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Pepperdine University
Graduate School of Education and Psychology

INFLUENCE OF SOCIAL SUPPORT AND INTIMATE PARTNER ABUSE ON AFRICAN
AMERICAN MOTHERS' SUBSTANCE USE

A clinical dissertation submitted in partial satisfaction
of the requirements for the degree of
Doctor of Psychology

by

Shaquita Tillman, M.A.

July, 2011

Thema Bryant-Davis, Ph.D. – Dissertation Chairperson

This clinical dissertation, written by

Shaquita Tillman, M.A.

under the guidance of a Faculty Committee and approved by its members, has been submitted to and accepted by the Graduate Faculty in partial fulfillment of the requirements for the degree of

DOCTOR OF PSYCHOLOGY

Doctoral Committee:

Thema Bryant-Davis, Ph.D., Chairperson

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ACKNOWLEDGMENTS

I would like to extend a special thank you to my dedicated chairperson, Dr. Thema Bryant-Davis, and committee members, Drs. Shelly Harrell and Rhonda Brinkley-Kennedy, for their support, guidance, encouragement, expertise, and insights throughout the dissertation process and in my professional endeavors.

I am also sincerely grateful to my family and friends for wholeheartedly supporting me throughout my life and in my intellectual pursuits. I am blessed to have you in my life, without you this dissertation would not have been possible.

VITA

Shaquita Tillman, M.A.

EDUCATIONAL HISTORY:

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| 2007 – present | Doctor of Psychology (Psy.D.), Expected Spring 2012
<i>Pepperdine University (APA-Accredited)</i>
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Los Angeles, CA |
| 2005 | Bachelor of Arts in Psychology (B.A.)
<i>University of California, Los Angeles</i>
Los Angeles, CA |

CLINICAL EXPERIENCE:

- | | |
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| 2010 – present | Psychology Extern
<i>Harbor-UCLA Medical Center</i>
<i>Dual Diagnosis Treatment Program</i>
<i>Supervisors: Lee Gomberg, Ph.D. and John Tsuang, M.D.</i>
Responsibilities: <ul style="list-style-type: none">▪ Provide comprehensive treatment to a culturally diverse patient population with co-morbid psychiatric and substance abuse disorders▪ Perform initial dual diagnosis evaluations and intake interviews and formulate treatment plans▪ Provide brief and long-term psychotherapy for adults with various Axis I and Axis II disorders▪ Complete individual sessions to promote completion of treatment plans▪ Facilitate Seeking Safety, CBT for Substance Use and Depression, and process groups▪ Conduct initial evaluations, clinical interviews and referrals to clients admitted to Psych ER▪ Completion of Department of Mental Health (DMH) clinical documentation to ensure adherence to ethical and legal requirements▪ Maintain communication with referral sources to promote completion of treatment plan goals▪ Conduct weekly case presentations to update the multidisciplinary care coordination team of clients' progress in treatment▪ Complete year-long Advanced Cognitive-Behavioral Therapy course▪ Attend Harbor-UCLA's Grand Rounds |
|----------------|---|

2009 – 2010

Clinician

Didi Hirsch Community Mental Health Center

Supervisor: Dmitry Tuller, Ph.D.

Responsibilities:

- Provide outpatient mental health services to underserved men and women, most of whom are chronically and seriously mentally ill and have substance use issues
- Conduct initial evaluations and intake interviews and formulate treatment plans
- Provide brief and long-term psychotherapy for adults with various Axis I and Axis II disorders
- Complete individual and group counseling sessions to promote completion of treatment plans
- Completion of Department of Mental Health (DMH) clinical documentation to ensure adherence to ethical and legal requirements
- Maintain communication with referral sources to promote completion of treatment plan goals
- Conduct weekly case presentations to update the multidisciplinary care coordination team of clients' progress in treatment
- Participation in a community outreach project in which diversity trainings and consultation services were provided for members of the Los Angeles Police Department that serve the serious and chronically mentally ill

2009 – 2010

Extern

Sports Concussion Institute

Supervisor: Tony L. Strickland, M.S., Ph.D., FACPN

Responsibilities:

- Provide neuropsychological assessments, general psychological testing, academic/cognitive/education testing, brief therapy, and cognitive therapy to clients of diverse ages, race/ethnicities, and socioeconomic backgrounds and presenting concerns (e.g., concussion, Alzheimer's, dementia)
- Conduct clinical interviews and administer, score, interpret, and write comprehensive testing reports
- Conduct neuropsychological evaluations of high school and collegiate athletes using ImPACT (Immediate Post-Concussion Assessment and Cognitive Test), a tool designed to evaluate baseline functioning and recovery process following a concussion
- Present weekly case presentations to a multidisciplinary team to promote the prevention, diagnosis and treatment of concussions, memory disorders, and acute/chronic pain

2008 – 2009

Clinician

South Central Training Consortium

Supervisors: Rhonda Brinkley-Kennedy, Psy.D. and Shelly Harrell, Ph.D.

Responsibilities:

- Provide psychotherapy to underserved women, children/adolescents, and families who have experienced various traumas (e.g., domestic violence, child sexual abuse, and sexual assault) and are housed at Jenesse Center (a domestic violence shelter) and Hope Gardens (a transitional living facility)
- Conduct initial evaluations and intake interviews and formulate treatment plans
- Provide brief and long-term psychotherapy for adults with various Axis I and Axis II disorders
- Complete individual counseling sessions for women, and children/adolescents to promote completion of treatment plans
- Complete family counseling sessions for women and their children to promote completion of treatment plans
- Conduct a weekly psychotherapy group with adult domestic violence survivors to increase clients' self-exploration, self-esteem and empowerment
- Co-facilitate a weekly psychotherapy group with homeless, senior women to increase the clients' self-exploration and empowerment
- Provide crisis intervention services on Jenesse Center's Crisis Hotline for individuals seeking services following incidences of domestic abuse
- Complete clinical documentation to ensure adherence to ethical and legal requirements
- Maintain communication with referral sources to promote completion of treatment plan goals
- Conduct weekly case presentations to update treatment team of clients' progress in treatment
- Collaboration and support of community agencies who serve primarily low-income diverse population of women, children and adolescents

2007 – 2008

Clinic Therapist

Pepperdine Community Counseling Center

Supervisors: Anat Cohen, Ph.D. and Gitu Bhatia, Psy.D.

Responsibilities:

- Conduct initial evaluations and intake interviews; formulate treatment plans; provide brief and long-term psychotherapy for adults with various Axis I and Axis II disorders at a university community clinic; participate in a weekly group supervision to discuss diagnosis and treatment of clinic clients; and participate in additional weekly peer supervision
- Collaborated with the Children of the Night organization to provide psychotherapy services to children/adolescents with

histories of trauma and involvement in prostitution. Psychotherapy responsibilities included: providing brief and long-term psychotherapy for adolescents with various Axis I disorders at the university community clinic; participate in a weekly group and peer supervision to discuss diagnosis and treatment of clinic clients

RESEARCH EXPERIENCE:

2007 – present

Research Assistant

Pepperdine University, Culture and Trauma Research Lab

Supervisor: Thema Bryant-Davis, Ph.D.

Responsibilities:

- Conduct empirical studies, literature reviews, presentations, posters and publications in collaboration with the principal investigator regarding cultural context of trauma recovery
- Areas of study include, but are not limited to, child sexual abuse, sexual assault, human trafficking, and intimate partner abuse
- Populations include ethnic minorities in the United States and women from Africa and the African Diaspora

2005 – 2007

Research Clinician

UCLA Integrated Substance Abuse Programs, The Semel Institute for Neuroscience and Human Behavior at UCLA

UCLA Access to Care Program – Grant funded by Substance Abuse and Mental Health Services (SAMHSA)

Supervisors: Richard Rawson, Ph.D., Elizabeth Gong-Guy, Ph.D., and Suzi Spear, M.S.

Responsibilities:

- Providing alcohol and drug screening and brief intervention services to a diverse student population at UCLA Counseling and Psychological Services using the Alcohol, Smoking, & Substance Use Involvement Screening Test (developed by the World Health Organization)
- Providing Government Performance & Results Act assessment to college population at the baseline and 6 month follow-up
- Presentations for various UCLA departments, i.e., Arthur Ashe Student Health and Wellness Center
- Conduct the Alcohol, Smoking, & Substance Involvement Screening Test training for UCLA Counseling and Psychological Services psychology interns, social work externs, and practicum students
- Participate in outreach activities and program recruitment and retention
- Development of project materials, e.g., brochures, flyers, and alcohol and other drug educational handouts

2004 – 2005

Research Clinician

UCLA Integrated Substance Abuse Programs, The Semel Institute for Neuroscience and Human Behavior at UCLA

Supervisors: Richard de la Garza, Ph.D. and Thomas Newton, MD

Responsibilities:

- Assistant in aspects of research focused on pharmacological treatment for methamphetamine and cocaine addiction. Screened subjects for the study by administering stimulant use questionnaires, taking vital signs, and urinalysis. Administered assessment tools such as Addiction Severity Index, Beck Depression Inventory, and Time-line Follow Back. Recorded progress notes.

2003 – 2004

Research Assistant

University of California, Los Angeles, Psychology Department

Supervisor: Edward Dunbar, Ph.D.

Responsibilities:

- Conducted research about Hate Crimes in the Los Angeles area; analyzed and coded crime reports; performed data entry and data analysis with SPSS and Arcview software; and recruitment and interviewing of hate crime victims using a standardized interviewing format and data form

TEACHING EXPERIENCE:

2010

Teaching Assistant

Pepperdine University

Course: Child/Adolescent Interventions

Supervisor: Carol Falender, Ph.D.

Responsibilities:

- Collaborated with supervisor to modify course lesson plan and objectives
- Surveyed clinical psychology doctoral students about their needs and preferences when learning child/adolescent theory and intervention
- Created course syllabus

2009 – 2010

Teaching Assistant

Pepperdine University

Course: Advanced Psychological Assessment

Supervisors: Carolyn Keatinge, Ph.D. & Susan Himelstein, Ph.D.

