RESILIENCE AND VULNERABILITY FACTORS ASSOCIATED WITH EXPERIENCING INTIMATE PARTNER VIOLENCE BY MULTIPLE ABUSIVE PARTNERS AMONG U.S. WOMEN: A MIXED METHODS STUDY

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ABSTRACT

Cara Jeannine Person: Resilience and Vulnerability Factors Associated with Experiencing Intimate Partner Violence by Multiple Abusive Partners Among U.S. Women: A Mixed Methods Study
(Under the direction of Kathryn E. (Beth) Moracco)

Background: Intimate partner violence (IPV) is a preventable public health problem that affects over 35% of U.S. women. While 27-86% of survivors have experienced IPV by multiple abusive partners (MAPs), few studies have examined what makes some survivors more vulnerable to experiencing MAPs, or whether they have specific domestic violence (DV) service and social support needs. This dissertation addresses these knowledge gaps by: 1) determining associations between initial abusive relationship (IAR) resilience and vulnerability factors and experiencing IPV by MAPs and 2) exploring how IPV by MAPs survivors have accessed and utilized services, social support, and engaged other coping strategies.

Methods: Using a mixed methods approach, in Study 1, I analyzed National Intimate Partner and Sexual Violence Survey (NISVS) data (n = 16,507) using multivariate logistic regression and moderation analysis methods. In Study 2, I conducted in-depth interviews with IPV by MAPs survivors (n = 20) and analyzed the data by employing thematic analysis and interpretive coding methods.

Results: NISVS analyses indicated that 15.6% of women who experienced physical and/or sexual IPV experienced IPV by MAPs (n = 405). These women experienced more frequent IAR IPV (*OR*: 1.21, $p < .01$) and were therefore more likely to use services (*OR*: 1.30, $p < .05$) than women with one abusive partner. Women who did not receive social support during

their IARs were more likely to experience IPV by MAPs as they got older (*OR*: 1.02, $p < .05$). Interviews revealed that IPV by MAPs survivors sought help from formal and informal sources and that: 1) negative initial encounters with service providers made them less likely to seek help in a subsequent relationship; 2) positive initial encounters, often after multiple abusive relationships, helped them leave their abusers; and 3) receipt of mixed reactions to disclosures of abuse from informal sources were common.

Conclusions: These results indicate that IPV by MAPs survivors are a distinct group whose vulnerability to chronic IPV is affected by frequent IPV in their IARs and a lack of engagement with helpful services and social support. Prevention efforts should address the need for service provider training, expanded support, and access to appropriately tailored DV-related services.

This dissertation is dedicated in honor of my mom's memory for her example of perseverance, strength, and love. She was my biggest cheerleader.

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LIST OF ABBREVIATIONS

BRFSS	Behavioral Risk Factor Surveillance System
CDC	Centers for Disease Control and Prevention
DV	Domestic Violence
DVPO	Domestic Violence Protective Order
IAR	Initial Abusive Relationship
ICPSR	Inter-university Consortium for Political and Social Research
IPV	Intimate Partner Violence
IPV by MAPs	Intimate Partner Violence by Multiple Abusive Partners
IRB	Institutional Review Board
MAPs	Multiple Abusive Partners
NCCADV	North Carolina Coalition of Domestic Violence
NIJ	National Institute of Justice
NISVS	National Intimate Partner and Sexual Violence Survey
NVAWS	National Violence Against Women Survey
PTG	Post-traumatic Growth
PTSD	Post-traumatic Stress Disorder
SRH	Self-rated Health
TMSC	Transactional Model of Stress and Coping
US	United States
VAW	Violence Against Women
WHO	World Health Organization

CHAPTER 1: INTRODUCTION, STUDY OVERVIEW, AND SPECIFIC AIMS

Intimate Partner Violence

Intimate partner violence (IPV) is a pattern of abusive behavior that includes physical and sexual violence, stalking, and psychological aggression by a current or former intimate partner (Breiding, Basile, Smith, Black, & Mahendra, 2015). It is a preventable, global, social, and public health problem that results in detrimental physical, mental, and reproductive health consequences (Basile, Arias, Desai, & Thompson, 2004; Black, 2011; World Health Organization, 2013a). Globally, lifetime prevalence of IPV victimization (physical and sexual) among women is 30% and in the United States (U.S.), it is 35.6% (Black et al., 2011; World Health Organization, 2013b). In addition to the negative consequences for individuals, IPV costs the U.S. $4.1 billion in direct costs for medical and mental health care, and $858.6 million in indirect costs from lost productivity annually (National Center for Injury Prevention and Control, 2003).

IPV has historically been known as *domestic violence (DV)*, but in order to include intimate relationships that do not involve a shared household or children in common, and to conform to language used by the Centers for Disease Control and Prevention (CDC) (Centers for Disease Control and Prevention, 2012), *IPV* was the term used for this dissertation study. However, *DV* was used to describe resources such as DV agencies or factors related to the criminal justice system, where the term *DV* is traditionally used. Although women were victimized by their IPV experiences, the preferred term to describe them is *survivor*. In this

study, *survivor* was primarily used instead of the term *victim*, except for descriptions of research studies that referenced the term *victim* or when describing experiences of victimization.

Intimate Partner Violence by Multiple Abusive Partners

A substantial proportion of women have experienced IPV by more than one intimate partner, i.e. multiple abusive partners (MAPs). According to studies with local samples, between 27-86% of women who have experienced IPV have experienced intimate partner violence by multiple abusive partners (IPV by MAPs), but few studies have focused on this population of survivors (Black, 2011; Iverson et al., 2013; Jaquier & Sullivan, 2014; Stein, Grogan-Kaylor, Galano, Clark, & Graham-Bermann, 2016). The CDC's National Intimate Partner and Sexual Violence Survey (NISVS) indicates that 20.9% of women experiencing IPV (specifically, rape, physical violence, and/or stalking) have been abused by two partners, and 8.3% have been abused by three or more partners (Black et al., 2011).

Understanding this population is important because previous research, albeit limited, has indicated that women who have experienced IPV by MAPs report higher rates of negative mental and physical health problems than women with one abusive partner (Carrington-Walton, 2014; Cole, Logan, & Shannon, 2008; Coolidge & Anderson, 2002). However, these studies often are not generalizable to the larger population and cannot provide evidence about what factors related to initial experiences with IPV make some women more vulnerable to IPV by MAPs than others. These knowledge gaps contribute to a potential disparity in meeting the needs of this population compared with women who have experienced one abusive relationship. Not addressing these needs may lead to continued negative physical and mental health consequences from abuse, and their associated individual and societal costs.

Much of the previous research on revictimization has not distinguished between persons abused repeatedly by the same partner versus persons who have been abused by MAPs (Cattaneo

& Goodman, 2005; Iverson et al., 2013; Krause, Kaltman, Goodman, & Dutton, 2008). Furthermore, no studies have used a national population-based sample to study the phenomenon of IPV by MAPs except for one dissertation study that used National Violence Against Women Survey (NVAWS) data from 1995-1996 (Carbone-Lopez, 2006). Accordingly, knowledge about factors associated with experiencing IPV by MAPs and about whom is most vulnerable to IPV by MAPs is limited. In addition, there is a lack of research on the use of services and social support for women experiencing IPV by MAPs. In order to effectively direct services for survivors and to inform secondary IPV prevention efforts, factors associated with experiencing IPV by MAPs need to be identified.

The purpose of this dissertation was to identify resilience and vulnerability factors, specifically modifiable factors, for women who experience IPV by MAPs. This mixed methods dissertation is comprised of quantitative analyses of population-based survey data from the NISVS dataset, and qualitative interviews with survivors of IPV by MAPs, and has three specific aims:

Aim 1: To determine the associations between vulnerability factors (race/ethnicity, severity and frequency of IPV, age, and post-traumatic stress disorder (PTSD) symptoms or injuries) related to the initial abusive relationship (IAR) and the likelihood of experiencing IPV by MAPs

Aim 2: To determine associations between resilience factors (use of services, disclosure of abuse and helpfulness (proxy for social support)), related to the IAR and the likelihood of experiencing IPV by MAPs

Aim 3: To gain a better understanding of: a) how women who have experienced IPV by MAPs have accessed and utilized services and social support and engaged in other coping

strategies; b) how helpful they found the services and social support they accessed; and c) what types of services or methods of support they believe would be most helpful

The conceptual model for this study draws on concepts, theories, and frameworks from the fields of sociology and psychology, including the concept of resilience (Dutton & Greene, 2010; Luthar, Cicchetti, & Becker, 2000; Southwick, Bonanno, Masten, Panter-Brick, & Yehuda, 2014), the Theory of Intersectionality (Crenshaw, 1991; Kelly, 2011; Nixon & Humphreys, 2010; Sokoloff & Dupont, 2005), and the Transactional Model of Stress and Coping (TMSC) (Lazarus & Cohen, 1977). The conceptual model delineates the proposed relationships among study variables.

This dissertation employed a two-part mixed-methods design to obtain more comprehensive information about experiencing IPV by MAPs (Creswell, 2015; Curry, 2015; Teddlie, 2009). First, I analyzed quantitative data from the 2010 NISVS (n = 2,594 women who are IPV survivors) to identify potential resilience and vulnerability factors associated with experiencing IPV by MAPs. Second, I conducted interviews with IPV by MAPs survivors (n = 20) and analyzed the qualitative data to delve deeper into their experiences, and coping strategies, including use of services and social support.

Study findings expanded the sparse knowledge base about the experiences of women who have experienced IPV by MAPs. These findings provide researchers with information on who is most at risk for experiencing IPV by MAPs, based on their IAR experiences. The study findings may also improve the ability of service providers and DV Advocates to meet the needs of women experiencing IPV by MAPs by helping them create more appropriate services. Finally, the results from this study can inform practitioners who are tasked with developing interventions for survivors as well as policymakers who govern within the criminal justice system and local social

service and DV agencies. These interventions may lead to the reduction of IPV by MAPs and a decrease in negative social and health consequences suffered by survivors.

This dissertation is divided into seven chapters. Chapter one contains an overview of the study and specific aims. Chapter two includes the background and literature review, which details current studies on factors associated with IPV, consequences of IPV, and the use of services and social support related to experiencing IPV. This chapter also includes a review of literature on experiencing IPV by MAPs. Chapter three provides an overview of the sociological and psychological theoretical concepts and frameworks that informed the conceptual model for this study, along with a description of the study conceptual model. Chapter four is comprised of the study design, research questions, hypotheses, data sources, and methods, specifically the quantitative analysis methods used in Study #1 and the qualitative analysis methods used in Study #2 to address the research questions and associated hypotheses. Chapter five presents a manuscript with findings from Study #1, which addresses Aims #1 and #2 through an analysis of resilience and vulnerability factors on the likelihood of experiencing IPV by MAPs. Chapter six presents a manuscript with findings from Study #2, which addresses Aim #3 through a qualitative examination of coping efforts, including help-seeking behaviors of IPV by MAPs survivors. Chapter seven integrates findings from Study #1 and Study #2, includes a review of the strengths and limitations of both studies, and provides an overview of study implications on future IPV prevention research, interventions, and policy.

CHAPTER 2: BACKGROUND AND LITERATURE REVIEW

Intimate Partner Violence

IPV is a preventable social and public health problem that is recognized as a violation of human rights worldwide (Nations, 1996). It is defined by the World Health Organization (WHO) as behavior within an intimate relationship that causes physical, sexual or psychological harm, including, physical aggression, sexual coercion, psychological abuse, and controlling behaviors (2012). CDC describes IPV as occurring between "current and former spouses and dating partners" and it includes physical and sexual violence, threats of violence, and emotional abuse, such as isolation and intimidation (2012). IPV affects women and men of all demographic profiles, but this study focused on violence against women because they bear the larger burden of abuse (Black et al., 2011; Tjaden & Thoennes, 2000).

Globally, 30% of women have experienced IPV (physical or sexual) in their lifetimes. The rates of IPV in the U.S. are also substantial, with more than 35.6% of women (42.4 million), reportedly raped, physically assaulted, or stalked by an intimate partner in their lifetimes (Black et al., 2011; World Health Organization, 2013b). State-specific lifetime rates of physical and sexual IPV range from 19.5% in Puerto Rico to 35.0% in Nevada (Breiding, 2008). In addition to physical and sexual violence, IPV includes controlling behaviors and emotional and psychological abuse that also have long-term negative health effects. NVAWS findings indicate that women who report being emotionally abused or who experience controlling behaviors are also more likely to be physically abused (Tjaden & Thoennes, 2000).

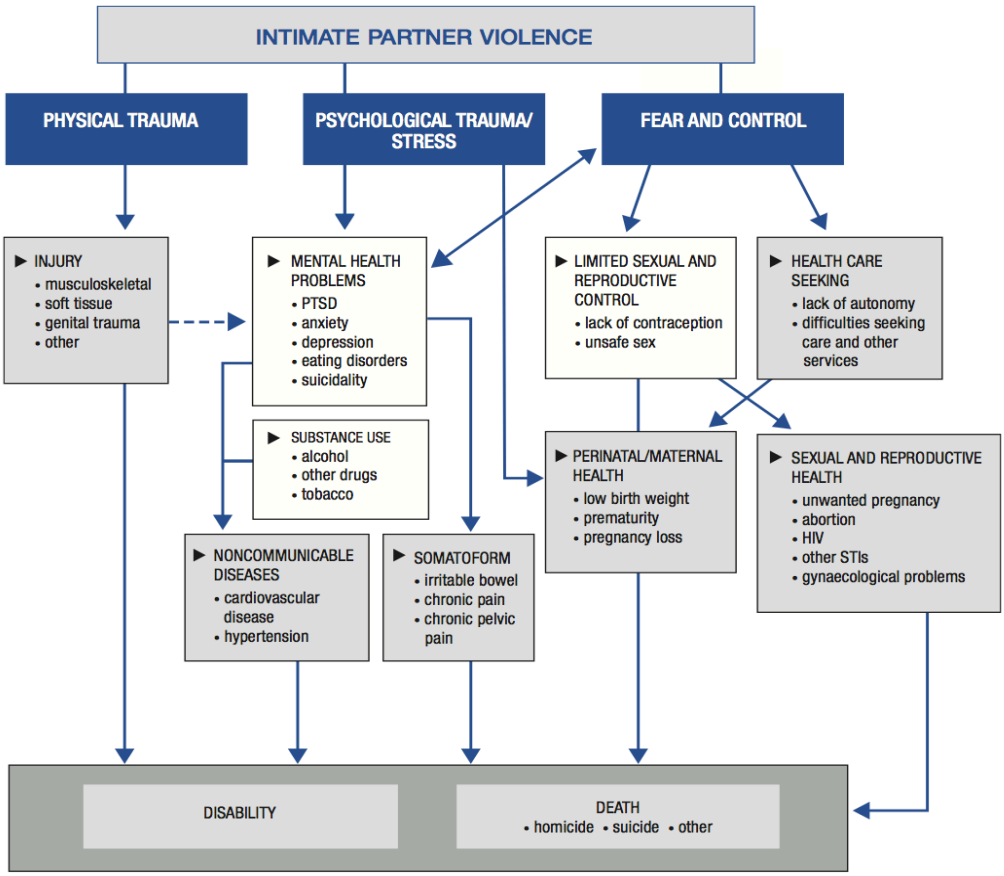
IPV can also include economic abuse when a woman is denied access to money or her ability to obtain and sustain employment is hindered (Adams, Sullivan, Bybee, & Greeson, 2008). In addition, the abuser may threaten her with harm or threaten to harm him or herself by committing suicide. Another tactic abusers use is to isolate their intimate partners, which limits their access to friends and family and possible support systems (O'Leary, 2001). Often, abusers deny or minimize the severity of violence or even blame their partners for their displays of abusive behavior. Some abusers may use their male privilege to manipulate traditional gender roles and others may use children as pawns in their efforts to control their partners (Domestic Abuse Intervention Programs, 1984; O'Leary, 2001). Furthermore, an abuser may try to exert control over a woman's reproductive health by not allowing her access to family planning methods or by refusing to use forms of contraception, such as condoms (Domestic Abuse Intervention Programs, 1984; World Health Organization, 2013b). Whether abusers use physical violence or more controlling behaviors as manipulation tactics, they inflict untold harm on their intimate partners.

Consequences of Intimate Partner Violence

IPV can have lasting negative effects on a woman's physical, mental, and reproductive health. It has been associated with conditions such as chronic pain, activity limitations, disabilities, cardiovascular disease, gastrointestinal system problems, asthma, depression, diabetes, anxiety, and post-traumatic stress disorder (PTSD) (Basile et al., 2004; Black, 2011; Bonomi, Anderson, Rivara, & Thompson, 2007; Carbone-López, Kruttschnitt, & Macmillan, 2006; Coker, 2000; Drossman, Talley, Leserman, Olden, & Barreiro, 1995; Krause, Kaltman, Goodman, & Dutton, 2007; Macy, Ferron, & Crosby, 2009; Stein et al., 2016; World Health Organization, 2013b). In addition, the risk of experiencing these health issues may increase if a woman has experienced multiple types of lifetime violence, more recent violence, or more severe

or continuous violence (Macy et al., 2009). As indicated by WHO's (2013b) model of pathways and health effects of IPV, there are multiple direct and indirect intersecting pathways through which IPV can affect a woman's health (pg. 8) (Figure 2.1).

Figure 2.1: Health Effects of Intimate Partner Violence



Physical violence results in 2 million injuries suffered by women annually (Black, 2011). Psychological trauma and experiences with fear and control often generate mental health issues (Black, 2011; Breiding et al., 2014; Campbell, 2002). Psychological consequences such as depression and anxiety can be particularly devastating, with over 22% of women experiencing IPV reporting symptoms of PTSD. Women may also struggle with suicidal thoughts, especially if they have suffered both sexual and physical abuse (Wingood, DiClemente, & Raj, 2000). In addition to the direct consequences of experiencing IPV, victims may also be affected by adverse

health outcomes due to IPV-related stress. Furthermore, research has shown that elevated levels of stress due to experiencing IPV can indirectly affect a woman's risk of having a compromised immune system, which may lead to chronic illness and disability. Stress may also increase a woman's risk of negative birth outcomes, such as having low birth weight babies and experiencing premature births. Finally, experiencing fear and control may put a woman at greater risk of sexual and reproductive health issues, such as becoming infected with HIV and sexually transmitted infections (World Health Organization, 2013b).

In addition to the health-related consequences of experiencing IPV, survivors are more likely to engage in negative health behaviors such as risky sexual activity or excessive smoking, drinking alcohol, or taking prescription medications (Centers for Disease Control and Prevention, 2012; Coker, 2007; World Health Organization, 2013b). The use and abuse of these substances may be a way for victims to cope with IPV or attempt to obtain relief from the violence. Due to health issues related to IPV experiences, women are often in need of more social and clinical services; including, housing, health care, and legal aid assistance (Black, 2011; Breiding et al., 2014). However, barriers to accessing services may be exacerbated by fear of repercussions from the intimate partner and feelings of shame due to experiencing an abusive relationship (World Health Organization, 2013b).

Experiencing IPV can also affect a woman's ability to work by decreasing her level of productivity, as well as increasing her rate of absenteeism. Additionally, the abusive relationship can affect her co-workers who witness IPV or it can be a financial loss for her employer because the company has to cover administrative, medical, and liability costs for the employee who is being abused (Swanberg, Logan, & Macke, 2005). Furthermore, experiencing IPV may cause financial repercussions for the survivor, which can lead to other problems such as experiencing

housing instability or becoming dependent on government assistance (Pavao, Alvarez, Baumrind, Induni, & Kimerling, 2007; Tolman & Rosen, 2001).

Ultimately, the effects of IPV can be deadly. Globally, WHO estimates that approximately 38% of all murdered women were killed by an intimate partner (2013b). Recent CDC estimates indicate that 55.3% of U.S. homicides against women are IPV-related (Petrosky, 2017), ranking the U.S. first among the 25 wealthiest countries with a homicide rate of 1.2/100,000 persons (approximately 1,500 murders) occurring annually (Black, 2011). Oftentimes, violence against intimate partners is never reported to law enforcement out of fear of retaliation, feelings of shame, or the belief that police officers will not be able to help; therefore, the prevalence of IPV is likely higher than statistics indicate (Gover, Welton-Mitchell, Belknap, & Deprince, 2013; Tjaden & Thoennes, 2000).

The repercussions from IPV can extend beyond the intended victim to her children, other family and friends, and the larger community to cause health, financial, and social welfare-related issues. Children who live in homes where IPV is occurring have an increased risk of exhibiting behavioral problems and experiencing emotional, physical, and sexual abuse (Holt, Buckley, & Whelan, 2008). Women who experience abusive relationships may also fear "putting others in the middle", because the abusive relationship may bring harm to supportive family members and friends (Beaulaurier, Seff, Newman, & Dunlop, 2006; Fugate, Landis, Riordan, Naureckas, & Engel, 2005; Wilson & Laughon, 2015).

Data Sources for Measuring Intimate Partner Violence

Studies about IPV often use small clinical samples of local participants from places such as DV shelters or health care facilities. Some national datasets exist, but generally only include a few IPV-related questions or data collected from surveys conducted one time. For example, CDC conducts the Behavioral Risk Factor Surveillance System (BRFSS) annually with 400,000

people to collect information on health-related topics; however, states are allowed to choose whether they include IPV-related questions, which limits the amount of data collected (Centers for Disease Control and Prevention, 2013). NVAWS was a one-time survey conducted by CDC and the National Institute of Justice (NIJ) in 1995-1996 with 16,000 respondents to understand experiences with violence, consequences suffered, and use of medical services and involvement with the criminal justice system. NVAWS used behaviorally specific questions to ask about violence, including rape, physical assault, and stalking (Tjaden & Thoennes, 2000). In addition, the annual National Crime Victimization Survey is conducted by the U.S. Census Bureau for the Bureau of Justice Statistics to characterize victimizations experienced in the past six months (Bureau of Justice Statistics, 2014).

CDC and NIJ collaborated in 2010 to create and conduct the NISVS, an annual, population-based survey, to determine the prevalence and incidence of IPV, sexual violence, and stalking, and the impact of violence, including the health consequences associated with these experiences (Black et al., 2011). Details about NISVS data are described in Chapter 4.

An Ecological Perspective on Intimate Partner Violence Prevention

As noted by WHO (2005), viewing IPV through a public health lens indicates that factors influencing IPV are multilevel and thus require multilevel responses. Although IPV has historically been thought of as a private issue, researchers and practitioners have progressively recognized violence, including IPV and child abuse, as a public health problem with primary, secondary, and tertiary interventions to combat IPV. Using the public health approach, IPV is addressed by defining the problem; identifying risk and protective factors; developing, testing, and evaluating prevention strategies; and disseminating these evidence-based prevention strategies (Centers for Disease Control and Prevention, 2012).

CDC and WHO have adopted an ecological approach to studying factors influencing IPV perpetration and victimization using The Ecological Model for Understanding Violence, which describes individual, relational, community, and societal factors related to violence (Centers for Disease Control and Prevention, 2015; Krug, Mercy, Dahlberg, & Zwi, 2002). The individual level encompasses biology and personal history affecting behavior, and the relational level asserts that certain characteristics of relationships with peers, family members, and intimate partners increase the risk of violence victimization or perpetration. The community level represents the context in which people live, work, and play. Levels of income inequality, acceptable social norms around the use of violence, and a lack of social services may influence risk of IPV at the community level. The final level is the societal level where cultural norms may identify violence as an acceptable method of conflict resolution and perpetuate beliefs of male dominance (World Health Organization, 2005; World Health Organization & London School of Hygiene and Tropical Medicine, 2010). This model addresses the intersection of risk factors across multiple levels of the social ecology where comprehensive interventions could be used to decrease IPV.

Risk and Protective Factors Associated with Experiencing Intimate Partner Violence

Extant literature has examined multilevel factors that may increase risk for IPV victimization. Numerous demographic and psychosocial factors have been associated with experiencing IPV such as being young (18-24 years), being a member of a minority racial or ethnic group, having low income, having fair or poor self-rated health (SRH), or experiencing food or housing insecurity (Breiding, Basile, Klevens, & Smith, 2017; Breiding, 2008; Brownridge, 2004; Caetano, 2008; Capaldi, 2012; Cunradi, 2009; Ellison, 2007; Hazen & Soriano, 2007; Vest, Catlin, Chen, & Brownson, 2002).

Relational Level Risk Factors for Experiencing IPV

Factors related to characteristics of the relationship, abusive partners, and the woman's community surroundings have also been associated with a higher risk of experiencing physical or sexual IPV (Capaldi, 2012; Cunradi, 2009). At the relational level, women who are divorced or separated from their partners were found to have the highest risk of experiencing IPV (Capaldi, 2012; Hazen & Soriano, 2007). An alternative explanation for this finding is that women who have experienced IPV may be more likely to get divorced or separated.

Some familial-level risk factors have shown a direct impact on an individual's long-term risk of experiencing IPV; namely experiencing child abuse and neglect or witnessing violence in the childhood home. These experiences can hinder emotional and behavioral development and limit one's ability to form healthy intimate relationships as an adult (Capaldi, 2012; Holt et al., 2008; Linder & Collins, 2005; Renner & Whitney, 2012; Slashinski, Coker, & Davis, 2003).

Community/Neighborhood Level Vulnerability Factors for Experiencing IPV

At the community level, risk factors for higher IPV rates include a high prevalence of low-income persons, unemployed persons, and female-headed households in the community (Hetling & Zhang, 2010). Shaw and McKay's (1942) Social Disorganization Theory hypothesizes that neighborhood structures such as clustering of poverty and frequent movement of residents in and out of the neighborhood, reduce social cohesion and informal control of negative behaviors such as perpetration of IPV (Frye, 2007). Social cohesion, which is based on shared responsibility; informal social control, which represents collective reactions to negative and positive behaviors; and personal attitudes toward IPV are all part of neighborhood characteristics that may influence a woman's likelihood of experiencing IPV (Browning, 2002). With less social organization, communities may vary in their beliefs about intervening in

intimate relationships and women may be less likely to report acts of IPV (Browning, 2002; Cunradi, 2009).

Weissman posits that economic instability may cause a community to have weakened social controls due to a lack of social capital, and that these areas of social disorganization are associated with higher rates of IPV (2007). She further asserts that the lack of job security in a community can lead to anxiety and stress that precedes increased violent behavior against family members (Weissman, 2007). Overall, the decline of neighborhood social capital, detached attitudes about IPV, and low resource neighborhoods may affect a woman's risk of experiencing IPV (Table 2.1).

Intimate Partner Violence by Multiple Abusive Partners

Research indicates that some women experiencing IPV victimization may have decreased self-protective capacity or increased vulnerability from previous abuse or trauma, which may cause them to become withdrawn, less likely to seek help, and more vulnerable to a continued or subsequent abusive relationship, or exploitation by future perpetrators (Bender, Cook, & Kaslow, 2003; Classen, Palesh, & Aggarwal, 2005; Cole et al., 2008; Coolidge & Anderson, 2002; Messman-Moore & Long, 2003). Not all women experience continued IPV; however, local studies estimate that a substantial proportion of women in the U.S. who have experienced IPV have been abused by at least two partners (27% to 86%) (Cole et al., 2008; Iverson et al., 2013; Jaquier & Sullivan, 2014; Stein et al., 2016). According to the NISVS, 20.9% of women experiencing IPV (specifically rape, physical violence, and/or stalking) have been abused by two partners and 8.3% have been abused by three or more partners (Black et al., 2011). Nearly half (47%) of women who experience IPV are victimized the first time between the ages of 18-24, and they will most likely be in intimate relationships in the future, although not necessarily violent relationships (Black, 2011). These statistics highlight the need to identify factors that

may increase vulnerability to experiencing IPV by MAPs and to address these risk factors through focused secondary IPV prevention efforts and improved intervention services.

Risk and protective factors associated with experiencing IPV by MAPs have not been thoroughly explored. Furthermore, few studies have delineated between women who are abused multiple times by one person (IPV revictimization) and women who are abused by multiple partners. Consequently, we lack data on what factors make some women more susceptible to experiencing IPV by MAPs than others (Cattaneo & Goodman, 2005; Kuijpers, van der Knaap, & Lodewijks, 2011).

Individual Level Risk Factors (and Consequences) Associated with Experiencing IPV by MAPs

Despite limited research, a few studies have examined the effects of demographics such as race/ethnicity, income, and age on likelihood of experiencing IPV by MAPs with mixed results. Some longitudinal and cross-sectional studies have found that being young at the time of abuse was predictive of experiencing IPV by MAPs (Testa, 2003). Another study found that being younger on average when compared with other women in the study was predictive of having experienced IPV by MAPs (Alexander, 2009). Other studies have found no effect based on age (Cole et al., 2008; Coolidge & Anderson, 2002); however, some studies have measured current age at the time of the survey and others measured age based on time of abuse. This measurement difference may account for some of these disparate results. The association between identifying as a member of a racial/ethnic group and risk of experiencing IPV by MAPs is also inconclusive. One study examining risk of IPV by MAPs found that women who were African American/Black or white were more likely to have experienced IPV by MAPs than Latinas (Stein et al., 2016). In contrast, another study found no difference in risk of IPV by MAPs based on ethnicity (Alexander, 2009). Some studies have analyzed income as a predictor of experiencing IPV by MAPs. Alexander (2009) did not find that income level or employment

status was associated with experiencing IPV by MAPs; however, another study found that having social security as a source of income was predictive of IPV by MAPs. (Vatnar & Bjorkly, 2008). This finding could be indicative of age rather than socioeconomic status. The differences between these study findings may be due to one study framing income as an indicator of financial security through employment and the other study examining the effect of "supported" income in the form of social security.

Women who have experienced IPV by MAPs experience negative physical and mental health problems at higher rates than women who have been abused by a single partner, as well as women who have not been abused (Cole et al., 2008; Coolidge & Anderson, 2002; Jaquier & Sullivan, 2014). Women who have been abused experience high rates of PTSD in general (Iverson et al., 2013); however, those who experience IPV by MAPs experience even greater rates of PTSD (Bogat, Levendosky, Theran, Von Eye, & Davidson, 2003). Additionally, researchers have found that women with MAPs who had PTSD symptoms, reported higher psychopathology (including higher scores on clinical self-defeating, dependent, paranoid, depression scales) than women with PTSD symptoms who had one abusive partner (Coolidge & Anderson, 2002). Despite the inability of researchers to determine whether higher rates of psychopathology experienced were the residual effects of enduring an abusive relationship or whether it was a preexisting issue, due to the cross-sectional study design, they did conclude that women with MAPs experienced more mental health issues (Coolidge & Anderson, 2002).

