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Lauren Michelle Kaplan
University of Miami, l.kaplan1@umiami.edu

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UNIVERSITY OF MIAMI

DOES FREQUENCY OF INTOXICATION EXACERBATE THE MENTAL HEALTH CONSEQUENCES OF RELATIONSHIP VIOLENCE?

By

Lauren Michelle Kaplan

A THESIS

Submitted to the Faculty
of the University of Miami
in partial fulfillment of the requirements for
the degree of Master of Arts

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Lauren Michelle Kaplan

Approved:

________________ Terrence Hill, Ph.D. Professor of Sociology	____________________ Terri A. Scandura, Ph.D. Dean of the Graduate School
________________ Amie Nielsen, Ph.D. Professor of Sociology	__________________ Neena Malik, Ph.D. Professor of Psychology

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Although numerous studies have documented the consequences of victimization on psychological distress, few have directly examined potential moderators of this association. Using data from the Welfare, Children, and Families project (1999-2001), a probability sample of 2,402 low-income women with children living in low-income neighborhoods in Boston, Chicago, and San Antonio, I predict psychological distress with measures of physical assault and sexual coercion before age 18 and psychological aggression, sexual coercion, and minor and severe physical assault in the past year. I also test the moderating influence of alcohol consumption. Cross-sectional results suggest that the effects of sexual coercion before age 18 and severe physical assault in the past year are moderated or exacerbated by alcohol consumption. Longitudinal results indicate that alcohol consumption exacerbates the effects of psychological aggression and minor physical assault in the past year on changes in psychological distress over time.

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Chapter 1: Introduction

Relationship violence is a major social problem in the United States. According to the Centers for Disease Control and Prevention (CDC 2002), approximately 25% of women in the United States experience intimate partner violence in their lifetime. Nearly 1,200 women die and 2 million women are injured every year due to intimate partner violence (CDC 2008). Furthermore, research indicates that approximately 28% of youths experience physical abuse in early life and approximately 5% report sexual abuse (Hussey, Chang, and Kotch 2006). A substantial body of research demonstrates that relationship violence is associated with poorer mental health throughout the life course (Banyard 1999; Briere and Runtz 1990; Briere and Runtz 1988; DeMaris and Kaukinen 2005; Hill, Mossakowski, and Angel 2007; McCauley, Kern, Kolodner, Dill, Schroeder, DeChant, Ryden, Derogatis, and Bass 1997; Mullen, Martin, Anderson, Romans, and Herbison 1996; Sackett and Saunders 1999; Sappington et al. 1997; Springer, Sheridan, Kuo, and Carnes 2007; Stein, Leslie, and Nyamathi 2002; Turner and Butler 2003; Vranceanu, Hobfoll, and Johnson 2007; Zlotnick, Johnson, and Kohn, 2006). Studies suggest that these patterns are generally consistent across a wide range of violence measures (e.g., non-specific relationship violence, physical assault, psychological aggression, and sexual coercion) and mental health outcomes (e.g., depression, anxiety, post-traumatic stress disorder, and non-specific psychological distress).

Although previous research clearly shows that relationship violence can contribute to poorer mental health, few studies consider the conditions under which the effects of violence may be more or less detrimental. Studies show that the association between relationship violence and mental health may vary according to demographic

characteristics (e.g., age, sex, and race) (Buckner, Bassuk, and Beardslee 2004; Downs, Capshew, and Rindels 2004; Williams and Mickelson 2007; Vanhorn 2000) and psychosocial resources (e.g., self-esteem, the sense of control, and social support) (Arias, Lyons, and Street 1997; Carlson, McNutt, Choi, and Rose 2002; Coker, Smith, Thompson, McKeown, Bethea, and Davis 2002; Hill, Kaplan, French, and Johnson 2008; Holt and Espelage 2005; Luster and Small 1997; Skomorovsky, Matheson, and Anisman 2006). To this point, however, little is known about potential behavioral moderators (e.g., social activities, substance use, and sleep practices). In this study, I highlight the potential moderating role of drinking behaviors for mental health outcomes associated with relationship violence.

Victimization and heavier alcohol consumption are commonly associated (Hill, Nielsen, and Angel 2009; Kilpatrick, Acierno, Resnick, Saunders, and Best 1997; Martino, Collins, and Ellickson 2005; Schuck and Widom 2001; Testa, Livingson, and Leonard 2003; Widom, Spatz, White, Czaja, and Marmorstein 2007; Wilsnack, Wilsnack, Kristjanson, and Harris 1998). Although these studies report a link between experiencing abuse and risky drinking practices, it is unclear whether alcohol consumption can intensify the negative psychological impact of relationship violence. If women turn to alcohol to cope with victimization, it is important to understand whether alcohol consumption functions to intensify the negative psychological impact of relationship violence.

There are several reasons why alcohol consumption may exacerbate the effects of victimization. Drinking can serve as a maladaptive coping strategy that prevents victims from overcoming stressful experiences (Anehensel 1983; Anehensel and Huba 1983;

Russell, et al. 1999). Drinking can trap victims of violence in a cycle of self-destructive behavior that erodes positive social ties, increases conflict, diminishes feelings of self-worth and control, and ultimately worsens their life circumstances (Kunz and Graham 1998; Rodgers, Korten, Jorm, Christensen, Henderson, and Jacomb 2000; Sayette, Wilson, and Elias 1993; Seeman and Seeman 1992). In fact, prior research suggests that drinking to cope is a major motivation for alcohol use and that drinking can exacerbate symptoms of distress, heighten levels of stress, and impair psychosocial functioning (Brennan, Schutte, and Moos, 1999; Cole, Tucker, and Friedman, 1990; Russell et al., 1999). The tension-reduction hypothesis posits that engaging in drinking behavior may be a form of self-medication, that is drinking in order to cope with unpleasant emotional states (Conger, 1956). Because victims often consume alcohol to cope with stress and trauma (Afifi, Brownridge, Cox, and Sareen 2006; Arata, Langhinrichsen-Rohling, Bowers, and O'Farrill-Swails 2005; Clements et al. 2004; Lo and Cheng 2007; Widom, White, Czaja, and Marmorstein 2007), research must address the question of whether alcohol consumption exacerbates the mental health consequences of relationship violence.

For the purposes of this investigation, I formally test whether alcohol consumption moderates the association between relationship violence and psychological distress. Toward this end, I use two waves of data collected from a large community-based probability sample of low-income urban women with children living in disadvantaged neighborhoods. I focus on low-income women due to their elevated risk and exposure to violence (Acierno 1997; Hill, Mossakowski, and Angel 2007; Tolman and Raphael 2000). Low-income women possess fewer resources (e.g., psychosocial and

socioeconomic) which can increase their vulnerability to relationship violence and other stressors (Durden, Hill, and Angel 2007; Ennis, Hobfoll, and Schroder 2000). Therefore, low-income women are an important group to focus on when studying the effects of relationship violence on mental health.

The remainder of this thesis consists of three major sections. In the first section, I develop the theoretical background upon which subsequent analyses are based. Specifically, I discuss why drinking might exacerbate the mental health consequences of relationship violence. In the second section, I offer a description of the data, measures, and statistical procedures. I end with a discussion of key findings and research and policy implication of this study.

Chapter 2: Theoretical Background

Relationship Violence and Psychological Distress

A substantial body of research demonstrates that relationship violence leads to psychological distress (Anderson 2002; Banyard 1999; Bogat, et al. 2003; Bradley, et al. 2005; Campbell and Soeken 1999; Hill, Mossakowski, and Angel 2007; Huang and Gunn 2001; McCauley, et al. 1997; Sackett, and Saunders 1999; Williams and Mickelson 2004; Zlotnick, Johnson, and Kohn 2006). For example, Hill and colleagues (2007), using the same data as the current study, examined the impact of relationship violence in early life and in adulthood on psychological distress among low-income women. They found, while controlling for other chronic stressors (neighborhood disorder, financial hardship, and household disrepair), that relationship violence is significantly associated with psychological distress.

Early life victimization can have a long term impact on mental health. Women who experience abuse in childhood report low levels of self-esteem, and more anxiety and depression than women who do not report childhood abuse (Banyard 1999; Bassuk, et al. 2006; Bradley, et al. 2005; Briere and Runtz 1988; Briere and Runtz 1990; McCauley, et al. 1997; Sappington, et al. 1997). In addition, victimization in adulthood also contributes to negative mental health outcomes. Prior research demonstrates that victimization in adulthood is associated with lower life satisfaction and self-esteem, greater depression, higher stress, and poorer health (Campbell and Soeken 1999; Zlotnick, Johnson, and Kohn 2006).

Relationship violence has been conceptualized as a traumatic life event and a chronic stressor which adversely impacts psychological well-being (Liang, Williams, and

Siegel 2006; MacMillan 2002; Woods and Campbell 1993). Experiencing violence in both early life and in adulthood can undermine self-esteem and lead to feelings of worthlessness, self-blame, and insecurity which can lead to psychological distress (Bradley, Schwartz, and Kaslow 2005; Briere and Runtz 1990; Sackett and Saunders 1999; Stein et al. 2002; Riger, et al. 2001; Williams and Mickelson 2004). Victims of violence may also experience shame and isolation which can further damage their mental health (Bradley, et al. 2005; Clements, Sabourin, Spiby 2004; Stein et al. 2002).