Responsibilities:

- Assisting clinical psychology doctoral students in the accurate administration, scoring, and interpretation of cognitive and personality test instruments
- Providing feedback to students on how to integrate relevant test results, clinical interview, case history, and behavioral

- observations in a comprehensive assessment report
- Assisting students in linking diagnosis, examinee's dynamics and defenses, relevant treatment recommendations, and short-term goals and long-term goals
- Providing feedback about the multicultural and legal ethical considerations in assessment
- Preparation of course materials

2002 – 2005

Psychology Tutor

University of California, Los Angeles, UCLA Academic Advancement Program

Supervisor: Maria Sanchez

Responsibilities:

- Tutoring undergraduate UCLA students in an introductory psychology course. Develop lesson plans for tutorial session. Create and administer study materials and review sheets. Advise students about courses for the Psychology major, minors, and internship opportunities. Assisted in interviewing prospective Psychology tutors for the Academic Advancement Program

ABSTRACT

African American women are at increased risk for severe forms of partner abuse. Moreover, women abused while pregnant have reported higher frequencies of severe intimate partner abuse compared with women who have been abused only before and/or after pregnancy. Literature suggests that social support is a critical resource for abused women who are seeking safety. Specifically, African American women, both those who report experiences of abuse and those who do not, endorse social support as a healthy coping strategy. The current study is a secondary analysis of the multisite Fragile Families and Child Wellbeing Study dataset looking at the relationship between intimate partner abuse and prenatal substance use as well as the potential of instrumental social support to serve as a protective factor for substance use by African American mothers who have experienced partner abuse. Regression analyses were conducted to examine this relationship. Counseling, research, and policy implications are provided.

Introduction and Literature Review

Intimate partner abuse impacts the lives of women from all racial, ethnic, socioeconomic, and religious backgrounds (Bryant-Davis, 2005; Watlington & Murphy, 2006). In the current study intimate partner abuse was defined as a pattern of verbal, emotional and physical abuse of one intimate partner by another for the purpose of obtaining and maintaining power and control. Persons may be dating, partnered, married, or previously in an intimate relationship (Tjaden & Thoennes, 2000). According to some estimates nearly one-fifth of women in the United States will experience intimate partner abuse at some point in their lifetime and intimate partners perpetrate 64% of all rapes, physical assaults, and stalking against women (Tjaden & Thoennes, 2000). In the United States, 1% of all surveyed women and up to 14% of married or cohabiting women has reported physical abuse by an intimate partner in the previous 12 months in national surveys (Tjaden & Thoennes, 2000). Based on conservative estimates from the National Violence Against Women Survey (Tjaden and Thoennes, 2000), which found that women often experienced multiple assaults in the preceding 12 months, approximately one-third of the five million intimate partner abuse incidents perpetrated against women each year in the U.S. result in medical care with the majority of women receiving treatment in a hospital setting (National Center for Injury Prevention and Control, 2003). The alarming high prevalence rates and increasing evidence for the physical and mental consequences of abuse make intimate partner abuse a serious public, medical and mental health concern.

Partner Abuse and Risk Factors for African American Women

Although intimate partner abuse is a ubiquitous public health issue, the intersection of race, socioeconomic status, and gender place low-income African American women at increased risk for experiencing partner abuse (Campbell & Gary, 1998). More specifically, epidemiological findings suggest that women who are African

American, young, poor, and reside in urban areas are more likely to experience intimate partner abuse (Rennison & Welchans, 2000). National data indicate a lifetime prevalence rate of 29.1% among low-income African American women (Tjaden & Thoennes 2000). Furthermore, prior research has indicated that African American women report more severe levels of abuse (Hampton, Oliver, & Magarian, 2003), and more repeat victimization (Carlson, Harris, & Holden, 1999) than Caucasian women.

Although research has shown that after controlling for income, differences by race in rates of intimate partner abuse are diminished or eliminated, suggesting that income may be a stronger predictor of partner abuse than ethnicity (Rennison & Planty, 2003), it is critically important for researchers and practitioners to understand the inextricable connection between race and income in the United States. For example, while White women make up 11% of the persons living in persistent poverty in this country, African American women constitute 25% of the persons living in the same condition (United States Census Bureau, 2006). In other words, findings that cite income as a greater predictor should be contextualized by the fact that African Americans are more likely to live under the stress and strain of poverty.

Occurrence of Intimate Partner Abuse During Pregnancy

The relationship between intimate partner abuse and pregnancy is varied and complex. The abuse may begin or intensify for women during pregnancy, or pregnancy may be a reprieve from abuse (Campbell, 2004; Campbell, Garcia-Moreno, & Sharps, 2004). Similarly, some studies have shown a decreased level of partner abuse, whereas others suggest that the pattern of partner abuse and the site of injury appear to change during pregnancy (Jahanfar & Malekzadegan, 2007). Nevertheless, research has shown that experiencing abuse by an intimate partner before pregnancy tends to be predictive of later abuse, even if violence begins in the postpartum period for some women (Campbell, 2004; Campbell et al., 2004; Letourneau, Fredrick, & Williams 2007;

McFarlane, Campbell, Sharps, & Watson, 2002).

In addition, findings from some studies indicate that experiences of intimate partner abuse occur quite frequently during pregnancy. Previous studies comparing the rates of abuse during pregnancy to those prior to pregnancy have found prevalence rates of 7% to 25% before pregnancy, and from 3% to 21% during pregnancy, with the majority of these pregnancy rates between 6% and 8% (Irion, Boulvain, Straccia, & Bonnet, 2000; Martin, Mackie, Kupper, Buescher, & Moracco, 2001). Furthermore, women abused while pregnant have reported higher frequencies of severe partner abuse compared with women who had been abused only before and/or after pregnancy (Campbell, 2004; Campbell et al., 2004; McFarlane et al., 2002). Additionally, women who experience partner abuse during pregnancy are at greater risk for having had attempts made on their lives than non-childbearing women (McFarlane et al., 2002). Alarming, intimate partner abuse perpetrated around the time of pregnancy is a leading cause of maternal death in the United States (Horon, 2005; Krulewich, 2001). Thus, the above-mentioned studies suggest that women who experience abuse during pregnancy are at increased risk for deleterious consequences of the abuse. In the current study the author will examine the experiences of African American women who have experienced abuse by an intimate partner during pregnancy.

Physical and Mental Health Effects of Partner Abuse

The adverse physical and mental health outcomes related to intimate partner abuse are well documented. The most common health consequences for survivors of partner abuse include headaches, insomnia, choking sensations, hyperventilation, gastrointestinal symptoms, and chest, back, and pelvic pain (Campbell et al., 2002). Intimate partner abuse also places women at higher risk for other physical health concerns, including HIV and sexually transmitted diseases (STDs) (Burke, Thieman, Gielen, O'Campo, & McDonnell, 2005). Additionally, a growing body of research has

documented a broad array of clinically significant sequelae of partner abuse in samples of abused African American women, including depression, anxiety, posttraumatic stress disorder (PTSD), substance use and abuse, dissociative phenomena, low self-esteem, feelings of helplessness and hopelessness, maladaptive cognitive distortions, and social isolation (Huang & Gunn, 2001; Kaslow et al., 2002; Sutherland, Sullivan, & Bybee, 2001; Thompson, Kaslow, & Kingree, 2002). Given the physical and mental health consequences that substance use causes for mothers and their children, the current study will focus on substance use in the lives of African American mothers, as well as the potential role of social support in impacting the relationship between partner abuse and substance use.

Substance Use and Survivors of Partner Abuse

Association between partner abuse and substance use. Researchers have found that intimate partner abuse and substance use often co-occur in women's lives (Gilbert, El-Bassel, Schilling, Wada, & Bennet-Ruiz, 2000; Hirsch, 2001; James, Johnson, & Raghavan, 2004). Specifically, the occurrence of intimate partner abuse is more likely among women who use drugs or alcohol (El-Bassel et al., 2004; El-Bassel et al., 2003) and women whose partners use drugs or alcohol (El-Bassel, Gilbert, Schilling, & Wada, 2000). A substantial body of literature has documented the associations between experiencing partner abuse and substance use among women, including alcohol use (Cunradi, Caetano, & Shafer, 2002; Field & Caetano, 2003; McNutt, Carlson, Persaud, & Postmus, 2002; Weinsheimer, Schermer, Malcoe, Baldof, & Bloomfield, 2005), cocaine use (Brokaw et al., 2002), marijuana use (Chermack, Fuller, & Blow, 2000; El-Bassel et al., 2000; El-Bassel, Gilbert, Wu, Go, & Hill, 2005), heroin use (El-Bassel et al., 2003), and tranquilizer use (El-Bassel et al., 2004). For example, in a sample of primarily African American low-income women, study results indicated that the women who used any drugs were almost three times as likely to experience partner

abuse compared to their nondrug using counterparts (Burke et al.,2005). In this same study, women who reported using any drugs were 2.72 times more likely than those women who did not use drugs to also report ever experiencing either physical or sexual partner abuse ($p = .09$). Additionally, women who used marijuana, sniffed, snorted, or smoked cocaine or heroin, injected drugs, or used pills were between 1.33 and 3.95 times more likely to report experiencing either physical or sexual partner abuse compared with women who did not use those drugs ($p < .09$; Burke et al., 2005).

Temporal relationship between partner abuse and substance use. Findings from previous studies suggest that the relationship between women's substance use and experiencing partner abuse is bidirectional and complex (Gilbert et al., 2006). In other words, research findings suggest that the relationship between substance use and partner abuse is reciprocal- substance use increases the risk for abuse, which in turn increase the risk for substance use. Thus, substance use by victims of partner abuse may be a potential risk factor for further victimization (El-Bassel et al., 2000).

Kilpatrick, Acierno, Resnick, Saunders, and Best (1997) pioneered the research exploring the nature of the temporal relationships between intimate partner abuse and substance use. The investigators found that the cross sectional designs of most intimate partner abuse studies and the limitations of self-report are two of the main barriers toward an understanding of the temporal relationship between substance use and partner abuse (Cunradi et al., 2002; Kilpatrick et al., 1997). Nevertheless, two hypotheses have garnered great attention in the explanation of the temporal relationship between partner abuse and substance use among abused women: the substance use leads to assault hypothesis vs. the assault leads to substance use hypothesis.

Substance use leads to assault hypothesis. The substance use-leads-to-assault framework, posits that substance use coupled with the impact of the accompanying lifestyle could increase a woman's vulnerability and exposure to

perpetrators of abuse (Kilpatrick et al., 1997). This framework also suggests that a woman's use of substances could impair her ability to identify perpetrators, thus victimization risk becomes heightened in the setting of risk-taking behaviors (Kilpatrick et al., 1997). In keeping with this hypothesis, Testa, Livingston and Leonard (2003) found that women's use of illicit substances was associated with intimate partner abuse during the subsequent 12 months in a random community-based sample of 724 women. In another longitudinal study of a random sample of 416 women from a methadone maintenance treatment program it was found that women who reported frequent use of crack cocaine were 4.4 times more likely than non-substance using women to report partner abuse during the subsequent 6 months, and frequent marijuana users were 4.5 times more likely than non-drug users to report subsequent partner abuse (Gilbert et al., 2006).

