alpha_i + \varepsilon_{i2}$$

We can assess change between times 1 and 2 by subtracting equation 1 from equation 2:

$$y_{i2} - y_{i1} = (\mu_2 - \mu_1) + \beta(x_{i2} - x_{i1}) + (\varepsilon_{i2} - \varepsilon_{i1})$$

In the above equation the coefficients and error terms that do not vary over time, γz_i and α_i , are differenced out. Therefore, only observed time-variant variables are entered into the equation when estimating the fixed effects results. In these models, variation that is due to stable, observed and unobserved characteristics of the respondents are differenced out. Thus, in these models, there remains a single source of un-modeled heterogeneity that could serve as a source of third-variable bias – unobserved, time-varying heterogeneity. We examine the role of the following time-varying covariates in models: mothers' and fathers' employment status, educational status, having completed education, the total number of children, perceived social support, and religious involvement.

Results

We use Stata (Version 10) to conduct all analyses.

Descriptive Statistics

The average number of depressive symptoms in the sample was 0.75 on a scale of 0 to 8, and 0.54 for anxious symptoms on a scale of 0 to 7 at year 1. These low numbers can be explained, as mentioned earlier, by the highly skewed distribution of depressive and anxious

symptoms. Approximately 78% of the sample experienced no depressive symptoms and 70% experienced no anxious symptoms at year 1.

Turning to relationship variables, almost half of our sample was married (48%) while 52% were cohabiting at year 1. Overall, 17% of our 2598 mothers dissolved their unions between year 1 and year 3. A large portion, 44%, of mothers experienced at least one symptom of control in their unions, while a much smaller 5% experienced violence.

The mothers' racial identity was fairly evenly distributed with 37% Black, followed by 30% Hispanic and 28% White. Education level was also fairly dispersed. Mothers having at least some college education represented 42% of our sample, followed equally by mothers with less than a high school diploma at 29% and mothers having a high school diploma or GED also at 29%. The average age of mothers was approximately 26 years old. About half of our mothers were employed (53%) while a much larger percentage of their partners had work outside the home (88%). Sixteen percent of mothers were enrolled in an educational or training program at year 1, and 16% had completed that education or training by year 3. The average number of children was 2.05 for our mothers at wave 1, suggesting that many mothers in our sample had other children in their care. Further, about 15% of our sample had utilized some form of welfare services in the past year (the first year of their child's life). Also, mothers reported having fairly high levels of social support with a mean of 4.36 on a 6-point scale, and reported religious attendance (a mean level of 2.56) between a few times a month to a few times per year.

(Table 1 about here)

Results from Models Predicting Depression and Anxiety at 1-Year from Controlling/Violent Union Types

Turning to our first research question: Does the association between mental health and domestic violence vary by type of violence, we found that both controlling only and violent and controlling unions had negative implications for mental health. Net of all control variables, we found that mothers in controlling unions had 87% greater odds of reporting an additional

depressive symptom and mothers in controlling and violent unions had 286% greater odds of reporting an additional depressive symptom compared to mothers who were in non-violent/non-controlling unions. With regard to symptoms of anxiety, we found that mothers who were in controlling unions had 62% greater odds of reporting an additional anxious symptom while mothers who were in controlling and violent unions had 255% greater odds of reporting an additional anxious symptom compared to mothers who were in non-violent/non-controlling unions. The addition of controls for demographic and economic factors did little to change the coefficients. However, the addition of the support variables, particularly perceived social support, to the model did slightly diminish the coefficients, but the differences between the controlling only and violent and controlling groups and the no violence or control group were still large and significant.

(Table 2 about here)

With regards to our control variables we found that, overall, marital status was unrelated to depressive and anxious symptoms. This finding is contrary to previous research. We also found only marginally significant or no associations between mother's age, employment status, welfare use, schooling status, and number of children under her care. We did find that Hispanics mothers reported fewer depressive and anxious symptoms than did White mothers. We also found that Black mothers had fewer anxious symptoms than did White mothers. In terms of education, we found few mental health differences between mothers with less than a high school education and those with a high school education. However, we did find that mothers with more than a high school education were less likely than those with a high school education to have anxious symptoms. Finally, we found that mothers with employed partners were less likely to have fewer depressive and anxious symptoms than did those mothers whose partners were unemployed.