The Moderating Influence of Alcohol Consumption

In this paper, I argue that alcohol consumption should exacerbate the psychological consequences of relationship violence. A moderator is a variable which affects the strength and or direction of a relationship between an independent and a dependent variable (Baron and Kenny 1986).My argument follows from research which shows that drinking can exacerbate the effects of stress and stressful life events on distress (Lipton 1994; Marchand et al. 2003; Neff and Husaini 1985). Prior research suggests that drinking can exacerbate the psychological consequences of a range of stressful life conditions (Lipton 1994; Marchand et al. 2003; Neff and Husaini 1985). For example, Marchand and colleagues (2003) found that work-related exposure to physical risks among heavy drinkers increased the likelihood of experiencing psychological distress. In a longitudinal study utilizing a probability sample of men and women, those who were heavy drinkers exhibited greater levels of depression when experiencing acute or chronic stress than light or moderate drinkers (Lipton 1994). Others find that heavy drinkers report having more depression when faced with stressful life events than moderate drinkers (Neff and Husaini 1985). Therefore, while prior research has demonstrated a

moderating role of alcohol use in relation to other stressors, surprisingly little attention has been directed towards the potential moderating function of alcohol consumption in studies of relationship violence and psychological distress.

Physiological evidence also indicates that drinking is a viable stress exacerbator of relationship violence. Importantly, alcohol use elicits a stress response (Higley, Hasert, Suomi, and Linnoila 1991; McEwen 2002). Women experiencing relationship violence are already vulnerable to distress and drinking alcohol can enhance this vulnerability by increasing allostatic load (McEwen 2002). Allostatic load refers to the toll that chronic stress can take on physiological functioning (McEwen 2002). Violent experiences in adulthood when they are ongoing and chronic may increase allostatic load. Furthermore, early life victimization may also increase allostatic load because it can be a trauma which exerts lasting effects on psychological functioning. Drinking in response to violence may contribute to and prolong the stress response. Accordingly, drinking can serve as a stressor which interferes with normal physiological functioning. Specifically, drinking can place demands on HPA axis (i.e., the hypothalamic-pituitary-adrenal axis which regulates the body's stress response), increasing levels of stress hormones such as cortisol in the body, and can eventually disrupt the manner in which the stress response itself operates (Lee and Rivier 1997; McEwen and Lasley 2002; Wand and Dobs 1991). In fact, prior research demonstrates that exposure to stress and early life rearing experiences contribute to alcohol use (Higley, Hasert, Suomi, and Linnoila 1991). Alcohol is a stressor that is itself associated with increased levels of stress hormones in the body such as plasma cortisol and corticotrophin (biological indices of physiological stress) (Higley et al. 1991; Wand, Mangold, Ali, and Giggey 1999). Relationship violence is a major

source of stress and if those who experience relationship violence engage in alcohol use they are being exposed to yet another stressor. As such, alcohol use among victims may lead to psychological distress.

Hypotheses

Based on the preceding discussion the following hypotheses are derived:

H1: Relationship violence before age 18 and in the past year will be associated with higher levels of psychological distress in adulthood over the two-year study period.

H2: The psychological consequences of relationship violence will be exacerbated by frequency of intoxication.

Chapter 3: Methods

Data

The current analyses are conducted using data from the Welfare, Children, and Families Project (WCF). The WCF is a household-based, stratified random sample of 2,402 low-income women living in low-income neighborhoods in three cities in the U.S. (Boston, Chicago, and San Antonio). Census blocks (i.e., neighborhoods) with at least 20 percent of residents below the Federal Poverty line were sampled. Then, households under 200 percent of the poverty line within these neighborhoods were selected. Households below 100 percent of the poverty line were over-sampled. Because one of the goals of the WCF project is to assess the impact of welfare policy and work on children, households were screened for the presence of children. Households with infants and young children (aged 0–4) and young adolescents (aged 10–14) were sampled. The children's caregivers (all women) completed face-to-face interviews. The respondent-level overall response rate is 75 percent, with city-specific response rates of 74 percent (Boston), 71 percent (Chicago), and 79 percent (San Antonio). Because city of residence is correlated with several of these measures (e.g., race/ethnicity and employment status) and due to varying sample sizes, subsequent analyses are also weighted.

Measures

Relationship Violence

Relationship violence during *childhood* and *adolescence* is measured with two items. These items capture physical assault and sexual coercion before age 18. Through a series of questions respondents were asked to indicate whether they were ever hit, beaten

up, burned, assaulted with a weapon, or whether their life had been threatened by an adult in their family or household before the age of 18. Respondents were also asked to indicate whether anyone – a stranger, friend, acquaintance, date, or relative – ever tried or succeeded in doing something sexual to them or made them do something sexual against their wishes. Original response categories for these items were coded as (0) never, (1) once or twice, (2) several times, and (3) often. Due to limited incidence rates, these measures were recoded into dummy variables. For each of the two measures, respondents were given a value of (1) if they reported being victims of physical assault or sexual coercion before age 18, respectively, and (0) if they did not. Hill and colleagues (2007) have recently used these measures of relationship violence before age 18 to predict psychological distress in the WCF sample.

Measures of relationship violence in the past year are drawn from the Revised Conflict Tactics Scales (CTS2) (Straus, Hamby, Boney-McCoy, and Sugarman 1996). These measures are known to have adequate reliability and validity (Straus et al. 1996; Straus and Douglas 2004). Drawing on the work of Straus and colleagues (1996), I selected measures to assess four major types of relationship violence, including psychological aggression, minor physical assault, severe physical assault, and sexual coercion.

Psychological aggression captures non-physical or verbal acts of violence. Psychological aggression is measured with three items. Respondents were asked to indicate how often in the past 12 months a romantic partner had threatened to (a) hit them, (b) use a weapon on them, and (c) hurt their child or take [him/her] away. *Minor physical assault* assesses non-severe or "common couple" acts of physical violence

(Johnson 1995). Minor physical assault is measured with two items. Respondents were asked to indicate how often in the past 12 months a romantic partner had (a) thrown something at them and (b) pushed, grabbed, or shoved them. *Severe physical assault* measures some of the more brutal and vicious acts of physical violence. Severe physical assault is measured with three items. Respondents were asked to indicate how often in the past 12 months a romantic partner had (a) slapped, kicked, bit, or punched them, (b) beaten, and (c) choked or burned them. Finally, *sexual coercion* is intended to capture forced sexual acts of violence. Sexual coercion is measured with a single item. Respondents were asked to indicate how often in the past 12 months a romantic partner had forced them into any sexual activity against their will.

Original response categories for all past-year relationship violence items were coded as (0) never, (1) once or twice, (2) several times, and (3) often. With the exception of sexual coercion, which is measured with a single item, indexes were computed by averaging across corresponding items. Due to limited incidence rates, indexes were then recoded into dummy variables. Respondents were given a value of (1) if they reported a particular act of violence in the past 12 months and (0) if they did not. For example, the dummy variable for psychological aggression is coded as 1 for one or more acts of such aggression in the past year and as 0 for no acts of psychological aggression in the past year.

Frequency of intoxication is assessed with one item: “In the past 12 months, how often have you gotten drunk?” This measure is employed in order to capture more heavy or problematic drinking behavior. Original responses were coded (1) never, (2) once or twice, (3) several times, and (4) often. Due to limited incidence rates, the responses for

the categories for several times and often were then combined, with responses ranging from (0) never, (1) once or twice, and (2) several times/often. This variable, as with all other continuous measures included in the analyses, was then mean-centered in order to avoid issues of multicollinearity.

Psychological Distress

Psychological distress is the focal outcome in this study. It is assessed using the Brief Symptom Inventory (BSI-18; Derogatis 2000). The BSI is composed of three subscales for depression, anxiety, and somatization. These three subscales load on a single factor and have been combined in previous studies (Hill et al. 2007; Hill and Angel 2005). For example, respondents were asked to report how much in the past 7 days they were distressed or bothered by: "feeling tense or keyed up," "feeling no interest in things," or bothered by "nausea or upset stomach." To assess distress I use the mean response to all 18 items of the BSI (Cronbach's alpha = 0.92). Responses to the original 18 items are coded (1) not at all, (2) a little bit, (3) moderately, (4) quite a bit, or (5) extremely. These responses were then added and the sums were then centered in the analyses.

Background Factors

In accordance with prior research on relationship violence and mental health among low-income women (e.g., Hill, Mossakowski, and Angel 2007; Tolman and Rosen 2001), the multivariate analyses include controls for *age* (in years), *race/ethnicity* (non-Hispanic White, Mexican American, and other Hispanic compared with Black), *education* (in years), *employment status* (1 = worked for pay in the past week), *family of origin welfare status* (1 = respondent's parents received public assistance), *current welfare status* (1 = currently receiving welfare), *marital status* (1 = married and living with spouse), *cohabiting status* (1 =

cohabiting, not married), and *number of children* (1 to 6 or more, top-coded continuous variable).