Assault leads to substance use hypothesis. In the assault-leads-to-substance-use hypothesis, it is believed that the use of substances develops as a coping strategy to temporarily escape the painful reality of partner abuse (Rogers, McGee, Vann, Thompson, & Williams, 2003). In support of this hypothesis, in a sample of low-income ethnic minority women in substance abuse treatment 40.8% reported psychological abuse, 49.6% physical abuse, and 32.8% sexual abuse by an intimate partner before their drug or alcohol use became a problem (Call & Nelson, 2007). Clearly, in these women's recollections, partner abuse had preceded their substance misuse. In response to questions about their use of alcohol or drugs after specific incidents of abuse by intimate partners, 36.8% reported that they did not or rarely used, 14.4% reported that they sometimes used, and 46.4% reported that they often, very often, or always used alcohol or drugs after abuse (Call & Nelson, 2007). Moreover, several qualitative studies have suggested that substance use, particularly heroin,

marijuana, and tranquilizer use, are used as a method of self-medication to cope with the distress of experiencing partner abuse (Gilbert et al., 2006).

Consequences of Substance Use for Mother and Child

Substance use that occurs during or post-pregnancy is of particular concern since it has been associated with multiple health consequences for both the mother and child. There is a paucity of scholarship that has examined the association between intimate partner abuse and prenatal substance use. To date, cigarette, alcohol and substance use have been identified correlates of intimate partner abuse in pregnancy (Huth-Bocks, Levendosky, & Bogat, 2002). Moreover, studies have shown pregnant abused women have higher rates of substance use (e.g., Kearney, Haggerty, Munro, & Hawkins, 2003). This author proposes that pregnant women may use substances as a means to cope with abuse similar to their non-pregnant counterparts. However, prenatal substance use during pregnancy poses risks for the mother and the unborn child (Flynn, Walton, Chermack, Cunningham, & Marcus, 2007). Thus, prenatal substance use among abused women warrants further study.

As described previously, women engaged in substance use often live in households or among friends at high risk for situations of alcohol- or substance-related violence. Thus the substance-involved woman may be more susceptible to the arguments, fights, and potential injury that can occur in a substance-using environment. Additionally, substance use has been correlated with risky sexual behavior, which can result in transmission of HIV and other sexually transmitted diseases and women who contract HIV can subsequently transmit the virus to their fetus (Stein, Leslie, & Nyamathi, 2001). Furthermore, after children are born, mothers' substance use can continue to negatively impact her parenting by way of an increased risk of abuse or neglect (Dube, Anda, Felitti, Edwards, & Williamson, 2002; Hoffmann & Cerbone, 2002; Nair, Schuler, Black, Kettinger, & Harrington, 2003; Stein et al., 2001).

Exposure to maternal substance use is associated with a number of adverse outcomes for infants and children. Examples of these adverse outcomes include poor emotional regulation and social interaction as toddlers (Conners et al., 2004) as well as the development of attention deficit hyperactivity disorder, oppositional defiant disorder, and conduct disorder (Clark, Cornelius, Wood, & Vanyukov, 2004). Additional emotional and behavioral problems that have been associated with maternal substance use include anxiety, emotional dependency, peer conflict, and social withdrawal (Chatterji & Markowitz, 2001). Further, parental substance use is associated with more exposure to violence within and outside the home, which has been shown to contribute to adverse psychological outcomes in adolescence, including higher rates of depression and posttraumatic stress disorder (Clarke, Stein, Sobota, Marist, & Hanna, 1999; Hanson et al., 2006). Moreover, children of substance users are more likely to use substances themselves (Hayatbakhsh et al., 2007; Reinherz, Giaconia, Hauf, Wasserman, & Paradis, 2000).

Maternal cigarette and alcohol use are the focus of the current investigation. Cigarette use during pregnancy, in particular, has been associated with spontaneous abortion, increased fetal mortality, sudden infant death syndrome, decreased IQ scores, behavioral disorders such as hyperactivity and conduct disorder (Ernst, Moolchan, & Robison, 2001). Epidemiological studies have also correlated cognitive deficits to prenatal cigarette exposure. Deficits in neuropsychological development on tasks that require learning, memory, and problem solving skills were impaired in children up to age 10 following exposure to maternal smoking during pregnancy (Cornelius, Ryan, Day, Goldschmidt, & Willford, 2001; DiFranza, Aligne, & Weitzman, 2004). Furthermore, children exposed to secondhand smoke are at an increased risk for Sudden Infant Death Syndrome (SIDS), acute respiratory infections, ear problems, and more severe asthma (Carmona, 2006).

In regards to maternal alcohol use, prenatal exposure to alcohol is one of the leading preventable causes of birth defects, mental retardation, and neurodevelopmental disorders. The association of prenatal alcohol exposure to a range of adverse infant neurocognitive and developmental outcomes, referred to as Fetal Alcohol Spectrum Disorders, has been well established in the literature (see Floyd, O'Connor, Sokol, Bertrand, & Cordero, 2005 for a review). Furthermore, studies have shown that children of alcoholics as compared to children of nonalcoholics experience a range of emotional and behavioral problems including, alcohol use, substance use, affective and anxiety disorders, relational difficulties, academic underachievement, and low self esteem (Beesley & Stoltenberg, 2002; Chassin, Pitts, & Prost, 2002; Harter, 2000).

Social Support and Survivors of Partner Abuse

Definition and importance of social support. Social support is a complex construct and has variously been defined as “social transactions that are perceived by the recipient or attended by the provider to facilitate coping in everyday life, and especially in response to stressful situations (Pierce, Sarason, & Sarason, 1990, p.173). Social support is multidimensional; some of the dimensions of social support include informational, instrumental (tangible), emotional, esteem and network. Informational support involves providing information about the stressor itself or how to effectively deal with the stressor. Instrumental support consists of the provision of goods and services necessary to cope with the stressor; the expression and communication of love is emotional support and the communication of respect and confidence of the person's abilities represents esteem support (Sarason, Sarason, & Pierce, 1994). Finally, network support involves communicating a sense of belonging and shared interests similar to those under distress (Sarason et al., 1994). In the current study, the author will focus on instrumental (tangible) support provided to abused African American women.

Studies have found that social support is a critical aspect in reducing women's risk for victimization and, conversely, that poor social support is related to increased risk (Rose, Campbell, & Kub, 2000). For example, social support networks may help to facilitate women's efforts to seek help and ultimately to end abusive relationships (Liang, Goodman, Tummala-Narra, & Weintraub, 2005). Beneficial social relationships may reduce risk of victimization by offering protection in a hostile environment and may also reduce risk of re-victimization (Sullivan & Bybee, 1999). Influential support may be provided by family and friends in the form of encouragement, advice, tangible assistance, and a safe haven (Goodkind, Gillum, Bybee & Sullivan, 2003) and also by the formal service sector such as police, social service agency staff, and crisis hotlines, although women seek help from the formal service sector less commonly than from family and friends (Liang et al., 2005).

Social support as a culturally relevant coping strategy of African Americans. Social support is posited to be a particularly relevant coping resource in the African American community (Thomas, 2001). In fact, social support has been found to be a preferred way to deal with adversity in the African American community (Mattis, 2000; Thomas, 2001) compared to formal services. For example, in a qualitative study, Short (2000) used focus groups to examine partner abuse among heterosexual African American and Caucasian women who were recently in abusive intimate relationships. A prominent racial difference in the sample was the inclination of African American women survivors to identify social support networks (family and friends) as sources of help and support.

Relationship between social support and partner abuse. Social support is a critical resource for women trying to escape abusive relationships. In one study, Thompson et al. (2000) found that emotion-focused social support improves the coping capacity of women survivors of partner abuse. Furthermore, another study found that

emotion-focused social support can make the difference toward the likelihood that women survivors sustain mental health and reduce the likelihood of future revictimization (Tan, Basta, Sullivan, & Davidson, 1995). African American women's use of social support can be conceptualized as an active problem solving strategy. Women who employ direct behavioral attempts to deal with partner abuse (e.g., seeking support from family, friends, and mental health professionals and attending places of worship) experience less depression, greater mastery, and enhanced self-esteem when their active coping strategies are effective (Kocot & Goodman, 2003). Usually, when abused women seek social support, they perceive more control over the situation, and are in a better position to increase their own safety, change the power dynamic in the relationship, and not become seriously affected by partner abuse-related stressors (Mitchell et al., 2006).

Relationship between Partner Abuse, Social Support, and Substance Use

There is a paucity of studies examining the relationship between intimate partner abuse, social support, and substance use. More specifically, there are few studies that explore whether or not social support buffers against substance use among abused women. The studies to date examining the relationship between partner abuse, social support and substance use have yielded conflicting results. In a qualitative study of 24 substance addicted welfare recipients (70% African American, 30% Caucasian) the investigators found that women who had limited networks were more likely to be severe cocaine users and more likely to be in an abusive relationship with an intimate partner in contrast to women with larger networks (James et al., 2004). In making inferences of the findings the investigators noted that having few network members may have contributed to women's vulnerability to partner abuse; similarly, lacking adequate social support may have served to lengthen their cocaine use (James et al., 2004).

In contrast, findings from Golinelli, Longshore, and Wenzel (2008) study of 590 ethnically diverse impoverished women indicated that the risk of partner abuse was lower among women who reported a relatively high level of social support, unless they were substance users. In other words, greater social support had no protective effect among women who reported substance use. The investigators hypothesized that social support may not have served as a protective factor against substance use in this sample because the women who used substances may have been enmeshed in social networks with other substance users and thus received support that was lacking in protective effects.

The conflicting findings in the above-mentioned studies examining the role of partner abuse, social support, and substance use may be explained by several factors. One factor that may contribute to the conflicting findings is the methodological differences between the studies (e.g., size of the sample – 24 vs. 590). Another factor that may account for the differences in the findings in the studies is the race/ethnicity of the participants (e.g., the findings may differ for African Americans and women of other race ethnicities). The age of participants may be an additional contributing factor, particularly the age of participants in the study may result in discrepant findings regarding perceived social support. Finally, the role of instrumental social support may vary as a result of the type of substance use reported, e.g., instrumental social support may serve as a protective factor for alcohol use, but not cocaine use. In the current investigation the author will examine these relationships with a sample of 2,390 African American women, ages 15-48 that report use of alcohol and/or cigarette use. In using this sample the investigator will be able to better determine the role of social support among African American women who report partner abuse and substance use.

Purpose of the Current Study

Problem statement. African American women and women who are pregnant are at increased risk of experiencing severe forms of intimate partner abuse (McFarlane et al., 2002). One of the ways in which women may cope with the psychic pain of partner abuse is substance use. Substance use among abused mothers poses a risk for the mother and the child. Thus it is of utmost importance to determine factors that protect against substance use among African American mothers who experience intimate partner abuse. To date, social support has been identified as a variable that reduces risk of revictimization among abuse survivors. In the current study the author will examine the intersection between resource access and social support, in the form of instrumental social support, and its role in substance use occurrence in a sample of abused African American mothers.