In addition, women who experienced IPV by MAPs exhibit more negative health behaviors than women with one abusive partner. A longitudinal study that examined the reciprocal effects of substance use on experiences with IPV, indicated that higher rates of marijuana and alcohol use were associated with experiencing IPV by MAPs (Testa, 2003).

Another study that examined risk of IPV by MAPs found that women who used illicit drugs were two times more likely to experience PV by a new partner within 12 months (Cole et al., 2008; Ørke, Vatnar, & Bjørkly, 2018).

Relational Level Risk Factors Associated with Experiencing IPV by MAPs

Women who have experienced IPV by MAPs are also burdened by more lifetime traumas than women who have been abused by one partner. For example, they are more likely to have been victims of physical assault or sexual violence or to be stalked by a non-intimate partner (Cole et al., 2008; Stein et al., 2016). Another difference between women victimized by MAPs and those with one partner is their exposure to violence in their childhood homes. Studies indicate that women with MAPs have experienced higher rates of child abuse (physical, sexual, and emotional) than women with one abusive partner (Alexander, 2009; Carrington-Walton, 2014; Cole et al., 2008; Stein et al., 2016; Vatnar & Bjorkly, 2008). These women are also more likely to have witnessed IPV between their parents (Alexander, 2009; Carrington-Walton, 2014; Vatnar & Bjorkly, 2008), which had an even greater effect on their risk of experiencing IPV by MAPs than having been abused as a child (Vatnar & Bjorkly, 2008).

Finally, limited research using local studies has found that women with MAPs have experienced worse IPV in their IARs than women with one abusive partner (Ørke et al., 2018). Studies have examined the effects of experiencing severe IPV on the likelihood of experiencing IPV by MAPs. A longitudinal study found that after 12 months, women who experienced more severe IPV in their baseline relationships were more likely to experience IPV by a new partner (Testa, 2003). Similarly, another study found that on average, women with MAPs had experienced more severe IPV (Bogat et al., 2003). In contrast to these findings, one study using latent class analysis to examine national data examined the likelihood that IPV survivors would move into a particular class of violence in their current relationship based on factors including

previous IPV experience. The researcher found that women who previously experienced methodical and severe abuse were less likely to be in a current abuse relationship (Carbone-Lopez, 2006). Although these results contradict other studies on risk of experiencing IPV by MAPs, the majority of studies have found IPV severity to be a predictive factor.

Another factor researchers have studied between women with MAPs and those with one abusive partner is the type of abuse experienced in current relationships at the beginning of the study or in previous relationships. One study with a sample of women who were seeking domestic violence protective orders (DVPOs) found that women who reported experiencing IPV by a new partner at follow up were more likely to have experienced stalking by a previous partner. They were also more likely to have experienced psychological and physical abuse and threats of sexual abuse or rape (Cole et al., 2008) (Table 2.1). Analyzing types of abuse experienced, IPV severity level and frequency, and consequences of abuse such as sustained injuries or mental health issues, may provide information on the overall extent of abuse a woman has experienced and provide some insight into her risk of vulnerability to IPV by MAPs.

Protective Factors for Experiencing IPV by MAPs

In contrast to factors that increase vulnerability to IPV, the use of DV-related services has been identified as a protective factor against revictimization within the same relationship and perhaps it is also a protective factor against experiencing IPV by MAPs. Specifically, the use of DV and Legal Advocates who assist in obtaining services has been shown to be effective in decreasing rates of IPV revictimization (Bell & Goodman, 2001; Bybee & Sullivan, 2002). Furthermore, DVPOs are considered one of the most effective methods for secondary prevention of IPV when properly enforced (Benitez, McNiel, & Binder, 2010; Carlson, Harris, & Holden, 1999; Holt, Kernic, Wolf, & Rivara, 2003; Kothari et al., 2012; Russell, 2012), although no

studies have examined the effects of DVPOs and risk of IPV by MAPs, obtaining a DVPO does indicate use of DV-related services that may help to prevent future IPV.

Receiving social support has also been deemed protective against experiencing IPV, leaving a relationship, or experiencing IPV by MAPs, although the magnitude of the effect is not always clear (Capaldi, 2012; Coker et al., 2002; Coker, Watkins, Smith, & Brandt, 2003). Social support constitutes helpful behavior that has been categorized as emotional, instrumental, where tangible aid is provided; informational, where information to help address the problem is offered; or appraisal, where reinforcing words or affirmations are shared (Heaney & Israel, 2008). In one study of women who experienced sexual, physical, or psychological abuse, researchers found that women with more social support were less likely to report having poor physical health, or anxiety, depression, PTSD symptoms, and suicide attempts (Coker et al., 2002). Social support may work through a buffering effect to shield women from the negative consequences of IPV, such as depression and substance abuse (Coker et al., 2002). Social support has also been associated with a decrease in continued IPV (by the same partner) (Sonis & Langer, 2008) and deemed protective against IPV revictimization by any intimate partner (initial or new) (Kuijpers et al., 2011; Sonis & Langer, 2008). One study that examined differences between women with MAPs and those with one partner found that women who had experienced IPV by MAPs were more likely to have less emotional support (Bogat et al., 2003) (Table 2.1). Although there is limited literature on the effects of different types of social support for women who have experienced IPV by MAPs, evidence suggests that a woman's risk of IPV by MAPs may be enhanced by her inability to access meaningful sources of support.

Table 2.1: Summary of Factors Associated with Experiencing Intimate Partner Violence and IPV by MAPs

	IPV Overall	IPV by MAPs
Individual	• young age • minority racial/ethnic group membership • low income/unemployment • fair/poor SRH • depressive symptoms • traditional gender role beliefs	• illicit drug use • marijuana and alcohol use • depression • PTSD symptoms • anxiety • decreased self-protective capacity from previous trauma • limited resources • lower age
Relational/Familial	• relationship status • family violence exposure	• previous stalking experience • exposure to IPV between parents • child abuse • non-IPV violence • severity of IAR IPV • type of abuse in IAR • lack of social support
Community/ Neighborhood	• concentrated poverty/economic instability • social cohesion/informal controls/social capital loss	

The Concept of Resilience and Factors Associated with Experiencing IPV

Trauma survivors vary greatly in how they respond to trauma (Rutter, 2012), and these differences are important to examine because identifying factors or contexts within which people respond to adverse events that promote healing and resilience may inform interventions to support survivors. With recent shifts in research from focusing on the negative consequences of experiencing trauma to more positive coping mechanisms (Cobb, Tedeschi, Calhoun, & Cann, 2006; Tedeschi & Calhoun, 1996; Valdez & Lilly, 2015), concepts such as resilience and

posttraumatic growth (PTG), which represents improvement in cognitive and emotional functional beyond the level prior to experiencing trauma (Calhoun & Tedeschi, 2003; Crann & Barata, 2015; Tedeschi & Calhoun, 1996), are at the forefront of new research that explores the experiences of trauma survivors.

Resilience has been used in various fields to describe, conceptualize, and study the post-traumatic recovery process to provide an understanding of the complex range of responses people exhibit to trauma. Although the concept of resilience is used broadly, it has primarily been conceptualized in three ways as: a pre-existing trait (being resilient), a process (becoming resilient), or an outcome of positive adaptation (achieving resilience) (Southwick et al., 2014). Resilience has been viewed as a personal trait that is influenced by a person's environment and that determines how that person responds post trauma (Greene, 2014; Rutter, 1987; Wagnild & Young, 1993) and as the process of being able to harness resources (e.g., biological, psychological, structural, and cultural) to sustain well-being within the context of violence and health (Panter‐Brick & Leckman, 2013).

Characterizing resilience solely as an inherent trait seemingly relegates people who do not easily "bounce back" after experiencing trauma to being considered failures and puts the onus on the victim to respond in a prescribed, "positive" manner. In addition, use of this resilience definition ignores the influence of factors such as access to services or receipt of social support, that can enhance or detract from one's ability to heal from and even grow from a traumatic experience (Anderson, Renner, & Danis, 2012; Humphreys, 2003; Jose & Novaco, 2015).

Alternatively, developing resilience is viewed as a dynamic process through which people may adapt when faced with negative situations and develop coping strategies (Luthar et

al., 2000). For example, resilience has been defined as a stable trajectory of healthy functioning after a highly adverse event, and as the ability to learn from a traumatic experience and move forward in a positive manner (Bonanno, 2004) or as a "process to harness resources to sustain well-being" (Panter‐Brick & Leckman, 2013). Often associated with "overcoming", resilience has been defined by the American Psychological Association as the process of adapting well in the face of adversity, trauma, tragedy, threats, or even a significant source of stress; and it is used to describe the positive way people respond to traumatic situations (2017b). Finally, resilience has been used to identify when someone has a positive psychological outcome after experiencing trauma (Rutter, 2006).

Although there are ongoing debates about the definition and even utility of the term resilience (Kaplan, 2005), some researchers have concluded that resilience involves multiple components: pre-existing protective characteristics (e.g., personality, social factors), the process one goes through to adapt post trauma (e.g., spirituality, coping mechanisms), and outcomes of the experience (e.g., lack of psychological symptoms (i.e., PTSD)) (Dutton & Greene, 2010). Characterizing resilience as a multi-pronged concept that can be innate, cultivated, and achieved after experiencing a traumatic event addresses limitations of current definitions by including aspects of different perspectives in one definition. In this dissertation, factors that can enhance resilience are examined to illustrate their impact on a woman's' vulnerability to experiencing IPV by MAPs.

Resilience and IPV Research

Resilience has been used in IPV studies to describe the way in which IPV survivors respond to and recover from trauma (Anderson & Bang, 2012; Humphreys, 2003), their lived experience related to abusive relationships (Crann & Barata, 2015; Hyland, 2014), and factors

that may influence their levels of resilience (Riley, 2013). These studies highlight two different perspectives regarding conceptualizing resilience in the IPV literature where: 1) resilience is portrayed as recovery after the traumatic experience of IPV, or 2) as sustainability with continued growth and even enhancement of function after IPV.

Similar to other traumatic events, IPV survivors may respond to their abuse by being: 1) negatively impacted and unable to prosper, 2) able to overcome and maintain a seemingly normal life, or 3) able to overcome and prosper (similar to the concept of PTG). IPV differs from resilience research focused on other traumatic events because IPV is often ongoing and causes expected, continued trauma (Riley, 2013). As noted by Crann & Barata (2015), the process of becoming resilient after experiencing IPV is ever-changing and complex and may include some duration of adversity.

Extant research using the Connor Davidson Resilience Scale (Connor & Davidson, 2003) and The Resilience Scale (Wagnild & Young, 1993) has indicated that women with higher resilience levels have lower physical and psychological distress symptoms, and that having social support, spiritual support, and accessing resources are influential in their resilience processes (Anderson et al., 2012; Humphreys, 2003; Jose & Novaco, 2015). These studies illustrate that some IPV survivors may be considered resilient, and have an ability to adapt and grow, while also experiencing a parallel struggle to manage mental health issues (Anderson et al., 2012; Humphreys, 2003).(Anderson et al., 2012; Humphreys, 2003). Persons who experience multiple traumas, such as survivors of IPV by MAPs, may have additional factors that affect their ability to heal from a traumatic experience. Research shows that previous stressful or adverse life experiences may influence how a person responds to a traumatic event. For example, experiencing multiple traumas may lower a woman's ability to respond to trauma and limit her

coping abilities. Alternatively, it could have the opposite effect by increasing her ability to seem less affected by future stressful events (Carlson, 1997).

Gaps in IPV by MAPs Research

All of these studies demonstrate that there are multiple systemic, socioeconomic, and psychological factors that influence a woman's risk of experiencing IPV by MAPs (Cole et al., 2008) as well as her ability to cope with the resulting trauma. Despite evidence that a high percentage of women experience IPV by MAPs and recognizing that these women suffer more extreme consequences of IPV, there are significant gaps in existing literature on factors that directly influence risk of experiencing IPV by MAPs. A large proportion of studies on IARs have focused on health issues as the outcome variable instead of abuse by another partner. Another limitation is that studies often use small DV shelter-based or community samples that limit the ability to generalize study findings to the larger population. Finally, few studies have delineated between revictimization within the same relationship and experiencing IPV by MAPs (Cattaneo & Goodman, 2005; Kuijpers et al., 2011).

Consequently, researchers do not fully understand what influences their risk of experiencing IPV by MAPs or their methods of coping with abuse. Researchers also do not know if needs, access to, and use of services and support differ for this population than for women with one abusive partner. These knowledge gaps contribute to an inability to meet the needs of this population, which may lead to continued suffering and physical and mental health consequences. Further study is warranted to understand the relationship between IAR factors and the use of social support and services in predicting IPV by MAPs to help direct DV and social services (Cattaneo & Goodman, 2005).

This dissertation addresses some of these identified knowledge gaps about experiencing IPV by MAPs by serving as one of the first studies to analyze NISVS data and one of a few

studies to examine differences between women with one abusive partner and women with MAPs. As indicated by Donald G. Dutton (2006), "…the true policy goal is to *prevent* violence, not to predict it" (p. 284); therefore, the focus should be on identifying risk factors on which to intervene. Further, being able to identify associated resilience and vulnerability factors can inform interventions for survivors and minimize the negative consequences of IPV.

CHAPTER 3: THEORETICAL FRAMEWORKS AND CONCEPTUAL MODEL

Theoretical Frameworks

A variety of theoretical frameworks drawn from psychology, sociology, and public health have been used to investigate factors associated with experiencing and perpetrating IPV (Lawson, 2012). I used the concept of resilience, the Theory of Intersectionality, and the TMSC to guide this study (American Psychological Association, 2017a; Crenshaw, 1991; Glanz & Schwartz, 2008).

Theoretical Limitations

There are no theories that can fully explain IPV victimization or perpetration. Some studies fail to demonstrate a link between traditional gender norms and IPV perpetration (Campbell, 1992; Sorenson & Telles, 1991). The feminist perspective (Bell & Naugle, 2008; Kelly, 2011) and Ecological Framework for Violence Against Women (VAW) (Heise, 1998) do not explain why some women are IPV perpetrators in a male-dominated society, why some men with strict traditional gender role beliefs do not perpetrate IPV, and why IPV occurs in same sex relationships. In addition, Albert Bandura's Social Learning Theory (Bell & Naugle, 2008) does not explain how some children who grow up in abusive homes do not become victims or perpetrators of violence, or how people who do not come from a violent childhood home end up in abusive relationships. Historically, IPV theories do not account for differences in cultural backgrounds, which may have a great influence on a woman's choices, options, habits, and beliefs related to intimate relationships. No single theory fully explains the multilevel complexities that influence the risk of experiencing IPV. A review of theories that have often

been used to explain IPV including feminism, power, and social learning theories, concluded that they all lacked empirical support. The authors noted, "to date, there is still no well-defined, comprehensive contextual theory that offers a framework for identifying proximal variables likely to be associated with IPV episodes" (Bell & Naugle, 2008). Despite empirical evidence that experiencing previous IPV enhances a woman's risk for IPV by MAPs (Cole et al., 2008) and the proposal of several models to explain the effect of child sexual abuse on IPV risk based on lack of support and coping styles, there is no empirically validated theoretical model for experiencing IPV by MAPs (Gold, Sinclair, & Balge, 2000; Grauerholz, 2000; Messman & Long, 1996).

Theoretical Frameworks Used in this Study

This dissertation study used the concept of resilience (American Psychological Association, 2017a), the Theory of Intersectionality (Crenshaw, 1991), and components of the TMSC (Lazarus & Cohen, 1977) to inform the conceptual model and help explain the influence of multiple factors on a women's susceptibility to IPV by MAPs.

The Concept of Resilience

For this study, resilience was defined as the process people go through to heal from experiences with traumatic events, which may involve the use of external resources, support, and the use of time. This definition most closely aligns with Dutton & Greene (2010) and Luthar, Cichetti, & Becker's (2000) descriptions of resilience as a process related to positive adaptation despite adversity that may vary according to the event experienced, the individual and environment, and the amount of time that has passed since the adverse event (pg. 221., pg. 543). In sum, I posit that individuals may be more adept at overcoming adversity than others based on their background or internal strengths; however, the way a person responds to adversity is also affected by contextual and situational factors, including access to resources, his or her

environment, and the influence of the traumatic event. Lack of access to resources and a harmful or unsupportive environment may hinder a person's ability to heal from and overcome traumatic events, leaving the person more vulnerable to future trauma.

Furthermore, a paradigm shift is occurring where researchers and practitioners are using a strengths-based approach to address problems faced by clients/patients (Greene, Galambos, & Lee, 2003; Panter‐Brick & Leckman, 2013; Southwick et al., 2014) by focusing on their strengths and resources instead of deficits (Xie, 2013). As indicated by Humphreys (2003), studying resilience in IPV survivors may help empower them to realize their own strengths and provide a foundation upon which to build interventions to decrease their vulnerability to future IPV (pg. 148).

The purpose of this dissertation is to identify resilience and vulnerability factors that may affect a woman's likelihood of experiencing IPV by MAPs and to examine factors that may enhance resilience. In this study, I used the concept of resilience to identify factors such as use of services and social support that may be considered resilience-enhancing to examine whether there are certain types of interactions with service providers or people in a woman's social network that help to increase the resilience of IPV survivors. Furthermore, I used the concept of resilience to guide my qualitative analysis about factors that have influenced survivors' experiences with IPV by MAPs.

The Theory of Intersectionality

Intersectionality is a theory that not only highlights the influence of multilevel factors on a woman's risk for various health and social ills, but also describes the power dynamics associated with overlapping and interacting oppressive social identities related to race, gender,

class, and other social groups that may increase these risks. Drawing from the position of Black Feminist Scholar, Patricia Hill Collins, Ursala Kelly (2011) states:

> *Intersectionality is a body of knowledge that is driven by the pursuit of social justice and seeks to explain the processes by which individuals and groups in various oppressed social positions, such as gender, race, ethnicity, class, age, sexual orientation, disability status, and religion result in inequitable access to resources, which in turn results in societal inequities and social injustice.* (pg. E43)

Intersectionality has its roots in the Black Feminist Movement, which started as a way to combat both racism in the Women's Movement dominated by white women and sexism in the Civil Rights Movement dominated by African American/Black men (Crenshaw, 1991). Using an Intersectionality framework allows researchers to understand how structural inequalities can influence IPV risk and how the influence of a woman's oppressed social identify can influence her response to experiencing IPV (Kelly, 2011). For example, this theory has expanded to describe the overlapping issues of other socially constructed identities that combat the essentialism of the Women's Movement by including women who identify as immigrants. As portrayed in the updated diagram of the Power and Control Wheel, there are multiple "systems of oppression" that affect a woman's experience with IPV (Chavis & Hill, 2008). For example, an immigrant woman with a low education level, limited English proficiency, low income, and no local family support does not have the same resources available as a highly educated, financially stable, white American woman with extensive social networks.

Critics argue that Intersectionality does not address the individual woman's emotional and psychological states that will undoubtedly impact her experiences with IPV (Kelly, 2011). They also posit that Intersectionality does not have a defined methodology to direct the study of intersecting identities and their influence on health and behavior (Brownridge, 2009; Schulz & Mullings, 2006). Accordingly, researchers have attempted to provide guidance on how to

incorporate Intersectionality into research studies by using various approaches based on how social variables are categorized for the purpose of analysis. *Anticategorical complexity* is a way of "deconstructing analytical categories" and challenging the use of socially constructed categories such as gender, which has evolved to include more than two groups. New ethnography practices are used to conduct work with this approach. Second, the *intracategorical* approach focuses on lived experiences and uses an individual's social location as a point of reference to a larger group or society. Common methods include conducting case studies and narratives. Third, the *intercategorical* approach, acknowledges that there are unequal relationships between established social groups. For example, a study comparing race and gender would make cross comparisons between all combinations of race and gender, not just the single variables of race and gender. Common practices with the *intercategorical* approach include analysis of more subgroup categories and multilevel interactions (McCall, 2005).

Despite a lack of definitive analysis methods or focus on intrapersonal factors, Intersectionality provides a lens through which I have incorporated societal position and contextual factors into my analysis of IPV by MAPs. It highlights the fact that a woman experiencing IPV who has a certain demographic and cultural profile has a unique standpoint, which influences her risk of IPV, her experiences with IPV, and her ability to cope and seek help during and after the abuse. The Theory of Intersectionality is a way to explain that abuse affects women of every race and ethnicity, yet it is known that some women have additional vulnerabilities based on social, economic, and political barriers entrenched in race, ethnicity, and culture (Gunther, 2006; Humphreys, Sharps, & Campbell, 2005). Furthermore, some women have an even greater likelihood of experiencing IPV by MAPs due to their social identities or

status as marginalized persons (e.g., minorities, immigrants, persons of low income levels, and disabled persons).

In this dissertation, I enlisted an *intercategorical* approach in the quantitative analysis to make cross comparisons between subgroups based on variables such as race/ethnicity and education level. I used the Theory of Intersectionality to inform my questions in the qualitative study on the construct of family background because childhood home environment (Alexander, 2009) and neighborhood environment (Beyer, Wallis, & Hamberger, 2015) are contextual factors that may be associated with a woman's IPV experiences. I also recruited a demographically diverse group of women for my interviews in order to include participants with varied perspectives and backgrounds.

The Transactional Model of Stress and Coping

Lazarus & Cohen's (1977) TMSC, which portrays how stressors affect health, defined stressors as "demands made by the internal or external environment that upset balance or homeostasis, thus affecting physical and psychological well-being and requiring action to restore balance or equilibrium" (Glanz & Schwartz, 2008). Coping self-efficacy, which is the belief that a person has in his or her ability to cope with external stressors, influences how well he or she exhibits coping behaviors and performs health behaviors, such as exercising or stopping cigarette smoking (Pisanti, 2012). Coping efforts are shaped by personality traits. For example, people who practice emotional regulation may try to change the way they feel about a stressor by seeking social support or alternatively, deny the problem, which leads to additional distress. Having a positive outlook on a potentially stressful situation may influence a woman's emotion-focused coping effort strategies (Glanz & Schwartz, 2008).

The TMSC has been used in empirical research to understand the link between IPV experience and mental health outcomes. Research has shown that self-efficacy is an important

factor in the "stay-leave decision-making process" (Lerner & Kennedy, 2000), as well as the process of dealing with the consequences of IPV that may affect aspects of a survivor's life. More specifically, a woman who has experienced IPV and has high coping self-efficacy to deal with the consequences of her abusive relationship may have less distress (Benight & Bandura, 2004). For example, a study on IPV and depression and anxiety symptoms found that disengagement coping, such as avoidance and wishful thinking, fully mediated the relationship between psychological IPV and depression and anxiety symptoms (Calvete, Corral, & Estévez, 2008). In addition, a study using data from the Chicago Women's Health Risk Study found that most women engaged in problem-focused coping and that the coping methods they chose were based on their experiences with abuse (e.g., harassment and severity) and the resources available to them (e.g., employment and support network) (Sabina & Tindale, 2008).

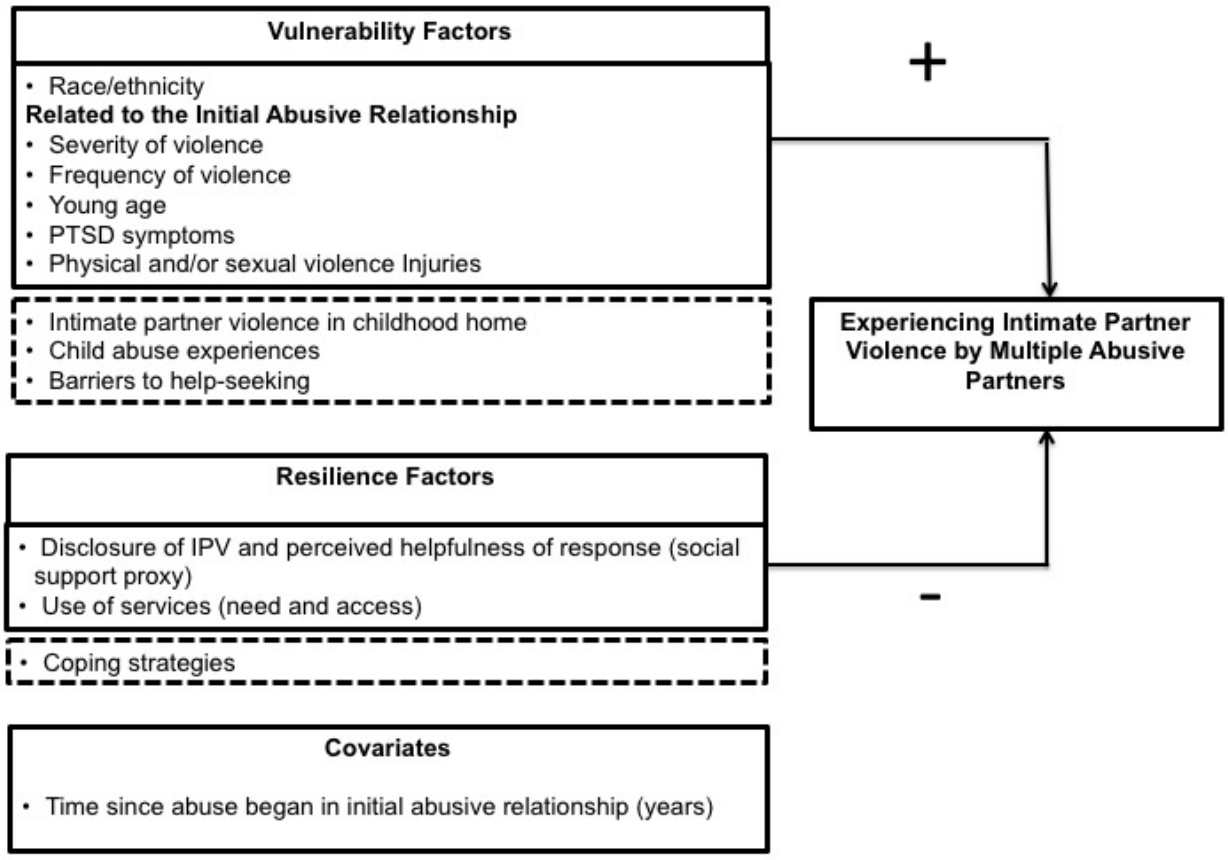
In this dissertation, the TMSC guided my inquiry into the use of internal coping strategies and help-seeking behaviors exhibited by IPV by MAPs survivors (Glanz & Schwartz, 2008). In addition, the TMSC informed questions about specific types of coping methods, including active coping, problem solving, and information seeking (Glanz & Schwartz, 2008). This model illustrates some of the internal (e.g., coping self-efficacy) and external (e.g., access to services) factors that may influence how a woman responds to a stressful situation such as an abusive relationship.

Conceptual Model Description

With the goal of identifying resilience and vulnerability factors related to experiencing IPV by MAPs that are most important to a woman's ability to cope and seek support or information and services, the concept of resilience (American Psychological Association, 2017a), the Theory of Intersectionality (Crenshaw, 1991), and components of the TMSC (Lazarus & Cohen, 1977) were combined to inform this study. The conceptual model displayed

below represents the relationships among variables that were analyzed with quantitative analysis methods and explored through qualitative analysis methods. The constructs in the solid line boxes were analyzed in both the quantitative and qualitative analyses, and constructs in the dotted line boxes were only analyzed in the qualitative analysis.

Figure 3.1: Analytic Conceptual Model - Experiencing IPV by MAPs



The vulnerability factors are severity and frequency of IPV, age, and experiences with PTSD symptoms or injuries related to physical and/or sexual violence experienced in the IAR. Race/ethnicity was also included as a vulnerability factor. Witnessing IPV in a woman's childhood home, experiencing child abuse, and experiencing barriers to help-seeking are all factors that were explored through the qualitative study.

The resilience factors that were analyzed included use of services and social support related to the IAR. I also analyzed the influence that these resilience factors have on the relationships between the vulnerability factors and experiencing IPV by MAPs. Coping strategies is another factor that was explored through the qualitative study (Figure 3.1).

CHAPTER 4: STUDY DESIGN AND METHODS

Position of the Researcher

In this study, I sought to expand the focus on IPV prevention to be more inclusive of women who have experienced IPV by MAPs. My research interest lies in understanding who is more likely to experience IPV by MAPs in order to improve prevention services and interventions. Although my life experiences do not mirror those of the women in DV support groups I have facilitated or of the women I have counseled on DV crisis lines, I wanted to ensure that I tell their stories accurately, while identifying factors that may influence risk of experiencing IPV by MAPs. Kimberlé Crenshaw's (1991) discussion of Structural Intersectionality and battering correlate with problems I witnessed when volunteering at a DV shelter (pg. 2). The overlapping issues of poverty, unemployment, and lack of education seemed to hinder some women from being able to progress beyond violent relationships. Crenshaw's (1991) statement that interventions need to be conscious of these intersecting structures of dominance resonates with my approach to studying experiences with IPV by MAPs (pg. 3).

Despite my training as an Epidemiologist, which comes from a positivist perspective, I believe that equally important information can be gained from obtaining qualitative data from the study population. As I have become more engaged with behavioral theories, my epistemological viewpoint has shifted more towards a constructivism/interpretivism stance with a greater focus on how people interpret and make sense of their own experiences within their surrounding contexts. There is less focus on the existence of one absolute truth, and more on the belief that how a person views reality is dynamic and that knowledge is built through interactions between

the researcher and study participant (Grbich, 2007). My overall mixed methods approach is dialectical pragmatism, which puts forth the argument that a researcher can integrate "perspectives and values of multiple paradigms and communities of practice" in a study (Johnson, 2012).

Since my position as the researcher was both influential to the construction of knowledge and in the analysis of the study data, I attempted to remain conscious of the beliefs and attitudes I have about IPV and gender roles in intimate relationships by taking reflexive notes and memoing throughout the analytic process (Guba & Lincoln, 2005). Although I am an outsider in that I have never experienced an abusive relationship, I tried to use my experiences working with women who have experienced IPV to provide an environment where study participants felt comfortable sharing their personal experiences with a sensitive topic.