Financial hardship, a chronic stressor that is prevalent among low-income women and is associated with health outcomes, is also controlled (Evans, Wells, and Moch 2003; Harting, Johansson, and Kylin 2003; Hill and Angel 2005; Hill, Ross, and Angel 2005; Mirowsky 1999). *Financial hardship* refers to difficulties in meeting the essential material needs of daily life. Financial hardship is assessed with mean response to 13 items (Cronbach's alpha = 0.83). Respondents indicated whether they had, for instance, enough money to "afford housing, food, and clothing," and "whether any adults or children in the household were unable to eat for a whole day because there wasn't enough money for food." The original responses for these items included mixed question formats and response categories. Therefore, each of these items was standardized to account for metric differences, summed, and then centered in all analyses.

Statistical Procedures

I begin my analysis with the presentation of weighted descriptive statistics for the study sample, including minimum and maximum values, means, standard deviations, and alpha reliability estimates (Table 1). Ordinary least squares (OLS) regression analyses are used to assess relationship violence and frequency of intoxication as predictors of psychological distress. My specific analytic strategy for the prediction of psychological distress at Wave 1 proceeds in 3 steps for hypothesis 1. The first model tests whether relationship violence before age 18 and in the past year predict psychological distress in adulthood, net of background factors. In model 2, frequency of intoxication is added. The final stage of my analysis tests a series of interaction terms to assess whether the effects of relationship violence are moderated by frequency of intoxication Thus, beginning in

model 3 each relationship violence*frequency of intoxication interaction term is entered separately in the analysis. Because cross-product terms were entered in the analysis, all continuous variables have been centered to avoid problems due to multicollinearity (Aiken and West 1991). The potential for multicollinearity was formally diagnosed by examining variance inflation factors (VIF) for each regression coefficient. VIFs above 10.00 are generally considered to indicate problematic multicollinearity (Myers 1986). Throughout my analyses, all VIFs were below 2.00.

Next, I model changes in psychological distress over a period of two years (1999 to 2001). Rather than using standard lagged endogenous dependent variable models, I utilize change score models to assess two-year psychological distress trajectories. A recent comparison of two-wave panel designs concluded that change score models are generally preferable to lagged endogenous dependent variable models (Johnson 2005). I first computed change scores by subtracting baseline psychological distress scores from follow-up psychological distress scores. Change scores are continuous variables that range from some negative number to some positive number. Negative numbers indicate a decrease in a given mental health indicator (e.g., fewer symptoms of psychological distress in 2001 than in 1999). Positive numbers suggest an increase in a given mental health indicator (e.g., greater symptoms of psychological distress in 2001 than in 1999). Change scores are continuous variables; therefore, I employ ordinary least squares (OLS) regression to model changes in psychological distress, with predictor variables measured at baseline. This approach enables the examination of hypothesis 2. The analytic strategy to examine changes in psychological distress over time proceeds in three steps. Model 1 tests whether early life relationship violence predicts changes in psychological distress,

controlling for baseline levels of psychological distress. Model 2 tests whether relationship violence in adulthood predicts changes in psychological distress, net of baseline levels of psychological distress and all background factors. Model 3 tests whether baseline frequency of intoxication predicts changes in psychological distress. As with the cross-sectional analysis, interaction terms were created to assess the moderating role of frequency of intoxication. Accordingly, beginning in Model 4 each relationship violence*frequency of intoxication interaction term is entered separately in the analysis.

Supplemental attrition analyses

Because the dependent variable for the change models incorporates measures from Wave 1 and 2, I estimated a logistic regression model predicting sample attrition (results available upon request). There was approximately 11% attrition (a loss of 273 respondents) between Wave 1 and Wave 2. The dependent variable in this case is dummy-coded such that respondents who completed questionnaires at both waves were given a value of zero, and those who completed the Wave 1 questionnaire only were given a value of one. Overall, attrition is seemingly random and education was the only significant predictor of the odds of attrition (b = -.06, $p<.05$). Since I adjust for education, attrition is unlikely to bias regression coefficients (Winship and Radbill 1994).

Table 1

Weighted Descriptive Statistics (WCF 1999-2001, n = 2,269)

	Range	M	SD	α
Psychological Distress				
BSI index (1999)	1 – 4.61	1.35	.47	.92
BSI index (2001)	1 – 4.72	1.43	.57	.93
BSI Change (2001-1999)	-2.50 – 2.50	-0.01	.48	-
Relationship Violence				
Physical assault (< age 18)	0 – 1	.17	-	-
Sexual coercion (< age 18)	0 – 1	.21	-	-
Psych. aggression (past year)	0 – 1	.15	-	-
Minor physical assault (past year)	0 – 1	.20	-	-
Severe physical assault (past year)	0 – 1	.11	-	-
Sexual coercion (past year)	0 – 1	.05	-	-
Frequency of Intoxication (1999)	0-2	.37	.61	-
Frequency of Intoxication (2001)	0-2	.35	.61	-
Background Factors				
Age	19 – 74	33.16	9.52	-
Non-Hispanic White	0 – 1	.04	-	-
Black	0 – 1	.42	-	-
Mexican American	0 – 1	.34	-	-
Other Hispanic	0 – 1	.20	-	-
Education	0 - 14	10.61	2.36	-
Employed	0 – 1	.43	-	-
Family received welfare	0 – 1	.42	-	-
Currently receiving welfare	0 – 1	.29	-	-
Cohabiting, not married	0 – 1	.07	-	-
Married, spouse in house	0 – 1	.30	-	-
Number of children	1 – 6	2.74	1.40	-
Financial hardship	-.90 – 3.36	-.08	.51	.83

Chapter 4: Results

Descriptive Analysis

Table 1 provides baseline descriptive statistics for selected background factors. In terms of race/ethnic composition, the sample includes Blacks (42%), Mexican Americans (34%), other Hispanics (20%), and non-Hispanic Whites (4%). The average respondent is 33 years of age, with approximately 11 years of formal education. Less than half of the respondents are employed (43%), have a history of receiving welfare benefits (42%), or are currently receiving welfare benefits (29%). Very few respondents are cohabiting (7%) or married and living with a spouse (30%). The average respondent is responsible for nearly 3 children and exhibits a low level of financial hardship.

It is important to note that approximately 22 percent of all women report physical assault by an intimate partner in their lifetime, and roughly 1.3 percent of all women are physically assaulted by an intimate partner each year (Tjaden and Thoennes 2000). The results from Table 1 indicate that most respondents report no violence in their lifetime. Although reports of physical assault (17%) and sexual coercion (21%) before age 18 are similar to national lifetime prevalence rates, twelve-month incidence rates for psychological aggression (15%), minor physical assault (20%), severe physical assault (11%), and sexual coercion (5%) are noticeably higher than expectations derived from national estimates.

The average respondent exhibits low levels of intoxication and psychological distress. With respect to the change scores, I observe an average decline psychological distress. These patterns suggest that risky drinking practices and mental health status improved between waves.

Table 2

Psychological Distress Regressed on Relationship Violence, Frequency of Intoxication, and Background Factors (WCF 1999, n = 2,269)

	Model 1				Model 2				Model 3			
	b	SE	Β		b	SE	β		b	SE	β	
Focal Predictors												
Physical assault (< age 18)	-	-	-		.20	.03	.16	***	.20	.03	.16	***
Sexual coercion (< age 18)	-	-	-		.21	.02	.19	***	.20	.02	.18	***
Psych. aggression (past year)	-	-	-		.07	.03	.05	*	.07	.03	.05	*
Minor phys. assault (past year)	-	-	-		.09	.03	.08	**	.08	.03	.07	**
Severe phys. assault (past year)	-	-	-		-.04	.04	.03		-.04	.03	-.03	
Sexual coercion (past year)	-	-	-		.15	.04	.07	**	.15	.04	.07	**
Frequency of Intoxication	-	-	-		-	-	-		.04	.02	.05	*
Background Factors												
Age	-.00	.00	-.03		.00	.00	-.00		.00	.00	.00	
Non-Hispanic White	.13	.05	.06	**	.07	.04	.03		.07	.04	.03	
Mexican American	.02	.02	.02		.01	.02	.01		.01	.02	.01	
Other Hispanic	.07	.03	.06	**	.09	.02	.08	***	.09	.02	.08	***
Education	-.00	.00	-.01		-.00	.00	-.02		-.00	.00	-.02	
Employed	.00	.02	.00		-.01	.02	-.01		-.01	.02	-.01	
Family received welfare	.04	.01	.08	***	.02	.01	.05	*	.02	.01	.05	*
Currently receiving welfare	.09	.02	.10	***	.07	.02	.07	**	.07	.02	.07	**
Cohabiting, not married	.00	.04	.03		-.04	.03	-.02		-.04	.03	.02	
Married, spouse in house	-.02	.02	-.02		.02	.02	.02		.03	.02	.03	
Number of children	.01	.01	.03		.01	.01	.03		.01	.01	.03	
Financial hardship	.26	.02	.28	***	.21	.02	.26	***	.21	.02	.23	***
Model Statistics												
Model F			23.29	***			35.14	***			33.67	***
Nested F			-				52.46	***			5.83	*
R-squared		.11					.22				.22	