Turning to the support variables, we found that for each additional source of social support, the odds of having an additional depressive symptom decreased by 13% and the odds of

having an additional anxious symptom decreased by 14%. We also found that for each additional level of religious involvement, the odds having an additional depressive symptom marginally increased by 7% and the odds of having an additional anxious symptom marginally increased by 5%. Overall then, it appears at least initially that support is not uniformly associated with mental health such that in this at risk population, having sources of social support is beneficial, but religious involvement may not be beneficial to mental health.

Net of all control variables, mothers in controlling-only unions still had 75% greater odds of having an additional depressive symptom and 45% greater odds of having an additional anxious symptom when compared to mothers in non-violent, non-controlling unions. Further, mothers in joint controlling *and* violent unions experienced 240% greater odds of having an additional depressive symptom and 182% greater odds of having an additional anxious symptom. These results lend support to hypothesis 1: we expected to find greater odds of having depressive and anxious symptoms for mothers in the controlling-only, and violence *and* controlling unions compared to mothers experiencing no violence or control. Our results indeed provide evidence to support this hypothesis.

Results from Models Predicting Leaving at 3-Years from Controlling/Violent Union Types

Turning to our second research question, does the probability of leaving vary by type controlling/violent union, we find that mothers in controlling-only unions were not significantly more likely to dissolve their union between years 1 and 3 than were mothers in non-violent/non-controlling unions (see Table 4). However, we found that mothers in violent and controlling unions had 87% greater odds of dissolving their unions between years 1 and 3 than mothers who were in non-violent/non-controlling unions before accounting for controls. This indicates that mothers in these most severe relationships do somewhat recognize a need to leave and are able to do so. The addition of controls for support at year 1 did diminish the effect slightly, but the difference between mothers in controlling and violent unions and mothers in non-controlling/non-violent unions remained significant. These findings partially support our second

hypothesis, such that though women in controlling-only relationships were not more likely than those in non-violent/non-controlling unions to leave their relationships, women who experienced violent acts in a controlling union had greater odds of union dissolution.

(Table 3 about here)

Turning to the control variables, we found that marital status was the most powerful predictor of dissolution. Consistent with previous research, mothers in cohabiting unions were 208% more likely to dissolve their union compared to mothers in marital unions. We also found that the odds of dissolution decreased by 6% for each additional year in age mothers were. Further, Black mothers had 54% greater odds of dissolution than did White mothers. Hispanic mothers were somewhat less likely to dissolve their union than were White mothers. We also found that mothers with at least some college were marginally significantly less likely to dissolve their unions. Mothers who were employed and who had used welfare in the past year also had greater odds of dissolving their union. With regard to the support variables, we found that for each additional level of social support, mothers had 9% lower odds of dissolving their union. However, each additional level of religious involvement a mother reported, her odds of dissolving the union increased by 7%.

(Table 4 about here)

Results from Models Predicting Change in Depression and Anxiety at 3-Years from Controlling/Violent Union Types

Change in depressive symptoms. Regarding our fixed effects regression results reported in Table 4, we found mothers in all violent groups reported an increase in their depressive symptoms from year 1 to year 3. The magnitude of change was greatest for mothers remaining in violent and controlling unions, followed by those who dissolved violent and/or controlling unions and unions which were not characterized by violent or controlling behaviors, mothers in controlling-only stable unions, and finally by stable non-violent/non-controlling unions. These results remained consistent after accounting for economic and support controls.

Considering our control variables, we found that change in mothers' educational status (that is, the mother entering school of some sort) was associated with a significant changes in depressive symptoms, particularly a decrease in reported depressive symptoms. However, for each additional child the mother had between years 1 and 3, she experienced a significant increase in depressive symptoms. Turning to our support variables, an increase in the level of perceived social support was significantly associated with a decrease in reported depressive symptoms, as would be expected.