My overarching dissertation research question is: *What makes some women more vulnerable to experiencing IPV by MAPs?* To answer this question, I employed a two-part mixed methods design based on the explanatory sequential model (Creswell, 2015), where I analyzed quantitative data from the NISVS (n=16,507 respondents) to identify potential resilience and vulnerability factors associated with experiencing IPV by MAPs. For Aims #1 and #2, I used a positivist perspective and utilized logistic regression and moderation analysis methods. Subsequently, using a constructivism/interpretivism standpoint, I collected and analyzed qualitative data from survivors of IPV by MAPs (n=20 interviewees) through one-on-one interviews, coding, and theory-building (Starks & Trinidad, 2007). For Aim #3, the qualitative analysis was guided by grounded theory methods to code survivor interview data (Strauss, 1990). I used thematic analysis of qualitative data to delve more deeply into study participants' experiences with violent partners in order to explain and expand on the quantitative findings

from the analysis of NISVS data. The quantitative and qualitative analysis processes were both sequential and iterative. The interview questions were informed by NISVS analysis findings and the interviews were used to probe on individual experiences with IPV that could not be understood by analyzing variables in the NISVS dataset, such as survivors' use of internal coping strategies and help-seeking behaviors. The information obtained from the interviews allowed me to gain more extensive information on experiences of IPV by MAPs survivors and helped explain some of the factor relationships identified in the quantitative analysis (Creswell, 2015; Curry, 2015; Teddlie, 2009). Termed "mixed research" by Lisa Pearce (2016), due to a mixing of philosophical positions in addition to methods, this dissertation was guided by Jennifer Greene's assertion that:

> *Mixed method inquiry is an approach to investigating the social world that ideally involves more than one methodological tradition and thus more than one way of knowing, along with more than one kind of technique for gathering, analyzing, and representing human phenomena, all for the purpose of better understanding* (Johnson, Onwuegbuzie, & Turner, 2007, p. 119)

Study 1: Research Questions, Hypotheses, Study Design, and Research Methods

Research Aims, Research Questions, and Hypotheses

Research Aim #1: To determine the associations between vulnerability factors (related to the IAR) and the likelihood of experiencing IPV by MAPs

RQ1: How do vulnerability factors related to the IAR (severity and frequency of IPV, age at first IPV, PTSD symptoms or injuries) or personal characteristics (race/ethnicity) influence the likelihood of experiencing IPV by MAPs?

H1.0: Women who report experiencing more severe or more frequent IPV, being young during their IAR, and having PTSD symptoms or injuries due to their IAR are more likely to report experiencing IPV by MAPs than women who do not report experiencing these IAR-related factors.

H1.1: Women who report being a member of a racial/ethnic minority group are more likely to report experiencing IPV by MAPs than women who do not report being a member of a racial/ethnic minority group.

Research Aim #2a: To determine associations between resilience factors (related to the IAR) and the likelihood of experiencing IPV by MAPs

RQ2a: How do resilience factors related to the IAR (disclosure of IPV and helpfulness (proxy for social support), use of services) influence the likelihood of experiencing IPV by MAPs?

H2.0a: Women who report disclosing IAR IPV to a family member, friend, police officer, doctor/nurse, psychologist/counselor, or crisis line responder and being helped are less likely to report experiencing IPV by MAPs than women who do not report disclosing IAR IPV and being helped. **H2.1a:** Women who report using legal, healthcare, victim's advocate, crisis hotline, or housing services due to their IARs are less likely to report experiencing IPV by MAPs than women who do not report accessing these services.

Research Aim #2b: To determine whether resilience factors have a moderating effect on the relationship between vulnerability factors and the likelihood of experiencing IPV by MAPs

RQ2b: How is the relationship between vulnerability factors and experiencing IPV by MAPs affected by resilience factors? **H2.0b:** The relationship between vulnerability factors and experiencing IPV by MAPs will vary by resilience factors such that for women who have used services or social support, there will be a negative association between vulnerability factors and experiencing IPV by MAPs and for women without service use or social support, there will be a positive association.

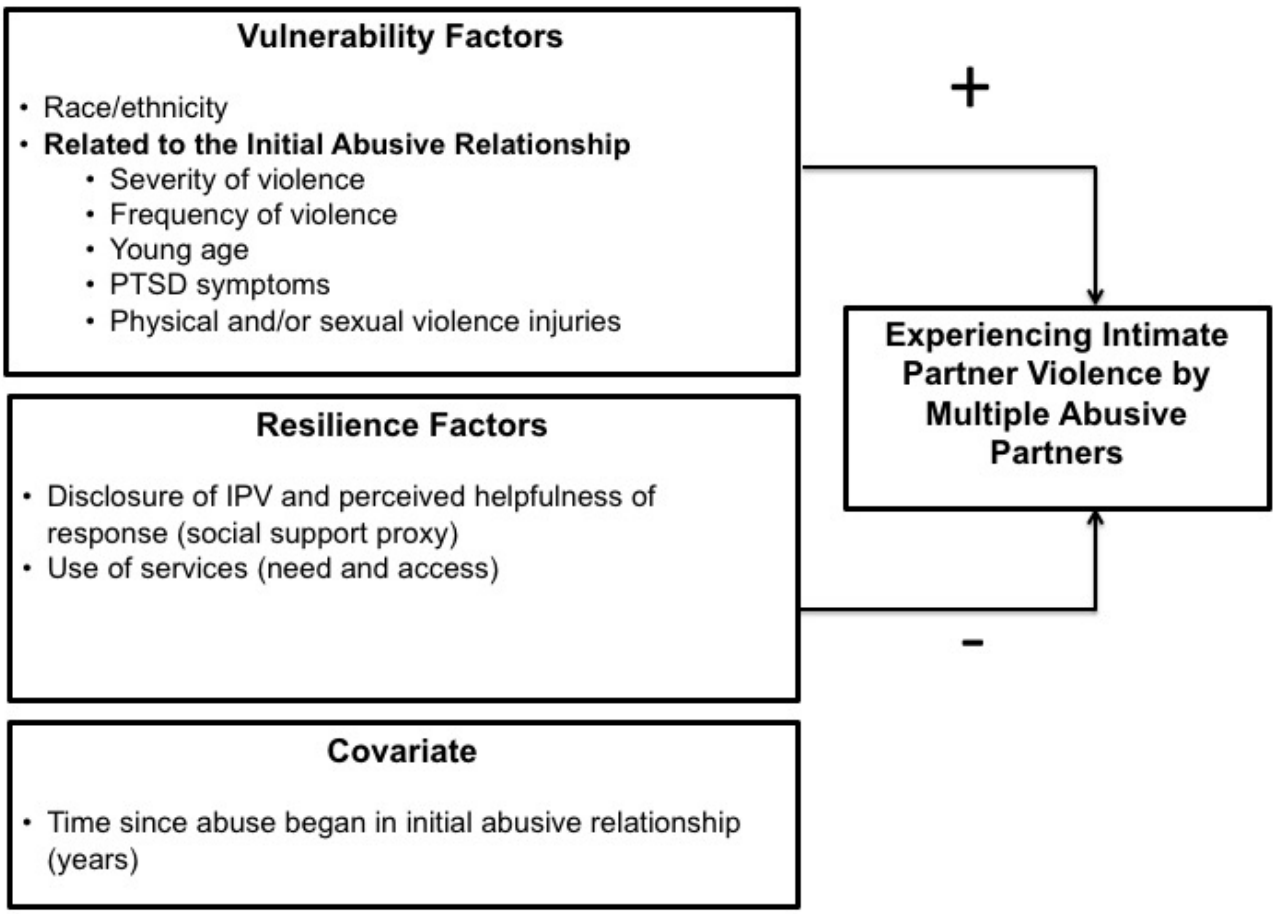
Research Aim #3: To gain a better understanding of: a) how women who have experienced IPV by MAPs have accessed and utilized services and social support, and engaged in other coping strategies; b) how helpful they found the services and social support they accessed; and c) what types of services or methods of support they believed would be most helpful

RQ3.0: How do women who have experienced IPV by MAPs describe their experiences seeking and using services and support; and **RQ3.1:** explain their self-care strategies?

Study Design and Research Methods

The conceptual model displayed below represents the relationships that were analyzed with quantitative analysis methods.

Figure 4.1: Quantitative Analytic Conceptual Model - Experiencing IPV by MAPs



The NISVS Dataset

Study data are from the NISVS, a NIJ and CDC-funded U.S. population-based survey conducted to meet the following objectives: 1) determine the prevalence and characteristics of sexual violence, stalking, and IPV, 2) determine who is most likely to experience these forms of violence, 3) determine the patterns and impact of the violence experienced by specific perpetrators, and 4) determine the health consequences of these forms of violence. The survey instrument was informed by the NVAWS (Tjaden & Thoennes, 2000) with subsequent input on items from subject matter experts, practitioners, and advocates to improve content validity. To improve the accuracy and quality of the survey instrument, cognitive testing was conducted to determine how well participants understood the survey questions. The NISVS cross-sectional dataset differs from other IPV-related surveys because it is the first national IPV survey to include questions about specific violent behaviors such as, types of sexual violence experienced other than rape and control of reproductive health, to further understand the public health burden of violence (Black et al., 2011). This dataset has the ability to connect specific behaviors to individual perpetrators and to identify sequential time periods when abusive relationships occurred. These features of the data allowed for analysis of IPV by MAPs. The use of cross-sectional data did not permit causality inference; however, NISVS data allowed for some determinations of temporality based on age-specific questions about abusive relationships.

Permission to access and analyze these data was granted through an approved Restricted Data Use Agreement that was submitted to the National Archive of Criminal Justice Data at the Inter-university Consortium for Political and Social Research (ICPSR). The Office of Human Research Ethics at the University of North Carolina at Chapel Hill determined that analysis of these data did not require Institutional Review Board (IRB) approval.

NISVS Recruitment and Data Collection Procedures

Applying a dual frame sampling design, data collectors used random digit dialing procedures to contact landline and cell phone numbers in all 50 states and the District of Columbia between January 22, 2010 and December 31, 2010. Equal allocation was used to select state-level sample sizes so that they were more likely to obtain an equal number of respondents from all states (Rosay, 2016). To decrease the possibility for errors, interview data collection and data entry occurred simultaneously using a computer-assisted telephone interview with the Blaise software package (Statistics Netherlands, n.d.). Approximately 45.2% of interviews were conducted by landline and 54.8% by cell phone. The overall weighted response rate (the proportion who agreed to participate in the interview among the contact numbers identified using the dual-frame sampling strategy, including both cell phones and landlines with unknown household status) was 33.6% (Breiding et al., 2017; Rosay, 2016) and the weighted cooperation rate (the proportion who agreed to the interview among the portion who were contacted and met the eligibility criteria) was 81.3% (Black et al., 2011; Breiding et al., 2017). Advance letters were sent to notify potential respondents of the upcoming survey using WHO's (2001) guidelines for DV research that specify how to protect confidentiality and maintain safety (pg. 11). If more than one eligible adult was in the home, a respondent was selected at random. Interviewers were allowed to call up to 15 times or receive a hard refusal or two soft refusals prior to terminating the interview request (Rosay, 2016).

Participants in the first phase of sampling were offered a $10 incentive and participants in the second phase (a resampling of non-responders from phase 1) were offered a $40 incentive, which could be mailed to their home or donated to United Way on their behalf. Interviews averaged 24.7 minutes and were completed with 16,507 persons (7,421 men and 9,086 women)

who were non-institutionalized, aged 18 years or older, and spoke English or Spanish (Black et al., 2011).

Each study participant was assigned a sampling weight provided by CDC to account for multiple factors including: probability of phone number being selected from the frame, probability of respondent being selected in each state, probability of selection from each household, number of telephone lines per household, probability of selection for non-response phase, and multiplicity (probability of landline respondent selected in the cell phone sample and probability of cell phone respondent selected in the landline sample). Nonresponse weights were applied to account for participants not responding or not completing the questionnaire. Post-stratification weights were provided to account for U.S. Census population totals used for the following demographic variables: age, sex, race, and ethnicity (Rosay, 2016).

Study Participants

Respondents went through a graduated informed consent process in which they did not initially know the purpose of the survey in order to protect confidentiality and maintain safety. Each interview consisted of 60 behaviorally specific questions about sexual violence, and stalking by any perpetrator, and IPV-related domains (psychological aggression, coercive control and entrapment, physical, and sexual violence) over one's lifetime and the past 12 months. (See Appendix A for details on the questions asked and the outcome and independent variables.)

The questions were asked in a way that removed blame from the respondent and made experiencing IPV the default, so that respondents would be more likely to disclose their experiences with IPV. For example, the first question related to physical IPV was, *"How many of your romantic or sexual partners have ever slapped you*?" The question asks specifically about the perpetrator's behavior and normalizes a non-zero response (Rosay, 2016). Questions were asked about the number of perpetrators who have performed each behavior in the respondent's

lifetime. If the respondent reported that at least one perpetrator performed the behavior, additional questions were asked about the perpetrator's demographic information, their relationship status with the perpetrator, and the ages of both the respondent and the perpetrator at the beginning and end of the relationship, along with the number of times the behavior was performed (ever and in the past 12 months). If multiple perpetrators were identified, follow up questions were asked about each person named. Unique identifiers/initials were used to follow the behaviors of each perpetrator through questions spanning multiple violence domains and through questions about consequences of experiencing violence, such as becoming injured or needing to utilize services.

Information related to perpetrator demographics; severity of violence before, during, and after the relationship ended; respondent injuries; PTSD symptoms; disclosure of IPV and use of services related to specific perpetrators are included in a perpetrator-level dataset, which has 51,535 observations and 442 variables. Information related to respondent demographics, health status, and experiences with all violence domains are included in the respondent-level dataset, which has 21,378 observations and 493 variables (Rosay, 2016). The number of observations in the final perpetrator-level dataset was increased due to the addition of a new perpetrator every time a new identifier or set of initials was encountered during initial dataset cleaning and preparation by NIJ (Rosay, 2016).

NISVS Measures

The procedures I used to create outcome, independent, and control variables from variables in the respondent-level and the perpetrator-level datasets are described below.

Primary Outcome Variable: **Physical and/or Sexual IPV by MAPs (variable = PVSVOUT)**

The analysis focused on questions about lifetime experiences with physical and/or sexual IPV based on a combination of 10 physical violence and 18 sexual violence indicator variables.

Women who reported that an intimate partner had performed at least one physical and/or sexual violence behavior, were counted as having experienced IPV. Only physical and sexual IPV were considered for the outcome variable because physical and sexual violence are often used together in many studies to define IPV (Campbell, 2002; Garcia-Moreno, Jansen, Ellsberg, Heise, & Watts; Tjaden & Thoennes, 2000) and questions related to physical IPV are one of the violence domains with the most complete information in NISVS (Rosay, 2016). The dichotomous ("yes" or "no") physical IPV variable provided a concrete estimate of IPV based on combining 10 indicators of physical violence behaviors. These behaviors include: slapping, pushing or shoving, hitting with a fist or a hard item, kicking, pulling hair, shoving against something, trying to hurt by choking or suffocating, beating, burning on purpose, or using a knife or gun. Sexual violence is a dichotomous ("yes" or "no") variable that was created by combining 18 sexual violence indicators. Sexual violence behaviors include: exposing sexual body parts; unwanted kissing; unwanted fondling; pressured, threatened, and forced sexual intercourse.

Lifetime IPV experience is a two-level variable (0 = no IPV, 1 = IPV) created from affirmative responses to lifetime physical and/or sexual IPV. To create the outcome variable, women were categorized as having experienced IPV by MAPs if they reported that at least two intimate partners performed one or more physical and/or sexual IPV-related behaviors in their lifetimes. IPV by MAPs is a dichotomous variable (0 = victimized by one perpetrator, 1 = victimized by more than one perpetrator) (Appendix A).

Other Descriptive Variables

Physical Violence (*variable: PVIPV*) and Sexual Violence (*variable: SVANY*) are dichotomous variables that were created based on the same 10 physical violence and 18 sexual violence indicator variables used in the creation of the IPV by MAPs outcome variable.

Psychological Violence (*variable: PAIPV*) is a dichotomous variable based on 18 "yes" vs. "no"

indicator variables related to expressive aggression and coercive control and entrapment (e.g., threatened to hurt him/herself or commit suicide when upset with you, destroyed something important; said things like, *"If I can't have you, then no one can"*). Each variable represents whether the respondent experienced at least one behavior representing each type of violence vs. none (0 = no violence, 1 = violence).

Demographic Variables

Age (variable: AGE) is a categorical variable that was measured in years and assessed by asking, *what is your age?* Responses include, 1 = 18-34, 2 = 35-49, 3 = 50-64, and 4 = 65 or older. Age was calculated based on the year 2010 when the survey was conducted.

Race was assessed by asking, *what is your race?* and respondents could choose more than one racial category, including: American Indian or Alaskan Native, Asian, Black, Multiracial, Native Hawaiian or Pacific Islander, Other, and White. ***Ethnicity*** was assessed by asking, *are you of Hispanic or Latino/a origin?* Response options were "yes" and "no". ***Race/ethnicity (variable = RACER)*** For this analysis, the race and ethnicity variables were combined to create race/ethnicity categories modeled after the U.S. Office of Management and Budget's (2000) standard subgroups. The categories include: 1 = non-Hispanic white, 2 = non-Hispanic black, 3 = non-Hispanic Other (Asian, Native Hawaiian/Pacific Islander, American Indian/Alaskan Native, Other), 4 = Hispanic.

Education (variable = RC2R) is a categorical variable that was measured by asking, *what is your highest level of education you have completed?* The response options include: 1 = less than high school, 2 = high school diploma/some college, 3 = college degree or higher.

Household Income Level (variable = INCOMER) was calculated in response to the question, *what was the total income from all household members during the most recently ended calendar year, before taxes? Include income from all sources such as work, investments, child*

support, and public assistance. The categories include (in the thousands): 1 = less than $25K, 2 = $25-less than $50K, 3 = $50K-less than $75K, 4 = $75K or more.

Marital Status (variable = MARITALR) is a categorical variable that was assessed by asking, *what is your current marital status?* Responses include: 1 = married, 2 = divorced/separated/widowed, 3 = single/never married.

Vulnerability Factors Related to the IAR

The race/ethnicity variable (described above), was also categorized as a potential vulnerability factor for experiencing IPV by MAPs.

In order to represent victimization overall and not equate frequency of violence with severity of violence, as cautioned by Koss et al. (2007), both severity and frequency of violence in the IAR were analyzed as potential vulnerability factors for experiencing IPV by MAPs.

Frequency of Violence in IAR (variable: FREQS) was determined based on calculating how often a respondent experienced physical and or sexual violence in her IAR. I created a continuous variable representing the frequency score for each IAR perpetrator by summing up the number of times each physical and sexual violence behavior was perpetrated. The summed score was divided by the maximum score (n = 56), based on a respondent having experienced all physical and sexual violent behaviors at least twice (10 physically violent behaviors two times each + 18 sexually violent behaviors two times each = 56). For example, if a woman reported experiencing three physically violent behaviors two times each and two sexually violent behaviors, one twice and the other one once, her frequency of violence score would be calculated in the following manner: physical violence experience ((one behavior x 2 times) + (one behavior x 2 times) + (one behavior x 2 times)) + sexual violence experience ((one behavior x 2 times) + (one behavior x 1 time)) = 9/56 = .16. The frequency score was multiplied by ten in order to be

on a 1-point scale for analyses, therefore the final frequency score in this example would be .16*10 = 1.6.

Severity of Violence in IAR (variable: SEVERES) was assessed by determining what types of physical and/or sexual violence behaviors the respondent experienced in her IAR. To construct the continuous severity of physical violence variable, I mapped 10 NISVS physical violence behaviors onto the 5-level Danger Assessment Scale, which is used to determine risk of homicide among women experiencing IPV (Campbell, 1986; Campbell, Webster, & Glass, 2009). Each violent behavior was assigned a score of 1 to 5, where 5 denoted higher risk of homicide based on previous research. The categories are as follows: 1 = slapping, pushing with no injuries, and/or lasting pain and includes NISVS behaviors of slapped and pushed or shoved. 2 = punching, kicking with no bruises, cuts, and/or continuous pain and includes NISVS behaviors of hit with a fist or something hard, kicked, and hurt by pulling hair. 3 = beating up with severe contusions, burns, or broken bones and includes NISVS behaviors of slammed into something, tried to hurt by choking or suffocating, and beat. 4 = threats to use a weapon with a head injury, internal injury, or permanent injury and does not include any NISVS behaviors. 5 = Use of weapons with wounds from a weapon and includes NISVS behaviors of burned on purpose and used a knife or gun.

The summed score was divided by the maximum score (n = 26), based on a respondent having experienced all 10 physical violence behaviors used in this analysis (two behaviors with a score of 1 + three behaviors with a score of 2 + three behaviors with a score of 3 + one behavior with a score of 4 + one behavior with a score of 5). For example, if a woman reported being slapped, kicked, and threatened with a weapon, her severity of physical violence score would be calculated in the following manner: slapped (one level 1 behavior x 1 point) + kicked (one level

2 behavior x 2 points) + being threatened with a weapon (one level 4 behavior x 4 points) = 7/26 = .27.

To construct the sexual violence variable, I mapped 16 NISVS sexual violence behaviors onto the Sexual Experiences Survey Short Form Victimization (SES-SFV) (Koss et al., 2007). THE SES-SFV, which uses a behaviorally specific assessment of violent behaviors similar to the NISVS, is one of the most widely used surveys to assess unwanted sexual experiences. The categories are as follows: 1 = sexual contact, which includes NISVS behaviors of unwanted kissing in a sexual way and fondling or grabbing of sexual body parts. 2 = sexual coercion, which includes NISVS behaviors of being pressured to have sex by being told lies, empty promises, or threats to end the relationship or spread rumors; being asked repeatedly for sex; or using one's influence or authority to coerce sex. 3 = attempted rape, which includes NISVS behaviors of using physical force or threats of physical force to try to have sex, but it did not happen. 4 = rape, which includes NISVS behaviors of having vaginal sex, receiving anal sex, being made to perform oral sex, being made to receive oral sex, when the respondent was drunk, high, drugged, or passed out and unable to consent or through use of physical force or threats of physical harm. Level 4 also includes NISVS behaviors of physical force or threats of physical harm being used to put fingers or objects inside the respondent's vagina or anus. Unwanted exposure of sexual body parts, being made to expose sexual body parts, and being forced to view sexual photos or videos did not map onto the scale and were each given a score of 0.

The summed score was divided by the maximum score (n = 47), based on a respondent having experienced all 18 sexual violence behaviors used in this analysis (three behaviors with a score of 0 + two behaviors with a score of 1 + three behaviors with a score of 2 + one behavior with a score of 3 + nine behaviors with a score of 4). For example, if a woman reported having

vaginal sex without being able to give consent and reported being pressured to have sex with someone in a position of authority, her severity of sexual violence score would be calculated in the following manner: sex without consent (1 rape behavior x 4 points) + pressured sex by authority figure (1 sexual coercion behavior x 2 points) = 6/47 = .13.

The overall severity of IPV score was calculated by averaging the severity score from both the physical violence and the sexual violence scales and similarly to IPV frequency, the severity score was multiplied by ten in order to be on a 1-point scale for analyses. Using the example above, the overall severity of IPV score would be: (.27 (physical violence score) + .16 (sexual violence score))/2 = .22* 10 = 2.2.

Age at IAR (variable: COMBOFIRST) is a continuous variable that represents respondent age (measured in years) when she began her IAR.

PTSD Symptoms (variable: PTSDSUM1) is a continuous variable that was assessed by determining how many self-reported PTSD symptoms the respondent experienced due to her relationship with the initial abusive partner. The aggregate variable includes the following symptoms from the PTSD Symptom Scale: having nightmares; trying hard not to think about the abuse; being constantly on guard, watchful, or startled; and feeling numb or detached (Foa, Riggs, Dancu, & Rothbaum, 1993). Each symptom had "yes" or "no" response options.

Injuries (variable: INJURY_PR1) is a dichotomous variable that was assessed by determining whether the initial abusive intimate partner caused injuries from physical or sexual violence based on responses to the following questions, *were you ever injured when this/any of these things happened with any of these people"* If "yes", the respondent was asked, *which of these people caused your injuries?* If the respondent affirmed a "yes" response based on either

physical or sexual violence, then she was categorized as having experienced injuries. The response options are 0 = no injuries, 1 = injuries.

Resilience Factors Related to the IAR

Service Use (variable: ACCESSSUM_ALL1) is a continuous variable that was assessed by asking whether the respondent used services due to the IAR based on responses to the following questions: *did you ever need any of the following services because of any of the things that any of these people did?* If "yes", the respondent was asked about her use of the following services: housing, victim's advocate, legal services, or medical care.

NISVS did not measure **social support** directly; however, it did assess **IPV disclosure** and the **perceived helpfulness of the person to whom IPV was disclosed**. The social support measure represents social support from persons in informal and formal roles.

Informal Disclosure of IPV (variable: SUPPORTF_PR1) was assessed by determining whether the respondent talked to a family member or friend about the IAR based on responses to three questions about disclosure of IPV and perceived helpfulness: 1) *have you ever talked to a family member/friend about what the perpetrator(s) did?* If "yes", 2), *which people did you talk to a family member/friend about?* If the respondent stated that she talked to a family member or friend and the perpetrator named was the initial abusive partner, the response was recorded in the perpetrator-level dataset and she was counted as having disclosed IPV. Otherwise, she was counted as not having disclosed IPV. Perceived helpfulness of talking with the family member/friend was assessed by asking, *when you spoke to your family member/friend about the perpetrator, how helpful was it to you?* The response options were collapsed from 1 = very helpful, 2 = somewhat helpful., 3 = a little bit helpful, 4 = not at all helpful into 0 = not helpful, 1 = helpful. ***Formal Disclosure of IPV (variable: SUPPORTP_PR)*** was assessed by determining whether the respondent talked to a police officer, doctor/nurse, psychologist/counselor, or crisis

line operator about the IAR based on responses to three questions about disclosure of IPV and perceived helpfulness of the response to the disclosure. In the same manner that informal support was assessed, the respondent was asked for which perpetrators did she speak with someone in a formal support role. Again, the response was recorded in the perpetrator-level dataset and she was counted as having disclosed IPV. Perceived helpfulness of talking with a police officer, doctor/nurse, psychologist/counselor, or crisis line operator was assessed by asking, *when you spoke to a police officer, doctor/nurse, psychologist/counselor, or crisis line operator about the perpetrator, how helpful was it to you?* The final response options are: 0 = not helpful, 1 = helpful. ***Disclosure of IPV and Perceived Helpfulness (variable: ALLSUPPORTBI)*** is a proxy variable for social support that represents both informal and formal disclosure of IPV and perceived helpfulness. 0 = no support (no disclosure, therefore no perceived support + disclosure, but no perceived support) and 1 = support (disclosure and at least one person was perceived to be helpful).

Control Variable

Time Since Abuse Began in the IAR (variable: TIMESINCE) is a continuous variable (measured in years) that was calculated by subtracting the *respondent age at first victimization* (specific to the initial abusive partner) from the current age of the respondent (in 2010 when the survey was conducted).

Quantitative Analysis

Dataset Training

Prior to conducting my initial analysis, I attended a NIJ-sponsored, invitation-only weeklong training on the NISVS dataset from January 11-15, 2016 at ICPSR at the University of Michigan. As part of the training, I presented an overview of my planned dissertation study and attended lectures where I gained insight into the nuances of the data, including skip patterns,

weighted estimates, and composite variables. I also learned about the process for tracking perpetrators and linking them back to respondents by merging the respondent and perpetrator-level datasets. To prepare the data for the analysis, I reviewed technical documentation provided with the dataset and notes from the NISVS training workshop.

Effective Sample Size and Power Analysis

$n = (Z_{\alpha/2} + Z_{\beta})^2 [P_1 (1 - P_1) + P_2(1 - P_2)]/(P_1 - P_2)^2$
n = number per group
$Z_{\alpha/2} = 1.96$
$Z_{\beta} = .84$
P_1 = hypothesized group 1 proportion
P_2 = hypothesized group 2 proportion

I used the online software nQuery Advisor to calculate the required sample size to detect a 14.2% difference in stalking prevalence between women who have experienced IPV with one perpetrator versus women who have experienced IPV by MAPs. With power = 80% and alpha = .05, 186 women are needed per IPV victimization status group resulting in an odds ratio of 1.82. Stalking experiences was chosen to calculate sample size because it represents an aspect of previous victimization that may differ between women who have experienced IPV by MAPs and those who have had one abusive partner (Cole et al., 2008). The expected group proportions were based on a study about women's risk for revictimization by a new partner where 53.1% of women who were abused by one partner reported being stalked and 67.3% of women who were abused by MAPs reported being stalked by their initial abusive partner (Cole et al., 2008).

I also calculated the sample size necessary to detect a 21% difference in PTSD symptoms between the same groups. With power = 80% and alpha = .05, 67 women are needed per IPV victimization status group, resulting in an odds ratio of 3.19. PTSD symptoms were chosen to calculate power because they are commonly associated with experiencing IPV and women who have experienced IPV by MAPs are expected to have higher rates. The expected group

proportions were based on a study about personality profiles of women who had been abused where 15% of women with one abusive partner reported experiencing PTSD symptoms and 36% of women with MAPs reported experiencing PTSD symptoms (Coolidge & Anderson, 2002). Due to the effects of complex survey sampling, I also calculated the effective sample size needed to account for the design effect using the complex sample size of 186 from the example above with the following equation:

> **Effective sample size *n* = estimated complex sample size/average design effect of all model variables = 186*2/.87 = 372/.87 = 428** (Heeringa, Berglund, & West, 2010)

To achieve the same precision with my complex sample as I would with a simple random sample, I needed 428 women in the total sample. With 2,189 women experiencing physical and/or sexual IPV with one partner and 405 (15.6% of victimized women) experiencing IPV by MAPs in their lifetimes, there is a sufficient number of women in the sample (n = 2,594) to conduct the analysis for each aim of the quantitative study.

Missing Data Analysis

To limit the effects of large amounts of missing data, I employed sequential multiple imputation using the fully conditional specification method. This method of imputation is preferred for use with complex survey samples and large datasets that utilize both categorical and continuous variables as it allows for specification of the imputation model for each variable conditioned on other variables (Liu & De, 2015). Using PROC MI, I created fifty imputations using the logistic regression specification for categorical variables (race, injuries, social support) and linear regression specification for linear variables (age, PTSD symptoms, service use), and included all interaction terms in the models (Mitani, Kurian, Das, & Desai, 2015; Von Hippel, 2009). I employed PROC MI to impute missing data and PROC MIANALYZE to combine the imputed dataset results in SAS 9.4 (SAS Institute Inc., 2017). The resulting estimates with 95%

confidence intervals accounted for sampling error and potential bias that may have occurred due to missing data when using complete case analysis (Berglund, 2015; Liu & De, 2015).