Note: Shown are unstandardized OLS regression coefficients (b), standard errors (SE), and standardized coefficients (β).
*p<.05, **p<.01, **p<.001

Table 3

The Effects of Relationship Violence on Psychological Distress as a Function of Frequency of Intoxication (WCF 1999, n = 2,269)

	Model 4			Model 5			Model 6			Model 7			Model 8			Model 9		
	B	SE		b	SE		B	SE		b	SE		b	SE		B	SE	
Physical assault (< age 18)																		
Main effect	.20	.03	***	-	-		-	-		-	-		-	-		-	-	
* Frequency of Intoxication	-.05	.04		-	-		-	-		-	-		-	-		-	-	
Sexual coercion (< age 18)							-	-		-	-		-	-		-	-	
Main effect	-	-		.20	.02	***	-	-		-	-		-	-		-	-	
* Frequency of Intoxication				.10	.03	**												
Psych. aggression (past year)																		
Main effect	-	-		-	-		.06	.03		-	-		-	-		-	-	
* Frequency of Intoxication	-	-		-	-		.06	.04		-	-		-	-		-	-	
Minor phys. assault (past year)																		
Main effect	-	-		-	-		-	-		.08	.03	**	-	-		-	-	
* Frequency of Intoxication							-	-		.04	.04							
Severe physical assault (past year)																		
Main effect	-	-		-	-		-	-		-	-		-.07	.04		-	-	
* Frequency of Intoxication	-	-		-	-		-	-		-	-		.15	.04	***	-	-	
Sexual coercion (past year)																		
Main effect	-	-		-	-		-	-		-	-		-	-		.15	.05	**
* Frequency of Intoxication	-	-		-	-		-	-		-	-		-	-		-.02	.07	
Model Statistics																		
Model F	32.11	***		32.47	***		32.15	***		32.05	***		32.82	***		31.98	***	
Nested F	2.10			7.72	**		2.74			1.18			13.15	***		0.08		
R-squared	.22			.22			.22			.22			.23			.22		

Note: Shown are unstandardized OLS regression coefficients (b), standard errors (SE), and standardized coefficients (β).
All models include controls for relationship violence in the past year, frequency of intoxication, and background factors.
*p<.05, **p<.01, **p<.001

Table 4

Partial Slopes for Significant Interactions (From Table 3) between Physical Assault and Sexual Coercion Before Age 18 and Frequency of Intoxication (WCF 1999, n = 2,269)

	Partial Slope Equation	Partial Slope for the Effect of Relationship Violence on Psychological Distress
Sexual Coercion (< age 18) * Frequency of intoxication		
Never	.20 + .10 (-.37)	.16
Once or twice	.20 + .10 (.63)	.26
Several times/Often	.20 + .10 (1.63)	.36
Severe physical assault (past year) * Frequency of Intoxication		
Never	-.07 + .15 (-.37)	-.13
Once or twice	-.07 + .15 (.63)	.02
Several times/Often	-.07 + .15 (1.63)	.17

Note: Shown are unstandardized OLS regression coefficients (b), standard errors (SE), and standardized coefficients (β).
All models include controls for relationship violence in the past year and all psychosocial resources, chronic stressors, and background factors.
*p<.05, **p<.01

Multivariate Analysis

Cross-Sectional Results

Tables 2 through 4 present the results of the cross-sectional analysis. As shown in Table 2, both physical assault (*b* = .20, p<.001) and sexual coercion (*b* = .20, p<.001) in early life are significantly associated with psychological distress at Wave 1. Also as anticipated, psychological aggression (*b* = .07, p<.05), minor physical assault (*b* = .08, p<.01), and sexual coercion (*b* = .15, p<.01) in the past year are significant predictors of psychological distress. However, contrary to my predictions severe physical assault is not significantly associated with psychological distress at Wave 1. Frequency of intoxication is significantly associated with psychological distress at Wave 1 (*b* = .04, p<.05).

As shown in Table 3, the hypothesis that frequency of intoxication will exacerbate the effects of relationship violence on psychological distress is partially supported. Frequency of intoxication exacerbates the effects of sexual coercion before age 18 (*b* = .10, p<.01) and of severe physical assault in the past year (*b* = .15, p<.001) on psychological distress at Wave 1.

To further illustrate these patterns, Table 4 presents partial slopes for all statistically significant interactions from Table 3. The partial slope for the effect of sexual coercion before age 18 on psychological distress is .16 for respondents who report never getting drunk, .26 for those who report getting drunk once or twice in the past year, and .36 for those who report getting drunk several times/often in the past year. Therefore, the magnitude of the association between sexual coercion and psychological distress increases with higher levels of frequency of intoxication. The partial slopes for severe physical assault in the past year are -.13 (never getting drunk), .02 (getting drunk once or

twice), and .17 (getting drunk several times/often). As with sexual coercion, the strength of the association between severe physical assault in the past year and psychological distress increases with higher levels of frequency of intoxication.

Table 5

Changes in Psychological Distress Regressed on Relationship Violence, Frequency of Intoxication,, and Background Factors (WCF 1999-2001 n = 2,022)

	Model 1				Model 2				Model 3			
	B	SE	B		b	SE	B		b	SE	β	
Focal Predictors												
Physical assault (<age 18)	-	-	-		.12	.03	.10	***	.12	.03	.10	***
Sexual coercion (<age 18)	-	-	-		.07	.02	.07	**	.07	.02	.07	**
Psych. aggression (past year)	-	-	-		.07	.03	.06	*	.07	.03	.06	*
Minor phys. assault (past year)	-	-	-		-.02	.03	-.02		-.02	.03	-.02	
Severe phys. assault (past year)	-	-	-		-.01	.03	-.00		-.01	.03	-.00	
Sexual coercion (past year)	-	-	-		-.11	.05	-.05	**	-.11	.05	-.10	*
Frequency of Intoxication	-	-	-		-	-	-		-.01	.02	-.02	
Psychological Distress (W1)	-.41	.02	-.45	***	-.45	.02	-.49	***	-.45	.02	-.49	***
Background Factors												
Age	.00	.00	.02		.00	.00	.02		.00	.00	.01	
Non-Hispanic White	.04	.04	.02		.02	.04	.01		.02	.04	.01	
Mexican American	-.01	.02	-.02		-.02	.02	-.02		-.02	.02	-.02	
Other Hispanic	-.02	.02	-.02		-.01	.02	-.01		-.01	.02	-.01	
Education	-.00	.00	-.02		-.01	.00	-.03		-.01	.00	-.03	
Employed	-.02	.02	-.02		-.02	.02	-.03		-.02	.02	-.03	
Family received welfare	-.01	.01	-.01		-.01	.01	-.02		-.01	.01	-.02	
Currently receiving welfare	.05	.02	.06	**	.05	.02	.05	*	.05	.02	.05	*
Cohabiting, not married	.02	.03	.01		.00	.03	.00		.00	.03	.00	
Married, spouse in house	-.10	.02	-.11	***	-.08	.02	-.09	***	-.08	.02	-.09	***
Number of children	.00	.01	-.00		.00	.01	.00		.00	.01	.00	
Financial hardship	-.01	.02	-.01		-.01	.02	-.01		-.01	.02	-.01	
Model Statistics												
Model F			41.20	***			31.78	***			30.21	***
Nested F			-				9.20	***			0.50	
R-squared			.21				.23				.23	

Note: Shown are unstandardized OLS regression coefficients (b), standard errors (SE), and standardized coefficients (β).
*p<.05, **p<.01, **p<.001

Table 6

The Effects of Relationship Violence on Changes in Psychological Distress Over Time as a Function of Frequency of Intoxication (WCF 1999-2001, n = 2,022)

	Model 4			Model 5			Model 6			Model 7			Model 8			Model 9		
	B	SE		b	SE		B	SE		B	SE		B	SE		b	SE	
Physical assault (< age 18)																		
Main effect	.12	.03	***	-	-		-	-		-	-		-	-		-	-	
* Frequency of Intoxication	-.05	.04		-	-		-	-		-	-		-	-		-	-	
Sexual coercion (< age 18)							-	-		-	-		-	-		-	-	
Main effect	-	-		.08	.02	**	-	-		-	-		-	-		-	-	
* Frequency of Intoxication				-.04	.03													
Psych. aggression (past year)																		
Main effect	-	-		-	-		.06	.03		-	-		-	-		-	-	
* Frequency of Intoxication	-	-		-	-		.08	.04	*	-	-		-	-		-	-	
Minor phys. assault (past year)																		
Main effect	-	-		-	-		-	-		-.02	.03		-	-		-	-	
* Frequency of Intoxication							-	-		.08	.03	*						
Severe physical assault (past year)																		
Main effect	-	-		-	-		-	-		-	-		-.02	.04		-	-	
* Frequency of Intoxication	-	-		-	-		-	-		-	-		.06	.04		-	-	
Sexual coercion (past year)																		
Main effect	-	-		-	-		-	-		-	-		-	-		-.11	.05	*
* Frequency of Intoxication	-	-		-	-		-	-		-	-		-	-		-.03	.07	
Model Statistics																		
Model F	28.85	***		28.82	***		29.03	***		29.13	***		28.87	***		20.86	***	
Nested F	1.57			1.10			4.45	*		6.12	*		1.91			0.64		
R-squared	.23			.23			.23			.23			.23			.18		