Change in anxious symptoms. Moving to the results for anxious symptoms between years 1 and 3 reported in Table 4, we found significant increases in anxious symptoms only for mothers in controlling-only stable and dissolved non-violent/non-controlling unions. These results were no longer significant for controlling-only mothers after we included controls for economic variation and support. Although mothers in stable non-violent/non-controlling, violent and controlling stable, and violent and/or controlling dissolved did not experience change in mental health, the direction of their coefficients was positive.

Mothers who became employed between years 1 and 3 experienced a significant decrease in anxious symptoms, as did mothers whose fathers of their children also became employed. Mothers who began to use welfare between years 1 and 3 experienced a marginally significant decrease in anxious symptoms, possibly due to the lessening financial worries. However, mothers who completed their education or training program between years 1 and 3 experienced a marginally significant increase in anxious symptoms. This may be due in part to the stress of searching for employment.

Comparing Violent Groups

To appropriately measure differences *between* our violent groups and the change in depressive and anxious symptoms over time, in results not shown we employed fixed effects analyses utilizing interaction terms. That is, we modeled the natural change in depressive and anxious symptoms over time for a reference group and then examined whether this natural

change over time was significantly different compared to those in our remaining violent groups. These analyses included all control variables.

We found that mothers remaining in controlling and violent unions were significantly more likely to increase in depressive symptoms over time than were mothers remaining in controlling-only stable unions and those remaining in non-controlling/non-violent stable unions, offering support to our third hypothesis. However, we do not find significant differences in either depressive or anxious symptoms for mothers in controlling-only stable unions as compared to mothers in non-controlling/non-violent stable unions. Therefore, we have only partial evidence to support hypothesis 3: that mothers who remain in more severe types of unions experience high levels of violence. This was true only for the mothers who were involved in both violent *and* controlling unions.

Concerning our fourth and final hypothesis, our results indicated that mothers who dissolved violent and/or controlling unions experienced a significant increase in depressive symptoms over time, net of economic and support variables. These results did not lend support for hypothesis 4, which predicted that mothers leaving violent and/or controlling unions would experience a decrease in symptoms. We also found that these controlling and/or violent mothers who dissolved their unions experienced a significant increase in depressive symptoms when compared to mothers in both the non-violent/non-controlling stable and controlling-only stable unions. However, when compared to mothers who remained in violent and/or controlling unions, mothers who dissolved their violent and/or controlling unions did not experience significant changes in mental health. Therefore, we found no support for our final hypothesis that mothers who dissolve violent and/or controlling unions experienced a decrease in mental health symptoms over time.

Discussion

This study documents the consequences of different violent unions and marital status on mental health and union dissolution of 2598 mothers using longitudinal data from the Fragile

Families study. We found support for our first hypothesis testing whether mothers in more severely violent unions experienced greater depressive and anxious symptoms. Our second hypothesis was also supported, which found mothers in more severely violent unions to have greater odds of leaving the union. Further, our third hypothesis was partially supporting such that we found that mothers who remained in more severely violent unions experienced greater increases in mental health symptoms over time than those not experiencing violent or controlling relationships. Finally, our fourth hypothesis was not supported. In fact, we found evidence that mothers who dissolved their violent and/or controlling unions also experienced an *increase* in depressive symptoms (but not anxious symptoms), between years 1 and 3.

Most importantly, we found that all mothers who were in some type of controlling union, whether that be control by itself or hand in hand with violence, had poor mental health outcomes. However, we did not find that mothers in controlling-only unions increased in depressive symptoms over time. Rather, we found the most severe consequences for mothers experiencing what Johnson would label *intimate terrorism*, or unions involving both male perpetrated violence and controlling behaviors. These mothers began at Year 1 with high rates of depressive and anxious symptoms, and then experienced a significant increase in symptoms over time. Although our sample of mothers experiencing *intimate terrorism* was only 9% of our sample and 18% of mothers experiencing violence or controlling behaviors, our findings indicate a strong prevalence of this particular group in an at-risk population. These mothers are more in need of psychological and social services due to their greater likelihood of mental health problems. They have uniquely different experiences and consequences than those experiencing *situational partner violence* and those experiencing controlling-only behaviors.