Significance of current study. In spite of similar rates of partner abuse, African American women face multiple barriers to seeking help from formal support systems (e.g., police, social service agencies) due to past negative interactions with these systems (Robinson & Chandek, 2000). Thus, it is important to investigate how utilization of informal social support may protect abused African American mothers from unhealthy outcomes, particularly substance use. Presently, there is a dearth of literature that examines the relationship between intimate partner abuse and substance use among African American mothers. The current study serves to fill in this gap as well as examine the impact of instrumental social support on this relationship. Whereas studies in the past have primarily studied the role of emotional social support, the current study focuses specifically on the role of instrumental support on abused African American mothers substance use.

Research Questions and Hypotheses

The following are the research questions and hypotheses for the current investigation.

Question 1. Among African American mothers is prenatal physical and verbal partner abuse related to alcohol and cigarette use?

Hypothesis 1a. It is hypothesized that prenatal physical partner abuse is significantly related to alcohol use among African American mothers.

Hypothesis 1b. It is hypothesized that prenatal physical partner abuse is significantly associated with cigarette use among African American mothers.

Hypothesis 1c. It is hypothesized that prenatal verbal partner abuse is significantly related to alcohol use among African American mothers.

Hypothesis 1d. It is hypothesized that prenatal verbal partner abuse is significantly associated with cigarette use among African American mothers.

Question 2. Does resource access, in form of instrumental support, decrease the likelihood of substance use among African American mothers who report prenatal verbal and physical abuse?

Hypothesis 2a. It is expected that instrumental support will decrease the odds of alcohol use among African American mothers who report prenatal verbal and physical abuse.

Hypothesis 2b. It is expected that instrumental support will decrease the odds of cigarette use among African American mothers who report prenatal verbal and physical abuse.

Definition of Key Terms

African American: According to the U.S. Census Bureau (2006) African American refers to people having origins in any of the Black race groups of Africa. In the present study individuals who identified as African American or Black were included as part of

the sample. Consistent with other studies, African American will be defined as self-reported heritage.

Instrumental Support: Instrumental support consists of the provision of goods and services necessary to cope with the stressor (Sarason et al., 1994). In the current study the provision of services include: providing childcare, a place to stay, and loaning \$200 to the participant.

Intimate Partner Abuse: In the current study intimate partner abuse was defined as a pattern of verbal, emotional and physical abuse of one intimate partner by another for the purpose of obtaining and maintaining power and control. Persons may be dating, partnered, married, or previously in an intimate relationship (Tjaden & Thoennes, 2000).

Substance use: For the purposes of this study, definition is limited to the frequency of cigarette smoking and alcohol consumption.

Methods

The current study was based on a secondary analysis of the Fragile Families and Child Wellbeing Study, which is a longitudinal study that examined the conditions and capabilities of parents and the well being of their children. The Fragile Families study followed a cohort of 4,898 sets of parents and their newborn children. Mothers and fathers were interviewed in person in the hospital at the time of the birth (baseline), again by telephone when the child was 12 – 18 months old, and periodically thereafter. Baseline data collection took place in 20 large U.S. cities from the spring of 1998 through the fall of 2000. Births were randomly sampled using a stratified cluster design. Nonmarital births were oversampled. The data are representative of nonmarital births in U.S. cities with populations of at least 200,000 (Reichman, Teitler, Garfinkel, & McLanahan, 2001). Participants were recruited from 75 hospitals in 20 U.S. cities with populations of 200,000 or more (in 15 states) and are representative of all births in each of these cities. The national sample consists of 16 cities, which were selected randomly to be representative of all cities with populations over 200,000. Eighty-six percent of eligible unmarried mothers completed baseline interviews; 90% of those mothers completed 1-year follow-up interviews. The current study examined the role of instrumental support on abused African American mother's reported substance use (alcohol and cigarettes).

Participants

The female African American participants in the Fragile Families and Child Wellbeing Study are the focus of the current study. There were 2,390 African American women, ages 15–48, who had just given birth and consented to participate in the baseline phase of the Fragile Families Study. All of these women were seeking medical services (labor and delivery) at a large, public hospital in varying regions of the United States. The majority of the sample (87%) described themselves as unmarried and as

earning below \$20,000 per year (55%) at the time of the interview. Sixty-seven percent of the sample reported that their highest level of education was a high school diploma or a GED. Of the African American women who participated in the baseline interviews, 2,134 (89%), participated in the one-year follow up interview.

Design

A prospective study design was utilized to examine the relationship between prenatal intimate partner abuse and substance use among African American mothers. The study was designed to examine if instrumental support would decrease the likelihood of substance use among African American mothers who reported experiencing abuse (physical and verbal) during their pregnancy.

The predictor variable in the current investigation was intimate partner abuse, i.e., physical partner abuse and verbal partner abuse. The outcome variable in the study was substance use i.e., cigarette and alcohol use. The variable hypothesized to impact the relationship between prenatal intimate partner abuse and substance use was instrumental support. Instrumental support was operationalized as support network members providing childcare, a place to stay and loaning money to the participant.

Instrumentation

The principal investigators of the Fragile Families study developed a structured interview to collect data on various domains. The Time 1 and Time 2 interviews for mothers and fathers include sections on (a) prenatal care, (b) mother-father relationships, (c) expectations about fathers' rights and responsibilities, (d) attitudes toward marriage, (e) parents' health, (f) social support and extended kin, (g) knowledge about local policies and community resources, and (h) education, employment, and income.

In the current study the investigator selected questions/responses from the mother's interviews related to the variables of interest, i.e., prenatal intimate partner

abuse, substance use, and instrumental support. Examples of items in the Time 1 and Time 2 interviews are as follows: One item assessed for verbal abuse by the baby's father. The sample was asked, "How often does the baby's father insult or criticize your ideas?" This 5-point Likert response ranged from 1(never) to 5(often). One item assessed for physical abuse perpetrated by the baby's father. The participants were asked, "How often does your baby's father hit or slap you?" Responses ranged from 1 (never) to 5 (often). Additionally, the participants were asked one question about their prenatal alcohol use: during the pregnancy how often did you drink alcohol? The responses ranged from 1 (at least one drink a day) to 4 (none). The participants were also asked one question about prenatal cigarette use: during the pregnancy, how many cigarettes did you smoke? The responses ranged from 1 (+2pk/day) to 4 (none). Finally, five items were asked in the interviews in regards to occurrence of social support, the questions were as follows: (a) During pregnancy, did you receive a place to live? (b) During pregnancy did you receive financial assistance? (c) Next year, would someone help you with babysitting/child care? (d) Next year, would someone in your family loan you \$200? (e) Next year, would someone in your family give you a place to stay? The responses to the questions on instrumental support were coded as categorical variables (e.g., yes or no) in the Fragile Families study. In the current study social support was the additive response for these five items and was coded as a continuous variable.

Procedures

The participants were recruited from 75 hospitals in 20 U.S. cities (in 15 states) with populations of 200,000 or more. The randomly selected sample is representative of all births in each of these cities. The national sample consists of 16 cities, which were selected randomly to be representative of all cities with populations over 200,000.

Following consent procedures mothers and fathers were interviewed in person in the hospital at the time of the birth (baseline), again by telephone when the child was

12 – 18 months old, and periodically thereafter. In the current study the investigator analyzed data collected in the baseline and the one-year follow up interviews conducted with the mothers. The baseline interview was administered during the mother's hospital stay following childbirth and consisted of a battery of questions on attitudes, relationships, parenting behavior, demographic characteristics, health (mental and physical), economic and employment status, neighborhood characteristics, and program participation. The one-year follow up was a telephone interview and was made up of a battery of questions about attitudes, relationships, parenting behavior, demographic characteristics, health (mental and physical), economic and employment status, neighborhood characteristics, and program participation. The questionnaires were verbally administered to prevent confounding by low levels of functional literacy at baseline and follow up. After interview completion, all participants were debriefed and provided a financial incentive. Detailed information about the questionnaire and methods can be found in The Fragile Families and Child Wellbeing Study: Baseline National Report (2003).

Results

Overview of Data Analyses

After examining the demographic composition of the sample, analyses were completed in three phases. First, the author includes results of descriptive analyses summarizing the relationship between age and income in the occurrence of partner abuse and substance use among the African American mothers in the sample. Second, the author conducted Spearman's Rho correlations to examine the relationship between partner abuse and substance use during pregnancy as reported at baseline and at one-year follow up interviews. Finally, the author completed logistic regression analyses to determine if instrumental support would decrease the odds that an abused mother would use substances during her pregnancy.

Demographics

Table 1 includes the demographics of the African American mothers in the sample who had recently given birth. The average age of the women was 24.6, with a range of 14 to 46. Approximately 30% of the participants earned a high school diploma and 21.7% had at least some college education. Seventy-six percent of the women reported that their total household income before taxes in the past twelve months was less than or equal to \$25,000. Twenty-one percent of the women reported prenatal verbal abuse and 2.6% reported that their boyfriend hit or slapped them while they were pregnant. Although the majority (88.9%) of women reported that they did not use alcohol during their pregnancy, 7.7% reported that they drank alcohol less than once per month, 2.3% indicated that they drank several times per month, .7% reported drinking several times per week, and .3% reported drinking alcohol every day while pregnant. Likewise, though most of the women (78.7%) reported that they did not smoke cigarettes during their pregnancy, 19.3% reported smoking almost a pack of cigarettes per day.

Descriptive Analyses

At baseline mother's age was significantly related to verbal partner abuse, but not physical partner abuse. Older women were more likely to report experiencing verbal partner abuse ($r_s = -.085$, $p < .01$). Though older women experienced verbal abuse more frequently, they were less likely to use alcohol or cigarettes during pregnancy ($r_s = -.164$, $r_s = -.105$ respectively; $p < .01$).

In regards to instrumental social support, the younger women at baseline were more likely to receive a place to stay during their pregnancy ($r_s = .383$, $p < .01$), and predicted that next year they could anticipate receiving housing ($r_s = .111$, $p < .01$). In addition, the younger women expected that they would receive childcare assistance in the next year ($r_s = .106$, $p < .01$). Whereas, older participants predicted that they would not have access to housing and childcare assistance. Overall, findings indicate that younger participants anticipate that they will have access to instrumental support.

At the one-year follow up the findings remained stable in that age was significantly associated with verbal partner abuse, but not physical partner abuse. Similarly, older women reported verbal partner abuse at higher rates than their younger counterparts ($r_s = -.089$, $p < .01$). Although older women continued to experience verbal abuse at higher rate, no significant relationship was found between abuse and alcohol or cigarette use ($r_s = .013$, $p = .561$; $r_s = -.024$, $p = .268$, respectively). Thus, older and younger participants used alcohol and cigarettes at similar rates.