Note: Shown are unstandardized OLS regression coefficients (b) and standard errors (SE)
All models include controls for relationship violence in the past year, frequency of intoxication, and background factors.
*p<.05, **p<.01, ***p<.001

Table 7

Partial Slopes for Significant Interactions (From Table 6) between Physical Assault and Psychological Aggression and Frequency of Intoxication (WCF 1999-2001, n = 2,022)

	Partial Slope Equation	Partial Slope for the Effect of Relationship Violence on Psychological Distress
Psych. aggression (past year) * Frequency of intoxication		
Never	.06 + .08 (-.37)	.03
Once or twice	.06 + .08 (.63)	.11
Several times/Often	.06 + 08 (1.63)	.19
Minor physical assault (past year) * Frequency of Intoxication		
Never	-.02 + .08 (-.37)	-.05
Once or twice	-.02 + .08 (.63)	.03
Several times/Often	-.02 + .08 (1.63)	.11

Note: Shown are unstandardized OLS regression coefficients (b), standard errors (SE), and standardized coefficients (β).
All models include controls for relationship violence in the past year and all psychosocial resources, chronic stressors, and background factors.
*p<.05, **p<.01

Multivariate Longitudinal Results

Tables 5 to 7 present longitudinal findings. Physical assault ($b = .12$, $p<.001$) and sexual coercion ($b = .07$, $p<.01$) before age 18 are significantly associated with a change in psychological distress between waves. Also, as predicted, psychological aggression ($b = .07$, $p<.05$) in the past year is also a significant predictor of increases in psychological distress between Wave 1 and Wave 2. However, sexual coercion ($b = -.11$, $p<.05$) in the past year is significantly associated with declines in levels of psychological distress over time. Frequency of intoxication is not a significant predictor of changes in psychological distress over time.

Table 6 presents the results for interaction terms between relationship violence and frequency of intoxication. Frequency of intoxication is a significant moderator of the effects of psychological aggression ($b = .08$, $p<.05$) and minor physical assault ($b = .08$, $p<.05$) in the past year on change in psychological distress over time.

Table 7 presents partial slopes for all statistically significant interactions from Table 6. The partial slope for the effect of psychological aggression in the past year on psychological distress is .03 for respondents who report never getting drunk, .11 for those who report getting drunk once or twice in the past year, and .19 for those who report getting drunk several times/often in the past year. The partial slopes for minor physical assault in the past year are -.05 (never getting drunk), .03 (getting drunk once or twice), and .11 (getting drunk several times/often). This demonstrates that the impact of both psychological aggression and minor physical assault in the past year on psychological distress are strengthened at higher levels of frequency of intoxication.

Other Significant Patterns/Results

Although, in this study the effects of background factors are not of primary interest, I would like to briefly acknowledge several significant patterns. The cross-sectional analysis shows that other Hispanics report significantly more psychological distress than Whites, Mexican Americans, and Blacks ($b = .09$, $p<.001$). In addition, those with a family history of receiving welfare ($b = .02$, $p<.05$), currently receiving welfare ($b = .07$, $p<.01$), and experiencing financial hardship ($b = .21$, $p<.001$) report significantly higher levels of psychological distress at Wave 1. In the longitudinal analyses, those currently receiving welfare report significant increases in psychological distress over time ($b = .05$, $p<.05$) and those who are married report significant declines in levels of psychological distress between Wave 1 and Wave 2 ($b = -.08$, $p<.001$).

Chapter 5: Discussion

Although numerous studies have documented the long-term consequences of childhood victimization on mental health in adulthood, few have directly examined potential moderators of this association. Using data from the Welfare, Children, and Families project (1999-2001), a probability sample of 2,402 low-income women with children living in low-income neighborhoods in Boston, Chicago, and San Antonio, I predicted psychological distress in adulthood with multiple types of relationship violence in early life and in adulthood. I also tested moderating influence of a stress-exacerbator, frequency of intoxication.

Key Findings

Consistent with prior research, I find that sexual coercion and physical assault before age 18 and psychological aggression, minor physical assault, and sexual coercion in the past year are positively associated with psychological distress at Wave 1 (DeMaris and Kaukinen 2005; Hill, Mossakowski, and Angel 2007; Springer, Sheridan, Kuo, and Carnes 2007; Stein, Leslie, and Nyamathi 2002; Turner and Butler 2003; Vranceanu, Hobfoll, and Johnson 2007). However, minor and severe physical assault in the past year do not significantly increase levels of psychological distress over time. This may be due to limited incidence of severe physical assault in the sample in comparison to other types of relationship violence, which may make it more difficult to detect significant effects. Longitudinal findings also indicate that sexual coercion and physical assault before age 18 and psychological aggression in the past year continue to have a long term impact on psychological distress over time. Therefore, early life violence may exert more lasting effects on psychological distress than violence in adulthood. This is consistent with a life

course perspective where early experiences with violence (e.g. within the family) can have a long-term impact on psychological functioning (MacMillan 2002; Shanahan 2000; Springer, Sheridan, Kuo, and Carnes 2007).

Experiencing violence in adulthood can also have lasting effects on psychological distress. Psychological aggression in the past year may be especially harmful to mental health. This is consistent with prior research which suggests that psychological aggression can be more detrimental to mental health than physical violence (Bifulco, Moran, Baines, Bunn, and Stanford 2001; Kent, Waller, and Dagnan 1999; Hill, Mossakowski, and Angel 2007; Hill, Schroeder, Bradley, Kaplan, and Angel 2009; Sackett and Saunders 1999).

Surprisingly, sexual coercion in the past year is associated with decreases in levels of psychological distress over time. Due to limited incidence rates of sexual coercion in the past year this finding should be interpreted with caution. It is unclear as to why sexual coercion would be inversely associated with psychological distress. The immediate effects of sexual coercion can be devastating, but victims may experience personal growth over time. One possibility is that while sexual coercion can have negative effects in the short-term, over time, in the context of positive coping, it may actually serve to build resiliency. This is consistent with prior research indicating that the adverse impact of sexual coercion can be more immediate than other types of violence such as psychological aggression (Hill et al. 2009). It may be that those who experience sexual coercion engage in more positive coping strategies which may contribute to more positive mental health outcomes. For instance, victims may seek out social support from others or from the community. Victims of sexual violence who have access to positive social

reactions and support from others do in fact exhibit more positive mental health outcomes (Campbell, Ahrens, Sefl, Wasco, and Barnes 2001). In addition, victims who blame themselves for their victimization tend to experience more depression (Wyatt 1990). Prior research suggests that community factors such as availability and effectiveness of services for victims can shape mental health outcomes (Campbell 1998). Sexual victimization is a traumatic event and experiencing such trauma can in some cases lead to positive personal growth in the face of adversity (Tedeschi and Calhoun 1996). Such personal growth can involve changes in self-concept (i.e. increased confidence and inner strength), interpersonal relationships (i.e. deepened appreciation of one's ties to others), and view of life (i.e. increased religiousness and sense of meaning in life) (Tedeschi and Calhoun 1996). In fact, prior research has shown that religiousness can play a key role in coping with traumatic life events and conditions such as cancer and Human Immunology Virus (HIV) (Cole and Pargament 2000; Kremer, Ironson, and Kaplan 2009). This highlights the importance of continuing to examine intervening factors in the relationship between victimization and mental health as well as the importance of focusing on specific types of violence.

My results also indicate that the main effects of drinking on psychological distress are more immediate. However, although there is no main effect of alcohol consumption longitudinally, frequency of intoxication does still have interactive effects with victimization. Importantly, my findings indicate that frequency of intoxication exacerbates the effects of relationship violence on psychological distress. The stress-exacerbating effect of alcohol consumption is a consistent pattern. I demonstrate that when alcohol consumption moderates the impact of victimization, it heightens levels of

psychological distress. This finding is replicated across different points in time and across multiple types of violence. However, alcohol consumption is not a significant moderator of all types of violence. For instance, in the cross-sectional analysis, frequency of intoxication is a significant moderator of the impact of sexual coercion before age 18 and of severe physical assault in the past year. However, in the longitudinal analysis frequency of intoxication is not a significant moderator of sexual coercion before age 18 or of severe physical assault in the past year. Instead, frequency of intoxication moderates the impact of psychological aggression and minor physical assault in the past year on changes in psychological distress over time. Therefore, relationship violence can be especially damaging to mental health in the context of greater alcohol consumption. I was unable to find any studies of the moderating influence of alcohol consumption, and so it is unclear how my results compare with other examinations of victimization and psychological distress. Additional research is encouraged to explore the stress-exacerbating role of alcohol consumption. Such research could help to explain how and why alcohol consumption is a significant moderator of certain types of violence.