Our findings in table 4 suggest that leaving a violent relationship does not necessarily mean that anxious and depressive symptoms will decrease. It is possible that the effects of controlling and/or violent behaviors linger, or that our measures do not provide sufficient time after dissolution to see decreases in mental health. Also, these mothers share a child with their

abusers, and are likely to be tied to the fathers after the dissolution, hence putting them at risk for further violence. Finally, these mothers may also be mourning the end of the relationship while making a transition to single-parent family life.

The most important implication from this study is the identification of a specific violent group, those that are controlling-only. We find that this group of mothers experiencing non-violent controlling behaviors had more depression and anxiety than mothers not involved in violent or controlling unions. Though these mothers did not increase in symptoms over time, they also did not decrease, thus they maintained the higher levels of depressive and anxious symptoms. Thus the controlling aspect of violence has been shown here to have a significant impact on mothers' mental health, and perhaps should be categorized as a separate and distinct group. This group of controlling-only mothers represented two thirds of our violent/controlling sample. These controlling-only unions are relationships which could perhaps be categorized, in accordance with Johnson's typologies, as *pre-intimate terror*. That is, just like intimate terrorism behavior escalates over time, relationships may start off with mild controlling behaviors which may then increase in severity over time to include the incorporation of violent behaviors. This is sensible, considering that most women and men do not choose to enter violent relationships, but rather control and violence climbs throughout the course of a relationship. However, this group of victims of controlling behaviors is not highlighted in the literature as a public health concern. Here we find it to have important implications, and hope to have emphasized its damaging consequences for mothers.

No study is without limitations, and we examine several here that pertain to these analyses. Our research is bound by the limitations of the Fragile Families study. We do have missing data for some variables at wave three and also lose respondents to attrition. We also are not able to assess frequency or severity of the violent acts in full accordance with Johnson's (2006) typologies, specifically the intent for violence central to *violent resistant* unions. We also do not have father-reports of control and violence as violent items were not assessed from fathers

at year 1. The Fragile Families study does not assess use of threats as a controlling behavior, such as threatening physical abuse, to take children away or to hurt them, or to leave, although other research has shown this to be prevalent among groups of abused women (Raj, Silverman, McCleary-Sills, & Liu, 2005; Thompson et al., 2006). We also note that we use loosely the terms “leaving” and “dissolving her union”, but here acknowledge that we have no information on relationship dissolution that would suggest which partner initiated the breakup.

Implications for future policy and research are vast. Screenings for intimate partner violence needs to include issues of controlling behaviors, including isolation, emotional abuse, and economic abuse, and in all settings, including the medical, psychological, social service, and educational fields. Clinical research should examine interventions used with women experiencing intimate partner violence, especially mothers, to determine which interventions are appropriate and successful with each group, particularly utilizing the knowledge that mothers’ psychological well-being may not improve when she exits an abusive relationship. Further, our research indicates different mental health trajectories of mothers who exit controlling or violent and controlling unions. Therefore, future research should further examine the resiliency of mothers and situational determinants which may serve as either risk or protective factors for mothers’ mental health after dissolution from these unions.

References

- Amato, P. R., Booth, A., Johnson, D. R., & Rogers, S. J. (2007). *Alone together: How marriage in America is changing*. Cambridge, MA: Harvard University Press.
- American Psychiatric Association. (2000). "Diagnostic and statistical manual of mental disorders" (text Revision). Washington, DC.
- Bonomi, A. E., Thompson, R. S., Anderson, M., Reid, R. J., Carrell, D., Dimer, J. A., & Rivara, R. P. (2006). Intimate partner violence and women's physical, mental, and social functioning. *American Journal of Preventative Medicine*, 30(6), 458-466.
- Brownridge, D. A. (2004). Understanding women's heightened risk of violence in common-law unions. *Violence Against Women*, 10(6), 626-651.
- Caetano, R., Ramsietty-Mikler, S., & Field, C. A. (2005). Unidirectional and bidirectional intimate partner violence among white, black, and Hispanic couples in the United States. *Violence and Victims*, 20(4), 393-406.
- Carlson, M. J. (2007). Trajectories of couple relationship quality after childbirth: Does marriage matter? *Center for Research on Child Well-being Working Paper #2007-11-FF*.
- Cherlin, A. J., Burton, L. M., Hurt, T. R., & Purvin, D. M. (2004). The influence of physical and sexual abuse on marriage and cohabitation. *American Sociological Review*, 69, 768-789.
- Coker, A. L., Davis, K. E., Arias, I., Desia, S. Sanderson, M., Brandt, H. M., & Smith, P. H. (2002). Physical and mental health effects of intimate partner violence for men and women. *American Journal of Preventative Medicine*, 23(4), 260-267.
- DeKlyen, M., Brooks-Gunn, J., McLanahan, S., & Knab, J. (2006). The mental health of married, cohabiting, and non-coresident parents with infants. *American Journal of Public Health*, 96(10), 1836-1841.
- Fertig, A. R., Garfinkel, I., & McLanahan, S. S. (2007). Child support enforcement and domestic violence. Taken from Fragile Families Working Papers.