Income was also analyzed to determine its relationship to partner abuse, substance use, and instrumental social support. At baseline, household income was not significantly associated with physical or verbal partner abuse ($r_s = .023$, $p = .421$; $r_s = -.004$, $p = .895$, respectively); this finding remained stable at one-year follow up ($r_s = .012$, $p = .720$; $r_s = .028$, $p = .385$, respectively). Analysis at baseline indicate that income is significantly related to alcohol and cigarette use ($r_s = .111$, $r_s = .235$ respectively,

$p < .01$), however at one-year follow up income is positively related to cigarette use only ($r_s = .199, p < .01$). Further, at baseline women with higher incomes were more likely to expect that they would receive financial support ($r_s = -.137, p < .01$) and a place to live ($r_s = -.098, p < .01$).

Partner Abuse and Substance Use

Table 2 presents findings of Spearman's Rho analyses noting the association between intimate partner abuse and prenatal substance use among African American mothers in the sample at baseline and one-year follow up. In general, the majority of mothers did not report prenatal alcohol use, however mothers who reported that their baby's father hit or slapped them were more likely to report drinking alcohol during their pregnancy ($r_s = .108, p < .01$). Results of the Spearman's Rho also indicated that mothers who experienced physical partner abuse were more likely to report prenatal cigarette use ($r_s = .139, p < .01$). Similarly, Spearman's Rho analyses revealed a significant relationship between verbal partner abuse and prenatal substance use. More specifically, African American mothers who reported that their baby's father insulted or criticized them endorsed a higher frequency of prenatal alcohol use ($r_s = .055, p < .05$). Further, those mothers who reported being verbally abused were also more likely to smoke cigarettes while pregnant ($r_s = .073, p < .01$).

At the one-year follow up interview, Spearman's Rho analyses indicate prenatal physical partner abuse is significantly related to reports of physical partner abuse one year later ($r_s = .183, p < .01$). Mothers who reported experiencing verbal abuse during pregnancy were also more likely to report experiencing verbal abuse a year later ($r_s = .287, p < .01$). Further, those mothers who reported being verbally abused at one year follow up were more likely to report cigarette use ($r_s = .084, p < .01$) but did not endorse a higher frequency of using alcohol ($r_s = -.067, p = .020$). At the one-year follow up,

physical abuse was significantly related to alcohol use ($r_s = -.095$, $p < .01$), but was not associated with smoking cigarettes ($r_s = .026$, $p = .372$).

Overall, Spearman's Rho correlation revealed that prenatal physical partner abuse is significantly related to alcohol use and cigarette use. Those women who were physically abused reported a higher frequency of alcohol and cigarette use during pregnancy. In addition, Spearman's Rho analyses indicate that prenatal verbal abuse is significantly associated to alcohol and cigarette use. Mothers who experienced verbal partner abuse were more likely to use alcohol and cigarettes during pregnancy. Moreover, experiencing prenatal partner abuse was related to reports of verbal and physical abuse at one year follow up. Of these women, those who reported verbal abuse were more likely to use cigarettes, but used alcohol at similar rates as their counterparts.

Partner Abuse, Substance Use, and Social Support

In order to examine the influence of instrumental support on prenatal substance use among a sample of abused African American mothers, two logistic regression analyses were conducted. In the first regression, the outcome variable was prenatal alcohol use and the predictor variables were partner abuse on step 1, and instrumental support on step 2. For the second regression, the outcome variable was prenatal cigarette use, and the order of entry for the predictor variables was unchanged. As shown in Table 3, results of the first logistic regression analyses indicated that demographic variables (i.e., age and education) and abuse emerged as significant predictors of alcohol use among the sample. Specifically, younger age increased the odds of alcohol use by 1.073 times among the African American mothers. Additionally, having less educational attainment increased the odds of alcohol use by 0.859 times among the sample. In regards to abuse type, mothers who experienced both prenatal verbal and physical abuse experienced an increased likelihood of using alcohol during pregnancy. In particular, experiencing physical abuse increased the odds of alcohol use

by 1.288 times among the mothers. Similarly, prenatal verbal abuse increased the odds of alcohol use by 0.757 times amongst the participants. However, instrumental support did not emerge as significant predictor of alcohol use by the expectant mothers. This suggests that access to instrumental support did not decrease the odds that abused mothers would use alcohol during their pregnancy.

Findings in the second regression analyses revealed that demographic variables (i.e., age and education) and abuse also emerged as significant predictors of cigarette use among the sample (see Table 4). In particular, younger mothers were 1.036 times more likely to smoke cigarettes during their pregnancy. Further, having less educational attainment increased the odds of cigarettes use by .595 times among the sample. Moreover, experiencing verbal abuse increased the odds by .830 times that mother would smoke cigarettes during her pregnancy. In addition, mothers who reported physical abuse were 1.249 times more likely to engage in prenatal cigarette use. Yet, instrumental support did not emerge as significant. In other words, having access to instrumental support did not decrease the odds that an abused mother would smoke during her pregnancy.

In sum, as indicated by logistic regression analyses, instrumental support did not decrease the likelihood of prenatal substance use among abused African American mothers. Being provided a place to live, receiving financial assistance, and receiving childcare was not significantly related to decreased substance use among African American mothers who reported being physically abused by a partner. Nor, did instrumental support serve as a protective factor against substance use among women who experienced verbal abuse. Mothers who were verbally abused and had access to housing, financial assistance, and babysitting used alcohol and cigarettes at similar rates as those mothers who did not have the resources.

Discussion

Although a growing body of literature has emerged noting the association between intimate partner abuse during pregnancy and prenatal substance use, the current study is the first to examine this complex relationship in a national sample of African American women. Moreover, the current investigation is among the first to examine the impact of both verbal and physical abuse in a national sample of African American mothers. The deleterious effects of intimate partner abuse on the physical and emotional health of women are well documented in the literature (Petersen, Gazmararian & Clark, 2001; Plichta, 2004). In fact, intimate partner abuse that occurs during pregnancy has been found to be one of the leading causes of maternal death (Rosen, Seng, Tolman & Mallinger, 2007).

Substance use, one of the adverse sequelae of partner abuse, has damaging affects for both mother and her unborn child. Fetal alcohol exposure can result in a variety of neuropsychological, behavioral, and physical disorders commonly referred to as Fetal Alcohol Spectrum Disorders (FASD). Moreover, prenatal alcohol use has been consistently associated with other substance use, especially tobacco (Meschke, Hellerstedt, Holl, Messelt, 2008). Prenatal cigarette exposure is related to spontaneous abortion, increased fetal mortality, sudden infant death syndrome, decreased IQ scores, behavioral disorders such as hyperactivity and conduct disorder (Ernst et al., 2001). Therefore, in light of the devastating impact of partner abuse and substance use for the mother and her unborn child (Silverman, Decker, Reed, & Raj, 2006), the author sought to determine if instrumental support protects against substance use among African American mothers who experience intimate partner abuse. This study is the first to examine the role of instrumental support on the relationship between intimate partner abuse during pregnancy and substance use among African American mothers.

Exploratory Findings

Exploratory analyses revealed significant differences among the African American mothers experience of partner abuse, prenatal alcohol and cigarette use, and anticipation of instrumental support based on age and income. As evidenced by findings in the current investigation, older participants were more likely to be verbally abused by their partner. The author notes that there may be several possible explanations for this finding, (a) men may be more verbally abusive to older women because older women are devalued in society, (b) the male perpetrators are older and less up to the demands of physical abuse, (c) the control of older women necessitates the combination of physical and verbal abuse, or (d) younger women are verbally abused but don't recognize it as abusive as older women do. Further, older women were less likely to drink alcohol and smoke cigarettes while pregnant. A possible explanation for this association is that older women may have recognized that they are pregnant earlier and subsequently stopped using alcohol or cigarettes. The older women's decision to cease use may also be a result of being more educated about the consequences of alcohol and cigarette use on the fetus. However, it appears that following pregnancy the older women resumed using alcohol and cigarettes – they may have believed that their children were not as vulnerable to impact of substance use following birth.

Although older mothers reported experiencing verbal abuse at higher rates it was the younger mothers who were more likely to report access to instrumental support. This association may be because (a) the sample of mothers includes adolescent mothers who one would expect would need more financial assistance than young adult and middle age women, (b) younger mothers could have had larger social networks of whom to seek support from, and (c) younger women may have believed that their support members held less victim-blaming attitudes. Likewise, younger mothers may not have had as extensive history of utilizing instrumental support because they may have

had shorter-term relationships as compared to older women who could have been in a relationship with their partner for several years. Finally, exploratory analyses did not reveal a significant relationship between experiencing partner abuse and household income. The author notes that income may not have been identified as a significant factor as in previous studies because of the lack of financial diversity among the sample that was comprised of primarily low socioeconomic status fragile families.

Relationship Between Partner Abuse, Substance Use, and Instrumental Support

The association between intimate partner abuse and substance use is well documented in the literature (El-Bassel et al., 2005; Weinsheimer et al., 2005). The results of the current study were consistent with this scholarship as evidenced by findings in which African American mothers who reported partner abuse were more likely to report prenatal alcohol and cigarette use. The author notes that the above finding is an association and not a causal relationship as the temporal relationship between partner abuse and substance use is reciprocal and complex (Burke et al., 2005). In other words, substance use and the impact of the accompanying lifestyle could increase a woman's vulnerability to being involved in an abusive relationship and continued use of substances may develop as a coping strategy as a way of temporarily escaping from the pain of abuse.

In light of the cyclic nature of intimate partner abuse and substance use in the lives of African American mothers in the current study, the author sought to examine if instrumental support could interrupt this cycle. The current investigation was the first study to examine the potential influence of instrumental support on intimate partner abuse and substance use among African American mothers. The author sought to investigate if resource access through one's social network would decrease the risk of substance use in light of findings that African American women are more likely to live in poverty and further poverty is associated with increased risk for intimate partner abuse.

As evidenced by the findings in the present study, instrumental support did not decrease the odds that an abused mother would use substances during her pregnancy. There are several explanations in understanding this finding. Namely, the long-term and far-reaching consequences of intimate partner abuse – even when a mother has access to resources e.g., money and childcare – does not erase the emotional distress caused by partner violence. The author proposes that this may indicate provision of emotional support by one's social network as an additional factor that may help alleviate the emotional distress experienced by survivors of intimate partner abuse. Thus social support overall (both emotional and instrumental) may be factors that decrease the odds of substance use among this population, but instrumental social support alone may not. Furthermore, the finding speaks to the realities of addiction in that provision of resources does not buffer against the need for treatment for mothers who abuse substances. Finally, as a result of the use of secondary data analysis the investigator does not have access to information regarding the substance use practices of the participant's social network. These persons may also be substance users and may provide or use substances with the mother experiencing abuse. In spite of findings that instrumental support was not a significant mediator in the current investigation, its potential buffering role for other outcomes such as safety, hope, and anxiety should not be diminished given the importance of resources and income for women's safety, particularly among low income women who are at increased risk for partner abuse.