Research and Policy Implications

Overall, my results highlight the importance of examining multiple forms of violence in both early life and adulthood. My results suggest that different types of violence can have varying effects on psychological distress. Furthermore, my results indicate that alcohol consumption is a consistent exacerbator of the negative psychological impact of victimization. Across different types of violence and points in time, alcohol consumption, when it has a moderating function, serves to heighten levels of psychological distress. This indicates that when victims turn to alcohol use, their

mental health suffers. By identifying the conditions under which the effects of violence on mental health outcomes may be more or less pronounced, such research can help guide intervention efforts for victims of violence. These findings clearly emphasize the need for additional research, prevention policies, and treatment programs focused on both victimization and substance use. Victim interventions are needed which can help to improve victims' lives and which avoid making adverse circumstances even worse. Integrating substance use programs with initiatives directed towards victims of violence is a promising avenue for helping victims to overcome adversity. However, the viability of this approach is contingent upon replication and further testing of the moderating influence of alcohol consumption.

Strengths and Limitations

To the author's knowledge, this study is the first to examine the stress-exacerbating role of frequency of alcohol consumption in the association between relationship violence and psychological distress. The present study also makes other advances over previous research on relationship violence and mental health. First, multiple types of violence occurring in both early life and adulthood are assessed. Also, the use of both cross-sectional and longitudinal analyses helps to clarify issues of causal ordering. Further, my analysis utilizes data collected from a large probability sample of low-income urban women. This is an improvement on prior research which tends to be based on data collected from small non-probability samples that often have limited variation in victimization experiences and mental health status.

Although this study has its strengths, several limitations should be noted. While the WCF is a valuable data source for examining the effects of victimization, it does have

certain restrictions. One limitation is my measurement of alcohol consumption. This measure is based on a single item. Studies often combine multiple measures of drinking behavior, which tends to increase reliability. Also, my measures of early life violence are limited to experiences before age 18, which does not allow for the specification of the age of victimization. Also, the measure of physical assault before age 18 includes both physical assault and psychological aggression. A more precise measure would assess physical assault and psychological aggression independently. Due to data limitations, the specific nature of the victim-offender relationship is unclear. I was also unable to assess the potential effects of witnessing abuse and of parental neglect in childhood.

The WCF data are restricted to the measurement of psychological distress and so other indicators of mental health were not able to be assessed. Psychological distress is an important indicator of mental health. However, additional research is encouraged which assesses the consistency of the moderation processes found in this study across other indicators of mental health. For instance, does alcohol consumption exacerbate the effects of victimization on post-traumatic stress disorder (PTSD)?

Also, due to the self-report nature of the data there is a potential for social desirability bias. It is possible that some respondents may falsely respond to questions by underreporting violent experiences, frequency of intoxication, and psychological distress in order to protect their self-concepts and identities. Since I am unable to control for social desirability in my models, my results may exaggerate or even misrepresent the strength of the association between victimization, frequency of intoxication, and mental health.

Finally, as stated, the sample is restricted to predominately Black and Hispanic low-income urban women with children, although women with these characteristics tend to exhibit high violence-risk profiles (Hill, Mossakowski, and Angel 2007; Tolman and

Rosen 2001), my results cannot be generalized beyond these specific population parameters.

Conclusion

In this thesis, I examined the effects of relationship violence in early and in adulthood on psychological distress. Importantly, I also assessed the moderating influence of frequency of intoxication. Despite the limitations of this study, my results demonstrate that cross-sectionally, frequency of intoxication is a significant moderator of the impact of sexual coercion in early life and of severe physical assault in adulthood. My longitudinal analysis shows that frequency of intoxication moderates the impact of psychological aggression and minor physical assault in adulthood on change in psychological distress over time. These findings demonstrate that relationship violence is more detrimental to the mental health of female victims of relationship violence with higher levels of alcohol consumption. Accordingly, additional empirical work is needed to explain these moderating influences. Could alcohol consumption lead to psychological distress among victims with higher levels of powerlessness or with lower levels of social support or self-esteem? Continued research can allow for a more meaningful understanding of under what conditions relationship violence leads to poor mental health.

Works Cited

Abbey, Antonia, Mary J. Smith, and Richard O. Scott. 1993. "The Relationship Between Reasons for Drinking Alcohol and Alcohol Consumption: An Interactional Approach." *Addictive Behaviors* 18: 659-670.

Acierno, Ron, Heidi S. Resnick, and Dean G. 1997. "Health Impact of Interpersonal Violence 1: Prevalence Rates, Case Identification, and Risk Factor for Sexual Assault, Physical Assault, and Domestic Violence in Men and Women." *Behavioral Medicine* 23: 53–65.

Afifi, Tracie O., Douglas A. Brownridge, Brian J. Cox, and Jitender Sareen. 2006. "Physical Punishment, Childhood Abuse and Psychiatric Disorders." *Child Abuse & Neglect* 30: 1093-1103.

Anderson, Kristin, L. 2002. "Perpetrator or Victim? Relationships between Intimate Partner Violence and Well-Being." *Journal of Marriage and Family* 64: 851-863.

Arata, Catalina M., Jennifer Langhinrichsen-Rohling, David Bowers, and Laura O'Farrill-Swails. 2005. "Single versus Multi-Type Maltreatment: An Examination of the Long-Term Effects of Child Abuse." *Journal of Aggression, Maltreatment & Trauma* 11: 29-52.

Arias, Ileana, Carolyn M. Lyons, and Amy E. Street. 1997. "Individual and Marital Consequences of Relationship violence: Moderating Effects of Relationship Efficacy and Spouse Support." *Journal of Family Violence* 12: 193-210.

Banyard, Victoria L. 1999. "Childhood Maltreatment and the Mental Health of Low-income Women." *American Journal of Orthopsychiatry* 69: 161 – 171.

Banyard, Victoria and Linda M. Williams. 1996. "Characteristics of Child Sexual Abuse as Correlates of Women's Adjustment: A Prospective Study." *Journal of Marriage and Family* 58: 853 – 865.

Bifulco, Antonia, Patricia M. Moran, Rebecca Baines, Amanda Bunn, and Katherine Stanford. 2002 "Exploring Psychological Abuse in Childhood: II. Association with Other Abuse and Adult Clinical Depression." *Bulletin of the Menninger Clinic* 66: 241-258.

Baron, Reuben M and David A. Kenny. 1986. "The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations." *Journal of Personality and Social Psychology* 51: 1173-1182.

Bassuk, Ellen., Dawson, Ree., and Huntington, Nicholas. 2006. "Intimate Partner Violence in Extremely Poor Women: Longitudinal Patterns and Risk Markers." *Journal of Family Violence* 21: 387-399.

Bogat, Anne, G., Sally T. Levendosky, Alexander Von Eye, and William S. Davidson. 2003. "Predicting the Psychosocial Effects of Interpersonal Partner Violence (IPV): How much does a Woman's History of IPV Matter?" *Journal of Interpersonal Violence* 18: 1271-1291.

Bradley, Christopher. 2007. "Veteran status and marital aggression: Does military service make a difference?" *Journal of Family Violence* 22: 197 – 209.

Bradley, Rebekah., Ann. C. Schwartz, and Nadine J. Kaslow. 2005. "Posttraumatic Stress Disorder Symptoms among Low-Income, African American Women with a History of Intimate Partner Violence and Suicidal Behaviors: Self-Esteem, Social Support, and Religious Coping." *Journal of Traumatic Stress* 18: 685 – 696.

Briere, John, and Runtz, Marsha. 1990. "Differential Adult Symptomatology Associated With Three Types of Child Abuse Histories." *Child Abuse & Neglect* 14: 357-364.

Briere, John and Marsha Runtz. 1988. "Multivariate Correlates of Childhood Psychological and Physical Maltreatment among University Women." *Child Abuse & Neglect* 12: 331-341.

Buckner, John C., Ellen L. Bassuk, and William R. Beardslee. 2004. "Exposure to Violence and Low-Income Children's Mental Health: Direct, Moderated, and Mediated Relations." *American Journal of Orthopsychiatry* 74: 413-423.

Campbell, Rebecca, Courtney E. Ahrens, Tracy Sefl, Sharon M. Wasco, and Holly E. Barnes. 2001."Social Reactions to Rape Victims: Healing and Hurtful Effects on Psychological and Physical Health Outcomes." *Violence and Victims* 16: 287-302.

Campbell, Rebecca. 1998. "The Community Response to Rape: Victims' Experiences with the Legal, Medical, and Mental Health Systems." *American Journal of Community Psychology* 26: 355-379.

Campbell, Jacquelyn and Karen L. Soeken. 1999. "Women's Responses to Battering Over Time: An Analysis of Change." *Jounral of Interpersonal Violence* 14: 21-40.

Carlson, Bonnie. E., Louise-Anne McNutt, Deborah Y. Choi, and Isabel M. Rose. 2002. "Intimate Partner Abuse and Mental Health: The Role of Social Support and Other Protective Factors." *Violence Against Women* 8: 720 – 745.