- Fomby, P. and Cherlin, A. J. 2007. "Family Instability and Child Well-Being." *American Sociological Review* 72: 181-204.
- Johnson, M. P. (1995). Patriarchal terrorism and common couple violence: Two forms of violence against women. *Journal of Marriage and the Family*, 57, 283-294.
- Johnson, M. P., & Ferraro, K. J. (2000). Research on domestic violence in the 1990s: Making distinctions. *Journal of Marriage and the Family*, 62, 948-963.
- Johnson, M. P. (2006). Conflict and control: Gender symmetry and asymmetry in domestic violence. *Violence Against Women*, 12(11), 1003-1018.
- Johnson, M. P. (2008). *A typology of domestic violence: Intimate terrorism, violent resistant, And situational couple violence*. Boston: Northeastern University Press.
- Kenney, C., & McLanahan, S. S. (2006). Why are cohabiting relationships more violent than marriages? *Demography*, 43(1), 127-140.
- Lee, B. (2007). Moderating effects of religious/spiritual coping in the relationship between perceived stress and psychological well-being. *Pastoral Psychology*, 55, 751-759.
- Long, J. S., & Freese J. (2006). Regression models for categorical dependent variables using Stata.
- Marcussen, K. (2005). Explaining differences in mental health between married and cohabiting Individuals. *Social Psychology Quarterly*, 68(3), 239-257.
- Raj, A., Silverman, J. G., McCleary-Sills, J., & Liu, R. (2005). Immigration policies increase South Asian immigrant women's vulnerability to intimate partner violence. *Journal of the American Medical Women's Association*, 60(1), 26-32.
- Reichman N., Teitler J., Garfinkel I., & McLanahan, S. (2001). Fragile families: Sample and design. *Children and Youth Services Review*, 23, 303-326.
- Rivara, F. P., Anderson, M. L., Fishman, P., Bonomi, A. E., Reid, R. J., Carrell, D. C., & Thompson, R. S. (2007). Healthcare utilization and costs for women with a history of

- intimate partner violence. *American Journal of Preventative Medicine*, 32(2), 89-96.
- Shackelford, T. K. (2001). Partner-killing by women in cohabiting relationships and marital relationships. *Homicide Studies*, 5(3), 253-266.
- Teitler, J.O., Reichman, N.E., & Sprachman, S. (2003). Costs and benefits of improving response rates for a hard-to-reach population. *Public Opinion Quarterly*, 67, 126-38.
- Thompson, R. S., Bonomi, A. E., Anderson, M., Reid, R. J., Dimer, J. A., Carrell, D., & Rivara, F. P. (2006). Intimate partner violence: Prevalence, types, and chronicity in adult women. *American Journal of Preventative Medicine*, 30(6), 447-457.
- Watlington, C. G., & Murphy, C. M. (2006). The roles of religion and spirituality among African American survivors of domestic violence. *Journal of Clinical Psychology*, 62(7), 837-857.