Results of the current study are particularly important when understood through the lens of African American women's socio-cultural context. African American women encounter a number of individual, relational, and socioeconomic stressors. Compared to women of other racial/ethnic groups they are far more likely to be single parents, to live in impoverished communities, and to have lower overall rates of educational attainment (De Navas-Walt, Proctor, & Lee, 2006). African American women also experience higher

rates of severe intimate partner abuse and report a higher incidence of repeat victimization (Amaro et al., 2005). Exposure to abuse and violence among African American women has been positively associated with substance use and abuse (James et al., 2003; Zule, Flannery, Wechsberg, & Lam, 2002). Though African American women are at risk for consequences of partner abuse and substance use they are less likely to seek help from formal support systems. Gaining insight into factors that may increase stress and result in substance use during African American women's prenatal period was very important given that African American women have the highest rate of preterm delivery and low birth weight babies (Campbell, 2000; Hogue & Bremner, 2005; Nuru-Jeter et al., 2008). As such, the current investigation sought to examine a culturally relevant coping strategy, instrumental support, as a means to reduce revictimization and its aftermath.

Counseling Implications

The bidirectional and complex relationship between partner abuse and substance use among African American mothers point to multiple counseling implications. Primarily, it highlights the importance of abused women receiving treatment for symptoms of trauma and substance use in a concerted effort to interrupt the assault-substance use cycle. An example of one such treatment is Seeking Safety, a manualized cognitive behavioral intervention that has shown a reduction in substance use, PTSD, and psychiatric symptoms in a large sample of African American women (Hein, Cohen, Litt, Miele, & Capstick, 2004). Secondly, mental health professionals who work with abused African American mothers should be sensitive to contextual (or ecological) variables, particularly low socioeconomic status that place women at increased risk for intimate partner abuse and substance use. As reported by Thompson and colleagues (2000), women who are not financially independent or have children by their abusers are more likely to be abused repeatedly and less likely to obtain resources

needed to make them feel more in control of the abuse or efficacious enough to secure their own safety and that of their children. In addition, clinicians working with survivors of partner abuse should also be mindful of the individual's age and income as these factors are related to type of abuse the individual experiences, the likelihood of prenatal substance use and perceived access to instrumental support as indicated by exploratory analyses in the current investigation. Lastly, clinicians should address parenting concerns that are exacerbated by both partner abuse and substance use. It is critical that treatment providers understand the way in which both substance use and violence affect their clients' view of themselves as mothers and their relationship to their children. In doing this, service providers may be able to empower the mothers to seek healthier outcomes for themselves and their children.

Policy Implications

Implications for policy are also made evident by the study findings. Specifically the aforementioned findings build the case for targeted screening of pregnant women for intimate partner abuse and substance use when they present for health care visits. A common thread linking these co-occurring conditions is that these are problems that are not readily disclosed and not easily identified by health care and service providers. Women seen in medical settings rarely volunteer an IPV history, yet may disclose if asked. Similarly, women who use substances may not recognize that they have a problem; even if they do recognize the problem, they may not disclose it to provider unless asked. Thus, it is recommended that medical personnel conduct routine screening when mothers have prenatal check ups and follow up care in the routine visits following the birth of the child. In addition, service providers in substance abuse treatment facilities are encouraged to screen for occurrence of partner abuse among women who present for treatment in those settings.

Recommendations for Future Research

The current study's confirmation of findings documenting the interrelatedness of partner abuse and substance use should also inform future research endeavors. It is recommended that researchers conduct a longitudinal study designed to increase our understanding of the linear relationship between partner abuse and substance use in these women's lives. Additionally the health consequences of intimate partner abuse and substance use point to the dire need to determine mediating variables in the relationship of intimate partner abuse and substance use. In these future investigations the researchers should determine protective factors from using substances among women, especially among vulnerable populations such as low income abused African American mothers.

Limitations and Contributions of the Study

The proposed study has a few methodological limitations that should be considered when examining the results. One limitation is the use of a voluntary sample. The sample may differ in some way than those who declined participation in the study. For example, the volunteers may have had a vested interest in sharing information about their relationships. Another limitation is the reliance upon self-report data. The participants may have underreported their cigarette and alcohol use due to the stigma of pre-natal and post-natal substance use. Furthermore, the participants may have denied having experienced intimate partner abuse due to the stigma of being involved in an abusive relationship as well as a desire to avoid promoting negative images of the African American community and/or concerns that criminal justice system may become involved if they report abuse. Finally, the results of the study may not be generalizable to women of other race/ethnicities, non-mothers, and abused African American women who use other drugs e.g., heroin.

Nevertheless, there are multiple strengths of the current investigation. Specifically, there is a paucity of scholarship examining the relationship of substance use and intimate partner abuse among African American mothers. The current investigation served to fill in this important gap. Further, there is minimal research on support systems of African American mothers who experience partner abuse. This study focused on the use of instrumental support among vulnerable African American mothers whose safety is compromised by both partner abuse and substance use. Finally, there are clinical/applied benefits of the current study. The study highlights the importance for service providers to (a) attend to stressors for African American mothers who use substances during and after pregnancy; and (b) assist African American women in establishing safety as a way to enhance their physical and mental health and that of their children. Bringing better understanding of the socio-cultural context of partner abuse can help to illuminate pathways of safety and health for African American women and their children.

Conclusions and Summary

In conclusion, the results of the current investigation indicated a significant relationship between partner abuse and substance use during pregnancy for African American mothers. More specifically, women who reported physical abuse and/or verbal abuse were more likely to smoke cigarettes during their pregnancy. Similarly, women who experienced prenatal physical and/or verbal abuse also had a higher incidence of alcohol use during pregnancy. Unfortunately, instrumental social support was not identified as a protective factor against alcohol and cigarette use among physically and verbally abused African American mothers. Thus further study is warranted to examine protective factors against partner abuse and substance use so that the mothers and their children may be able to access safety and healing.

REFERENCES

- Amaro, H., Larson, M., Gampel, J., Richardson, E., Savage, A., & Wagler, D. (2005). Racial/ethnic differences in social vulnerability among women with co-occurring mental health and substance abuse disorders: Implications for treatment services. *Journal of Community Psychology, 33*(4), 495-511. doi:10.1002/jcop.20065
- Beesley, D. & Stoltenberg, C. (2002). Control, attachment style, and relationship satisfaction among adult children of alcoholics. *Journal of Mental Health Counseling, 24*, 281-298. Retrieved from <http://www.amhca.org/news/journal.aspx>
- Brokaw, J., Fullerton-Gleason, L., Olson, L., Crandall, C., McLaughlin, S., & Sklar, D. (2002). Health status and intimate partner violence: A cross-sectional study. *Annals of Emergency Medicine, 39*, 31–38. doi:10.1067/mem.2002.117271
- Bryant-Davis, T. (2005). Thriving in the wake of trauma: A multicultural guide. Westport, CT: Greenwood Press.
- Burke, J., Thieman, L., Gielen, A., O'Campo, P., & McDonnell, K. (2005). Intimate partner violence, substance use, and HIV among low-income women: Taking a closer look. *Violence Against Women, 11*, 1140-1161. doi:10.1177/1077801205276943
- Call, C. & Nelsen, J. (2007). Partner abuse and women's substance problems: From vulnerability to strength. *Affilia, 22*, 334- 346. doi:10.1177/0886109907306437
- Campbell, J. (2000). Health consequences of intimate partner violence. *The Lancet, 359*(9314), 1331-1336. doi:10.1016/S0140-6736(02)08336-8
- Campbell, J. (2004). Helping women understand their risk in situations of intimate partner violence. *Journal of Interpersonal Violence, 19*, 1464-1477. doi:10.1177/0886260504269698

- Campbell, D., & Gary, F. (1998). Providing effective interventions for African American battered women: Afrocentric perspectives. In J.C. Campbell (Ed.), *Empowering survivors of abuse: Healthcare for battered women and their children* (pp. 229–240). Thousand Oaks, CA: Sage.
- Campbell, J., Garcia-Moreno, C., & Sharps, P. (2004). Abuse during pregnancy in industrialized and developing countries. *Violence Against Women*, 10, 770-789.
doi:10.1177/1077801204265551
- Campbell, J., Snow-Jones, A., Dienemann, J., Kub, J., Schollenberger, J., O'Campo, P., & Carlson-Gielen, A. (2002). Intimate partner violence and physical health consequences. *The Archives of Internal Medicine*, 162, 1157-1163.
doi:10.1001/archinte.162.10.1157
- Carlson, M., Harris, S., & Holden, G. (1999). Protective orders and domestic violence: Risk factors for re-abuse. *Journal of Family Violence*, 14, 205–226.
doi:10.1023/A:1022032904116
- Carmona, R. (2006). New surgeon general's report focuses on the effects of secondhand smoke. Retrieved March 31, 2009 from <http://www.hhs.gov/news/press/2006pres/20060627.html>.
- Chassin, L., Pitts, S., & Prost, J. (2002). Binge drinking trajectories from adolescence to emerging adulthood in a high-risk sample: Predictors and substance abuse outcomes. *Journal of Consulting and Clinical Psychology*, 70, 67-78.
doi:10.1037/0022-006X.70.1.67
- Chatterji, P., & Markowitz, S. (2001). The impact of maternal alcohol and illicit drug use on children's behavior problems: evidence from the children of the national longitudinal survey of youth. *Journal of Health Economy*, 20, 703–731.
doi:10.1016/S0167-6296(01)00090-X

- Chermack, S., Fuller, B., & Blow, F. (2000). Predictors of expressed partner and non-partner violence among patients in substance abuse treatment. *Drug and Alcohol Dependence*, 58, 43–54. doi:10.1016/S0376-8716(99)00067-8
- Clark, D., Cornelius, J., Wood, D., & Vanyukov, M. (2004). Psychopathology risk transmission in children of parents with substance use disorders. *American Journal Psychiatry*, 161, 685–691. doi:10.1176/appi.ajp.161.4.685
- Clarke, J., Stein, M., Sobota, M., Marist, M., & Hanna, L. (1999). Victims as victimizers: Physical aggression by persons with a history of childhood abuse. *Archives of Internal Medicine*, 159, 1920–1924. doi:10.1001/archinte.159.16.1920
- Conners, N., Bradley, R., Mansell, L., Liu, J., Roberts, T., Burgdorf K., & Herrell J. (2004). Children of mothers with serious substance abuse problems: an accumulation of risks. *American Journal Drug Alcohol Abuse*, 30, 85–100. doi:10.1081/ADA-120029867
- Cornelius, M., Ryan, C., Day, N., Goldschmidt, L., & Willford, J. (2001). Prenatal tobacco effects on neuropsychological outcomes among preadolescents. *Journal of Developmental Behavior Pediatrics*, 22, 217–25. doi:10.1097/00004703-200108000-00002
- Cunradi, C., Caetano, R., & Shafer, J. (2002). Alcohol-related problems, drug use, and male intimate partner violence severity among US couples. *Alcoholism: Clinical and Experimental Research*, 26, 493–500. doi:10.1111/j.1530-0277.2002.tb02566.x
- DeNavas-Walt, C., Proctor, B. & Lee, C. (2006). Income, Poverty, and Health Insurance Coverage in the United States: 2005. U.S. Census Bureau, Current Population Reports, P60-231, U.S. Government Printing Office, Washington, DC.