Data Cleaning and Preparation

I cleaned the data by removing all variables that were not relevant for the analysis and I conducted an exploratory univariate descriptive analysis to determine the distribution of key independent variables in the study sample (e.g., demographics and vulnerability and resilience factors) and to identify extreme values. Variables from the perpetrator-level dataset were tracked per respondent and merged with the respondent-level dataset to create a final dataset for analysis.

Statistical Analysis Methods

I calculated descriptive statistics on respondent demographic variables using PROC SURVEYFREQ. Next, I constructed the independent variables as described above and ran bivariate logistic regression models for each independent variable by the dependent variable of experiencing IPV by MAPs. All variables were statistically significant in the bivariate analysis at p <.1 except for race/ethnicity (p = .17) and social support (p = .30); however, they were all included in subsequent multivariate models. To examine correlations between continuous independent variables, I created a correlation matrix. To examine correlations between categorical variables, I calculated chi square (χ^2) values. Finally, to examine relationships between categorical and continuous independent variables, I calculated tetrachoric/polychoric correlations. Increases in IAR IPV frequency were highly correlated with increases in IAR IPV severity (r = .954, p = <.001); therefore, I removed IPV severity from the multivariate logistic regression models and used IPV frequency to represent the degree of IPV in the IAR. I chose to conduct the analysis with IPV frequency because IPV frequency was more representative of IPV experienced over time within the IAR and not solely based on individual incidents of IPV. Prior to running the analysis, I conducted a sensitivity analysis by examining IPV frequency and IPV

severity in separate models. I also examined multicollinearity among independent variables using PROC REG with TOL VIF options to calculate tolerance and its reciprocal, variance inflation (Allison, 2012).

For Aims #1 and #2, I used PROC SURVEYLOGISTIC in SAS and ran multivariate logistic regression models to determine if experiencing vulnerability and resilience factors were associated with the likelihood of experiencing IPV by MAPs. Logistic regression procedures were used because the dependent variable of experiencing IPV by MAPs is binary/dichotomous and the assumptions required for ordinary least squares regression that the random error term has a normal distribution, mean = 0, and constant variance, are violated by the fact that the dependent variable can only have two values (Allison, 2012). Due to complex survey sampling procedures used in the collection of NISVS data, weights provided with the dataset were used to compute national estimates that accounted for sampling, non-response, coverage, and sampling variability (Black et al., 2011; Breiding et al., 2017; Klein, Proctor, Boudreault, & Turczyn, 2002). For all multivariate models, I transformed parameter estimates into odds ratios and used 95% confidence intervals and $p < .05$ from Wald tests to determine the influence of each predictor variable and interaction effect on the outcome of experiencing IPV by MAPs. After assessing each category compared with the reference group, I used a TEST statement to obtain hypothesis tests to make comparisons between categories of variables that were not the reference group (e.g., non-Hispanic Black vs. Hispanic).

For Aim #1, I modeled the likelihood of experiencing IPV by MAPs by vulnerability factors related to the IAR including, IPV frequency, age, PTSD symptoms, injuries (reference = no injuries), and race/ethnicity (reference = non-Hispanic white/Caucasian) (Model 1). Using an intercategorical approach to examine potential differences between racial/ethnic groups, I also

modeled the likelihood of experiencing IPV by MAPs based on education and income levels (McCall, 2005).

Logistic Regression Model (logit/log odds): $\log [p_i/1-p_i] = \alpha + \beta_1\chi_{i1} + \beta_2\chi_{i2} + \ldots + \beta_k\chi_{ik}$

Model 1: log [likelihood of experiencing IPV by MAPs based on vulnerability factors (related to the IAR)] = $\alpha + \beta_1$(IPV frequency) + β_2(age)+ β_3(PTSD symptoms) + β_4(injuries) + β_5(race/ethnicity) + β_6(time since)

For Aim #2a, I modeled the likelihood of experiencing IPV by MAPs by resilience factors related to the IAR including, support (reference = no support) and use of services (Model 2). I also modeled the effects of all vulnerability and resilience factors on the likelihood of experiencing IPV by MAPs (Model 3).

Model 2: log [likelihood of experiencing IPV by MAPs based on resilience factors] = α + β_1(services) + β_2(social support) + β_6(time since)

Model 3: log [likelihood of experiencing IPV by MAPs based on vulnerability and resilience factors (related to the IAR)] = $\alpha + \beta_1$(IPV frequency) + β_2(age) + β_3(PTSD symptoms) + β_4(injuries) + β_5(race/ethnicity) + β_6(services) + β_7(social support) + β_8(time since)

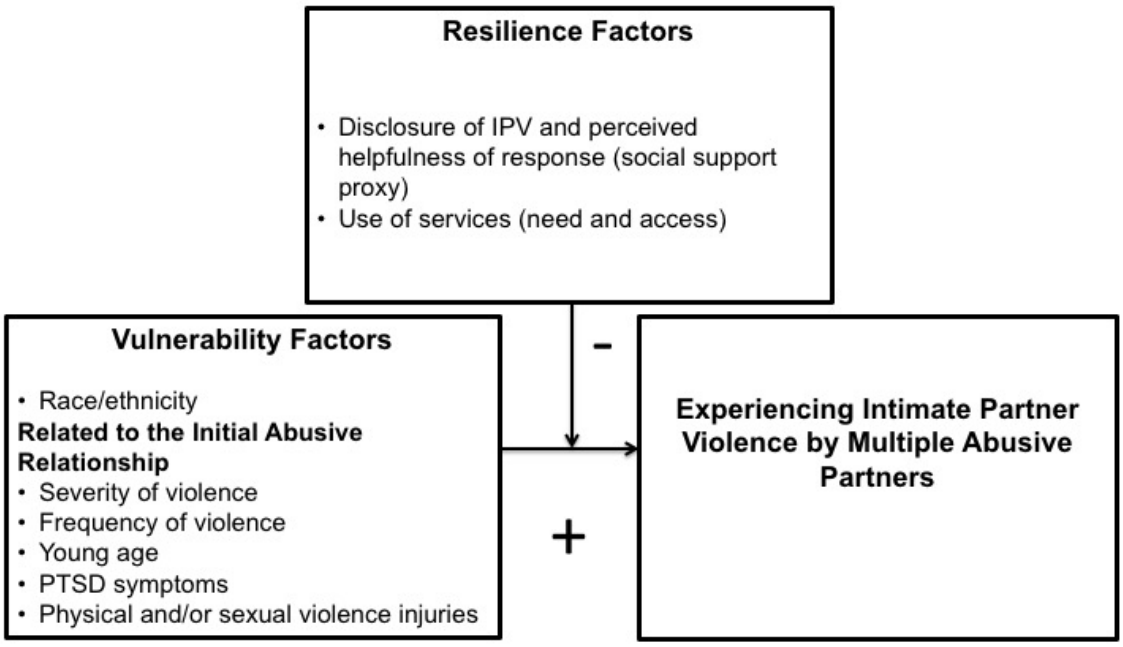
For Aim #2b, I conducted moderation analyses modeled after Frazier, Tix, and Barron (2004) to quantify the effects of resilience factors (*services* and *social support*) on the relationship between vulnerability factors and the likelihood of experiencing IPV by MAPs. First, I ran a main effects model without the interaction terms (Model 3). Second, I ran a model that included interaction terms for service use and each vulnerability factor (Model 4) and another model that included interactions terms for use of social support and each vulnerability factors (Model 5). I tested groups of interactions for individual moderators simultaneously to decrease the risk of type 1 error by performing a "chunk test" where I contrasted model fit with all interaction terms compared with a model with no interaction terms to determine if any of the interaction factors were significant (Jaccard, 2001).

If the "chunk test" revealed that any of the interaction terms were significant at $p < .05$, I used a backwards elimination strategy to examine the significance of individual interaction terms by comparing model fit after dropping an interaction term. If interactions terms were significant, post-hoc probing was used to determine whether significant moderation patterns were as hypothesized (buffering moderation effect). I estimated the effect of the vulnerability factor on the likelihood of experiencing IPV by MAPs by calculating odds ratios and 95% CIs at different levels of the moderator variables (*services* (m = 0, m = 1) and *social support* (m = 0, m = 1)) (Hayes, 2013). Finally, if there were significant interaction terms, I created graphic plots of the predicted probabilities of experiencing IPV by MAPs as a function of the vulnerability factors at various levels of *services and social support* (Hayes, 2013; Hosmer, 2013).

Model 4: log [likelihood of experiencing IPV by MAPs based on vulnerability factors (related to the IAR) and service use interaction terms] = $\alpha + \beta_1$(IPV frequency) + β_2(age) + β_3(PTSD symptoms) + β_4(injuries) + β_5(race/ethnicity) + β_6(services) + β_7(social support) + β_8(time since) + β_9(services*IPV frequency) + β_{10}(services*age) + β_{11}(services*PTSD symptoms) + β_{12}(services*injuries) + β_{13}(services*race/ethnicity)

Model 5: log [likelihood of experiencing IPV by MAPs based on vulnerability factors (related to the IAR) and social support interaction terms] = $\alpha + \beta_1$(IPV frequency) + β_2(age) + β_3(PTSD symptoms) + β_4(injuries) + β_5(race/ethnicity) + β_6(services) + β_7(social support) β_8(time since) + β_9(social support*IPV frequency) + β_{10}(social support*age) + β_{11}(social support*PTSD symptoms) + β_{12}(social support*injuries) + β_{13}(social support*race/ethnicity)

Figure 4.2: Quantitative Analytic Conceptual Model for Moderation Analyses-Experiencing IPV by MAPs



Quantitative Study Limitations

Study 1 was affected by several limitations. One limitation of this study is the cross-sectional nature of NISVS data, which limited inference of causality. However, respondents were asked time-associated questions (e.g., age at beginning of an abusive relationship) that allowed me to determine the temporality of some variables related to IPV experiences.

I was unable to determine whether a respondent utilized services or social support at a certain time or how many times due to a relationship, but my analysis of service use and social support did connect these factors with individual relationships. Similarly, I did not know when each violent behavior occurred, only that it happened within the confines of a specific relationship. When assessing IPV frequency, I only included physical and sexual violence behaviors in the measures because of the ability of these violent behavior types to easily map onto the scales I used; however, including psychological violence indicators may have also been influential in predicting experiences with IPV by MAPs.

Furthermore, in my comparisons between women who have experienced IPV by MAPs and women who have had one abusive partner, I did not distinguish between women who have had two, three, four, or more abusive partners. Although I lost some information by not comparing these groups and NISVS data allows for up to 15 perpetrators for each type of violence, there were high percentages of missing data beyond more than two perpetrators.

Another limitation of retrospective reporting was that respondents may have had a hard time recalling specifics of abusive relationships that occurred a long time ago; therefore, responses to questions about specific relationships may have involved some recall bias, particularly if the respondent discussed multiple partners. Finally, as noted by other researchers (Breiding, 2014), NISVS may not have been able to reach the most severely impacted persons or those most at risk for experiencing IPV by MAPs due to safety concerns or concerns about experiencing repeat trauma when discussing experiences with IPV.

Study 2: Qualitative Examination of Coping Methods, including Service and Support Use, by Women Who Have Experienced IPV by MAPs

In the qualitative study, I conducted in-depth interviews with a sample of women (n = 20) who experienced IPV by MAPs. I supplemented NISVS analysis findings with the qualitative data. I used interviews to address some of the limitations of cross-sectional survey data, which helped ensure that respondents had clarity on what they are being asked and enabled me to obtain more context on question responses. Qualitative data analysis helped to expound on the variable relationships identified in the quantitative analysis. It also helped to explain experiences with IPV by MAPs, specifically related to coping strategies involving the use of services and social support.

Research Aim and Thematic Questions

Research Aim #3: To gain a better understanding of: a) how women who have experienced IPV by MAPs have accessed and utilized services and social support, and engaged in other coping strategies throughout their experiences with IPV; b) how helpful they found the services and social support they accessed; and c) what types of services or methods of support they believe would be most helpful

There were no hypotheses for Aim #3 because it is not appropriate to test hypotheses in a qualitative study.

During the interviews, I inquired about the following thematic questions related to respondent experiences with IPV by MAPs:

3.0: How do women who have experienced IPV by MAPs describe their most salient needs related to experiencing IPV?

3.1: How do women who have experienced IPV by MAPs describe their experiences seeking out and using services and social support?

3.2: How do women who have experienced IPV by MAPs describe their self-care strategies?

Instrument Development

The interview guide was informed by semi-structured, audio recorded interviews that I conducted with DV Advocates, to gather information on their views about the needs and coping strategies of women experiencing IPV by MAPs. An exemption from the UNC IRB was received prior to recruiting and interviewing respondents for these informational interviews. I completed interviews with people in the following roles: DV Agency Directors (2), Family Justice Resource Center Director, Law School DV Clinic Director/Law Professor, DV Agency Director of Crisis Services, DV Support Group Coordinator, and a DV Survivor Support Group Facilitator who was also a Health Educator/Case Manager and a Support Group Facilitator who was also an

Immigrant Advocate. The interviewees were chosen with the assistance of my dissertation chair, Dr. Beth Moracco, based on their positions in leadership or direct service roles in DV agencies or organizations that provide services to persons who have experienced IPV. I used snowball sampling to identify additional interviewees. I sent an email to chosen interviewees in Wake, Durham, Alamance, and Orange counties in North Carolina with a request for them to participate. Prior to beginning the interviews, I obtained verbal consent from each participant to audio record and take notes to improve accuracy for later use when creating the IPV survivor interview guide. All interviews were conducted by phone except for one, which was conducted in-person, between August and September 2015 and lasted an average of 20-25 minutes.

I asked interviewees about the immediate and long-term needs of IPV survivors and about any lack of services for this population. I also inquired about potential patterns related to social context/surroundings and IPV experiences for women who have experienced IPV by MAPs. Finally, I asked about their beliefs about why some women are more vulnerable to experiencing IPV by MAPs than others. During the interviews, we discussed the role of DV agencies and Advocates in meeting the needs of women who have experienced IPV by MAPs. I also asked them to provide specific input on questions to ask survivors related to their use of services, availability of social support, and other coping strategies.

The IPV survivor interview guide was also informed by gaps identified in the literature related to women's experiences with IPV by MAPs. I included questions that have not been previously asked related to coping with MAPs. Previous studies often use standardized questionnaires with inventories or scales to assess exposure to violence (Caralis & Musialowski, 1997; Cole et al., 2008). Although I did not find an interview guide with open-ended questions that was used specifically for women who have experienced IPV by MAPs, I included topics

from in-depth interviews that were asked of women who have experienced lifetime IPV (Bacchus, Mezey, & Bewley, 2003; Gill, 2004). (Appendix D).

To ensure that the information was appropriate and informative, I solicited assistance from other researchers who conduct IPV-related studies, DV Advocates, and survivors of IPV, to act as expert reviewers/consultants on the IPV by MAPs survivor interview guide and recruitment and consent materials. I also pilot tested the interview guide by interviewing other researchers to improve question clarity, wording, and appropriateness of included questions. Furthermore, the review was conducted to determine the average time to complete the interview and the appropriate order of questions. I made final revisions to the survivor interview guide, screening instrument, and recruitment and consent materials based on the response from my dissertation committee members, expert reviewers/consultants, pilot test respondents, and initial interviews with IPV by MAPs survivors.

Sampling and Qualitative Analysis Recruitment

Study participants self-identified as having experienced IPV by MAPs. I recruited a purposive sample of 20 women from which I reached "informational redundancy" or "saturation", while also obtaining maximum demographic variation (Glaser, 2017; Guest, Bunce, & Johnson, 2006; Sandelowski, 1995). Purposive sampling was used because it is preferable to probabilistic sampling for obtaining in-depth information on cases (Patton, 1999). I obtained IRB approval for the survivor interviews from the Office of Human Research Ethics at UNC IRB after a full board review prior to recruiting or interviewing study participants (Study # 16-2274).

For Aim #3, I began recruiting IPV by MAPs survivors by emailing my contacts at DV agencies. To prevent low participation rates, I utilized the assistance of local DV agency personnel with whom I had previously worked or interviewed to assist with recruitment efforts, as well as the assistance of my dissertation committee members who conduct IPV-related

community-based research. After the initial response to my emailed inquiry about advertising the study, I met with DV agency representatives in person or by phone to discuss details about the study, provided them with colored copies of brochures and flyers as needed, and answered their questions about the study. The following agencies agreed to promote the study: 1) Durham Crisis Response Center, 2) Family Abuse Services of Alamance County, 3) Compass Center for Women and Families, 4) Helpmate, 5) Inter-faith Council Homestart Program, and 6) The North Carolina Coalition of Domestic Violence (NCCADV). Agency representatives stated that they would post information on client listservs or information boards, present the information at house meetings or support groups, and alert staff to share the opportunity with clients individually. NCCADV is the state agency that also promoted the study among member organizations. The flyers and brochures included a general overview of the study, eligibility requirements, and information on what participating in the study would entail, along with my contact information.

Despite all of the recruitment efforts and connections, over a period of five weeks, I had only interviewed one study participant, so I expanded my recruitment efforts beyond local DV agencies to include women outside of North Carolina and those who had not necessarily utilized the services of a DV agency, which provided a more demographically diverse group of women with heterogeneous encounters with services providers and informal supporters. Furthermore, one of the eligibility requirements of the study was that women had to be out of their most recent abusive relationship for at least 3 months. Often, women who were DV agency clients living in shelters could only stay in the facility for up to three months (although this is not consistently enforced), so they were automatically ineligible for the study. In addition, many agencies did not have continued contact with clients once they left the facility and were not able to promote the study with former clients.

I began to recruit study participants online using the following platforms: 1) Craigslist, 2) Reddit (I posted study information after contacting online support group moderators), 3) Facebook (I posted study information after contacting online support group moderators), 4) Twitter, 5) Callforparticipants.com, 6) Jointheconquest.com, and 7) Researchmatch.org. In addition, I utilized my professional and academic connections to advertise the study using the Sistahdocs and Gender-based Violence Research Group listservs and Groupme groups for UNC undergraduate and graduate students. I also advertised the study by posting flyers and brochures throughout locations on the campus of UNC Chapel Hill, including the Graduate Student Center, hospital, Beacon Program, libraries (Davis, Health Sciences, Undergraduate), Student Wellness, LGBTQ Center, School of Pharmacy, and School of Medicine.

I also engaged local social service agencies through visits to Dress for Success, who shared the study on their client listserv and Durham County Human Services where I visited the following offices to leave flyers and brochures related to the study: Free Dental Clinic; Women's Clinic; Economic Services Application; Economic Services Readmission; Child Custody; and Women, Infants, and Children. Finally, I advertised throughout Durham and Chapel Hill, North Carolina by posting flyers and brochures at five local public libraries, The Orange County courthouse, and downtown Durham businesses, including a bookstore, a restaurant, a clothing store, and coffee shops. Expanding my recruitment efforts to different communities and especially online, allowed me to recruit and interview all of the women in the study in less time than it took me to recruit the initial respondent.

Data Collection Procedures

Study participants texted or called the study phone number, sent a message to the study email address, or sent me a direct Facebook or Groupme message to indicate their interest in the study. Within 12 hours, I scheduled a screening call to review eligibility requirements, provide

an overview of the study, review the study process, discuss confidentiality, and set up an interview time and location if eligible. Prior to or at the beginning of each interview, participants were asked to complete an anonymous short screening tool online using Qualtrics software, or on paper if preferred to record their demographic information. The screener asked about demographics, including age range, race/ethnicity, education level, household income level, employment status, marital status, intimate relationship status, whether or not they have children, and if they do, how many children, how many abusive intimate partners they have had, and how long it has been since they were in an abusive relationship. The respondents also checked statements to indicate that they had been briefed on the following during the screening calls: 1) their right as a volunteer to pause or stop the interview at any time, 2) the request to audio record and transcribe the interviews, and 3) that their name and identifying information would not be connected with their interview transcript (Appendix C). The beginning and end of the survey included contact information for DV and social service agencies. Respondents who met the following criteria: 1) self-identify as a woman, 2) be at least 18 years old, 3) be able to speak and read written English, 4) self-identify as having experienced IPV by at least two partners, and 5) no longer be in a relationship with an abusive partner for at least the previous three months in order to increase participant safety, were invited to participate in a one to one-half hour long, audio recorded interview about how they have accessed and utilized services and social support, and engaged other coping strategies throughout their experiences with IPV. They were asked for additional contact information if needed and whether they wanted to receive a reminder phone call, text, or email message prior to the interview date. Study participants were offered $25 in cash or PayPal payment for their participation.

As a former IPV support group facilitator/crisis line responder and in adherence to IRB protocol, I was cognizant of the need to ensure safety with this population; therefore, I conducted all interviews in convenient, safe places such as a public library meeting room or online using Skype, Google Hangout, Google Duo, or FaceTime in a private office. No phone messages were left for study participants mentioning IPV or DV, and personal information was kept separately from interview data. Because the interviews may have brought up painful memories for the participants, I provided information/contact numbers for local and national DV services as needed. Finally, I conducted the study in a manner that upheld ethical and safety recommendations for DV research that were outlined by WHO (Ellsberg & Heise, 2002).

Prior to beginning the interviews, I reviewed the consent form with the interviewees and asked them to provide written or verbal consent (depending on whether the interview was conducted in person or virtually). The consent form included the following information: an overview of the study, terms of confidentiality, study participant compensation, assurance of voluntary participation, potential benefits to participants, what was being requested of participants, dissemination plans for study findings, and my contact information (Arksey & Knight, 1999) (Appendix B). I reviewed the request to audio record the interview, described the risks and benefits, and reminded them of their option to skip questions they did not feel comfortable answering or to end the interview at any time.

I also asked the interviewees if they had questions for me and reviewed with them CDC definitions for physical, sexual, psychological (expressive aggression and coercive control) violence; stalking; and social support (Breiding et al., 2015). Finally, I asked them to take a few moments before the interview began to create a timeline of the relationships we would be discussing. I encouraged them to use significant life experiences such as a graduation or birth of

a child to help them recall specific details about their experiences in these relationships. The semi-structured interview format allowed study participants to answer questions without response constraints so that they could provide rich, detailed information about their individual experiences with IPV.

Each interview began with general questions about their experiences in their IAR followed by subsequent abusive relationships. Interviewees were asked about the following: types of IPV experienced in the IAR and subsequent relationships, their most immediate needs during and after experiencing their IAR, long-term needs related to experiencing IPV, presence/lack of social support, use of services related to experiencing IPV, long-term difficulties, the effect of their IAR on subsequent relationships, and stress management and self-care. At the end of the interview, study participants were invited to provide additional information about experiencing IPV by MAPs that they wanted to discuss and they were asked to discuss some reasons why they believed some women are more vulnerable to experiencing IPV by MAPs. To elicit responses that were as complete as possible, I probed with prepared follow up questions and statements (Arksey & Knight, 1999). I also used a conversational tone to build a rapport with study participants so they felt comfortable answering questions openly and honestly.

Qualitative Data Analysis

Audio recordings of the interviews were transcribed verbatim by an independent contractor. All audio recordings and transcripts were saved on an encrypted password-protected laptop. Interviewee names and identifiers were not used on transcripts and each study participant was given a unique identifier based on her interview date and order of interview. I began reviewing the audio recordings and transcripts as soon as I started conducting interviews in order to allow for necessary changes to wording of questions that respondents had difficulty

answering. Following each interview, I wrote a narrative summary and memos to capture my initial thoughts and document similarities between participant experiences, note emergent themes, and detail any potential biases of the study participant or of my own as the interviewer using reflexivity (Arksey & Knight, 1999; Rubin & Rubin, 2005).

To organize the data for coding, analysis, and interpretation, I entered the transcripts into qualitative data analysis and research software ATLAS.ti 8 (Muhr, 2004). First, I created a codebook with a priori codes representing constructs about IPV by MAPs based on the literature, study aims, and theories informing the conceptual model for this study (Miles, Huberman, & Saldana, 2014). The codebook included definitions for each code, guidelines for use, and example text from the interview transcripts (MacQueen, McLellan-Lemal, Bartholow, & Milstein, 2008). Second, I used various strategies for coding and interpreting the data including, line-by-line coding (Charmaz, 2006), which is recommended to create broad categories where "basic themes and issues in the data" were identified, along with analytic memoing (Saldaña, 2012). Some of the types of codes I used included attribute, descriptive, in vivo, process, emotions, and values (Saldaña, 2015). Finally, I added codes created during the line-by-line coding process to the codebook and begin categorizing and aggregating more specific codes into higher-level codes that could explain large amounts of data.

To begin identifying themes by making connections between codes, I generated reports using ATLAS.ti 8 (Muhr, 2004) that documented each time a code was used. In addition, I used the ATLAS.ti 8 (Muhr, 2004) mapping tool to construct a network analysis diagram with arrows to depict relationships between codes to determine those most relevant to the study of experiences with IPV by MAPs. Codes that were not prominent across participants or those found to be unrelated to the topic of experiencing IPV by MAPs were deleted. I created code

matrices to organize major codes across participant experiences based on techniques by Miles and Huberman (1994), and used them to write analytic memos on emerging themes and patterns in the data about the codes (Miles et al., 2014; Saldaña, 2015). I recoded the transcripts as needed based on the patterns seen in the memos and diagrams. Lastly, I grouped codes into overarching themes using exemplary quotes to represent key study findings (Charmaz, 2006).

A sample of transcripts (10%) was coded independently by another researcher and compared with my coding in order to increase the reliability of study findings (Arksey & Knight, 1999). If there was disagreement in our codes, a consensus was reached through discussion of reasons for using particular codes. In addition, emerging themes were reviewed by IPV survivors, DV Advocates, and researchers with advanced expertise in analysis of qualitative data to increase credibility of findings (Graneheim & Lundman, 2004).

Qualitative Study Limitations

There are a few limitations to note in the qualitative study. Participants self-selected into the study and may have been more likely to use formal services and seek social support, because some of the recruitment was done through DV agencies, social service agencies, and online support groups. Despite potential similarities among participants based on their experiences, the sample sociodemographic data indicated that I interviewed a diverse sample of participants. Furthermore, although participants who were recruited from North Carolina counties may be more similar to one another than to the women experiencing IPV by MAPS in the general U.S. population; the North Carolina counties from which I recruited participants have great demographic variation (United States Census Bureau, 2014).

Another potential limitation is that all of the participants have exited their abusive relationships, so the findings may be biased towards successful coping strategies; however, these women were readily able to reflect on what would have been most helpful during their IARs.

Participants may have had difficulty recalling specifics of abusive relationships that occurred a long time ago. Prior to the qualitative interviews to help with recall, I asked participants to write out a timeline using significant events to help them remember their relationships. In addition, I asked general descriptive questions that allowed respondents to describe the entirety of their IPV experience without focusing on specific dates or incidents.

CHAPTER 5: RESILIENCE AND VULNERABILITY FACTORS ASSOCIATED WITH EXPERIENCING INTIMATE PARTNER VIOLENCE BY MULTIPLE ABUSIVE PARTNERS: FINDINGS FROM THE 2010 NATIONAL INTIMATE PARTNER AND SEXUAL VIOLENCE SURVEY (NISVS)

Introduction/Background

Intimate Partner Violence (IPV) occurs when a person commits acts of violence against his or her intimate partner that may include physical or sexual violence, stalking, or psychological aggression (Breiding et al., 2015). IPV is associated with negative physical and mental health outcomes for women (Devries et al., 2013; Jewkes, Dunkle, Nduna, & Shai, 2010). Previous research has indicated that women who are abused by multiple abusive partners (MAPs) experience worse health outcomes (Carrington-Walton, 2014; Coolidge & Anderson, 2002; Jewkes, 2002; Stein et al., 2016), than women abused by a single partner, however we know little about risk and protective factors associated with experiencing intimate partner violence by multiple abusive partners (IPV by MAPs). In this paper, I examined three domains of risk and protective factors associated with experiencing IPV by MAPs including, factors associated with the initial abusive relationship (IAR) that may increase vulnerability to experiencing IPV by MAPs and the use of domestic violence (DV)-related services and social support that may decrease vulnerability to experiencing IPV by MAPs using National Intimate Partner and Sexual Violence (NISVS) data.

Intimate Partner Violence

Globally, 30% of women have experienced physical and/or sexual abuse in their lifetimes and 35.6% (42.4 million) of U.S. women report being raped, physically assaulted, or stalked by an intimate partner (Black et al., 2011; World Health Organization, 2013a). Longitudinal studies

have indicated that there are temporal associations between IPV and health outcomes such as, incident depressive symptoms, anxiety, post-traumatic stress disorder (PTSD), HIV infection, and physical health problems, as well as suicide attempts (Devries et al., 2013; Dillon, Hussain, Loxton, & Rahman, 2013; Jewkes et al., 2010; Newcomb & Carmona, 2004). Further, experiencing IPV can be deadly; approximately 38% of all murdered women reportedly killed by an intimate partner (World Health Organization, 2013a) and 55.3% of U.S. homicides against women are IPV-related (Petrosky, 2017).

Intimate Partner Violence by Multiple Abusive Partners

The negative consequences of experiencing IPV may be even worse for women who have experienced IPV by MAPs. According to local studies, between 27% to 86% of IPV survivors have been abused by more than one intimate partner (Cole et al., 2008; Iverson et al., 2013; Jaquier & Sullivan, 2014; Stein et al., 2016). Studies demonstrate that women who have experienced IPV by MAPs have higher rates of negative mental health issues compared with women who have been abused by one partner (Coolidge & Anderson, 2002; Jaquier & Sullivan, 2014). Specifically, researchers found that women with MAPS had higher rates of depression than women with one abusive partner. They also found that women with MAPs who had PTSD symptoms, reported higher psychopathology (including higher scores on clinical self-defeating, dependent, paranoid, depression scales) than women with PTSD symptoms who had one abusive partner. Although researchers were unable to determine whether the higher rates of psychopathology experienced were the residual effects of enduring an abusive relationship or a preexisting issue, due to the cross-sectional study design, they did conclude that women with MAPs experienced more mental health issues (Coolidge & Anderson, 2002). Similarly, a longitudinal study found that women with MAPs scored significantly higher on a PTSD scale than those with one abusive partner (Bogat et al., 2003). Longitudinal and cross-sectional studies

also indicate that women who experience IPV by MAPs have higher rates of substance abuse, including use of illicit drugs and alcohol (Cole et al., 2008; Ørke et al., 2018; Testa, 2003).