Table 1. *Descriptive Statistics*

	μ	sd
Depressive Symptoms, Year 1	0.75	1.73
Anxious Symptoms, Year 1	0.54	1.27
Married	0.48	0.50
Cohabitation	0.52	0.50
Dissolution	0.17	0.38
Control in the Relationship	0.44	0.50
Violence in the Relationship	0.05	0.22
Mothers' Race		
White	0.28	0.45
Black	0.37	0.48
Hispanic	0.30	0.46
Mothers' Education		
Less than High School Diploma	0.29	0.46
High School Diploma or GED	0.29	0.45
At least some College	0.42	0.49
Mothers' Age	26.11	6.13
Mothers' Employment Status	0.53	0.50
Fathers' Employment Status	0.88	0.33
Mothers' Education Status	0.16	0.37
Completes Education Year 1 to Year 3	0.16	0.37
Total Number of Children	2.05	1.16
Welfare Use in the Last Year	0.15	0.36
Perceived Social Support	4.36	1.77
Religious Involvement	2.56	1.53
Observations	2598.00	

Table 2. Negative Binomial Regression Results for Symptoms of Depression and Anxiety, Reporting Coefficients and Odds Ratios

	Symptoms of Depression						Symptoms of Anxiety					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	β	e^{β}	β	e^{β}	β	e^{β}	β	e^{β}	β	e^{β}	β	e^{β}
Controlling Categories												
No Violence and Control	-	-	-	-	-	-	-	-	-	-	-	-
Controlling Only	0.63***	1.87***	0.63***	1.88***	0.56***	1.75***	0.48***	1.62***	0.46***	1.59***	0.37***	1.45***
Violent and Controlling	1.35***	3.86***	1.33***	3.78***	1.22***	3.40***	1.27***	3.55***	1.21***	3.34***	1.04***	2.82***
Demographic and Economic												
Cohabiting Union			0.06	1.07	0.01	1.01			0.07	1.07	-0.01	0.99
Mothers' Age			-0.01	0.99	-0.01	0.99			0.01	1.01	0.01	1.01
Mothers' Race												
White			-	-	-	-			-	-	-	-
Black			0.07	1.07	0.03	1.03			-0.22*	0.80*	-0.26*	0.77*
Hispanic			-0.28+	0.76+	-0.35*	0.70*			-0.27*	0.76*	-0.32**	0.73**
Mothers' Education												
Less than High School			0.26+	1.30+	0.23	1.25			0.03	1.03	-0.02	0.98
High School			-	-	-	-			-	-	-	-
At Least Some College			0.04	1.04	0.1	1.01			-0.29**	0.75**	-0.23*	0.80*
Mothers' Employment Status												
Mothers' Employment Status			-0.11	0.89	-0.09	0.92			-0.12	0.88	-0.11	0.9
Fathers' Employment Status												
Fathers' Employment Status			-0.39*	0.67*	-0.31+	0.73+			-0.39**	0.67**	-0.32**	0.72**
Welfare Use in Past Year												
Welfare Use in Past Year			0.17	1.18	0.16	1.18			-0.01	0.99	-0.07	0.93
Mother Currently In School												
Mother Currently In School			0.12	1.12	0.1	1.11			0.09	1.09	0.11	1.11
Number of Children												
Number of Children			0.02	1.02	0	1			0.06+	1.07+	0.04	1.04
Support Variables												
Perceived Social Support												
Perceived Social Support					-0.13***	0.88***					-0.15***	0.86***
Religious Involvement												
Religious Involvement					0.06+	0.94+					0.05+	0.95+
Constant	-0.70***	0.50***	-0.26	0.77	0.49	1.64	-0.94***	0.39***	-0.74**	0.48**	0.1	1.11
N	2598		2545		2542		2598		2545		2542	
Chi-square	50.35***		77.03***		97.45***		77.06***		114.9***		158.4***	

Note: e^{β} = exponentiated β

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.10$

Table 3. *Logistic Regression Results Predicting Dissolution, Reported Coefficients and Odds Ratios*