Cherlin, Andrew J., Tera R. Hurt, Linda M. Burton, and Diane M. Purvin. 2004. "The influence of physical and sexual abuse on marriage and cohabitation." *American Sociological Review* 69: 768 – 789.

Clements, Caroline M., Caryn M. Sabourin, and Lorinda Spiby. 2004. "Dysphoria and Hopelessness Following Battering: The Role of Perceived Control, Coping, and Self-Esteem." *Journal of Family Violence* 19: 25-36.

Coker, Ann L., Paige H. Smith, Martie P. Thompson, Robert E. McKeown, Lesa Betheas, and Keith E. Davis. 2002. "Social Support Protects against the Negative Effects of Partner Violence on Mental Health." *Journal of Women's Health & Gender-Based Medicine* 11: 465-476.

Cole, Brenda and Kenneth Pargament. 2000. "Re-Creating Your Life: A Spiritual/Psychotherapeutic Intervention for People Diagnosed with Cancer." *Psycho-Oncology* 8: 395-407.

Conger, J. 1956. "Reinforcement Theory and The Dynamics Of Alcoholism." *Quarterly Journal of Studies on Alcohol* 17: 296–305.

Cunradi, Carol B., Raul Caetano, and John Schafer. 2002. "Socioeconomic Predictors of Intimate Partner Violence among White, Black, and Hispanic Couples in the United States." *Journal of Family Violence* 17:377–389.

DeMaris, Alfred and Catherine Kaukinen. 2005. "Violent Relationship Violence and Women's Mental and Physical Health: Evidence from a National Sample." *Journal of Research in Crime and Delinquency* 42: 384 – 411.

Derogatis, Leonard. 2000. *Brief Symptom Inventory 18, Administration, Scoring, and Procedures Manual*. Minneapolis, MN: National Computer System.

Draper, Brian, Jon J. Pfaff, Jane Pirkis, John Snowdon, Nicola T. Lautenschlager, Ian Wilson, and Osvaldo P. Almeida. 2008. "Long-Term Effects of Childhood Abuse on the Quality of Life and Health of Older People: Results from the Depression and Early Prevention of Suicide in General Practice Project." *Journal of the American Geriatrics Society* 56: 262 – 271.

Durden, Emily. D, Terrence D. Hill, and Ronald J. Angel. 2007. "Social Demands, Social Supports, and Psychological Distress among Low-income Women." *Journal of Social and Personal Relationships* 24:343–361.

Edwards, Valerie J., George W. Holden, Vincent J. Felitti, and Robert F. Anda. 2003. "Relationship Between Multiple Forms of Childhood Maltreatment and Adult Mental Health in Community Respondents: Results From the Adverse Childhood Experiences Study." *American Journal of Psychiatry* 160: 1453-1460.

Ennis, Nicole, Stevan Hobfoll, and Kerstin Schroder. 2000. "Money Doesn't Talk, It Swears: How Economic Stress and Resistance Resources Impact Inner-city Women's Depressive Mood." *American Journal of Community Psychology* 28:149–173.

Fox, Greer L., Michael L. Benson, Alfred A. DeMaris, and Judy Van Wyk. 2002. "Economic distress and intimate violence: Testing family stress and resources theory." *Journal of Marriage and Family* 64: 793 – 807.

Frias, Sonia M. and Ronald J. Angel. 2005. "The Risk of Partner Violence among Low-Income Hispanic Subgroups." *Journal of Marriage and Family* 67: 552 – 564.

Hill, Terrence D., Amie L. Nielsen, Ronald J. Angel. 2009. In Press. "Relationship Violence and Frequency of Intoxication Among Low-Income Urban Women." *Substance Use & Misuse*.

Hill, Terrence D., Ryan D. Schroeder, Christopher Bradley, Lauren M. Kaplan, and Ronald J. Angel. 2009. In Press. "The Health Consequences of Relationship Violence in Adulthood." *American Journal of Public Health*.

Hill, Terrence, Lauren Kaplan, Michael French, and Robert Johnson. 2009. "Relationship violence in Early Life and Mental Health in Adulthood: An Examination of Mediating and Moderating Influences of Psychosocial Resources." Department of Sociology, University of Miami, Coral Gables, FL. Unpublished Manuscript.

Hill, Terrence D., Krysia N. Mossakowski., and Ronald J. Angel. 2007. "Relationship Violence and Psychological Distress among Low–Income Urban Women." *Journal of Urban Health: Bulletin of the New York Academy of Medicine* 84: 537 – 551.

Hill, Terrence D. and Ronald J. Angel. 2005. "Neighborhood disorder, psychological distress, and heavy drinking." *Social Science & Medicine* 61: 965-975.

Holahan, Charles J., Rudolf H. Moos, Carole K. Holahan, and Ruth C. Cronkite, and Patrick K. Randall. 2001. "Drinking to Cope, Emotional Distress and Alcohol Use and Abuse: A Ten-Year Model." *Journal of Studies on Alcohol* 62: 190-198.

Holt, Melissa K. and Dorothy L. Espelage. 2005. "Social Support as a Moderator Between Dating Violence Relationship violence and Depression/Anxiety Among African American and Caucasian Adolescents." *School Psychology Review* 34:309-328.

Horwitz, Allan V., Cathy S. Widom, Julie McLaughlin, and Helene R. White. 2001. "The Impact Of Childhood Abuse and Neglect on Adult Mental Health: A Prospective Study". *Journal of Health and Social Behavior* 42: 184-201.

Huang, Chien, J. and Gunn, Tiffany. 2001. "An Examination of Domestic Violence in an African American Community in North Carolina: Causes and Consequences." *Journal of Black Studies* 31: 790-811.

Hussey, Jon M., Jen J. Chang, and Jonathan B. Kotch. 2006. "Child Maltreatment in the United States: Prevalence, Risk Factors, and Adolescent Health Consequences." *Pediatrics* 118: 933-942.

Johnson, David. 2005. "Two-Wave Panel Analysis: Comparing Statistical Methods for Studying the Effects of Transitions." *Journal of Marriage and Family* 67:1061 – 1075.

Johnson, Michael P. 1995. "Patriarchal Terrorism and Common Couple Violence: Two Forms of Violence against Women." *Journal of Marriage and the Family* 57: 283-294.

Kent, Angela, Glenn Waller, and Dave Dagnan. 1999. "A Greater Role of Emotional than Physical or Sexual Abuse in Predicting Disordered Eating Attitudes: The Role of Mediating Variables." *Internal Journal of Eating Disorders* 25:159-167.

Kremer, Heidemarie, Gail Ironson, and Lauren Kaplan. 2009. "The Fork in the Road: HIV as a Potential Positive Turning Point and the Role of Spirituality." *AIDS Care* 21: 368-377.

Kunz, Jean L. and Kathryn Graham. 1998. "Drinking Patterns, Psychosocial Characteristics and Alcohol Consequences." *Addiction* 93: 1079-1090.

Kilpatrick, Dean G., Ron Acierno, Heidi S. Resnick, Benjamin E. Saunders, and Connie L. Best. 1997. "A 2-Year Longitudinal Analysis of the Relationships Between Violent Assault and Substance Use in Women." *Journal of Consulting and Clinical Psychology* 65: 834-847.

Lee, Soon and Catherine Rivier. 1997. "An Initial, Three-Day-Long Treatment With Alcohol Induces A Long-Lasting Phenomenon Of Selective Tolerance In The Activity Of Rat Hypothalamic-Pituitary-Adrenal Axis." *The Journal of Neuroscience* 17: 8856-8866.

Liang, Belle, Linda M. Williams, and Jane A. Siegel. 2006. "Relational Outcomes of Childhood Sexual Trauma in Female Survivors: A Longitudinal Study." *Journal of Interpersonal Violence* 21: 42-57.

Lipton, Robert I. 1994. "The Effect of Moderate Alcohol Use on the Relationship between Stress and Depression." *American Journal of Public Health* 84: 1913-1917.

Lo, Celia C. and Tyrone C. Cheng. 2007. "The Impact of Childhood Maltreatment on Young Adults' Substance Abuse." *The American Journal of Drug and Alcohol Abuse* 33: 139–146.

Luster, Tom and Stephen A. Small. 1997. “Sexual Abuse History and Problems in Adolescence: Exploring the Effects of Moderating Variables.” *Journal of Marriage and the Family* 59: 131-142.

MacMillan, Ross. 2002. “Violence and the Life Course: The Consequences of Relationship violence for Personal and Social Development.” *Annual Review of Sociology* 27: 1-22.

Marchand, Alain, Andree Demers, Pierre Durand, and Marcel Simard. 2003. “The Moderating Effect of Alcohol Intake on the Relationship between Work Strains and Psychological Distress.” *Journal of Studies on Alcohol* 64: 419-427.

Martino, Steven C., Rebecca L. Collins and Phyllis L. Ellickson. 2005. “Cross-Lagged Relationships between Substance Use and Intimate Partner Violence among a Sample of Young Adult Women.” *Journal of Studies on Alcohol* 66: 139-148.