Finally, research has shown that women who experience IPV by MAPs are burdened by an increased amount of trauma throughout their lifetimes compared with women with one abusive partner. Significantly more women with MAPs report higher rates of being physically, sexually, and emotionally abused as a child (Alexander, 2009; Carrington-Walton, 2014; Cole et al., 2008; Stein et al., 2016; Vatnar & Bjorkly, 2008). Specifically, in a sample of women obtaining domestic violence protective orders (DVPOs), 58.5% of women who were abused by MAPs reported experiencing sexual abuse compared with 36.7% of women who had been abused by one partner (Stein et al., 2016). Women with MAPs are also more likely than women with one abusive partner to have witnessed IPV between their parents (Alexander, 2009; Carrington-Walton, 2014; Vatnar & Bjorkly, 2008). One study found that having witnessed IPV in the childhood home increased risk of experiencing later IPV by MAPs significantly more than having experienced physical child abuse (Vatnar & Bjorkly, 2008). In addition to experiences with child abuse and witnessing IPV in their childhood homes, women with MAPs are also more likely to have experienced other lifetime traumas such as, stalking, physical assault, and sexual violence by a non-intimate partner (Cole et al., 2008; Stein et al., 2016).

Studies indicate that some women who have been abused may have a decreased self-protective capacity or increased vulnerability from their experiences with abuse (including IPV, sexual abuse, and child abuse), that may cause them to become more vulnerable to continued IPV within the same relationship or IPV by MAPs (Bender et al., 2003; Classen et al., 2005; Cole et al., 2008; Coolidge & Anderson, 2002; Messman-Moore & Long, 2003). However, not

all women experience IPV by MAPs and a better understanding of factors that predict risk of IPV by MAPs will inform secondary prevention efforts with IPV survivors.

Demographic Risk Factors for Experiencing IPV by MAPs

As indicated by Cole et al. (2008), there are multiple systemic, socioeconomic, and psychological factors that put women at risk of experiencing IPV by MAPs, and IPV research must take into account the frequency, duration, severity, and type of abuse women have previously experienced (Scott-Storey, 2011). There is limited research on what factors predict vulnerability to experiencing IPV by MAPs; however, researchers have found some factors related to demographics and the IAR that may affect risk of experiencing IPV by MAPs.

Previous studies have found mixed results regarding the effect of age on the risk of experiencing IPV by MAPs. Coolidge & Anderson (2002) and Cole et al. (2008) did not find any significant differences when comparing women with MAPs and women with one abusive partner. However, a retrospective study with a community sample of women seeking services for IPV, found that women with MAPs were younger on average than those with one abusive partner (35 years vs. 40 years) (Alexander, 2009). Similarly, a longitudinal study examining risk of IPV by MAPs in another community sample found that being younger at the time of the IAR was predictive of experiencing IPV by MAPs, although the sample only included women between the ages of 18-30 years (Testa, 2003). Age may have some influence on risk of experiencing IPV by MAPs; however, most studies examined age at time of the survey. Age during the IAR may be more indicative of women's risk of IPV by MAPs. According to the World Health Organization (WHO) (2010), women who are young when they experience IPV may not have fully developed their ideas about healthy relationships and their young age my increase their vulnerability to IPV (pg. 20).

Although studies have found mixed results regarding the association of racial/ethnic group membership and experiencing IPV (Browning, 2002; Cho, 2012; Vest et al., 2002), there has not been as much research on the association with experiencing IPV by MAPs. However, one study did find that women who identified as African American/Black or white were more likely to experience IPV by MAPs than Latinas (Stein et al., 2016).

Initial Abusive Relationship Risk Factors for Experiencing IPV by MAPs

Various factors related to previous experiences with IPV have been associated with risk of experiencing IPV by MAPs (Ørke et al., 2018). In a sample of pregnant women, researchers found that women with MAPs had experienced more severe IPV over time than women with one partner (Bogat et al., 2003). In a longitudinal study, researchers found a significant effect of experiencing severe IPV in the baseline relationship on experiencing IPV by a new partner within 12 months (Testa, 2003). Although both studies found an effect of severe IPV on experiencing IPV by MAPs, they measured different aspects of experiencing severe IPV. Bogat et al.'s (2003) study aggregated IPV severity across abusive relationships; therefore, they were unable to tease out the effects of IPV that occurred within individual relationships. In Testa's (2003) study, researchers looked at the immediate effect (within 1 year) of IPV severity by looking at the effect of IPV within one relationship and the risk of experiencing IPV by a new partner. Because the trauma of experiencing severe IPV can have a long-term effect on a woman, it would be helpful to analyze whether experiencing severe or frequent IPV in the IAR increases vulnerability to IPV by MAPs.

Another longitudinal study examined risk of experiencing IPV by MAPs based on the type of abuse experienced in the baseline relationship and in previous relationships. Authors found that women with MAPs were more likely to have experienced psychological, physical, and sexual violence, including rape in relationships, prior to the baseline partner (Cole et al., 2008).

Having been stalked by the baseline intimate partner was also predictive of experiencing IPV by MAPs at the one year follow up (Cole et al., 2008). Although this study did not specifically measure IPV severity or frequency, the findings demonstrate that women with MAPs experienced greater amounts of every type of abuse. Analyzing types of abuse experienced, IPV severity level and frequency, and injuries sustained from IPV may provide information on the overall extent of abuse a woman has experienced and provide some insight into her vulnerability to experiencing IPV by MAPs.

Further demonstrating that the effects of IPV can be long-lasting, another study revealed that fear of a previous abusive partner was associated with PTSD symptom severity over and above the experience of having a current abusive partner or having experienced child abuse and neglect (Jaquier & Sullivan, 2014). Experiencing these psychosocial difficulties continues the victimization cycle whereby women have an even greater risk of experiencing more IPV (Kuijpers, van der Knaap, & Winkel, 2012a). With high rates of PTSD symptoms among IPV survivors (Iverson et al., 2013), and even higher rates of PTSD among IPV by MAPs survivors (Bogat et al., 2003), mental health issues can be considered both risk factors and consequences of IPV. The association between PTSD symptoms and experiencing IPV by MAPs is an important area to examine.

A previous study used National Violence Against Women Survey data to conduct a latent class analysis to examine the likelihood that IPV survivors will move into a particular class of violence in their current relationship based on childhood trauma, characteristics of the victim, and IPV in a previous relationship. This study found that women who previously experienced methodical and severe abuse were less likely to be in a current abuse relationship (Carbone-Lopez, 2006). Despite the prediction of less IPV following more severe experiences with IPV,

we know that a large portion of women do experience IPV by MAPs and the majority of studies indicate a positive effect of experiences with previous severe IPV on the risk of experiencing IPV by MAPs.

Evidence from numerous studies indicates greater suffering due to lifetime cumulative victimization among women who have experienced IPV by MAPs versus those with one partner; however, the ability to predict why some women are more vulnerable to IPV by MAPs is lacking. Many studies have not differentiated between women who are experiencing continued abuse (revictimization) within the same relationship and those who experience IPV by MAPs. Other studies have examined current "victim-related" characteristics such as education and income levels that may be unable to demonstrate a meaningful relationship with IPV experiences that have occurred in the past. Finally, studies often use community-based or DV shelter-based samples that limit the ability to generalize findings to a larger population.

Use of Services and Social Support as Protective Factors for Experiencing IPV by MAPs

A potential contributor to IPV by MAPs is a lack of resources, including access to financial resources or to DV-related services. This scarcity of resources may be influenced by financial abuse and can limit the ability of IPV survivors to access basic needs such as affordable housing. It can also have a negative impact on their ability to leave an abusive partner and thrive independently (Clough, Draughon, Njie-Carr, Rollins, & Glass, 2014). Despite these challenges, some women do find resources through the services of local DV agencies (e.g., counseling, court advocacy, support groups); social service agencies (e.g., financial assistance, housing, unemployment benefits); the criminal justice system (e.g., police protection, DVPO, legal aid); and medical services (Bybee & Sullivan, 2005). Although DVPOs have been identified as a protective factor against revictimization or continued abuse from the same partner (Bell & Goodman, 2001), the overall effect of use of services on vulnerability to experiencing IPV by

MAPs is uncertain.

Social support, which constitutes helpful behavior that has been categorized as emotional, instrumental; where tangible aid is provided; informational, where information to help address the problem is offered; or appraisal, where reinforcing words or affirmations are shared (Glanz, Rimer, & Viswanath, 2008), is another factor that has demonstrated protective effects against experiencing IPV, leaving an abusive relationship, or experiencing IPV by MAPs; however, the magnitude of the effect is also still not clear (Capaldi, 2012; Coker et al., 2002; Coker et al., 2003).

The Transactional Model of Stress and Coping posits that social support can positively affect health outcomes or promote a "stress-buffering" effect in intense situations by changing how a survivor adapts, perceives, or copes with a stressful event (Glanz et al., 2008; Lazarus & Cohen, 1977). The availability of social support works through a buffering mechanism to shield women from the negative consequences of IPV such as adverse mental health outcomes (i.e., depression and substance abuse) (Coker et al., 2002). Furthermore, similar to use of services, social support has also been deemed protective against future abuse with any intimate partner (not distinguishing between initial or new partners) (Kuijpers et al., 2011; Sonis & Langer, 2008) and is associated with a decrease in revictimization within the same relationship (Sonis & Langer, 2008).

One study found that IPV survivors with higher social support scores reported a decreased risk of poor mental health outcomes, specifically, anxiety, depression, PTSD symptoms, and suicide attempts (Coker et al., 2002). Another study found that women with MAPs had lower emotional social support than women who had only experienced IPV with a previous partner (Bogat et al., 2003). Finally, social support received through a DV advocacy

program also resulted in less risk of abuse for women with initial and new partners (Bybee & Sullivan, 2002), but the result was found to be time-limited, not lasting more than 3 years (Bybee & Sullivan, 2005).

Most of the related social support research describes how receiving social support can decrease the risk of negative mental health outcomes or decrease survivors' experience with re-victimization within the same relationship, but the focus on how receiving social support can specifically affect survivors' vulnerability to experiencing IPV by MAPs has been limited. The effects of trauma from experiencing IPV coupled with a lack of social support may further disadvantage a woman and put her at greater risk of experiencing IPV by MAPS.

Identifying predictive factors related to experiencing IPV by MAPs may have implications for what types of services and supports could mitigate the consequences of IPV and assist women in becoming less vulnerable to experiencing IPV by MAPs. Similar to their ability to protect women from revictimization and the harmful effects of IPV, social support and service use may buffer the effects of factors that affect women's vulnerability for experiencing IPV by MAPs. These supportive factors, defined in this study as resilience factors because of their potential to provide IPV victims with the tools to assist with the healing process after suffering trauma, may ultimately aid in their ability to overcome adversity and thrive.

There are significant gaps in existing literature on vulnerability factors that affect women's risk of experiencing IPV by MAPs. Without studies using national population-based samples, IPV researchers are restricted in their ability to generalize about the experiences of IPV by MAPs survivors. Furthermore, with a limited number of studies delineating between revictimization within the same relationship and experiencing IPV by MAPs (Cattaneo & Goodman, 2005; Kuijpers et al., 2011), we do not know if this population suffers similar

vulnerability factors as women with one abusive partner or if they have similar needs related to using services and receiving social support. Not meeting the needs of this population may lead to continued suffering and physical and mental health consequences.

Hypotheses

In this study, I used a U.S. population-based sample to: 1) identify what vulnerability factors related to an IAR and race/ethnicity are associated with a woman's likelihood of experiencing IPV by MAPs and 2) determine whether resilience factors related to the use of services or use of social support for IPV-related needs predict a woman's likelihood of experiencing IPV by MAPs. Based on findings in the extant literature on IPV and IPV by MAPs, I hypothesized that women who reported experiencing more traumatic IARs (e.g., more frequent or severe IPV, PTSD symptoms or injuries due to IPV) would be more likely to experience IPV by MAPs. I also hypothesized that women who experienced their IAR at a young age and women who were members of racial/ethnic minority groups would be more likely to experience IPV by MAPs (HY1A). Finally, I hypothesized that women who reported using services or receiving social support related to their IARs would be less likely to experience IPV by MAPs (HY1B) and that the effect of these factors would buffer the effect of IPV by MAPs vulnerability factors (HY2).

Methods

I analyzed quantitative data from the 2010 National Intimate Partner and Sexual Violence Survey (NISVS) (Black et al., 2011) to identify factors associated with experiencing IPV by MAPs. The methodology and content of this survey is described below.

National Intimate Partner and Sexual Violence Survey (NISVS) Data

NISVS is a NIJ and CDC-funded nationally-representative survey of non-institutionalized persons, aged 18 years and older, English or Spanish speakers (n = 16,507:

7,421 men and 9,086 women) (Black et al., 2011). The survey objectives were to determine: 1) prevalence and characteristics of sexual violence, stalking, and IPV; 2) who is most likely to experience these forms of violence; 3) patterns and impact of the violence experienced by specific perpetrators; and 4) health consequences of these forms of violence.

NISVS Recruitment and Data Collection Procedures

NISVS used a dual frame sampling design where data collectors used random digit dialing procedures to contact landline and cell phone numbers in all 50 states and the District of Columbia (Rosay, 2016). Participants were offered up to $40 U.S. dollars as an incentive for participation. The overall weighted response rate (the proportion who agreed to participate in the interview among the contact numbers identified using sampling strategy) was 33.6% (Breiding et al., 2017; Rosay, 2016) and the weighted cooperation rate (the proportion who agreed to be interviewed among the portion who were contacted and met the eligibility criteria) was 81.3% (Black et al., 2011; Breiding et al., 2017). Each study participant was assigned a sampling weight provided by CDC to account for probability of selection. Nonresponse weights were applied to account for participants not responding or not completing the questionnaire. Post-stratification weights were provided to account for U.S. Census population totals used for the following demographic variables: age, sex, race, and ethnicity (Rosay, 2016). Additional information about NISVS methodology can be found in the NISVS 2010 Summary Report (Black et al., 2011).

Individuals in each household were randomly selected to participate and went through a graduated informed consent procedure where they did not initially know the purpose of the survey in order to protect confidentiality and maintain safety (Black et al., 2011; Breiding et al., 2017). Interviews averaged 24.7 minutes and consisted of 60 behaviorally-specific questions about psychological, physical, and sexual violence; and stalking. Questions were asked about the number of perpetrators who performed each behavior in their lifetimes. If multiple perpetrators

were identified, follow up questions were asked about each person named. The data are cross-sectional; however, there are age-related variables that allowed for some determinations of temporality. In addition, because each of the questions about violent behaviors are connected to individual perpetrators, these data permitted analysis of IPV by MAPs.

Ethical Considerations

Permission to access and analyze these data was granted by the National Archive of Criminal Justice Data at the Inter-university Consortium for Political and Social Research. The Office of Human Research Ethics at the University of North Carolina at Chapel Hill determined that analysis of these data was exempt from Institutional Review Board approval.

NISVS Measures Used in Study

Primary Outcome Variable: **Physical and or Sexual IPV by MAPs**

The analysis focused on questions about lifetime experiences with physical and/or sexual IPV based on a combination of 10 physical violence (e.g., slapped, pushed or shoved; hit with a fist or a hard item; kicked; pulled hair; shoved against something; tried to hurt by choking or suffocating; beat; burned on purpose; or used a knife or gun) and 18 sexual violence (e.g., exposed sexual body parts; unwanted kissing; unwanted fondling; or pressured, threatened, and forced sexual intercourse) indicator variables. Women who reported that an intimate partner had performed at least one physical and/or sexual violence behavior, were counted as having experienced IPV. To create the dichotomous outcome variable, women were categorized as having experienced IPV by MAPs if they reported two or more intimate partners who performed at least one physical and/or sexual IPV-related behavior during the relationship.

Descriptive Variables

Demographic Variables

During the interviews, demographic information was gathered on the following variables: 1) **age** is a categorical variable that was measured in years and assessed by asking, *what is your age?* and responses included, 1=18-34, 2 = 35-49, 3 = 50-64, and 4 = 65 or older, 2) **race/ethnicity** is a categorical variable that was measured by asking, *what is your race?* and *are you of Hispanic or Latino/a origin?* and responses included, 1-non-Hispanic white, 2 = non-Hispanic Black, 3 = non-Hispanic other race (Asian, Pacific Islander, American Indian/Alaskan Native), 4 = Hispanic (any race), 3) **education level** is a categorical variable that was measured by asking, *what is your highest level of education you have completed?* and responses included, 1 = less than high school, 2 = high school diploma/some college, 3 = college degree or higher, 4) **household income level** is a categorical variable (measured in U.S. dollars) that was determined by asking, *what was the total income from all household members during the most recently ended calendar year, before taxes?*, and responses included, 1 = less than $25K, 2 = $25-less than $50K, 3 = $50K-less than $75K, 4 = $75K or more, 5) **marital status** is a categorical variable that was assessed by asking, *what is your current marital status?,* and responses included, 1 = married, 2 = divorced/separated/widowed, 3 = single/never married

Other Descriptive Variables

Physical Violence and Sexual Violence are dichotomous variables that are based on the same 10 physical violence and 18 sexual violence indicator variables used in the creation of the IPV by MAPs outcome variable. **Psychological Violence** is a dichotomous variable based on 18 "yes" vs. "no" indicator variables related to expressive aggression and coercive control and entrapment (e.g., threatened to hurt him/herself or commit suicide when upset with you, destroyed something important; said things like, *"If I can't have you, then no one can"*). Each

variable represents whether the respondent experienced at least one behavior representing each type of violence vs. none (0 = no violence, 1 = violence).

Vulnerability Factors Related to the IAR

Independent Variables

Frequency of Violence was determined based on calculating how often a respondent experienced physical and/or sexual violence in her IAR. I created a continuous variable to represent the frequency score for each IAR perpetrator by summing the number of times each physical and sexual violence behavior was perpetrated. The summed score was divided by the maximum score (total = 56), based on a respondent having experienced all 10 physical and 18 sexual violence behaviors at least twice (i.e., with both intimate partners). The frequency score was multiplied by ten in order to be on a 1-point scale for analyses.

Severity of Violence was assessed by determining what types of physical and/or sexual violence behaviors the respondent experienced in her IAR. First, I mapped 10 NISVS physical violence behaviors onto the 5-level Danger Assessment Scale, which is used to determine risk of homicide among women experiencing IPV. Each violent behavior was assigned a score of 1 to 5, where 5 denoted higher risk of homicide based on past research (Campbell, 1986). Two behaviors were scored 1, three behaviors were scored 3, three behaviors were scored 3, one behavior was scored 4, and one behavior was scored 5. To calculate the severity of physical violence, the summed score was divided by the maximum score (total = 26) a respondent could have received if she had experienced all ten physical violence behaviors used in this analysis.

Secondly, I mapped 16 NISVS sexual violence behaviors onto the Sexual Experiences Survey Short Form Victimization (SES-SFV), which uses a behaviorally specific assessment of violent behaviors similar to NISVS. Each violent behavior is assigned a score of 1 to 7 based on the level of "bodily intrusiveness" (Koss et al., 2007). Three behaviors were scored 0, two

behaviors were scored 1, three behaviors were scored 2, one behavior was scored 3, and nine behaviors were scored 4. To calculate the severity of sexual violence, the summed score was divided by the maximum score (total = 47), a respondent could have received if she had experienced all 18 sexual violence behaviors used in this analysis. The overall severity of IPV score was a continuous variable that was calculated by averaging the severity score from both the physical and sexual violence scales. The overall severity of IPV score representing physical and sexual violence behaviors was calculated by averaging the severity score from both the physical and sexual violence scales and similarly to IPV frequency, the severity score was multiplied by ten in order to be on a 1-point scale for analyses.

Age at Initial Abusive Relationship is a continuous variable that represents respondent age (measured in years) when she began her IAR.

PTSD Symptoms is a continuous variable that was assessed by determining how many self-reported PTSD symptoms the respondent experienced due to her relationship with the initial abusive partner. The aggregate variable includes the following symptoms from the PTSD Symptom Scale: having nightmares; trying hard not to think about the abuse; being constantly on guard, watchful, or startled; and feeling numb or detached (Foa et al., 1993).

Injuries is a dichotomous ("yes" or "no") variable that was assessed by determining whether the initial abusive intimate partner caused the respondent to sustain injuries due to physical and/or sexual violence behaviors (0 = no injuries, 1 = injuries).

Resilience Factors Related to the IAR

Service use is a continuous variable that determined whether the respondent used any of the following services due to her IAR: housing, victim's advocate, legal, or medical.

NISVS did not measure **social support** directly; however, it did assess **IPV disclosure** and the **perceived helpfulness of the person to whom IPV was disclosed**. For this analysis, these two variables were combined to create a proxy measure to represent **social support**. **IPV disclosure** was assessed by asking if respondents had ever talked to anyone in an informal or formal capacity about what the initial abusive partner did to them (0 = no, 1 = yes). **Perceived helpfulness** was assessed by asking how helpful they found talking to each person (1 = very helpful, 2 = somewhat helpful, 3 = a little bit helpful, 4 = not at all helpful), which was collapsed into 0 = not helpful and 1 = helpful and combined with IPV disclosure. **Social support** is a dichotomous variable that represents both informal (family and friends) and formal (police officer, doctor/nurse, psychologist/counselor, or crisis line operator) IPV disclosure of IPV and perceived helpfulness of the person to whom IPV was disclosed. The categories represented include the following: 0 = no support (no disclosure, therefore no perceived support + disclosure, but not perceived support) and 1 = support (disclosure and at least one person was perceived as helpful).

Control Variable

Time Since Abuse Began in the IAR (variable: TIMESINCE) is a continuous variable (measured in years) that was calculated by subtracting the *respondent age at first victimization* (specific to the initial abusive partner) from the current age of the respondent (in 2010 when the survey was conducted).

Data Analysis

Analytic Sample

After excluding males, and women who did not report experiencing IPV or only reported psychosocial IPV or stalking, the analytic sample was limited to women who reported having

experienced one or more physical and/or sexual IPV behaviors at least one in their lifetimes (n = 2,594).

Missing Data Analysis

To limit the effects of large amounts of missing data, I employed sequential multiple imputation using the fully conditional specification method. This method of imputation is preferred for use with complex survey samples and large datasets that utilize both categorical and continuous variables as it allows for specification of the imputation model for each variable conditioned on other variables (Liu & De, 2015). I created fifty imputations and used logistic regression specification for the categorical variables (race, injuries, social support) and linear regression specification for the linear variables (age, PTSD symptoms, service use), and included interaction terms in the models (Mitani et al., 2015; Von Hippel, 2009). I employed PROC MI to impute missing data and PROC MIANALYZE to combine the imputed dataset results in SAS 9.4 (SAS Institute Inc., 2017). The resulting estimates with 95% confidence intervals accounted for sampling error and potential bias that may have occurred due to missing data when using complete case analysis (Berglund, 2015; Liu & De, 2015).

Statistical Analysis Methods

First, I calculated descriptive statistics on respondent demographic variables using PROC SURVEYFREQ. To examine collinearity between independent variables, I created a correlation matrix for continuous variables and used tetrachoric/polychoric and polyserial correlations to calculate chi square (χ^2) values. In the preliminary analyses to assess the relationship between IPV severity and IPV frequency, I determined that there was a highly positive correlation between these two variables ($r = 0.954$, $p = <.001$) and entering both variables in the model resulted in nonsignificant results. I removed IPV severity from the models and used IPV frequency to represent the degree of IPV in the IAR because IPV frequency was more

representative of the entire IAR abusive experience and was not as affected by one extreme violent incident. Prior to running the analysis, I conducted a sensitivity analysis by examining IPV frequency and IPV severity in separate models and achieved comparable results. I also examined multicollinearity among independent variables using PROC REG with TOL VIF options to calculate tolerance and its reciprocal, variance inflation (Allison, 2012).

I used multivariate logistic regression to determine the odds of experiencing IPV by MAPs based on vulnerability and resilience factors. I fit the models using SAS SURVEYLOGISTIC procedures in SAS 9.4 (SAS Institute Inc., 2017). Only independent variables that represented either resilience or vulnerability factors were included in the multivariate models, along with race/ethnicity because unlike current income or education level, race/ethnicity was the only demographic variable that was determined prior to experiencing IPV.

Due to complex survey sampling procedures used in the collection of NISVS data, weights provided with the dataset were used to compute estimates that accounted for sampling, non-response, coverage, and sampling variability (Black et al., 2011; Breiding et al., 2017). For all multivariate models, I transformed parameter estimates into odds ratios and used 95% confidence intervals and $p < .05$ to determine the effect of each predictor variable and interaction effect on the outcome of experiencing IPV by MAPs. After assessing each category compared with the reference group, I used a TEST statement to obtain hypothesis tests to make comparisons between categories of variables that were not the reference group (e.g., non-Hispanic Black vs. Hispanic).

To test my hypothesis that vulnerability factors would be positively associated with experiencing IPV by MAPs, I modeled the effects of vulnerability factors (race/ethnicity, frequency of IPV, age at relationship start, PTSD symptoms, and injuries) on the likelihood of

experiencing IPV by MAPs (Model 1). To test my hypothesis that resilience factors would be negatively associated with experiencing IPV by MAPs, I modeled the effects of resilience factors related to the IAR (use of services and social support) on the likelihood of experiencing IPV by MAPs (Model 2). To examine the effects of each vulnerability and resilience factor net the effect of other factors, I tested a model that included all factors (main effects/full model) (Model 3). To test my hypothesis that using DV-related services would moderate the relationship between vulnerability factors, such that the positive effect of vulnerability factors on experiencing IPV by MAPs would be reduced, I ran the full model with all interaction terms representing use of services and vulnerability factors (Model 4). Finally, to test my hypothesis that receiving social support would moderate the relationship between vulnerability factors, such that the positive effect of vulnerability factors on experiencing IPV by MAPs would be reduced, I ran the full model with all interaction terms representing social support and vulnerability factors (Model 5). I tested groups of interactions for individual moderators simultaneously to decrease the risk of type 1 error by performing a "chunk test" where I contrasted model fit with all interaction terms compared with a model with no interaction terms to determine if any of the interaction factors were significant (Jaccard, 2001). If the "chunk test" revealed that any of the interaction terms were significant at $p < .05$, I used a backwards elimination strategy to examine the significance of individual interaction terms by comparing model fit after dropping an interaction term (Hayes, 2013).

Results

Sample Characteristics

The analytic sample consists of the 2,594 women who reported experiencing IPV from at least one partner. Of the 2,594 women in the study who reported experiencing physical and or sexual violence in their lifetimes, 84.4% (n = 2,189) were abused by only one partner and 15.6%

(n = 405) were abused by MAPs (i.e., more than one partner). Along with experiencing physical and sexual IPV, 54.6% of the women in the analytic sample also experienced psychological IPV in their IARs. Their average age was 47.4 years (range: 18 to 92 years) and the majority of these women were non-Hispanic white (n = 1,913, 73.7%) and had at least graduated from high school/attended some college (n = 2,539, 90.9%). The majority of them had household incomes below $50,000 (n = 1,467, 56.6%) and less than half of them were married (n = 1,086, 42.8%). (Table 5.1)

Table 5.1: Characteristics of U.S. Women Who Have Experienced Physical and/or Sexual Intimate Partner Violence by One Partner or MAPs, NISVS 2010 (n=2,594)

Characteristics	IPV by only 1 Partner		IPV by Multiple Partners	
	Sample size[a] (n=2,189)	%	Sample size[a] (n=405)	%
Age (Years)[b]				
18–34	554	25.4	100	24.8
35–49	561	25.7	114	28.22
50–64	735	33.7	150	37.1
64+	334	15.3	40	9.9
Race/Ethnicity				
White[c]	1,632	74.9	281	70.7
Black[c]	230	10.6	49	12.2
Other[cd]	143	6.6	36	9.0
Hispanic	175	8.0	35	8.7
Education Level				
< HS Grad	185	8.5	40	9.9
HS Grad/Some College	1,289	58.9	262	64.7
College Grad+	715	32.7	103	25.4
Income Level (Thousands)				
< $25K	686	34.2	153	41.1
$25 to < $50K	529	26.4	99	26.6
$50 to < $75K	316	15.8	55	14.8
$75+K	475	23.7	65	17.5
Marital Status				
Married	936	43.6	150	38.3
Div/Sep/Widow	774	36.1	154	39.3
Single	436	20.3	88	22.5

[a]Unweighted numerator count.
[b]Age calculations are based on respondent age in 2010 when the survey was conducted.
[c]non-Hispanic
[d]Includes Asians, Pacific Islanders, American Indians/Alaskan Natives

Multivariate Logistic Regression Results

All vulnerability and resilience factors were significantly associated with experiencing IPV by MAPs in the bivariate analyses at $p < .10$ except for race/ethnicity ($p = .17$) and social support ($p = .30$). There were no tolerance values less than .50 or variance inflation factors higher than 1.99, indicating that multicollinearity was not a concern for the models. The results of all multivariate logistic regression models are shown in Table 5.2. Model 1 represents the effects of vulnerability factors on experiencing IPV by MAPs. In concert with the hypothesis that vulnerability factors would affect likelihood of IPV by MAPs, increasing levels of IAR IPV frequency were positively associated with increased odds of experiencing IPV by MAPs. Women who experienced higher levels of IPV frequency had 1.21 higher odds ($p < .01$) of experiencing IPV by MAPs compared with women with lower IAR IPV frequency. Contrary to expectations, no other vulnerability factors had a statistically significant effect on experiencing IPV by MAPs.

Model 2 represents the effects of resilience factors on experiencing IPV by MAPs. Contrary to the hypothesis, women who reported utilizing any DV-related service because of their IAR had 30% higher odds of experiencing IPV by MAPs than women who did not report use of services ($p < .05$). Receipt of social support did not have a statistically significant effect on the likelihood of experiencing IPV by MAPs. Model 3 represents the effects of vulnerability and resilience factors on experiencing IPV by MAPs. As hypothesized, IAR IPV frequency was significant and women with higher levels of IAR IPV frequency had 1.20 higher odds of experiencing IPV by MAPs ($p < .05$) than women who experienced lower IAR IPV frequency. Service use was not significant in this model ($p = .26$), suggesting that it is likely a proxy variable for IPV frequency.