	<u>Model 1</u>		<u>Model 2</u>		<u>Model 3</u>	
	β	e^β	β	e^β	β	e^β
Controlling Categories						
No Violence and Control	-	-	-	-	-	-
Controlling Only	0.1	1.1	0.09	1.1	0.06	1.06
Violent and Controlling	0.63**	1.87**	0.63*	1.88*	0.58*	1.79*
Demographic and Economic						
Cohabiting Union			1.13***	3.08***	1.15***	3.16***
Mothers' Age			-0.07***	0.94***	-0.07***	0.93***
Mothers' Race						
White			-	-	-	-
Black			0.43**	1.54**	0.34*	1.41*
Hispanic			-0.31+	0.73+	-0.39*	0.68*
Mothers' Education						
Less than High School			-0.04	0.96	-0.05	0.95
High School			-	-	-	-
At Least Some College			-0.26+	0.77+	-0.22	0.8
Mothers' Employment Status						
Mothers' Employment Status			0.26*	1.30*	0.28*	1.32*
Fathers' Employment Status						
Fathers' Employment Status			-0.11	0.9	-0.06	0.94
Welfare Use in Past Year						
Welfare Use in Past Year			0.38*	1.46*	0.36*	1.44*
Mother Currently In School						
Mother Currently In School			0.09	1.09	0.1	1.1
Number of Children						
Number of Children			0.06	1.06	0.04	1.04
Support Variables						
Perceived Social Support					-0.09**	0.91**
Religious Involvement					-0.07+	1.07+
Constant	-1.31***	0.27***	-0.62+	0.54+	-0.29	0.75
N	2243		2201		2198	
Chi-square	7.887*		325.8***		335.6***	

Note: e^β = exponentiated β

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.10$

Table 4. *Fixed Effects Regression Results for Depressive and Anxious Symptoms by Violent Group*

	Depressive Symptoms						Anxious Symptoms					
	β	SE(β)	β	SE(β)	β	SE(β)	β	SE(β)	β	SE(β)	β	SE(β)
Violent Groups												
No Violence or Control, Stable	0.22**	0.07	0.17*	0.08	0.17*	0.08	0.05	0.05	0.02	0.06	0.01	0.06
Controlling-Only, Stable	0.23***	0.06	0.18**	0.07	0.17*	0.07	0.11*	0.05	0.07	0.05	0.06	0.05
Violent & Controlling, Stable	1.04***	0.24	0.91***	0.24	0.89***	0.24	0.18	0.18	0.12	0.18	0.1	0.18
Violent/Controlling, Dissolved ^a	0.59***	0.15	0.46**	0.16	0.46**	0.17	0.16	0.11	0.09	0.12	0.09	0.12
No Violence of Control, Dissolved	0.59***	0.14	0.57***	0.15	0.55***	0.16	0.33**	0.11	0.30**	0.12	0.28*	0.12
Economic Variables												
Mothers Employment			-0.08	0.08	-0.07	0.08			-0.20**	0.06	-0.20**	0.06
Fathers Employment			-0.17	0	-0.17	0.11			-0.27***	0.08	-0.27***	0.08
Mother in School			-0.22*	0.01	-0.21*	0.1			-0.1	0.07	-0.09	0.07
Mother Completed Education			0.12	0.12	0.11	0.12			0.15+	0.09	0.16+	0.09
Number of Children			0.15*	0.07	0.15*	0.07			0.03	0.05	0.03	0.05
Welfare Use in Past Year			0.01	0.12	0	0.12			-0.17+	0.09	-0.18*	0.09
Support Variables												
Perceived Social Support					-0.07*	0.03					-0.03	0.02
Religious Involvement					0	0.03					0.03	0.02
Constant	0.75***	0.03	0.66***	0.18	0.96***	0.23	0.55***	0.02	0.87***	0.14	0.92***	0.17
N	4994		4901		4890		4994		4901		4890	
Number of Mothers	2524		2518		2518		2524		2518		2518	
R2 within	0.03		0.03		0.03		0.01		0.02		0.02	
R2 between	0.03		0.03		0.03		0.01		0.02		0.02	
F-Statistic	0.03		0.01		0.03		0.01		0.01		0.01	

^aMothers in this group could be violent, controlling, or violent and controlling but stable at either wave

*** p<0.001, ** p<0.01, * p<0.05, + p<0.10