McCauley, Jeanne, David E. Kern, Ken Kolodner, Laurie Dill, Arthur F. Schroeder, Hallie K. DeChant, Januce Ryden, Leonard R.Derogatis, and Eric B. Bass. 1997. ”Clinical Characteristics of Women with a History of Childhood Abuse.” *JAMA* 277: 1362-1368.

McEwen, Bruce. 2002. *The End of Stress as We Know It.* Wahington, DC: Joseph Henrey Press.

Miranda, Robert, Lori A. Meyerson, Patricia J. Long, Brian P.Marx, and Sharon M. Simpson. 2002. “Sexual Assault and Alcohol Use: Exploring the Self-Medication Hypothesis.” *Violence and Victims* 17: 205-217.

Mullen, P. E., Martin, J. L., Anderson, J. C., Romans, S. E., & Herbison, G. P. 1996. “The Long-Term Impact of the Physical, Emotional, and Sexual Abuse of Children: A Community Study.” *Child Abuse & Neglect* 20: 7 – 21.

National Center for Injury Prevention and Control. 2002. *CDC Injury Research Agenda*. Atlanta, GA: Centers for Disease Control and Prevention.

Neff, James A. and Baqar A. Husaini. 1985. “Stress-Buffer Properties of Alcohol Consumption: The Role of Urbanicity and Religious Identification.” *Journal of Health and Social Behavior* 26: 207-222.

Riger, Stephanie., Raja, Sheela., and Camacho, Jennifer. 2002. “The Radiating Impact of Intimate Partner Violence.” *Journal of Interpersonal Violence* 17: 184-205.

Rodgers, Bryan, Ailsa E. Korten, Anthony F. Jorm, Helen Christensen, Scott Henderson, and Patricia A. Jacomb. 2000. *Addiction* 95: 1833-1845.

Russell, Marcia, M. Lynne Cooper, Michael R. Frone, and Robert S. Pierce. 1999. "A Longitudinal Study of Stress, Alcohol, and Blood Pressure." *Epidemiologic Bulletin* 40: 299-306.

Sackett, Leslie, A. and Saunders, Daniel, G. 1999. "The Impact of Different Forms of Psychological Abuse on Women." *Violence and Victims* 14: 105-117.

Sappington, A. A., Robert Pharr, Ashley Tunstall, and Edward Rickert.1997. "Relationships among Child Abuse, Date Abuse, and Psychological Problems." *Journal of Clinical Psychology* 53: 319 – 329.

Sayette, M.A., T. Wilson, and M.J. Elias. 1993. "Alcohol and Aggression: A Social Information Processing Analysis." *Journal of Studies on Alcohol* 54: 399-407.

Schuck, Amie M. and Cathy Spatz Widom. 2001. "Childhood Victimization and Alcohol Symptoms in Females: Causal inferences and Hypothesized Mediators." *Child Abuse and Neglect* 25: 1069-1081.

Seeman, Melvin and Alice Z. Seeman. 1992. "Life Strains, Alienation, and Drinking Behavior." *Alcoholism: Clinical and Experimental Research* 16: 199-205.

Shanahan, Michael J. 2000. "Pathways to Adulthood in Changing Societies: Variability and Mechanisms in Life Course Perspective." *Annual Review of Sociology* 26: 667-692.

Skomorovsky, Alla, Kimberly Matheson, and Hymie Anisman. 2006. "The Buffering Role of Social Support Perceptions in Relation to Eating Disturbances among Women in Abusive Dating Relationships." *Sex Roles* 54: 627-638.

Springer, Kristen, Jennifer Sheridan, Daphne Kuo, and Molly Carnes. 2007. **"**Long–Term Physical and Mental Health Consequences of Childhood Physical Abuse: Results from a Large Population–Based Sample of Men And Women." *Child Abuse and Neglect* 31: 517 – 530.

Stein, Judith A., Michelle Burden Leslie, and Adeline Nyamathi. 2002. "Relative Contributions of Parent Substance Abuse and Childhood Maltreatment to Chronic Homelessness, Depression, and Substance Abuse Problems among Homeless Women: Mediating Roles of Self-Esteem and Abuse in Adulthood." *Child Abuse & Neglect* 26: 1011-1027.

Straus, Murray A., Sherry L. Hamby, Sue Boney-McCoy, and David B. Sugarman. 1996. "The Revised Conflict Tactics Scales (CTS2): Development and Preliminary Psychometric Data." *Journal of Family Issues* 17: 283-316.

Straus, Murray A. and Emily M. Douglas. 2004. "A Short Form Of The Revised Conflict Tactics Scales, And Typologies For Severity And Mutuality." *Violence and Victims* 19: 507 – 520.

Tedeschi, Richard G. and Lawrence G. Calhoun. 1996. "The Posttraumatic Growth Inventory: Measuring the Positive Legacy of Trauma. *Journal of Postraumatic Stress* 9: 455-471.

Testa, Maria, Jennifer A. Livingson, and Kenneth E. Leonard. 2003. "Women's Substance Use and Experiences of Intimate Partner Violence." *Addictive Behaviors* 28: 1649-1664.

Tjaden P, and Thoennes N. 2000. "Extent, Nature, and Consequences of Intimate Partner Violence." Washington, DC: National Institute of Justice, U.S.

Tolman, Richard M., and Jody Raphael. 2000. "A Review of Research on Welfare and Domestic Violence." *Journal of Social Issues* 56: 655–682.

Tolman, Richard M. and Daniel Rosen. 2001. "Domestic Violence in the Lives of Women Receiving Welfare: Mental Health, Substance Dependence, and Well-Being." *Violence Against Women* 7: 141-158.

Turner, Heather A. and Melissa. J. Butler. 2003. "Direct and Indirect Effects of Childhood Adversity on Depressive Symptoms in Young Adults." *Journal of Youth and Adolescence* 32: 89 – 103.

U.S. Department of Health and Human Services. 2008. *Adverse Health Conditions and Health Risk Behaviors Associated with Intimate Partner Violence - United States, 2005.* Morbidity and Mortality Weekly Report. Atlanta, GA. Centers for Disease Control and Prevention.

VanHorn, Barbara. 2000. "Violence And Depression Among Ethnically Diverse, Low Income Women: Mediating And Moderating Factors." Ph.D. dissertation, Department of Philosophy, University of North Texas, TX.

Vranceanu, Ana-Maria, Stevan E. Hobfoll, and Robert J. Johnson. 2007. "Child Multi-Type Maltreatment and Associated Depression and PTSD Symptoms: The Role of Social Support and Stress." *Child Abuse & Neglect 31,* 71 – 84.

Wand, Gary S., Deborah Mangold, Mahmood Ali, and Paul Giggey. 1999. "Adrenocortical Responses and Family History of Alcoholism." *Alcohol Clinical and Experimental Research* 23: 1185-1190.

Wand, G.S. and A.S. Dobs. 1991. "Alterations in the Hypothalamic-Pituitary-Adrenal Axis in Actively Drinking Alcoholics." Journal of Clinical Endocrinology & Metabolism 72: 1290-1295.

Wenzel, S., Tucker, J., Elliot, M., Marshall, G., and Williamson, S. 2004. "Physical Violence Against Impoverished Women: A Longitudinal Analysis Of Risk And Protective Factors." *Women's Health Issues* 14: 144 – 154.

Widom, Cathy Spatz, Helene Raskin White, Sally J. Czaja, Naomi R. Marmorstein. 2007. "Long-Term Effects of Child Abuse and Neglect on Alcohol Use and Excessive Drinking in Middle Adulthood." *Journal of Studies on Alcohol & Drugs* 68: 317-326.

Williams, Stacey L. and Kristin D. Mickelson. 2007. "A Psychosocial Resource Impairment Model Explaining Partner Violence and Distress: Moderating Role of Income." *American Journal of Community Psychology* 40: 13-25.

Williams, Stacey, L. and Kristin D. Mickelson. 2004. "The Nexus of Domestic Violence and Poverty: Resilience in Women's Anxiety." *Violence Against Women* 10: 283-293.

Winship, Christopher. and Larry Radbill. 1994. "Sampling Weights and Regression Analysis. *Sociological Methods and Research* 22: 230-257.

Woods, Stephanie J. and Jacquelyn C. Campbell. 1993. "Posttraumatic Stress in Battered Women: Does the Diagnosis Fit?" *Issues in Mental Health Nursing* 14: 173-186.

Wilsnack, Richard., Sharon Wilsnack, Arlinda Kristjanson, and T. Harris. 1998. "Ten-year Prediction of Women's Drinking Behavior in a National Representative Sample." *Women's Health* 4: 199-230.

Wyatt, Gail E., Cindy M. Notgrass, and Michael Newcomb. 1990. "Internal and External Mediators of Women's Rape Experiences." *Psychology of Women Quarterly* 14: 153-176.

Zlotnick, Caron, Dawn, M. Johnson, Robert Kohn. 2006. "Intimate Partner Violence and Long-Term Psychosocial Functioning in a National Sample of American Women." *Journal Interpersonal Violence* 21: 262-275.