Model 4 introduced the interaction between service use, which was a significant variable in Model 2 (resilience factors only) and all vulnerability factors. The results of this model (p = .326), indicate that there is no evidence to support the hypothesis that service use moderates the associations between race/ethnicity (p = .454), IAR IPV frequency *(*p = .294), age at IAR (p = .522), PTSD symptoms (p = .137), or injuries (p = .105) and experiencing IPV by MAPs. Model 5 introduced the interactions between social support and each of the vulnerability factors. Contrary to the hypothesized effect, based on the p-value of .063 from the joint test of significance, there were no interaction effects. However, because the p-value for the joint test was near the cutoff alpha = .05, I examined p-values for individual interactions. There was no evidence to support the hypothesis that social support moderates the associations between race/ethnicity (p = .594), IAR IPV frequency (p = .228), PTSD symptoms (p = .084), or injuries (p = .532) and experiencing IPV by MAPs. However, the one significant finding was that the relationship between age at IAR and experiencing IPV by MAPs was moderated by social support (p = .025) (Table 5.2).

Table 5.2: Results of Multivariate Logistic Regression: Resilience and Vulnerability Factors Predicting IPV by MAPs Among U.S. Women, NISVS 2010 (n = 2,594)

Variable	Model 1 (Vulnerability Factors)	Model 2 (Resilience Factors)	Model 3 (All Vulnerability + Resilience Factors)	Model 4 (All Factors + Service Use Interactions)	Model 5 (All Factors + Social Support Interactions)
	aOR (95% CI)	**aOR (95% CI)**	**aOR (95% CI)**	**aOR (95% CI)**	**aOR (95% CI)**
Race/Ethnicity					
White[c]	Ref		Ref	Ref	Ref
Black[c]	1.45 (0.95-2.21)		1.42 (0.93-2.17)	1.20 (0.72-1.99)	1.35 (0.69-2.63)
Other[cd]	1.90 (0.95-3.84)		1.87 (0.91-3.85)	1.87 (0.83-4.21)	0.89 (0.23-3.46)
Hispanic	1.12 (0.68-1.85)		1.11 (0.67-1.84)	1.01 (0.59-1.74)	0.66 (0.27-1.64)
IPV Frequency	1.21 (1.05-1.40) **		1.20 (1.04-1.40) *	1.29 (1.04-1.59) *	1.53 (1.01-2.32) *
Age[ef]	1.00 (0.99-1.02)		1.00 (0.99-1.02)	1.00 (0.99-1.02)	1.02 (1.00-1.05) *
PTSD Symptoms[e]	0.91 (0.80-1.02)		0.92 (0.82-1.03)	0.86 (0.74-0.99) *	0.75 (0.59-0.96) *
Injuries[e]	1.26 (0.85-1.88)		1.27 (0.83-1.94)	1.51 (0.92-2.49) *	1.33 (0.54-3.27)
Social Support[e]		0.80 (0.57-1.10)	0.75 (0.53-1.06)	0.74 (0.52-1.06)	1.29 (0.62-2.69)
Service Use[e]		1.30 (1.06-1.61)*	1.13 (0.88-1.45)	1.45 (0.70-3.00)	1.15 (0.90-1.48)
				***p*-value**	***p*-value**
Service Use (SU) Interactions				.326	
SU*Race/Eth				.454	
SU*IPV Frequency				.294	
SU*Age				.522	
SU*PTSD Symptoms				.137	
SU*Injuries				.105	
Social Support (SS) Interactions					.063
SS*Race/Eth					.594
SS*IPV Frequency					.228
SS*Age					.025*
SS*PTSD Symptoms					.084
SS*Injuries					.532

[a]*p<. 05, **p<.01, ***p<.001

[b]Models control for the amount of time (years) that have passed since the respondent began her first abusive relationship

[c]non-Hispanic

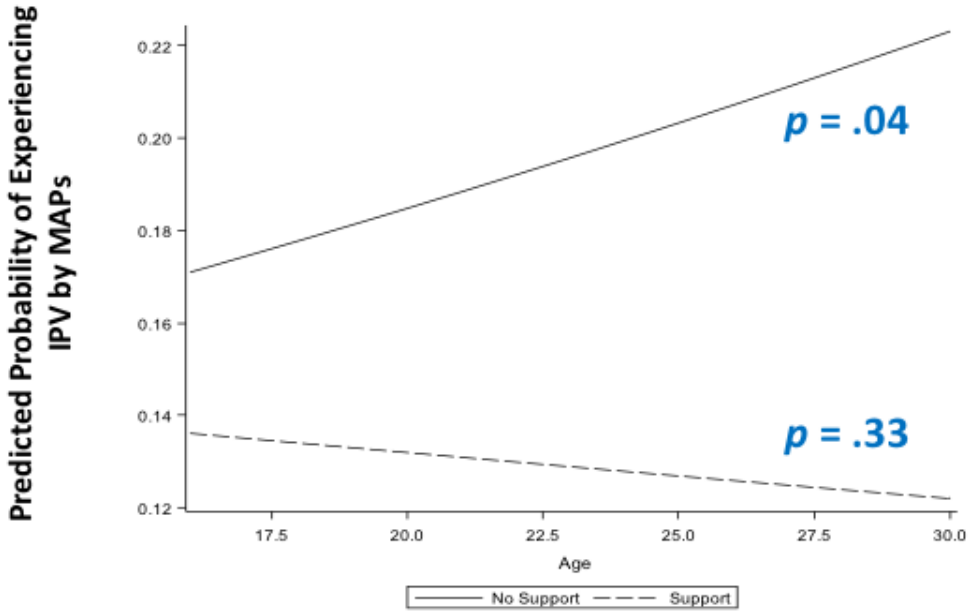
[d]Includes Asians, non-Hispanic Pacific Islanders, American Indians/Alaskan Natives

[e]During the respondent's initial abusive relationship

[f]Less than 18 years old

I probed the interaction effect and found that among those who received social support during their IAR, there was no association between age during the time of the IAR and experiencing IPV by MAPs based on a p value of .33. Alternatively, among those who **did not** receive social support, there was a positive association between age during the time of IAR and experiencing IPV by MAPs based on a p-value of .04. The graph below depicts predicted probabilities of IPV by MAPs for age at IAR at different levels of social support (yes vs. no) (Figure 5.1). Overall this pattern is consistent with the buffering hypothesis (Lazarus & Cohen, 1977).

Figure 5.1: Predicted Probabilities of Experiencing IPV by MAPs Associated with Increasing Levels of Age at IAR for Women with and without Social Support



Discussion

The study objective was to examine the effects of vulnerability and resilience factors that increase the likelihood that women who have experienced IPV will become vulnerable to experiencing IPV by MAPs. This study addressed literature gaps by using a nationally-representative sample to identify factors related to the IAR that may affect risk of experiencing a

subsequent abusive relationship. In this sample of 2,594 women who had experienced physical and/or sexual IPV, 405 women (15.6%) experienced IPV by MAPs, which represents approximately 4.67 million U.S. women who have been abused by at least two partners in their lifetimes. Overall, I found that having experienced more frequent IPV in the IAR and using DV-related services was positively associated with experiencing IPV by MAPs. However, the effect of using DV-related services went away when IPV frequency was included and most likely represents frequency and severity of IPV. Further, I did not find evidence to support moderation of the relationship between any of the vulnerability factors and experiencing IPV by MAPs by service use. However, I did find evidence to support moderation of the relationship between age at IAR and receipt of social support.

My hypotheses regarding vulnerability factors were partially supported because one vulnerability factor had a significant effect on the likelihood of experiencing IPV by MAPs. I hypothesized that women who experienced IPV by MAPs would be members of a minority racial/ethnic group, but I found that race/ethnicity was not associated with experiencing IPV by MAPs. These results were similar to a longitudinal, shelter-based study that examined differences in predictors of IPV revictimization (by current and new partners) among African American/Black or Hispanic women and non-Hispanic white women and did not find differences based on racial/ethnic group membership when the variable was initially entered into the model (Bybee & Sullivan, 2005). There is a substantial amount of deliberation in the literature involving the effect of identifying as a member of a racial/ethnic minority group and experiencing IPV. Previous studies have indicated that being a member of a racial/ethnic minority group is associated with having a higher risk of experiencing IPV (Breiding, 2008; Caetano, Field, Ramisetty-Mikler, & McGrath, 2005). In contrast with these findings, another

study found significantly higher numbers of abusive partners among African American/Black and white women compared with Latinas (Stein et al., 2016).

My hypothesis that women who experienced more traumatic IARs would be more vulnerable to MAPs was partially supported. Women who experienced high IPV frequency in their IARs had a greater likelihood of experiencing IPV by MAPs. Indicating a dose-response relationship, higher levels of IPV frequency had an even greater effect on risk of experiencing IPV by MAPs than medium levels of IPV frequency. My findings were similar to those found in a study where IPV frequency was predictive of IPV revictimization; however, this study examined IPV within the same relationship (Sonis & Langer, 2008). These findings indicate that women who experience the most frequent acts of violence within their IARs are at risk for continued abuse within the relationship as well as with subsequent partners and should be targeted for interventions to assist with connecting them to resources such as appropriate legal services and financial resources.

The hypothesis that young age at IAR increases a woman's vulnerability to experiencing IPV by MAPs was not supported. Although my analysis did not find that being young in the IAR predicted IPV by MAPs, young age has been considered a predictor of experiencing IPV (World Health Organization & London School of Hygiene and Tropical Medicine, 2010). The lack of effect seen in this study on likelihood of experiencing IPV by MAPs may be due to the wide range of ages that women first experienced IPV, indicating that women are vulnerable to experiencing IPV by MAPs at any age and as seen in previous research, older age is not necessarily protective against experiencing IPV (Capaldi, 2012).

In contrast with my hypothesis that experiencing more PTSD symptoms would be associated with vulnerability to experiencing IPV by MAPs, PTSD symptoms did not have an

effect on the likelihood of experiencing IPV by MAPs. Researchers have debated the influence of PTSD or psychopathology on experiencing IPV or PTSD being a consequence of IPV (Cole et al., 2008; Coolidge & Anderson, 2002). Despite the continued debate of whether PTSD is a predictor or consequence of IPV, consistent evidence indicates that IPV by MAPs survivors suffer from more PTSD symptoms and other mental health issues than women with one abusive partner (Coolidge & Anderson, 2002; Jaquier & Sullivan, 2014). Future IPV by MAPs studies with national samples could be strengthened by expanding the PTSD symptoms measure to present a more comprehensive measure of PTSD by using scales such as the modified PTSD Symptom Scale (Foa et al., 1993), which has been used with samples of victims of violent crimes (Andrews, 2000).

Study findings also indicated that sustaining injuries due to the IAR was not associated with experiencing IPV by MAPs in the multivariate model, although the variable representing injuries was significant in the bivariate analysis and it was significant when IPV frequency was removed from the model ($OR = 1.51$, $p < .05$). This discrepancy may be due to its fairly high positive correlation with IPV frequency ($r = .721$, $p < .001$). Using an aggregate term to represent both physical and sexual violence injuries may have also diminished the effect of the relationship of injuries and experiencing IPV by MAPs; however, there was such a small number of injuries due to sexual violence that in order to account for them, it was necessary to combine these variables.

Finally, I hypothesized that using DV-related services or receiving social support related to the IAR would make women less vulnerable to experiencing IPV by MAPs. In contrast with the hypothesis, service use did not decrease vulnerability to experiencing IPV by MAPs, but it was a positive predictor of experiencing IPV by MAPs. These findings may indicate that women

who received services either experienced more traumatic IPV (e.g., greater IAR IPV frequency), which already increased their likelihood of experiencing IPV by MAPs, or the services they received may not have met their needs appropriately.

Contrary to studies that indicate receiving social support is protective against revictimization with new or previous partners, (Capaldi, Knoble, Shortt, & Kim, 2012; Kuijpers et al., 2011), this study did not find that social support had an effect on experiencing IPV by MAPs. However, the "stress-buffering" effect presented by the Transactional Model of Stress and Coping did translate into a moderation effect of the relationship between age at IAR and experiencing IPV by MAPs such that for those who did not receive support during their IAR, they had an increased likelihood of experiencing IPV by MAPs as they got older. Although neither resilience factor moderated the relationship between the majority of vulnerability factors and experiencing IPV by MAPs, this lack of an effect may be more reflective of the measures used. For example, the full effect of receiving services on experiencing IPV by MAPs could have been impacted by the use of an aggregated variable that represented all of the service types. Similarly, aggregating all types of support may have muted the effect of receiving social support from a particular source. However, no support type was associated with experiencing IPV by MAPs in the bivariate analysis and separating out formal from informal support did not alter study findings.

Taken together, these study findings add to the limited body of literature about the vulnerability of IPV by MAPs survivors and indicate that women who experience more frequent IPV in their IARs and receive DV-related services (most likely due to frequent IPV), have an increased likelihood of experiencing MAPs. They also indicate that women who do not receive IAR social support are more likely to experience IPV by MAPs as they age. Additional research

is needed to determine whether specific combinations of services affect IPV vulnerability or whether there is a time-limited effect of service or support received, similar to previous research (Bybee & Sullivan, 2005). Although service and support use were specific to individual relationships, I was unable to determine when the service or social support was accessed or received. The preferred study design would have been to follow IPV survivors longitudinally and examine their subsequent relationships and the potential impact of social support or use of specific services that are most helpful to assist survivors of IPV who have the greatest risk of experiencing IPV by MAPs.

Limitations

Some limitations of the study findings should be noted. I used cross-sectional data, which limits determinations of causality; however, respondents were asked time-associated questions that enabled me to determine the temporality of some variables related to IPV victimization, such as the order in time that each relationship occurred based on respondent age. In this study, there were many challenges related to the retrospective reporting used for data collection; however, I controlled for these issues by incorporating the *time since initial abusive relationship began* variable in my analyses.

In my comparisons between women who have experienced IPV by MAPs and women who had one abusive partner, I did not distinguish between women who had two, three, four, or more abusive partners. Although I lost some information by not comparing these groups, I found that although NISVS allows for up to 15 perpetrators per type of violence, there were high percentages of missing data beyond a couple of perpetrators. In addition, the distinction of interest in IPV victimization experience is between women who have been in one abusive relationship and women who have been in multiple abusive relationships, despite the number of partners. NISVS data did not allow me to determine which relationship was the IAR if a

respondent reported more than one abusive partner in the same year. However, this occurred rarely and when necessary, I chose the first perpetrator identified by the respondent as the initial abusive partner.

As previously mentioned, I was unable to determine whether a respondent utilized social support or services at a certain time or how many times due to a relationship, but my analysis of social support and service use did connect these factors with individual relationships. Similarly, I did not know when each violent behavior occurred, only that it happened within the confines of a specific relationship. When assessing IPV frequency, I only included physical and sexual violence behaviors in the measures because of the ability of these violent behavior types to easily map onto the scales I used; however, including psychological violence indicators may have also been influential in predicting experiences with IPV by MAPs.

In addition, NISVS respondents may have had difficulty recalling details about abusive relationships that occurred a long time ago, especially if they have experienced multiple abusive relationships or blocked some of the negative memories from their minds. Because of these issues, some responses may have been subject to recall bias. Finally, as noted by other researchers (Breiding, 2014), NISVS may not have been able to reach the most severely impacted persons or those most at risk for experiencing IPV by MAPs due to their inability to participate in the survey because of concerns about safety or reexperiencing trauma.

Conclusions

To my knowledge, this is the first study to use a nationally-representative sample to examine predictors of experiencing IPV by MAPs based on IAR experiences, race/ethnicity, and the accompanying service use and social support factors. By examining factors in the IAR that are salient to experiencing IPV by MAPs, this study builds on previous research that indicates that victimization experiences over a lifetime, beginning with childhood trauma, can

continuously heighten vulnerability to IPV by future partners (Cole et al., 2008). Finally, these findings highlight the impact of IAR IPV frequency on the likelihood of experiencing future IPV and suggest that women who have more frequent IPV in their IARs be the focus of interventions to address IPV risk and that they may require more support than other IPV survivors. These findings also suggest that interventions should target women who have received DV-related services. The positive association with experiencing IPV by MAPs may indicate that women who need services the most are accessing them, but their needs most likely are not being met. However, this finding is most likely due to experiences with frequent IPV. This finding points to the need to not only address an IPV survivor's immediate concerns, but also to evaluate her entire history of IPV, which may give service providers some insight into chronic factors that are affecting IPV vulnerability over time. Future research should also examine experiences with DV-related service use to learn how service providers can provide optimal support for IPV survivors. Finally, future studies also need to include additional measures that represent contextual factors that have been associated with experiencing IPV to further examine differences between women with one abusive partner and those with MAPs, such as experiencing child abuse (Carrington-Walton, 2014; Wood & Sommers, 2011).

CHAPTER 6: SURVIVING IPV BY MAPS: EXPERIENCES WITH COPING THROUGH TRAUMA BY SEEKING HELP AND SOCIAL SUPPORT

Introduction

Women who experience intimate partner violence by multiple abusive partners (IPV by MAPs) have higher rates of lifetime victimizations, including other traumas such as child abuse or non-IPV assault than women with one abusive partner (Carrington-Walton, 2014; Stein et al., 2016) and more severe health outcomes (Coolidge & Anderson, 2002; Jaquier & Sullivan, 2014). Previous research has indicated that some factors related to the initial abusive relationship (IAR), as well as utilization of services and social support contribute to the likelihood that a woman will experience IPV by MAPs (Bogat et al., 2003; Cole et al., 2008). In this paper, I describe coping behaviors, including use of services and social support by women who have experienced IPV by MAPs to inform secondary IPV prevention efforts.

Intimate Partner Violence

More than one in three (42.4 million) women have experienced rape, physical violence, or stalking by an intimate partner in the U.S. (Black et al., 2011). IPV victimization is associated with negative mental health (e.g., post-traumatic stress disorder (PTSD), depression, and anxiety) (Basile et al., 2004 & Thompson, 2004; Black et al., 2011; Bonomi et al., 2007 & Thompson, 2007) and physical health (e.g., chronic pain, cardiovascular disease, and gastrointestinal system) (Black et al., 2011; Breiding, 2008) outcomes. These long-lasting health consequences can impact many areas of women's lives, including their ability to be financially independent (Ford-Gilboe et al., 2009; Pavao et al., 2007), to interact socially (Bonomi et al., 2006), and to have positive self-worth (Bradley, Schwartz, & Kaslow, 2005; Zlotnick, Johnson, & Kohn, 2006).

Intimate Partner Violence by Multiple Abusive Partners

Studies estimate that one-quarter to over one-half of women who have experienced IPV in their lifetimes have experienced it by at least two intimate partners (Cole et al., 2008; Liendo, Wardell, Engebretson, & Reininger, 2011; Stein et al., 2016). Comparisons between women who have experienced IPV by one partner and IPV by MAPs indicate that women with MAPs report higher rates of lifetime victimizations (e.g., child abuse) (Carrington-Walton, 2014; Cole et al., 2008; Stein et al., 2016), depression, PTSD symptoms (Coolidge & Anderson, 2002), and substance use (Testa, 2003).

Previous research that has focused on child abuse and subsequent IPV victimization (Messman & Long, 1996; Valdez, Lim, & Lilly, 2013; Zamir & Lavee, 2014), revictimization of women who have experienced sexual assault (Casey & Nurius, 2005; Macy, 2007), and revictimization within the same relationship (Kuijpers, van der Knaap, & Winkel, 2012b; Mele, 2009; Sonis & Langer, 2008), has concluded that vulnerability to subsequent victimization can be predicted based on having experienced theses previous victimizations (Cole et al., 2008).

Limited studies about predicting IPV by MAPs have examined victim-related factors such as having certain demographics or experiencing previous traumas (Stein et al., 2016), and exhibiting avoidant attachment behaviors and substance use (Testa, 2003). Studies have also examined risk of revictimization (with baseline or new partners) following a DV advocacy intervention (Bybee & Sullivan, 2002). A longitudinal study by Cole, et al. (2008) predicted IPV by MAPs among women with domestic violence protective orders (DVPOs) and found that at least 23.7% of women reported experiencing IPV by a new partner within 12 months. These women had higher rates of child abuse, violence by someone other than an intimate partner, and multiple types of IPV by a partner prior to the baseline partner compared with women who had one abusive partner (Cole et al., 2008). My analysis of National Intimate Partner and Sexual

Violence Survey (NISVS) data also showed that experiencing more frequent IPV in the IAR and accessing domestic violence (DV)-related services was positively associated with experiencing IPV by MAPs (dissertation manuscript 1). However, these studies focused solely on identifying factors that are associated with experiencing IPV by MAPs. Further research is needed to better understand the experiences of women who have been abused by multiple partners. Examining their experiences disclosing abuse and enacting self-care strategies will provide information on how to best support women with a greater risk of experiencing IPV by MAPs and inform IPV prevention and intervention efforts. The current study addresses this gap by examining the coping efforts of IPV by MAPs survivors, (i.e., women who are no longer in abusive relationships), specifically focusing on their experiences accessing DV-related services and social support in order to identify areas that can be addressed with IPV prevention efforts.

Coping Efforts Among Survivors of IPV

The concept of resilience, defined as the process people go through to heal from trauma, may involve the use of external resources and support, along with internal coping mechanisms, and could be indicative of a woman's likelihood of experiencing IPV by subsequent partners. Trauma survivors vary greatly in how they respond to trauma (Rutter, 2012), and their ability to be resilient may be enhanced by access to services and support. Examining these service use and support factors and understanding how to bolster them, may inform interventions to support survivors of IPV and decrease their vulnerability to subsequent IPV, as well as support their mental health needs (Iverson et al., 2013; Krause et al., 2008).

To counteract the negative effects of experiencing IPV, survivors use various coping methods, including emotion-focused strategies such as seeking social support, meaning-focused strategies such as focusing on values and beliefs, or problem-focused strategies such as help-seeking (disclosing IPV with the expectation of receiving assistance), through formal and

informal channels (Folkman, 2013; Morrison, Luchok, Richter, & Parra-Medina, 2006; Taylor, Hardison, & Chatters, 1996). The Transactional Model of Stress and Coping, which describes how stressors affect health, indicates that factors such as coping self-efficacy can influence how well a woman is able to mitigate the negative consequences of IPV (Lazarus & Cohen, 1977). For example, Sabina & Tindale (2008) found that the help-seeking behaviors of IPV survivors was based on their IPV experiences (e.g., more severe IPV led to more use of social networks) and the resources available to them (e.g., access to employment and support network). Previous studies have documented that access to DV-related services can be helpful for women who are experiencing IPV (Bybee & Sullivan, 2005; Perez & Johnson, 2008) by providing resources such as safety planning, financial support, and counseling to help them escape abusive relationships and heal from the trauma of their experiences. Similarly, accessing positive social support through informal social networks and faith-based communities has been associated with fewer depressive and PTSD symptoms, anxiety, and suicide attempts following experiences with IPV (Coker et al., 2002; Watlington & Murphy, 2006).

In contrast, emotion-focused coping efforts, such as problem avoidance and social withdrawal, have been found to increase risk of revictimization among survivors of IPV (Iverson et al., 2013). For example, a 6-month longitudinal study found that women who practiced these coping methods were 1.29 times more likely to experience physical IPV revictimization and those who practiced coping efforts that involved problem-solving, cognitive restructuring, and social support, were 1.30 times less likely to experience physical IPV revictimization with a previous or new partner (Iverson et al., 2013). Coping efforts such as problem avoidance, have also predicted greater PTSD symptoms among survivors of IPV (Krause et al., 2008) and have

been shown to be predictive of revictimization over and above the influence of PTSD symptoms among IPV survivors (Iverson et al., 2013).

Despite extensive research centered on coping strategies of IPV survivors (Fraga Rizo, 2013), women who have experienced IPV by MAPs have not been well-represented in the literature, aside from studies that include obtaining formal services or social support in regression models predicting experiences with IPV by MAPs (Bybee & Sullivan, 2002; Cole et al., 2008). Although a large proportion of women in the Bybee and Sullivan (2002) study experienced IPV by MAPs, we do not have a detailed understanding of the experiences of IPV by MAPs survivors interacting with service providers across various fields (i.e., criminal justice, medical, social, and DV advocacy). Also, their experiences seeking support from people in their social networks and disclosing their abuse is not well understood. There is a dearth of knowledge about whether this population has greater needs than women who have experienced IPV by one partner, how they have coped with their IPV experiences, if they have encountered barriers and challenges to seeking help, and the optimal ways to support them.

Current Study

The purpose of this study was to gain an understanding of: a) how women who have experienced IPV by MAPs have accessed and utilized services and social support and engaged in other coping strategies throughout their experiences with IPV; b) how helpful they found the services and social support they accessed; and c) what types of services or methods of support they believed would be most helpful.

Methods

I conducted in-depth interviews with 20 women who experienced IPV by MAPs to understand their experiences seeking DV-related services and social support and utilizing other coping methods. I obtained Institutional Review Board approval from the Office of Human

Research Ethics at the University of North Carolina at Chapel Hill after a full board review prior to recruiting or interviewing study participants (Study # 16-2274).

Sampling and Recruitment

To be eligible for the study, participants had to meet the following criteria: 1) self-identify as a woman, 2) be at least 18 years old, 3) be able to speak and read written English, 4) self-identify as having experienced IPV by at least two partners, and 5) no longer be in a relationship with an abusive partner for at least three months prior to beginning the study to increase participant safety. I recruited a purposive sample of 20 women from which I reached "informational redundancy" or "saturation", while also obtaining demographic variation (Glaser, 2017; Guest et al., 2006; Sandelowski, 1995).

I began recruitment efforts with five local DV agencies and the statewide North Carolina DV Coalition by connecting with agencies where I had previously conducted formative interviews with DV Advocates. First, I met with agency representatives to describe the study and provide advertising materials. Second, I posted study flyers and handed out brochures throughout the local metro area with county social service organizations, non-profit organizations, courthouses, libraries, universities and businesses. Third, I recruited women from across the U.S. using online social media platforms, classified advertisements websites, mobile messaging apps, and research-oriented listservs to obtain more diverse experiences, particularly from women not actively involved with a local DV agency.

Data Collection Procedures

Instrument Development

The interview guide was informed by semi-structured, audio recorded interviews that I conducted with nine DV Advocates to gather information about the needs and coping strategies of women who had experienced IPV by MAPs, along with their beliefs about why some women

experience IPV by MAPs. I solicited feedback on the interview guide from fellow violence researchers, DV Advocates, and IPV survivors. I also piloted-tested the interview guide to improve question clarity, wording, and appropriateness of included questions and incorporated all feedback into the final version. Interview questions addressed the following about experiences in abusive relationships: 1) types of IPV experienced, 2) most immediate needs after leaving an abusive relationship and long-term needs related to experiencing IPV, 3) experiences using DV-related services and seeking social support, 4) stress management and self-care strategies used, and 5) perceptions about why some women experience IPV by MAPs.

I conducted the study in a manner that upheld ethical and safety recommendations for DV research that were outlined by the World Health Organization (Ellsberg & Heise, 2002). Interviews were scheduled with women during screening calls to review eligibility requirements, provide an overview of the study purpose, review the study process, discuss confidentiality, and identify an interview time and location that was convenient for the participant. I conducted all interviews in places that allowed for privacy, including public library meeting rooms, a private office, or online using video chat communication platforms. Each interview session lasted approximately one hour and twenty minutes. Study participants were offered $25 as appreciation for their participation. Contact information for local and national DV services was made available to each participant.

Prior to beginning each interview, participants were asked to complete an anonymous online demographic survey using Qualtrics software or on paper, and provided their written or oral consent to participate and be audio recorded. IPV-related definitions were reviewed with participants and they were asked to create a timeline of the relationships that would be discussed using significant life experiences such as graduations and births of children to help them recall

events related to the relationships. To elicit responses that were as complete as possible, I probed with prepared follow up questions and statements (Arksey & Knight, 1999) and took notes during the interviews to supplement the audio recording.

Data Analysis

Audio recordings of the interviews were transcribed verbatim by an outside contractor and I began immediate close readings of the transcripts and review of the recordings to check for accuracy and to make changes to the wording of questions for subsequent interviews if respondents had difficulty answering them. Following each interview, I wrote a narrative summary and memos to capture initial thoughts and document similarities between participant experiences, note emergent themes, and detail any potential biases of the study participant or of my own as the interviewer using reflexivity (Arksey & Knight, 1999; Rubin & Rubin, 2005).

The transcripts were entered into qualitative data analysis and research software ATLAS.ti 8 (Muhr, 2004) to organize the data for coding, analysis, and interpretation. First, I created a codebook with a priori codes, representing constructs about IPV by MAPs based on the literature, study aims, and theories informing the conceptual model for this study (Miles et al., 2014). The codebook included definitions for each code, guidelines for use, and example text from the interview transcripts (MacQueen et al., 2008). Second, I used various strategies for coding and interpreting the data including, line-by-line coding (Charmaz, 2006) to create broad categories where "basic themes and issues in the data" were identified, along with analytic memoing (Saldaña, 2012). I added codes created during the line-by-line coding process to the codebook and begin categorizing and aggregating more specific codes into higher-level codes that could explain large amounts of data. To strengthen findings, ongoing negative case analysis was conducted by inspecting the data for cases that conflicted with the majority of cases (Given, 2008; Miles et al., 2014).

Third, I generated reports using ATLAS.ti 8 (Muhr, 2004) to document each time a code was used and to examine the co-occurrence of codes, which helped me to begin making connections among codes. In addition, I used the ATLAS.ti 8 (Muhr, 2004) mapping tool to construct a network analysis diagram to depict relationships between codes and determine those most relevant to the study. Codes that were not prominent across participants or those found to be unrelated to the topic of experiencing IPV by MAPs were deleted. Fourth, I created a case-ordered descriptive meta-matrix to compare codes across participants and code matrices to organize major codes across participant experiences based on techniques by Miles and Huberman (1994). I used these matrices to write analytic memos on emerging themes and patterns in the data about the codes (Miles et al., 2014; Saldaña, 2015). Data were recoded as needed based on the patterns seen in the memos and diagrams. Lastly, I grouped codes into overarching themes using exemplary quotes to represent key study findings (Charmaz, 2006).