- DiFranza, J., Aligne, C., & Weitzman, M. (2004). Prenatal and postnatal environmental tobacco smoke exposure and children's health. *Pediatrics*, 113, 1007–1015.
Retrieved from <http://pediatrics.aappublications.org/>
- Dube, S., Anda, R., Felitti, V., Edwards, V., & Williamson, D. (2002). Exposure to abuse, neglect, and household dysfunction among adults who witnessed intimate partner violence as children: Implications for health and social services. *Violence and Victims*, 17, 3–17. doi:10.1891/vivi.17.1.3.33635
- El-Bassel, N., Gilbert, L., Frye, V., Wu, E., Go, H., & Hill, J. (2004). Physical and sexual intimate partner violence among women in methadone maintenance treatment. *Psychology of Addictive Behaviors*, 18, 180–183. doi:10.1037/0893-164X.18.2.180
- El-Bassel, N., Gilbert, L., Schilling, R., & Wada, T. (2000). Drug abuse and partner violence among women in methadone treatment. *Journal of Family Violence*, 15, 209–225. doi:10.1023/A:1007532917759
- El-Bassel, N., Gilbert, L., Witte, S., Wu, E., Gaeta, T., & Schilling, R. (2003). Intimate partner violence and substance abuse among ethnic minority women receiving care from inner-city emergency department. *Women's Health Issue*, 13, 16-22.
Retrieved from <http://www.elsevier.com/>
- El-Bassel, N., Gilbert, L., Wu, E., Go, H., & Hill, J. (2005). The temporal relationship between drug abuse and intimate partner violence: A longitudinal study among women on methadone. *American Journal of Public Health*, 95, 465–470.
doi:10.2105/AJPH.2003.023200
- Ernst, M., Moolchan, E., & Robinson, M. (2001). Behavioral and neural consequences of prenatal exposure to nicotine. *Journal of American Academy Child and Adolescent Psychiatry*, 40, 630–41. doi:10.1097/00004583-200106000-00007

- Field, C., & Caetano, R. (2003). Longitudinal model predicting partner violence among White, Black, and Hispanic couples in the United States. *Alcoholism: Clinical and Experimental Research*, 27, 1451–1458. doi:10.1097/01.ALC.0000086066.70540.8C
- Floyd, R., O'Connor, M., Sokol, R., Bertrand, J., & Cordero, J. (2005). Recognition and prevention of fetal alcohol syndrome. *Obstetrics Gynecology* 106, 1059–1064. doi:10.1097/01.AOG.0000181822.91205.6f
- Flynn, H., Walton, M., Chermack, S., Cunningham, R., & Marcus, S. (2007). Brief detection and co-occurrence of violence, depression, and alcohol risk in prenatal care settings. *Archives of Women's Mental Health*, 10, 155–161. doi:10.1007/s00737-007-0188-6
- Gilbert, L., El-Bassel, N., Manuel, J. Wu, E., Go, H., Golder, S., Seewald, R., & Sanders, G. (2006). An integrated relapse prevention and relationship safety intervention for women on methadone: testing short-term effects on intimate partner violence and substance use. *Violence and Victims*, 21, 657-672. doi:10.1891/vivi.21.5.657
- Gilbert, L., El-Bassel, N., Schilling, R., Wada, T., & Bennet-Ruiz, B. (2000). Partner violence and sexual HIV risk behaviors among women in methadone treatment. *AIDS and Behavior*, 4, 262-269. doi:10.1023/A:1009568718804
- Golinelli, D., Longshore, D., & Wenzel, S. (2008). Substance use and intimate partner violence: Clarifying the relevance of women's use and partner's use. *Journal of Behavioral Health Services and Research*, 36(2), 199 - 211. doi:10.1007/s11414-008-9114-6
- Goodkind J., Gillum T., Bybee D., & Sullivan, C. (2003). The impact of family and friends' reactions on the well being of women with abusive partners. *Violence Against Women*, 9, 347–373. doi:10.1177/1077801202250083

- Hampton, R., Oliver, W., & Magarian, L. (2003). Domestic violence in the African American community: An analysis of social and structural factors. *Violence Against Women, 9* (5), 533-557. doi:10.1177/1077801202250450
- Hanson, R., Self-Brown, S., Fricker-Elhai, A., Kilpatrick, D., Saunders, B., & Resnick, H. (2006). Relations among parental substance use, violence exposure and mental health: the national survey of adolescents. *Addictive Behaviors, 31*, 1988–2001. doi:10.1016/j.addbeh.2006.01.012
- Harter, S. (2000). Psychosocial adjustment of adult children of alcoholics: A review of the recent empirical literature. *Clinical Psychology Review, 20*, 311- 337. doi:10.1016/S0272-7358(98)00084-1
- Hayatbakhsh, M., Alati R., Hutchinson D., Jamrozik, K., Najman, J., Ma- mun, A., Callaghan, M., & Bor, W. (2007). Association of maternal smoking and alcohol consumption with young adults' cannabis use: a prospective study. *American Journal of Epidemiology, 166*, 592–598. doi:10.1093/aje/kwm110
- Hien, D., Cohen, L., Litt, L., Miele, G., & Capstick, C. (2004). Promising empirically supported treatments for women with comorbid PTSD and substance use disorders. *American Journal of Psychiatry, 161*, 1426-1432. doi:10.1176/appi.ajp.161.8.1426
- Hirsch, A. (2001). "The world was never a safe place for them": Abuse, welfare reform, and women with drug convictions. *Violence Against Women, 7*, 159-175. doi:10.1177/10778010122182370
- Hoffmann, J., & Cerbone, F. (2002). Parental substance use disorder and the risk of adolescent drug abuse: An event history analysis. *Drug and Alcohol Dependence, 66*, 255–264. doi:10.1016/S0376-8716(02)00005-4

- Hogue, C.J., & Bremner, D.J. (2005). Stress model for research into preterm delivery among black women. *American Journal of Obstetrics and Gynecology*, 192(5), Supplement 1, S47-S55. doi:10.1016/j.ajog.2005.01.073
- Horon, I. (2005). Underreporting of maternal deaths on death certificates and the magnitude of the problem of maternal mortality. *American Journal of Public Health*, 95(3), 478-482. doi:10.2105/AJPH.2004.040063
- Huang, C. J., & Gunn, T. (2001). An examination of domestic violence in an African American community in North Carolina: Causes and consequences. *Journal of Black Studies*, 31, 790-811. doi:10.1177/002193470103100606
- Huth-Bocks, A., Levendosky, A., & Bogat, G. (2002). The effects of domestic violence during pregnancy on maternal and infant health. *Violence and Victims*, 17, 169-183. doi:10.1891/vivi.17.2.169.33647
- Irion, O., Boulvain, M., Straccia, A., & Bonnet, J. (2000). Emotional, physical and sexual violence against women before or during pregnancy. *British Journal of Obstetrics and Gynecology*, 107, 1306-1308. doi:10.1111/j.1471-0528.2000.tb11625.x
- Jahanfar, S., & Malekzadegan, Z. (2007). The prevalence of domestic violence among pregnant women who were attended in Iran University of Medical Science hospitals. *Journal of Family Violence*, 22, 643-648. doi:10.1007/s10896-007-9084-0
- James, S., Johnson, J., & Raghavan, C. (2004). "I couldn't go anywhere": Contextualizing violence and drug abuse: A social network study. *Violence Against Women*, 10, 991-1014. doi:10.1177/1077801204267377
- James, S., Johnson, J., Raghavan, C., Lemos, T., Barakett, M., & Woolis, D. (2003). The violent matrix: A study of structural, interpersonal, and intrapersonal violence among a sample of poor women. *American Journal of Community Psychology*, 31, 129-141. doi:10.1023/A:1023082822323

- Kaslow, N., Thompson, M. P., Okun, A., Price, A., Young, S., Bender, M., Wycoff, S., Twomey, H., Goldin, J., & Parker, R. (2002). Risk and protective factors for suicidal behavior in abused African American women. *Journal of Consulting and Clinical Psychology, 70*, 311-319. doi:10.1037/0022-006X.70.2.311
- Kearney, M., Haggerty, L., Munro, B., & Hawkins, J. (2003). Birth outcomes and maternal morbidity in abused pregnant women with public versus private health insurance. *Journal of Nursing Scholarship, 35*(4), 345-9. doi:10.1111/j.1547-5069.2003.00345.x
- Kilpatrick, D., Acierno, R., Resnick, H, Saunders, B, & Best, C. (1997). A two-year longitudinal analysis of the relationship between violent assault and alcohol and drug use in women. *Journal of Consulting and Clinical Psychology, 65*(5), 834-847. doi:10.1037/0022-006X.65.5.834
- Kocot, T., & Goodman, L. (2003). The roles of coping and social support in battered women's mental health. *Violence Against Women, 9*, 1–24. Retrieved from <http://vaw.sagepub.com/>
- Krulewich, C. (2001). Maternal mortality. *Journal of Midwifery & Women's Health, 46*(2), 88-90. doi:10.1016/S1526-9523(01)00104-0
- Letourneau, N., Fredrick, C., & Williams, J. (2007). Mothering and domestic violence: A longitudinal analysis. *Journal of Family Violence, 22*, 649-659. doi:10.1007/s10896-007-9099-6
- Liang, B., Goodman, L., Tummala-Narra, P., & Weintraub, S. (2005). A theoretical framework for understanding help-seeking process among survivors of intimate partner violence. *American Journal of Community Psychology, 36*, 71–84. doi:10.1007/s10464-005-6233-6

- Martin, S., Mackie, L., Kupper, L., Buescher, P., & Moracco, K. (2001). Physical abuse of women before, during, and after pregnancy. *Journal of American Medical Association*, 285, 1581- 1584. doi:10.1001/jama.285.12.1581
- Mattis, J. (2000). African American women's definitions of spirituality and religiosity. *Journal of Black Psychology*, 26, 101-122. doi:10.1177/0095798400026001006
- McFarlane, J., Campbell, J. C., Sharps, P., & Watson, K. (2002). Abuse during pregnancy and femicide: Urgent implications for women's health. *Obstetrics & Gynaecology*, 100, 27-36. doi:10.1016/S0029-7844(02)02054-9
- Mcnutt, L., Carlson, B., Persaud, M., & Postmus, J. (2002). Cumulative abuse experiences, physical health and health behaviors. *Annals of Epidemiology*, 12, 123–130. doi:10.1016/S1047-2797(01)00243-5
- Meschke, L., Hellerstedt, W., Holl, J., & Messelt, S. (2008). Correlates of prenatal alcohol use. *Maternal and Child Health Journal*, 12, 442 – 451. doi:10.1007/s10995-007-0261-9
- Mitchell, M., Hargrove, G., Collins, M., Thompson, M., Reddick, T. & Kaslow, N. (2006). Coping variables that mediate the relation between intimate partner violence and mental health outcomes among low-income, African American women. *Journal of Clinical Psychology*, 62(12), 1503–1520. doi:10.1002/jclp.20305
- Nair, P., Schuler, M., Black, M., Kettinger, L., & Harrington, D. (2003). Cumulative environmental risk in substance abusing women: Early intervention, parenting stress, child abuse potential and child development. *Child Abuse & Neglect*, 27, 997–1017. doi:10.1016/S0145-2134(03)00169-8
- National Center for Injury Prevention and Control. (2003). Costs of intimate partner violence against women in the United States. Centers for Disease Control and Prevention, Atlanta, GA.