Ten percent of transcripts were coded independently by another researcher and compared with my codes to increase the reliability of study findings (Arksey & Knight, 1999). In case of disagreement, we discussed the reasons for our codes and a consensus was reached. In addition, emerging themes were reviewed by IPV survivors, DV Advocates, and researchers external to the study with advanced expertise in analysis of qualitative data to increase credibility of findings and help with interpretation of the data (Graneheim & Lundman, 2004).

Results

My analysis of the interview transcripts highlighted successful coping strategies of survivors of IPV by MAPs, as well as areas in which service providers and persons providing social support were both helpful and unhelpful. In the sections below, I discuss: 1) how survivors coped with their abuse experiences by seeking out services, 2) accessing support, and 3) practicing self-care, along with the barriers they faced accessing services and support.

Study Participant Characteristics

I interviewed 20 women who experienced IPV by MAPs. The majority of study participants were between the ages of 25-34 years (n = 11), non-Hispanic whites (n =1 1), had a household income of $25,000 or more (n = 10), worked at least part-time (n = 13), and had children (n = 14). The majority of unmarried women were not currently dating (n = 13) and a large proportion of women had experienced IPV by three or more partners (n = 9) (Table 6.1). All but one woman experienced physical or sexual violence with at least one partner and most women reported experiencing some type of psychological abuse in addition to physical and sexual violence.

Many of these women described traumatic events in their lives such as growing up in homes where they witnessed DV or having an incarcerated parent or a substance abusing parent. Other women described the death of a parent at a young age, being homeless, being in the foster care system, and becoming wives and mothers at early ages.

Table 6.1: Demographic Characteristics of Study Participants (n=19)[a]

Variables	n	%
Age (years)		
18-34	11	58
35-54	7	37
55+	1	5
Race/ethnicity		
African American/Black[b]	3	16
Arabic[b]	1	5
Biracial (Black/White, Black/Native American, Hispanic/White)	3	16
Caucasian/White[b]	11	58
Hispanic	1	5
Education Level		
≤ High School Diploma	3	16
≤ Some College	5	26
≤ College Degree+	11	58
Household Income Level (thousands)		
<$25K	9	47
$25-<$75K	7	37
$75K+	3	16
Marital Status		
Married	2	11
Divorced/Separated	8	42
Single/Never Married	9	47
Abusive Partners		
Two	10	53
Three	5	26
Four+	4	21

[a]Data are available for 19/20 study participants
[b]non-Hispanic

Experiences Navigating Domestic Violence-related Services

Participants' narratives about seeking out and using services related to their IARs varied greatly, with some women having negative interactions with service providers that impeded later use in the IAR or in subsequent abusive relationships, and other women having positive interactions that assisted them with leaving an abusive partner or rebuilding their lives after the relationship ended.

Negative Interactions with Service Providers Deterred Women from Later Use

Some of the most negative interactions occurred with service providers who did not believe the women, chided them for being too young to experience IPV, belittled or ignored them, or even blamed them for being victimized during their IARs. One particularly haunting moment was when a young woman visited a health clinic to receive an abortion and she shared with the doctor, *"He'll kill me. If I have this in me – if I go through with this pregnancy, I'm going to end up dead."*. During this incident, the doctor missed the opportunity to intervene and respond to the participant's disclosure of abuse by stating, *"do what you feel is best"*. Although the participant expressed that she was in an abusive relationship, there was no further action by the physician to address the fact that she felt unsafe or to direct her to DV-related resources. Another woman described her interaction with a Cognitive Behavioral Therapist as particularly harmful because the therapist focused solely on changing her behaviors. The participant felt *"invalidated"* and began to blame herself and take responsibility for how she was being treated by her abuser. Although she continued to receive therapy, this participant indicated that after this experience, she will never seek help from a Cognitive Behavioral Therapist. Despite many survivors currently attending therapy, some of them felt that their inability to receive counseling immediately following their IARs due to financial constraints of DV agencies, limited personal funds, or a lack of knowledge about local services affected their vulnerability to subsequent IPV.

Other women described their interactions with the criminal justice system, specifically with police officers as unhelpful at times or as being made to feel like they were *"taken as a joke"* or *"even stupid for calling… or trying to make a report"*. In one case, a young woman called the police to notify them that her first abusive boyfriend was fighting someone else. While the police officer was onsite, the participant disclosed that her boyfriend was abusing her and the officer dismissed her concerns with this statement: *"we didn't come out here on a domestic*

violence call. He's your boyfriend, as far as I'm concerned, he can do whatever he wants to you…I just want to focus on the incident at hand." Similar to the woman who interacted with the doctor at the health clinic, the concerns of this participant were ignored by a service provider who could have intervened. Consequently, she no longer wanted to *"go back to the police"* for help after that experience and neither did she trust disclosing her abusive relationship to other people out of fear of being discounted or worse, blamed.

At least three of the participants discussed being arrested multiple times for defending themselves against their abusers when they called the police or when someone called on their behalf. These interactions left the women with negative feelings about the police or beliefs that being taken to jail for defending themselves was *"criminal"*. One participant stated that she thinks *"[police officers] just go into a situation and they don't, they don't spend a lot of time trying to figure out the facts."* From her point of view as someone who was arrested numerous times and charged with DV-related misdemeanors along with her abuser, it angered her that the police would punish her for *"defending herself"*. Interestingly, time in jail seemed to be an impetus to her leaving the relationship for good.

Being arrested could be damaging for the participant and have devastating consequences. For example, one participant who had previously been arrested when she called the police about her abuser refused to be taken to jail again. When her husband assaulted her so badly that her children called 911 and the police questioned her, she noted that, *"he got off free"*, because she feared being arrested too. Although her face became *"two-thirds black and blue",* when the police responded, the injuries from her assault were not yet visible and she felt she would not win the *"he said, she said"* argument, and therefore, opted not to report her abuser and risk repeating her own incarceration.

Most women echoed the sentiment that they had some difficulties accessing services. For example, some were not unable to afford a lawyer for a DVPO case and others were told that they were ineligible for services, which limited their help-seeking. As a 13-year-old who was trying to get away from her 36-year-old abuser, one participant was told by social services personnel that she could not be helped because she was not enrolled in school. The participant said that she *"slipped through the cracks in the system"* and she was actually *"thankful for that, because they would have taken my kids away, 'cause I was so young."* In this particular case, the barrier may have been policies that were meant to be helpful and keep children in school. In another case, the barrier was the service provider who told the participant she did not need counseling, although she was a rape victim and suffering from depression after experiencing IPV by two partners. She shared that she "*really wanted counseling and I didn't get it."*. Similar to the experience of another participant who was told that she was ineligible for services *"because we haven't lived together"*, these three cases highlight situations where the needs of survivors were not met because of structural barriers created by policies or through the intentional or unintentional efforts of service providers. The woman who requested counseling after two abusive relationships had initially rejected the idea of needing help in her IAR due to a mistrust of the criminal justice system, but when she did seek help through a DV agency, she was denied access by the DV Advocate to some of the services for which she seemed eligible.

In another case where the service provider did not address the participant's needs, a college student sought out counseling services after having survived a suicide attempt that was related to her IAR. She described how her university's mental health services were not well-publicized and that she made several unanswered calls to schedule an appointment. Furthermore, some women talked about not knowing what local services were offered for survivors of IPV or

not being able to seek out services on their own. As one participant stated, *"it didn't even occur to me to see a therapist…'cause it wasn't physical…I didn't think I was gonna be…taken seriously".*

Positive Interactions with Service Providers Gave Women Resources to Leave Abusers

Contrary to these negative interactions with service providers, some women had encounters with providers that addressed their needs and strengthened their ability to leave relationships. Following a visit to the emergency room, nurses asked a participant about experiencing IPV and provided her with contact information for the local DV agency. Later when she felt ready, the participant contacted the DV agency and received shelter for her and her child, while she made plans to obtain employment and permanent housing, as well as secured access to a pro-bono attorney and a DV Advocate. Like many other participants, she utilized multiple services and accessed the services of the DV agency multiple times because of the helpful interaction, which provided her with the resources she needed to leave her second abuser. As she indicated:

> *…I called those emergency numbers and I was at a women's shelter that night and I stayed there for the next two months…They're, they're an amazing resource…But again, it all tied back to that first time at the clinic appointment where the nurses asked me… even the second time, years later, when I went with my son to the shelter, all that came from original info that they had given me.* (woman in her 20's with two abusive partners, respondent #16)

This participant's situation highlights how service providers, particularly in a medical setting can establish connections to resources for later service use when a woman is ready to leave the relationship or accept the help.

Other women, who were often isolated, positively described their interactions with services through technology, especially in resource-limited areas. For example, two women described their ability to receive text messages notifying them when their abusers were moved

within the criminal justice system or released, which was particularly helpful to these women who lived in remote, rural areas. One participant shared that the local DV agency would let her know, *"we have a bed for you if you need it"*. This participant recalled how she utilized their services many times, including a Court Advocate and support group, and that she appreciated the preventive measures, such as safety planning, that were put in place for women experiencing IPV. One woman who was living overseas while married to her second abuser used an online chatroom to speak with a DV Advocate. Another woman took multiple DV screening tests online, which made her realize the seriousness of her situation and prompted her to start preparing to leave her abuser. Like many women experiencing IPV by MAPs, whose *"perspective of reality was skewed"* due to continuous psychological abuse from multiple partners, receiving assurance from people outside of the relationship or learning information about DV provided confirmation that how they were being treated was wrong and that they needed to leave their abusers.

Beyond the tangible support provided by DV and social service agencies, medical providers, and lawyers, many women expressed that the information they learned about IPV from their interactions with service providers was the most helpful to them, particularly during or after being in more than one abusive relationship. For example, some women did not comprehend that they had been in previous abusive relationships until they learned more about how abusers manipulate their victims or that despite the fact that they had physically or verbally fought back, they were still experiencing IPV. One participant stated that attending a weekly class/support group was most helpful because it made her realize that *"there's more to abuse than just hitting"* and that IPV encompasses a broader set of behaviors than just physical harm.

Women discussed how learning about IPV through their own research or through DV-related services after their abusive relationships helped but indicated that they needed that knowledge as young women **prior** to their IARs. Survivors wished they would have learned *"what gaslighting is and how to recognize it. How to recognize forms of abuse…"* and discussed that having a lack of understanding of what was happening to them was the *"worst part".* Many of the women wished that they had known about the long-lasting effects of non-physical abuse and that it can be just as harmful or even more harmful than physical assault. They wished that they had been taught in school about verbal and emotional abuse because perhaps they would have noticed the *"red flags"* sooner that pointed to IPV. Another woman who experienced IPV in same-sex relationships indicated that beyond having a lack of knowledge, she also did not have models of what a healthy relationship looks like, especially between same-sex partners.

Finally, the participants also suggested that *"general awareness and education are critical points to tackle"* for the public to also be knowledgeable about different types of IPV. In addition to increased knowledge about IPV for the general public, survivors expressed that the messages portrayed in society about how women should be treated by men and the messages that are given to young women about expectations of how they should be treated need to be changed. For example, some women grew up with messages such as *"so he may be beating on you, but at least he brings some money home"* or that being married meant that they were owned, and they internalized these messages, which primed them to be receptive to similar messages from multiple abusers.

Experiences Navigating Informal Social Support from Family and Friends

Some IPV survivors received emotional support through empathetic actions or instrumental support through receipt of tangible assistance such as provisions of safe housing (Heaney & Israel, 2008). Throughout their experiences with multiple abusive relationships, many

women described having a network of family, friends, and acquaintances who caused intentional and unintentional harm through actions and inaction that may have impeded their ability to leave an abuser or expedited their falling victim to another abuser.

Unsupportive Family and Friends Hindered Women from Leaving Abusers

Often, participants shared their experiences of being blamed by the abuser's family for experiencing IPV. In one extreme case where the participant's second abuser planned to drive her car into a lake with her in it, she explained:

> *New Year's Eve, I ended up in the trunk of my car…He's strangling me to get out the car, right? The car's in reverse, he comes in the car, he takes my seatbelt off, he puts the car in park, and he's like, literally pulling me out of the car. I'm screaming…And the whole time his mom was like, "well, well you provoked him. What did you say to provoke him? What did you do to provoke him? You need to stop.* (woman in her 20's with two abusive partners, respondent #17)

This quotation illustrates how family members witnessed IPV and still blamed the victim. Similarly, intervening by family members of the abusers was rare. In addition to blaming the victim for being abused, they would also blame the victim for seeking help, especially if it involved some type of repercussions for the abuser, such as time in jail or prison. These family members were complicit in victimizing the women and were often the only people remaining in their social networks because women were isolated from their own family and friends. In one case, the participant was approached by her boyfriend's father to *"work it out"* and drop the criminal DV case against him. She responded, *"I can't let it go this time".* Furthermore, some family members would ignore the abuse and act as if it was *"not our business"* or silence the women even when they witnessed incidents of physical assault.

Beyond the perpetrator's family, women described encounters within their own network of family and friends as unsupportive, particularly after experiencing multiple abusive relationships. One woman shared:

> *…so there were times when I actually wished it was physical, because then at least there would be like actual clear-cut signs that he was abusing me, and people would have to take me seriously. (woman in her 20's with two abusive partners, respondent #5)*

Some of the people in women's social networks unwittingly made it even harder for them to exit abusive relationships by shaming them for being abused by multiple partners and labelling them as responsible for their abuse. When women encountered these unsupportive people after experiencing MAPs, they were often more likely to counter these negative messages by seeking help from a different source, such as faith-based support groups.

Often, survivors had family members and friends who offered support, but who were also ultimately unsupportive by exhibiting mixed (both positive and negative) reactions to disclosure of IPV due to ignorance of the abuse women endured or preconceived notions about intimate relationships. Participants shared how their immediate need for a safe place to stay was often provided; however, they were sometimes subject to unsolicited advice that was more harmful than helpful from the same people offering shelter. In one instance, a participant's friend picked her up from a DV shelter and took her to run errands. The friend provided emotional support by expressing anger over the abuse and she provided instrumental support by giving the participant transportation, but she also blamed the participant for her circumstances. It affected the participant and she expressed, *"I'm just gonna…get away from them and that negativity and all that, blaming me and all that…it had me question like, am I really at fault for this?"* (woman in her 20's with two abusive partners, respondent #8)

Another woman encountered similar scorn from her parents when she planned to leave her husband. They provided her with instrumental support by allowing her to move back in with them, but their advice to her was, *"you stick it out. You make it work…if you marry him, you don't get divorced"*. However, the participant stated that, *"they never believed that he would*

actually be capable of killing me", although he had put a loaded gun to her head. In this case and so many others, people in the survivors' social networks meant well, but often did not know the extent of the abuse. Sometimes women did not disclose everything that had happened to them, with sentiments like, *"it couldn't be happening again.* "*You know, you already did it once, you should be smarter than that"*, they were ashamed to be in another abusive relationship. As one participant shared:

> *And the worst part was, like, I never- I never told my friends-They knew that it was bad. They knew that he was stalking me after I'd left him, but I never told them that he had kicked my feet out from underneath me and, like, physically caused me a wound. For some reason I kept that to myself.* (woman in her 20's with two abusive partners, respondent #16)

Additional unsupportive people were bystanders who witnessed the abuse and did nothing to intervene or to alert the proper authorities. One participant described her experience being physically assaulted in an alleyway:

> *There wasn't anyone to call the cops for me. I think I was in such a state of fear and domination that what it would've taken is to have someone call the cops for me. The person leaning out of their third story apartment was just like "Shut up!" instead of calling the cops.* (woman in her 20's with two abusive partners, respondent #16)

This quotation, which was echoed in the stories of other women who were openly abused in public, illustrates how when women were not supported by bystanders, their ability to get out of abusive relationships was stymied and they were further inundated with messages that appeared to communicate that what was happening to them was not that important or perhaps not that bad. It also illustrates that some of theme experienced shame as a barrier to disclosing their experiences with IPV.

Supportive Family, Friends, and Strangers Assisted Women with Leaving Abusers

The narratives of women receiving support during or after experiencing IPV by MAPs revealed that most of the support they received was emotional or instrumental. Often, women in

grave danger had to rely on the support of family and friends to help them leave their abusers. One mechanism through which emotional support was provided was by confronting the abuser about his or her behavior. Common types of instrumental support came in the way of providing a safe place to stay, financial support, and opportunities for employment. Many women moved *"back home"* with their parents or stayed in the homes of various friends after their IARs and others received financial support for necessities like hiring a lawyer. One unique case occurred when an Army recruiter approached a participant who had a black eye by suggesting that she join the military. Two weeks later, she says that *"he shipped me out",* demonstrating that this offer of employment provided her a way to escape the abuse.

In other cases, survivors received instrumental support when other people contacted the police; whether it was a neighbor who was asked by the participant to call or the participant's children who called after witnessing the abuse. In one case, the supportive person was a friend of the abuser who assisted the participant during a physically violent incident. The participant recounted:

> *…I remember his calling the EMS to say, 'Her arm is broken, please come.'… And then I remember him…telling [the perpetrator], 'Go sit your ass outside before I kill you.' And he called back 911, and he said, 'You need to send the police. He broke her arm.' And, so because of that call, they initiated a court case.* (woman in her 30's with two abusive partners, respondent #11)

As this quotation illustrates, the action of the abuser's friend is what provided the opportunity for the participant to leave and to involve the court system in gaining protection from her abuser. Just having someone to listen to the participant and encourage her was helpful, as one young women recounted, *"Yeah, I don't think I would've' found the strength to leave him at that time if it hadn't been for that friend."*

Survivors also indicated that the most helpful type of support from family members and friends was for them to be believed and not blamed or judged in their IARs. Many of the women

talked about needing *"someone to listen. Someone to validate that what I was going through was real and that it wasn't normal"*. After leaving these relationships, they noted that giving them *"time and patience"* was helpful because it allowed them to go through the healing process of having experienced multiple traumas.

Experiences Dealing with Trauma After Abuse

Survivors Used Self-care Strategies to Cope with Trauma After Leaving MAPs

Beyond seeking more immediate formal support from service providers and informal support from social networks, participants coped with their IPV by MAPs experiences by: 1) helping others through sharing stories of survival or assisting other women experiencing IPV, and 2) focusing on themselves by obtaining counseling or spiritual guidance. Long-term coping efforts were enacted through "paying it forward" to others after positive encounters with service providers and social networks, or after negative encounters that prompted women to work to ensure that other women did not have similar experiences. One participant shared how she founded a DV organization. With her background in social work and her own experience struggling to navigate through the criminal justice system to access DV-related resources, she wanted to connect IPV survivors to resources like counseling, legal services, and shelter. Two survivors described how they facilitated support groups. As stated by one participant, *"it was about being around other people that, you know, it didn't' matter how broken you were…because we're all a little broken",* which can help women feel less isolated while dealing with the effects of IPV. Whether women shared their stories as a warning call or as a message of comfort for those having experienced similar relationships, many of them described speaking out as a way to cope and feel empowered. Three participants are writing their stories through books and online blogs to share their messages digitally. As one participant stated:

> *...so I have an online blog, that I blog about my experiences from before the, from before and during, to even after. Um, so that helps me a lot. Sometimes it's good, sometimes it's not.*
>
> *Because when I'm writing, I'm also reliving everything. Um, but you know, getting e-mails, um, people I went to school with-shocked me, like that they would be in similar situations…feeling like I've helped somebody kind of um, helps me.* (woman in her 30's with three abusive partners, respondent #18)

As illustrated by this quotation, one way that women coped with their IPV by MAPs experiences was to share their stories widely, even though it was at times painful to revisit those memories.

Another way women coped was through the act of forgiveness. Although women did not forget their experiences with IPV, they wanted to move forward in their own healing processes, especially when they had to continue raising children that they shared with their abusers. In addition, women talked about forgiving themselves because they did not want to hold onto *"all of that toxic stuff that builds up inside you".* After having experienced IPV by MAPs, many of them struggled with shame and lacked trust in themselves to choose romantic partners; however, as one survivor stated, *"you don't heal if you don't forgive yourself and that, to me, is the long-term medicine"*.

Alternatively, women actively addressed their experiences with IPV by MAPs by finding ways to empower themselves directly. For example, many survivors discussed that even though they may not have received counseling immediately after experiencing their IARs, they focused on improving their mental health and participated in long-term therapy, meditation, hypnosis, and spiritual counseling. At least nine women sought help from their local places of worship and from their renewed relationships with God. Some women focused more on their physical health or engaging in activities that may have been prohibited during their relationships, such as traveling. Whatever their chosen methods of coping, women overwhelmingly sought to improve their mental health and learn to be independent or to embrace their newfound autonomy after

having experienced multiple relationships where their decision-making was limited or they were dependent on their romantic partners.

Discussion

I conducted this study to explore how women who have experienced IPV by MAPs have accessed and utilized DV-related services and social support and engaged other coping strategies throughout their experiences with IPV. My aim was to understand their experiences and also learn what would be most helpful to meet their immediate and long-term needs, as well as identify points of intervention to prevent IPV. Survivors indicated that eliminating barriers to services, including mental health counseling; improving IPV education; and achieving independence were the most necessary factors that would have been helpful during their experiences with MAPs. Many of these factors are some of the same barriers and challenges that have been identified by women with one abusive partner; however, it seems that these barriers may be exacerbated for this group of women. Often, they were not connected with services or people in supportive roles during their IARs. Through receipt of negative or disaffirming messages from their social networks and limited access to helpful service providers as they dealt with the trauma of abuse in their IARs, they may have become more vulnerable to experiencing IPV by a new partner. This study indicates that it is important to identify and address the heightened needs of this population for access to positive social support and tailored services.

Interactions with Service Providers

Overall, I found that interactions with both service providers and social networks during IARs influenced whether a woman was able to get out of an abusive relationship, as well as her help-seeking behaviors in subsequent abusive relationships. Women experienced both positive and negative interactions with service providers; however, the negative interactions during their IARs limited their use of services when needed later in the same relationship or with a new

partner. In addition to overcoming feelings of self-blame and harmful beliefs about experiencing IPV by MAPs, many women shared stories of encountering barriers to services. Most often these barriers were depicted in forms of denial, blame, and outright disregard, particularly during their IARs. The majority of encounters that prompted women **not** to reuse services when needed were encounters with police officers, specifically if they were arrested during IPV-related situations or when their pleas for help were ignored.

Findings from this study are consistent with the results of a qualitative study with 102 IPV survivors that found that 90% of women who had previously interacted with either the court system or police officers for IPV-related concerns did not consistently contact the police for subsequent help (Gover et al., 2013) because their decisions for seeking help were influenced by previous unhelpful or harmful encounters (Liang, Goodman, Tummala-Narra, & Weintraub, 2005). Similar to the findings in this study, Gover et al.'s (2013) research indicated that some of the main reasons for not calling the police again included being dissatisfied with the criminal justice system and feeling as if their concerns did not meet the threshold to be taken seriously. Recent studies indicate that an increasing number of women are being arrested even when they are considered the victim in IPV-related cases and this makes them hesitant to call for help when needed at a later time out of fear of being arrested again (Dichter, 2013), as was seen in this study. Encountering barriers to future service use is an alarming factor when we consider that women are less likely to make repeat calls to police after negative interactions, particularly among women with MAPs. Police encounters that negatively impact options for later use are especially troubling given that police services and medical care have been identified as the most commonly used formal services for IPV survivors (Ansara & Hindin, 2010), and they are most often used when a women is in immediate need and significant danger.

Women also encountered negative interactions with social services or counseling services primarily due to access barriers such as unhelpful service providers, lack of personal or agency finances, or lack of knowledge about available services. Understanding barriers to accessing these services is also important, especially because immediate and long-term counseling were mentioned as one of the most helpful resources for women who have experienced IPV by MAPs.

In contrast, many women described reacting differently in later abusive relationships than in their IARs by more readily disclosing the abuse to members of their social networks, or seeking help through formal service providers, physically fighting back, or deciding to discontinue engaging in intimate relationships. In these instances, woman had more positive interactions with service providers than during their IARs and stated that receiving help with preventive measures, such as safety planning and having access to digital resources were particularly helpful. Although women experiencing IPV often access their informal networks for social support, those who experience more severe IPV are more likely to seek help from formal service providers than their informal networks (Ansara & Hindin, 2010), especially when they have depleted all of the informal support available to them during a previous abusive relationship (Young-Wolff et al., 2013). Similar to the findings in this study where initial interactions with service providers affected women's later use, Young-Wolff's (2013) study highlights the importance of service providers for women with MAPs.

Interactions with People in the Survivor's Social Network

I found that survivors encountered people in their social networks who provided them with instrumental and emotional support, but that unsupportive people through action or inaction affected the ability of survivors to leave an abusive relationship. Women gave examples of how they accessed instrumental support, such as housing, and emotional support, such as encouragement, to leave their abusers. Often, they received support through mixed reactions

where someone would help them after disclosing abuse, but simultaneously offer advice that could be considered harmful. These findings are consistent with previous research that found that 78% of women reported experiencing mixed reactions from people across their social networks and from individuals (Trotter & Allen, 2009). This statistic suggests that social support is not a uniform concept that is solely positive or negative, but that both types of support commonly occur simultaneously (Sylaska & Edwards, 2014; Trotter & Allen, 2009; Uchino, Holt-Lunstad, Smith, & Bloor, 2004). Similar to negative interactions with formal service providers, having negative experiences when requesting informal support can impede a survivor's future attempts at seeking help. Specific actions such as disclosing a woman's location to her abuser (Trotter & Allen, 2009) or offering to help, but attaching disempowering conditions to the support, can be particularly harmful (Sylaska & Edwards, 2014).

Long-term Coping Methods

Finally, I found that women enacted various long-term coping methods after leaving their abusive partners to manage their trauma by helping others or by engaging in practices that improved their mental and physical health. Similar to rates of mental health issues in another study with survivors of IPV where approximately 40% suffered from PTSD symptoms and slightly more than 50% suffered from depression (Cole et al., 2008), 55% of the women in this study reported experiencing PTSD symptoms, depression, anxiety, and suicide ideation and attempts. Accordingly, many of the coping practices they identified such as meditation, therapy, and support groups were used to positively impact their mental health (Calvete et al., 2008; Krause et al., 2008). As reported in a study on coping methods used by survivors of IPV, women used various coping methods (Fraga Rizo, 2013); however, all of the participants in this study were no longer in abusive relationships and much of their focus was on emotion and religious-focused coping methods.

Implications for Interventions and Research

These results have several implications for interventions that address IPV prevention and healing from IPV, especially with women who have experienced IPV by MAPS, many of whom did not receive help after their IARs. Study findings suggest that the decisions to disclose their abuse and seek out both formal services and informal support were heavily influenced by what occurred in their IARs and by initial interactions with persons providing support. This study identified several problematic experiences with service providers in the criminal justice system that need to be addressed. Based on the negative interactions with police officers described by participants, training is needed for police officers to understand the dynamics of IPV (O'Dell, 2007). In addition, guidelines are needed that outline appropriate and ethical ways to respond to women who express concerns about experiencing IPV (O'Dell, 2007; Rajan & McCloskey, 2007).

IPV-related protocols should also be established in health care settings to ensure that women who are screened and identified as being in abusive relationships are connected with appropriate services (O'Doherty et al., 2014). Given the multifaceted needs of women experiencing abuse, collaborations among service providers in different fields and linkages between community-based services are needed (Macy, Giattina, Parish, & Crosby, 2010), such as Family Violence Justice Centers that offer counseling, medical, and legal services in one location (Gwinn, Strack, Adams, Lovelace, & Norman, 2007).

Efforts should be made by DV Advocates and other service providers to become knowledgeable about women's lifetime IPV experiences, and to learn about any previous positive and negative interactions with service providers or persons in their informal networks. Identifying specific areas of breakdown in services provided may help to adjust services to survivors' needs and designate where to direct limited funds to address the needs of clients with

the most severe histories of IPV in their IARs. In addition, responses to survivors should be tailored to address different intersections of survivors' lives (e.g., women with disabilities or undocumented women) (Parmar, Sampson, & Diamond, 2005) or to address issues such as loss of child custody or chronic mental health issues as was seen in this study population.

With evidence from this study indicating that IPV by MAPs survivors utilized their informal support networks most often, and that these interactions involved mixed responses, interventions should include some components that addresses potential support persons directly. For example, intervention studies that have included family members and friends in educational programs or in therapy sessions have proven to be beneficial for study participants in addressing weight loss and substance abuse issues (Hogan, Linden, & Najarian, 2002; Humphreys & Noke, 1997; Wing & Jeffery, 1999). Efforts to provide a woman with ongoing positive support by engaging her natural support system as advocates may be beneficial to her general wellness as a survivor.

Finally, because women are most often victimized by IPV (Black et al., 2011), I focused on this population in the study; however, studies indicate that men are increasingly experiencing IPV (Black et al., 2011) and IPV among persons in same sex relationships is at least as prevalent as in heterosexual relationships (Walters, Chen, & Breiding, 2013). Future research should explore experiences with use of coping methods, particularly help-seeking behaviors, among survivors of IPV by MAPs in these populations.

Limitations

There are a few limitations to note in this study. Participants self-selected into the study and may have been more likely to use formal services and seek social support, because some of the recruitment was done through DV and social service agencies, and online support groups. Also, all of the participants have exited their abusive relationships, so the findings may be biased

towards successful coping strategies; however, these women were readily able to reflect on what would have been most helpful during their IARs. The data may be subject to recall bias because some of the abusive relationships that the survivors discussed happened many years ago; although, study participants completed a timeline to help them recall the general context of each relationship. Further, recall bias may have occurred in instances where the study participants blocked out particularly harmful memories. Finally, the women who participated from North Carolina may be more similar to each other than women from other states; however, the sample was a demographically diverse group of women with heterogeneous encounters with service providers and informal supporters. The goal was to understand the phenomenon of coping among IPV by MAPs survivors and not necessarily represent the broader population.

Conclusions

The overwhelming majority of women in this study demonstrated high levels of resilience after experiencing IPV by MAPs. Despite feelings of self-blame, encounters with barriers to services, and incidents involving mixed displays of support, they continued to seek out services and support to help them heal from trauma. Service providers who acknowledged the abuse in the IAR and actively worked to link survivors to services were most helpful, as were family members and friends who provided instrumental support without making statements that could unknowingly be harmful. In addition, access to immediate counseling after the IAR and having more general knowledge about what constitutes IPV, were cited as factors that would have been most helpful to these women. This study indicates that many, if not most IPV by MAPs survivors have used formal service providers, and more often, persons close to them in informal roles when support is needed. This study highlights the importance of having service providers in all fields be knowledgeable about engaging with victims of IPV, as well as having persons in social networks acquire the tools to help, not harm survivors.