- Nuru-Jeter, A., Dominguez, T.P., Hammond, W.P., Leu, J., Skaff, M., Egerter, S., Jones, C.P., & Braveman, P. (2008). "It's the skin you're in": African-American women talk about their experiences of racism. An exploratory study to develop measures of racism for birth outcome studies. *Maternal and Child Health Journal*, 40(2), 66-73. Retrieved from <http://www.springerlink.com>
- Petersen, R., Gazmararian, J., & Clark, K. A. (2001). Partner violence: Implications for health and community settings. *Women's Health Issues*, 11, 116-125.
doi:10.1016/S1049-3867(00)00093-1
- Pierce, G., Sarason, B., & Sarason, I. (1990). Integrating social support perspectives: working models, personal relationships, and situational factors. In S. Duck, R. Silver (Eds.), *Personal Relationships and Social Support*, (pp. 173-189) Newbury Park, CA: Sage.
- Plichta, S. B. (2004). Intimate partner violence and physical health consequences: Policy and practice implications. *Journal of Interpersonal Violence*, 19(11), 1296-1323.
doi:10.1177/0886260504269685
- Reichman, N., Teitler, J., Garfinkel, I., & McLanahan, S. (2001). Fragile families: Sample and design. *Children and Youth Services Review*, 23(4/5), 303-326.
doi:10.1016/S0190-7409(01)00141-4
- Reinherz, H., Giaconia, R., Hauf, A., Wasserman, M., & Paradis, A. (2000). General and specific childhood risk factors for depression and drug disorders by early adulthood. *Journal of American Academy Child and Adolescent Psychiatry*, 39, 223–231. doi:10.1097/00004583-200002000-00023
- Rennison, C., & Planty, M. (2003). Nonlethal intimate partner violence: Examining race, gender, and income patterns. *Violence & Victims*, 18, 433–443.
doi:10.1891/vivi.2003.18.4.433

- Rennison, C., & Welchans, S. (2000). Intimate partner violence. Washington, DC: U.S. Department of Justice, Bureau of Statistics.
- Robinson, A. & Chandeck, M. (2000). Differential police response to Black battered women. *Women & Criminal Justice*, 12, 29-61. doi:10.1300/J012v12n02_04
- Rogers, B., McGee, G., Vann, A., Thompson, N., & Williams, O. J. (2003). Substance abuse and domestic violence: Stories of practitioners that address the co-occurrence among battered women. *Violence Against Women*, 9, 590-598. doi:10.1177/1077801202250454
- Rose L., Campbell J, & Kub J. (2000). The role of social support and family relationships in women's responses to battering. *Health Care for Women International*, 21, 27–39. doi:10.1080/073993300245384
- Rosen, D., Seng, J.S., Tolman, R.M., Mallinger, G. (2007). Intimate partner violence, depression, and posttraumatic stress disorder as additional predictors of low birth weight infants among low-income mothers. *Journal of Interpersonal Violence*, 22(10), 1305-14. doi:10.1177/0886260507304551
- Sarason, B., Sarason, I., & Pierce, G. (1994). Relationship-specific social support: Toward a model for the analysis of supportive interactions. In B.R. Burleson, T.L. Albrecht, & I.G. Sarason (Eds), *Communications of social support: Messages, interactions, and community*, (pp. 91-112). Thousand Oaks, CA: Sage.
- Seng, J., Oakley, D., Sampsel, C., Killian, C., Graham-Bermann, S., & Lieberzon, I. (2001). Post-traumatic stress disorder and pregnancy complications. *Obstetric Gynecology*, 97, 17-22. doi:10.1016/S0029-7844(00)01097-8
- Short, L. (2000). Survivors' identification of protective factors and early warning signs for intimate partner violence. *Violence Against Women*, 6, 272-285. doi:10.1177/10778010022181840

- Silverman, J., Decker, M., Reed, E. & Raj, A. (2006). Intimate partner violence victimization prior to and during pregnancy among women residing in 26 U.S. states: Associations with maternal and neonatal health. *American Journal of Obstetrics and Gynecology*, 195, 140–148. doi:10.1016/j.ajog.2005.12.052
- Stein, J., Leslie, M., & Nyamathi, A. (2001). Relative contributions of parent substance use 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. doi:10.1016/S0145-2134(02)00382-4
- Sullivan, C., & Bybee, D. (1999). Reducing violence using community-based advocacy for women with abusive partners. *Journal of Consulting and Clinical Psychology*, 67(1), 43 – 53. doi:10.1037/0022-006X.67.1.43
- Sutherland, C., Sullivan, C., & Bybee, D. (2001). Effects of intimate partner violence versus poverty on women's health. *Violence Against Women*, 7, 1122-1143. doi:10.1177/10778010122183775
- Tan, C., Basta, J., Sullivan, C., & Davidson, W. (1995). The role of social support in the lives of women exiting domestic violence shelters. *Journal of Interpersonal Violence*, 10, 437-451. doi:10.1177/088626095010004004
- Testa, M., Livingston, J., & Leonard, K. (2003). Women's substance use and experiences of intimate partner violence: A longitudinal investigation among a community sample. *Addictive Behaviors*, 28, 1649–1664. doi:10.1016/j.addbeh.2003.08.040
- Thomas, A. (2001). African American women's spiritual beliefs: A guide for treatment. *Women and Therapy*, 23, 1-12. doi:10.1300/J015v23n04_01

- Thompson, M., Kaslow, N. J., & Kingree, J. B. (2002). Risk factors for suicide attempts among African American women experiencing recent intimate partner violence. *Violence and Victims*, 17, 283-295. doi:10.1891/vivi.17.3.283.33658
- Thompson, M., Kaslow, N., Kingree, J., Rashid, A., Puett, R., & Jacobs, D. (2000). Partner violence, social support, and distress among inner-city African American women. *American Journal of Community Psychology*, 28, 127-143. doi:10.1023/A:1005198514704
- Tjaden, P., & Thoennes, N. (2000). *Full report of the prevalence, incidence, and consequences of violence against women: Findings from the National Violence Against Women Survey*. Washington, DC: U.S. Department of Justice.
- United States Census Bureau 2006. (2008, November 8). U.S. poverty rate and poverty overtime. Retrieved from <http://www.census.gov/hhes/www/poverty/histpov/hstpov2.html>
- Watlington, C. & Murphy, C. (2006). The roles of religion and spirituality among African American survivors of domestic violence. *Journal of Clinical Psychology*, 62(7), 837-857. doi:10.1002/jclp.20268
- Weinsheimer, R., Schermer, C., Malcoe, L., Balduf, L., & Bloomfield, L. (2005). Severe intimate partner violence and alcohol use among female trauma patients. *Journal of Trauma*, 58, 22–29. doi:10.1097/01.TA.0000151180.77168.A6
- Zule, W., Flannery, B., Wechsberg, W., & Lam, W. (2002). Alcohol use among out-of-treatment crack using African American women. *The American Journal of Drug and Alcohol Abuse*, 28(3), 525 – 544. doi:10.1081/ADA-120006740

Table 1
Demographic Characteristics of African American Mothers

Characteristics	Frequency	Percent
Maternal Age		
Under 18	262	11.0
19 - 29	1665	69.7
30 – 39	420	17.5
40 – 49	43	1.8
Maternal Education		
< 8 th grade	40	1.7
Some H.S.	757	31.7
H.S. Diploma	730	30.6
GED	126	5.3
Some College	523	21.9
Technical/Trade School	79	3.3
BA/BS	102	4.3
Graduate School	30	1.3
Household Income		
< 6,000	101	51.5
< 12, 500	64	32.7
< 25, 000	31	15.9
Unknown	2194	91.8
Partner Abuse		
Verbal	502	21.0
Physical	62	2.6
Substance Use		
Alcohol		
Everyday	6	.3
Several/week	16	.7
Several/month	56	2.3
< 1/month	184	7.7
Never	2124	89.0
Cigarettes		
2+packs/day	9	.4
1<packs<2	35	1.5
<1 pack/day	461	19.3
None	1881	78.8

Table 2
Spearman's Rho Correlation Findings on Partner Abuse and Substance Use

Variables	Alcohol	Cigarette
	Baseline	
Verbal Abuse	.055*	.073**
Physical Abuse	.108**	.139**
	One-Year Follow Up	
Verbal Abuse	-.067*	.084**
Physical Abuse	-.095**	.026

*p < .05 **p < .01

Table 3
Logistic Regression of Alcohol Use by Abuse Type and Instrumental Support

	B	S.E.	Wald	Sig.	Exp(B)
Age	0.71	.008	78.121	.000	1.073
Education	-.152	.048	10.063	.002	.859
Verbal Abuse	-.279	.108	6.666	.010	.757
Physical Abuse	.253	.104	5.912	.015	1.288
Instrumental Support	.022	.034	.430	.512	1.022
Constant	-3.877	.268	208.997	.000	.021

p < .05

Table 4
*Logistic Regression of Cigarette Use by Abuse Type
 and Instrumental Support*

	B	S.E.	Wald	Sig.	Exp(B)
Age	.035	.007	27.760	.000	1.036
Education	-.520	.042	150.106	.000	.595
Verbal Abuse	-.187	.079	5.540	.019	.830
Physical Abuse	.223	.077	8.370	.004	1.249
Instrumental Support	.036	.027	1.785	.182	1.037
Constant	-1.583	.209	57.520	.000	.205

p < .05