CHAPTER 7: DISCUSSION AND CONCLUSIONS

The overall purpose of this dissertation was to better understand what makes some women more vulnerable to experiencing IPV by MAPs and how they engage coping methods, including seeking formal services and informal support. The three aims of this dissertation were to: 1) determine the associations between IAR vulnerability factors and the likelihood of experiencing IPV by MAPs, 2) determine associations between IAR resilience factors and the likelihood of experiencing IPV by MAPs, and 3) gain a better understanding of: a) how women who have experienced IPV by MAPs have accessed and utilized services and social support, and engaged in other coping strategies throughout their experiences with IPV; b) how helpful they found those services and social support; and c) what types of services or methods of support they believed would be most helpful. The results from this study improve our understanding of IAR factors that are associated with experiencing IPV by MAPs and provide insight into the coping and help-seeking experiences of IPV by MAPs survivors, which can inform interventions to prevent IPV by MAPs. In this concluding chapter, I review key findings from both manuscripts, review potential limitations and strengths of each study, and discuss implications for future research, intervention work, and policy changes.

Summary of Study Findings

The findings from Aim #1 suggested that experiencing higher levels of IPV frequency in the IAR was positively associated with experiencing IPV by MAPs. The findings from Aim #2 suggested that obtaining DV-related services was positively associated with experiencing IPV by MAPs; however, there was no longer an effect when vulnerability factors related to the IAR were

included in the model. Furthermore, obtaining DV-related services had no moderating effect on the relationship between any vulnerability factors and experiencing IPV by MAPs. I also presented evidence that receiving positive social support was not associated with experiencing IPV by MAPs and that it had no moderating effect on the relationship between race/ethnicity, IAR IPV frequency, having PTSD symptoms or injuries and experiencing IPV by MAPs. However, it did have a moderating effect on the relationship between age at IAR and experiencing IPV by MAPs. Consistent with prior victimization research, these findings provide important evidence regarding the association between factors related to the IAR that can affect a woman's vulnerability to experiencing IPV by MAPs (Carrington-Walton, 2014; Cole et al., 2008). Specifically, these findings provide information on factors that can be used to indicate that an IPV survivor may need more extensive support and access to helpful services and resources to limit her risk of vulnerability to subsequent abusive relationships.

In the study examining Aim #3, I used qualitative data to expand on the findings in Aims #1 and #2 and explore the experiences of women who engaged in coping strategies throughout their experiences with IPV by MAPs, including utilizing services and social support. With evidence from the quantitative analysis indicating that in addition to IAR IPV frequency, using DV-related services was associated with experiencing IPV by MAPs and that obtaining social support affected the likelihood of experiencing IPV by MAPs based on age at IAR, I wanted to gain a better understanding of how women engaged these formal services and any informal supports during and after these abusive relationships. Through interviews with survivors of IPV by MAPs, I learned that women engaged in various coping methods throughout their experiences with IPV. Most often, they employed help-seeking behaviors such as accessing DV-related services through police officers and medical care personnel, and social support from family

members and friends during their relationships. They engaged in more mental health-focused activities after leaving their relationships. Despite encountering some internal and external barriers to accessing services and social support, these findings demonstrate that women experienced positive, negative, and mixed interactions, with service providers and persons in their social networks from whom they sought support. The circumstances surrounding these interactions and the responses women received when they disclosed abuse during their IARs influenced their ability to leave abusive relationships, as well as their help-seeking behaviors in subsequent abusive relationships. These findings provide important information indicating the most frequently used sources from which IPV by MAPs survivors sought services and support. Specifically, these findings suggest service providers and persons in women's social networks who should be targeted for IPV prevention interventions because they provide negative or mixed responses when survivors disclose their abuse. These findings also highlight services that should be more tailored to address the needs of this population. Collectively, these findings demonstrate the importance of knowing the history of violence each woman experienced in her IAR and of her experiences accessing DV-related services and support.

Study Strengths

This study has both conceptual strengths, based on the population of interest and the factors analyzed, and methodological strengths, based on the NISVS dataset and qualitative sample used. Along with the use of mixed methods, these study design strengths support the importance of the findings on IAR factors that affect vulnerability to IPV by MAPs and the experiences of IPV by MAPs survivors seeking services and accessing social support.

Population of Interest

By focusing on differences between women with one abusive partner and IPV by MAPs, this study adds to the limited literature that examines women with MAPs as a distinct group

(Carrington-Walton, 2014; Cole et al., 2008; Stein et al., 2016). In the quantitative analysis, I compared women with one abusive partner versus women with MAPs and used 28 indicators to group them by whether or not they had experienced physical and/or sexual violence, similar to other research with IPV survivors (Campbell, 2002; Garcia-Moreno et al.; Tjaden & Thoennes, 2000; World Health Organization, 2013a). In the qualitative analysis, women self-identified as having experienced IPV by MAPs, and all but one survivor who mainly experienced psychological and emotional abuse, had experienced physical and/or sexual violence. Using this population with a range of IAR experiences and varied experiences accessing services and seeking social support allowed me to gain a better understanding of DV-related service utilization and examine patterns of help-seeking behaviors among IPV by MAPs survivors.

The majority of previous studies on IPV revictimization have not delineated between revictimization that occurs within the same relationship and experiencing IPV by MAPs (Cattaneo & Goodman, 2005; Kuijpers et al., 2011), although studies indicate that women who experience IPV by MAPs suffer from greater mental health issues (Coolidge & Anderson, 2002; Jaquier & Sullivan, 2014). Except for a limited number of studies involving women who have experienced IPV by MAPs that have primarily focused on the effects of child abuse and victim-related characteristics, few studies have examined factors that cause women to be more vulnerable to subsequent IPV (Cole et al., 2008; Stein et al., 2016).

This dissertation addresses this gap by assessing differences between the IAR experiences of IPV survivors and evaluating factors that may impact experiences of subsequent IPV. Making this designation allowed me to focus on the unique experiences of women who have an increased risk of experiencing serious deleterious health consequences from IPV. Including the voices of IPV survivors is critical in IPV prevention work and hearing directly

from women who have experienced IPV by MAPs and have interacted with medical, social service organizations, or criminal justice system services, provided information on what services were helpful, what was needed and not accessible, and what would have helped prevent them from experiencing IPV by MAPs. In this dissertation, I situated the survivor's voice as the expert and used their experiences to inform IPV prevention efforts.

Population-based National Data

The NISVS dataset is a population-based survey that was created to determine prevalence of IPV, who is most likely to experience IPV, the patterns and impact of IPV within each abusive relationship, and the health-related consequences. The use of this weighted dataset was a strength of this study because it allowed for generalizations to the larger U.S. population, providing more representative findings than results from small clinical or DV-agency samples often used in IPV studies. Despite the availability of various national data sources that include information on IPV, previous datasets often have a limited number of questions that can characterize the complexity of IPV experiences and lack the ability to track IPV prevalence changes over time (Centers for Disease Control and Prevention, 2014; Tjaden & Thoennes, 2000). In contrast, the NISVS is the first national IPV survey to include questions about specific violent behaviors, such as types of sexual violence experienced other than rape and control of reproductive health, to further understand the public health burden of violence (Black et al., 2011). Also, the NISVS is the only cross-sectional dataset that allowed for some determinations of temporality between the occurrence of MAPs based on age-specific questions related to each relationship. Finally, this dissertation is also one of the first studies outside of CDC research to analyze NISVS data, since the initial public release in 2016.

The IPV by MAPs survivors who I interviewed for the qualitative study were also recruited from across the U.S. Efforts to expand study participant recruitment nationwide

resulted in a sample that was more demographically diverse, as well as, diverse in their IPV experiences and experiences accessing services and utilizing social support.

Mixed Methods

This dissertation is also strengthened by the use of a mixed methods design that was based on the sequential explanatory model, which has been suggested as a way to better understand self-reports of abuse experiences (Carrington-Walton, 2014). Findings from the quantitative study that IAR violence experiences affect risk of subsequent IPV were corroborated and expanded on by the context added by the qualitative study findings.

Study Limitations

There are also a few limitations worth noting in the quantitative and qualitative studies.

NISVS Dataset

Similar to any survey that includes retrospective questions, there may be some recall bias because respondents may have described relationships and incidents that occurred many years ago; however, I controlled for some of these issues related to retrospective data by controlling for time since IAR in the analysis. As with any national survey that includes questions about sensitive topics such as IPV, NISVS may not include responses from people who are severely impacted by IPV or most at risk for experiencing IPV by MAPs due to safety concerns or concerns about experiencing repeat trauma when discussing IPV experiences (Breiding, 2014). Not including these people may have led to estimates of IPV that underestimated the true prevalence and severity of this phenomenon (Black et al., 2011).

Because the NISVS is a cross-sectional dataset, I was limited in making some determinations of causality between health-related variables and demographic variables (except for race/ethnicity, since it does not change over time) and experiencing IPV by MAPs. However, because some of the variables were associated with the respondent's age, such as the time when

each abusive relationship started and ended, I was able to make some determinations of temporality. Also due to the cross-sectional nature of the data, I could not indicate which relationship occurred first if a woman experienced her first two abusive partners in the same year. This did not occur often, but if necessary, I chose the partner that was named first as belonging to the IAR. In addition, I did not distinguish between women with two versus more than two abusive partners because the variables related to any abusive partner after the second one became limited due to large amounts of missing data.

Although the NISVS includes time-associated variables based on age, variables such as service use, social support, and PTSD symptoms and injuries were connected to each abusive partner and therefore, each relationship. I was unable to determine at what time during the relationship these events occurred or if they occurred after the relationship ended, only that they were related to the particular relationship. Similarly, NISVS data do not indicate exactly when each violent behavior occurred during the relationship, but it does indicate whether it occurred anytime during the relationship and if it was within the past year. Because the analysis was focused on lifetime experiences with IPV and the overall circumstances of each relationship, lifetime violent behaviors were used in the analysis. Finally, the NISVS does not measure IPV-related risk factors such as, witnessing IPV in the childhood home and experiencing physical child abuse (Linder & Collins, 2005).

Measurement

Service use was measured based on whether the respondent utilized services related to housing, victim's advocacy, legal, or medical because of her IAR. Because some service use types had low numbers (e.g., only eight women experiencing IPV by MAPs used victim's advocacy services), I aggregated the continuous variable to include use of any type of service.

Aggregating these data may have biased the results to be more reflective of the influence of services used by the largest percentage of the sample on experiencing IPV by MAPs.

Social support was also an aggregated variable that was represented by a combination of the proxy variables for informal (family and friends) and formal (police officer, doctor/nurse, psychologist/counselor, or crisis line operator) disclosure of IPV and perceived helpfulness. The dichotomous variable represented *no support* (disclosure, therefore no support or disclosure, and no one provided helpful support) and *support* (at least one person provided helpful support). Because NISVS data only allows for information on whether the person was considered helpful, describing and characterizing each experience of seeking support was challenging. Although a preferential measure for social support would have been to use a social support scale, categorizing social support in the manner described helped to differentiate women who received no support and needed it from those who received helpful support from at least one person. In addition, the qualitative data expounded on the nonsignificant findings of social support as a predictor of IPV by MAPs by examining the differences in positive, negative, and mixed interactions from all sources and provided more context around the effects of these interactions beyond what was provided by NISVS data.

Having PTSD symptoms is another factor that was limited in the way it was measured in the NISVS dataset. Although most PTSD scales, including the PTSD Symptoms Scale (Foa et al., 1993), have many factors that indicate someone is responding to their experience with a traumatic event, the NISVS only includes four indicators to represent PTSD symptoms. In this analysis, I used a continuous variable to represent PTSD symptoms including, having nightmares; trying hard not to think about the abuse; being constantly on guard, watchful, or startled; and feeling numb or detached. Having additional PTSD symptoms included in the

NISVS dataset would have provided a more comprehensive variable to represent the complexity of experiencing PTSD.

Qualitative Sample

The women who participated in the qualitative study were self-selected into the study, and because some of the recruitment was done through DV agencies, social service agencies, and online support groups, these women may have been more likely to use formal services and seek social support than the general population. Recall bias may have also been present during some of the qualitative interviews if women were discussing abusive relationships that happened a long time ago or if they had blocked out painful memories; however, each study participant completed a timeline to help them remember the general context of each relationship. Finally, 50% of the women I interviewed lived in North Carolina and may have been more similar to each other than women from other states; however, the sample was demographically diverse and represented a range of encounters with service providers and informal supporters.

Implications for Research

The findings from this dissertation provide implications for future research on prevention of IPV by MAPs, including: 1) improvement of measures associated with experiencing IPV by MAPs, 2) examination of the effects of more contextual factors on experiencing IPV by MAPs, and 3) examination of differences between groups of IPV by MAPs survivors.

Future research on experiencing IPV by MAPs should include measures on coping behaviors beyond help-seeking to better understand the entirety of methods that IPV survivors use to manage being in abusive relationships, leaving relationships, and healing from these relationships. Future studies should also include improved measures of factors such as PTSD symptoms, service use, and social support in national studies. Although the findings from this dissertation suggest that some of these factors are associated with IPV by MAPs, we cannot fully

understand the effect of various interactions with service providers and persons in support networks without more comprehensive measures that can tease out these effects individually.

The qualitative study in this dissertation and previous studies with IPV survivors indicated that IPV survivors experience a range of responses when disclosing abuse (Sylaska & Edwards, 2014; Trotter & Allen, 2009; Uchino et al., 2004). Assessing the survivor's need, the type of services or social support received, the response of the service provider or supporter, and instances where necessary services or support could not be accessed would provide a better indication of experiences with formal and informal social support. The findings from this dissertation suggest that individual interactions with supporters and service providers are important indicators associated with experiencing IPV by MAPs and need to be assessed empirically in a national study using a comprehensive scale such as the Social Reactions Questionnaire (Ullman, 2000).

National surveys on IPV victimization, particularly future studies on experiencing IPV by MAPs, need to include additional measures that represent contextual factors that have been associated with experiencing IPV to further examine differences between women with one abusive partner and those with MAPs. For example, experiencing child abuse and exposure to IPV in the childhood home has been associated with later IPV (Carrington-Walton, 2014; Wood & Sommers, 2011), but NISVS data do not measure physical child abuse. In addition, education level and employment status has been associated with experiencing IPV (Breiding, 2008; Cattaneo & Goodman, 2005), but NISVS data do not include questions to inquire about these factors during IPV, only at the time the survey was administered, which does not allow for predictive analyses.

Future studies should build on the findings from this dissertation by examining differences *among* women who have experienced IPV by MAPs. For example, analyzing lifetime victimization factors such as experiences with child abuse or continued financial deprivation may identify some of the more contextual factors that affect chronic IPV victimizations. Finally, because women are most often victimized by IPV (Black et al., 2011), I focused the analysis on this population; however, studies indicate that men are increasingly experiencing IPV (Black et al., 2011). Additionally, IPV among persons in same sex relationships is at least as prevalent as IPV in heterosexual relationships (Walters et al., 2013); therefore, similar analyses to examine factors associated with experiencing IPV by MAPs and the associated experiences with coping and help-seeking should be examined in these populations.

Implications for IPV by MAPs Interventions

The findings from this dissertation provide implications for future intervention work to prevent IPV by MAPs, including: 1) acknowledgement of women's full history of IPV and connecting those with the highest risk of IPV by MAPs to appropriate resources, 2) enhancement of efforts to include social support networks in IPV prevention efforts, and 3) continued intervention efforts to decrease teen dating violence and bystander interventions to support victims of IPV.

Although, in the quantitative analysis I found that receipt of services positively predicted IPV by MAPs vulnerability, perhaps the positive association indicates that women who need services most are accessing them; however, their needs are not being met or more likely that use of services is a proxy for IPV frequency and severity. From the qualitative interviews, I learned that the most salient long-term needs of IPV by MAPs survivors are obtaining counseling and gaining financial independence. Acknowledging and addressing these factors by connecting women to the appropriate resources and services may be a better way to serve survivors.

With evidence from this dissertation indicating that IPV by MAPs survivors utilized their informal support networks most often and that these interactions involved mixed responses, interventions should include some component that addresses support persons directly. For example, intervention studies that have included family members and friends have proven to be beneficial for people dealing with various health issues such as weight loss and substance abuse (Hogan et al., 2002; Humphreys & Noke, 1997; Wing & Jeffery, 1999). Efforts to provide a woman with ongoing positive support by engaging her natural support system as advocates may be beneficial to her general wellness as a survivor.

Although in the quantitative study, I did not find a significant association between experiencing the IAR at a young age and experiencing IPV by MAPs, I did find that social support moderated this relationship. The finding that the majority of IPV by MAPs survivors in the qualitative study reported experiencing their IAR while in high school or college supports the continued efforts to address primary prevention of IPV through teen dating violence interventions (Black et al., 2011; Foshee et al., 1996). Specifically, based on the qualitative findings, more interventions should involve teaching teens about the broad spectrum of behaviors included in IPV and provide information on local and online IPV-related services.

Historically, IPV was something that happened in private and not openly discussed. However, women in this study described various incidents where they were physically assaulted in front of bystanders who did nothing to intervene, perhaps out of fear of getting hurt themselves or not knowing what to do. This finding points to the need for enhanced efforts to not only educate the general public about what IPV is, but of how to help someone who is experiencing IPV using campaigns such as NO MORE (nomore.org) or through evidenced-based bystander intervention efforts (Coker et al., 2017; Moynihan et al., 2015). Although findings

from this study support continued efforts for primary prevention, it is important to note that more secondary and tertiary interventions are also needed to address immediate needs from experiencing IPV, particularly factors that contribute to chronic vulnerability to IPV.

Implications for Policies on IPV Prevention

The findings from this dissertation provide implications for future policies to prevent IPV by MAPs, including: 1) enhanced training for service providers who interact with women who have experienced IPV, 2) improved IPV screening efforts by medical professionals and connecting survivors to DV-related services, and 3) improved collaborations across agencies to better serve survivors.

Based on the findings that subsequent help-seeking behaviors were impacted due to negative initial interactions with service providers, training efforts for service providers should be enhanced, especially for persons in the criminal justice system. Policies need to be enacted to require training for police officers, along with monitored compliance, to understand the dynamics of IPV and how it can present in more ways than physical violence. Further, more time is needed for DV-related emergency calls to allow them to investigate violent incidents instead of immediately arresting a potential victim (O'Dell, 2007; Rajan & McCloskey, 2007).

Finally, due to negative interactions with medical care providers, IPV-related protocols should be established in health care settings to ensure that women who are screened and identified as being in abusive relationships are connected with appropriate services (Coker et al., 2007; O'Doherty et al., 2014). Similar to the collaborations seen in Community Health Centers in low-income communities (Adashi, Geiger, & Fine, 2010) and Family Violence Justice Centers across the U.S. (Gwinn et al., 2007), post-screening services should be linked for improved access among IPV survivors. Increased systems-level collaborations are needed across

disciplines, along with advocates, to help survivors navigate through various service agencies and connect them to services like safe housing and legal protection.

Conclusions

Prevention of experiencing IPV by MAPs is an important issue that requires multifaceted primary, secondary, and tertiary prevention efforts to decrease women's vulnerability to abusive partners and to address their physical and mental health needs, as well as other consequences of IPV. This dissertation adds to the limited body of knowledge about this population's experiences with seeking help and support by identifying factors that are associated with experiencing IPV by MAPs, describing the immediate and long-term needs of survivors, and highlighting the importance of initial interactions with service providers and supporters for women experiencing IPV. The ultimate goal is to prevent people from abusing their partners in the first place; however, continued research into the needs of this population and efforts to intervene on vulnerability factors and enhance resilience among IPV survivors is needed to decrease the likelihood that more women will experience IPV by MAPs.

APPENDIX A: TABLE OF FACTORS

Type of Variable	Response Categories	Survey Question	Notes
Outcome Variable			
IPV by MAPs status	0=IPV by one partner, 1=IPV by 2+ partners	• **(Physical Violence):** *How many of your romantic partners have ever…* • slapped you? • pushed or shoved you? • hit you with a fist or something hard? • kicked you? • hurt you by pulling you hair? • slammed you into something? • tried to hurt you by suffocating you? • beaten you? • burned you on purpose? • used a knife or gun on you? • **(Sexual Violence):** • *How many people have ever done any of the following things when you did not want it to happen? How many people have ever…* • exposed their sexual body parts to you, flashed you, or masturbated in front of you? • made you show your sexual body parts to them? • made you look at or participate in sexual photos or movies? • kissed you in a sexual way? • fondled or grabbed your sexual body parts? • had vaginal sex with you? • made you receive anal sex? • made you perform oral sex? • made you receive oral sex?	-If a respondent said that one intimate partner did any of these behaviors any number of times, the respondent was counted as having experienced IPV -If a respondent said that at least two intimate partners did any of these behaviors, then she was counted as having experienced IPV by MAPs

Type of Variable	Response Categories	Survey Question	Notes
		• How many people have ever used physical force or threats to physically harm you to make you… • have vaginal sex? • receive anal sex? • perform oral sex? • receive oral sex? • put their fingers or an object in your vagina or anus? • How many people have ever used physical force or threats of physical harm to… • try to have vaginal, oral, or anal sex with you, but sex did not happen? • *How many people have you had vaginal, oral, or anal sex with after they pressured you by…* • doing things like telling you lies, making promises about the future they knew were untrue, threatening to end your relationship, or threatening to spread rumors about you? • wearing you down by repeatedly asking for sex, or showing they were unhappy? • using their influence over you, for example, your boss or your teacher?	
Initial Abusive Relationship Vulnerability Factors			
Race/ethnicity	1=non-Hispanic white, 2=non-Hispanic black, 3=non-Hispanic other, 4=Hispanic	• *What is your race?* • *Are you of Hispanic or Latino/a origin?*	

Type of Variable	Response Categories	Survey Question	Notes
Severity of violence	continuous	• **(Physical violence), Danger Assessment Scale** • **NISVS behaviors assessed a scale value of 1:** • Slapped, pushed or shoved • **NISVS behaviors assessed a scale value of 2:** • Hit with a fist or something hard, kicked, hurt by pulling hair • **NISVS behaviors assessed a scale value of 3:** • Slammed into something, tried to hurt by choking or suffocating, beat • **NISVS behaviors assessed a scale value of 4:** • No behaviors were included because they did not map onto the types of behaviors included in the scale with a value of 3, such as threats to use a weapon • **NISVS behaviors assessed a scale value of 5:** • Burned on purpose, use a knife or gun • **(Sexual Violence): Sexual Experiences Survey** • **NISVS behaviors assessed a scale value of 1:** • Unwanted kissing in a sexual way, fondling or grabbing of sexual body parts • **NISVS behaviors assessed a scale value of 2:** • Being pressured to have sex by being told lies, empty promises, or threats to end the relationship or spread rumors; being asked repeatedly for sex; or using one's influence or authority to coerce sex • **NISVS behaviors assessed a scale value of 3:**	-Severity of IPV was based on the severity level of abusive behaviors experienced IPV in the respondent's IAR -10 physical violence behaviors were mapped onto the Danger Assessment scale and 18 sexual violence behaviors were mapped onto Sexual Experiences Survey Short Form Victimization -A weighted sum was calculated based on the severity level of each behavior experienced for physical and sexual abuse separately. The severity score was multiplied by ten in order to be on a 1-point scale for analyses. -Unwanted exposure of sexual body parts, being made to expose sexual body parts, and being forced to view sexual photos did not map onto the scale and were given a score of 0.

Type of Variable	Response Categories	Survey Question	Notes
		• Using physical force or threats of physical force to try to have sex, but did it did not happen • **NISVS behaviors assessed a scale value of 4:** • Having vaginal sex, receiving anal sex, being made to perform oral sex, being made to receive oral sex when the respondent was drunk, high, drugged or passed out and unable to consent or through use of physical force or threats of physical harm • Physical force or threats of physical harm being used to put fingers or objects inside the respondent's vagina or anus	
Frequency of violence	Continuous	*How many times did (perpetrator) ever do (any physical or sexual violence behavior)?* 0=no times, 1=1 time, 2=2+ times	-Frequency of IPV was based on how often a respondent experienced IPV in her IAR -The number of times each abusive behavior was done was summed and divided by the maximum score that represented every physical or sexual violence behavior being done to obtain the IPV frequency final score. The frequency score was multiplied by ten in order to be on a 1-point scale for analyses.
Young age	continuous	• *How old were you the first time any of these things happened?*	

Type of Variable	Response Categories	Survey Question	Notes
PTSD symptoms	continuous	• *Throughout your relationship with (perpetrator), when (perpetrator) did this/these things, did you ever…* • have nightmares about it? • try hard not to think about it or go out of your way to avoid being reminded of it? • feel like you were constantly on guard, watchful, or easily startled? • feel numb or detached from others, your activities, or your surroundings?	-Yes/no response options were summed so a higher number represented having experienced more PTSD symptoms
Physical and/or sexual injuries	0=no injuries, 1=injuries	• *Were you ever injured when this/any of these things happened with any of these people?* If yes, • *Which of these people caused your injuries?*	-Injuries represented injuries due to physical and/or sexual violence to coincide with the type of violence represented by the outcome variable. -The amount of injuries reported due to sexual violence was small and could not have been analyzed separately from the variable representing injuries due to physical violence
Initial Abusive Relationship Resilience Factors			
Disclosure of abuse/perceived helpfulness of response (Social support)	0=no support (no disclosure, therefore no perceived support + disclosure, but not perceived support 1=support (disclosure and at least one person	• *Have you ever talked to any of the following people about what (perpetrator) did?* • **(Formal Sources):** • the police? • a doctor or nurse? • a psychologist or counselor? • a crisis line operator • **(Informal Sources):** • a friend?	-Variables were created to represent support from formal sources and informal sources separately, as well as overall support -Perceived helpfulness categories were

Type of Variable	Response Categories	Survey Question	Notes
	was perceived to be helpful)	• a family member? • *When you spoke to (formal or informal source of support) about (perpetrator), how helpful was it to you? Was it…* • very helpful • somewhat helpful • a little bit helpful • not at all helpful	collapsed into 0=not helpful (representing not at all helpful, a little bit helpful) and 1=helpful (representing somewhat helpful, very helpful) -Disclosure of abuse and perceived helpfulness of the response were combined to be a proxy variable for social support
Use of services	Continuous	• *Did you ever need any of the following services because of any of the things that any of these people did?* • medical care? • housing services? • victim's advocate services? • legal services • *Where you able to get the services you needed when (perpetrator) did this/these things?*	-Yes/no response options were summed so a higher number represented having used more services based on not needing them and therefore not accessing them vs. needing them and accessing them
Control Variable			
Time since abuse began in initial abusive relationship	Continuous	• *How old were you the first time any of these things happened?* • *What is your age?*	-Age of the respondent when abuse began was subtracted from current age

APPENDIX B: PARTICIPANT CONSENT FORM

The Resilience Research Study

Please read this informed consent agreement carefully before you decide to participate in this research study.

Research Study Purpose: The purpose of the research study is to gain a better understanding of how women who have experienced domestic violence by multiple intimate partners have:

1) been able to access and utilize resources (domestic violence and/or social services),
2) been able to access and utilize social support, and
3) have engaged in coping strategies throughout their experiences with abusive relationships.

Eligible Participants must meet the following criteria:

- Identify as a woman
- Be 18 years or older
- Be able to speak and understand written English
- Have experienced domestic violence by two or more intimate partners
- No longer be in a relationship with an abusive partner for at least three months

What you will be asked to do in the research study: Prior to beginning the in-person interview, you are being asked to read and sign the consent form. Remember that you may stop the interview at any time or feel free to skip questions you do not feel comfortable answering. You are being asked to participate in an audio-recorded in-person interview to discuss your experiences with domestic violence. You will be asked specific questions about the domestic violence you experienced, your use of services or resources and social support, and your use of coping strategies.

At the end of the interview, you will receive $25 in cash.

You will not be contacted further unless you have acknowledged that you are interested in reviewing initial research study findings and/or attending a public presentation about the research study findings.

Time and equipment required: The online survey required about 2-3 minutes of your time to determine if the research study was a good fit for you. Since the study is a good fit, the in-person interview is expected to take about one hour to one and a half hours to complete.

Risks: As a research study participant, you may experience some emotional distress as you remember and describe your experiences with domestic violence. In order to minimize these risks, you will be reminded that you may take a break from the interview. You may also stop answering questions if you feel uncomfortable. You may stop the interview completely at any time.

We will provide you with information on resources such as support groups that may be helpful to you. In addition, contact information for multiple domestic violence agencies will be immediately available.

There is some risk that you may feel embarrassed as you describe your experiences with domestic violence. To minimize this risk, every effort will be made to provide a private interview space that is free from distractions from other people.

If during the course of the interview, we learn of issues of you or someone else being harmed or in danger of being harmed, we may have to contact others to get you the help that is needed and to comply with state reporting requirements. Confidentiality can be broken if you as the study participant reports immediate harm to yourself or others.

Benefits: There are no direct benefits to you for participating in this research study. The research study may help us make a significant contribution to the field of violence prevention research. It may also help improve the way domestic violence agencies are able to help women who have experienced domestic violence by multiple intimate partners.

Confidentiality: The information you provide when you answer questions and when you participate in the interview will be handled confidentially. Each research study participant will be assigned an identification number so that your name, contact information, and any other identifiable information will not be connected with any information you provide during the interview. The list connecting your name and the research study identification number will be kept in a locked file.

The audio recording of your interview will be transcribed word for word. The transcripts will only include your study identification number and will be stored in a locked cabinet in a locked office. The audio recordings will be destroyed when the research study data are analyzed and the study is completed.

To ensure that the information collected about your experiences will remain anonymous, your name and other information that could identify you will not be used in any presentations, reports, or scientific journal articles. Direct quotes from the interviews will only be described as "stated by a research study participant who is between x and y years old with z number of abusive partners".

Voluntary participation: Your participation in the research study is completely voluntary. Your participation in this research study will in no way affect any services you may or may not be receiving at a domestic violence or social services agency.

Right to withdraw from the research study: You have the right to withdraw from the research study at any time without penalty by stating that you no longer want to continue participating in the interview. If you decide to withdraw from the research study, any audio recording of your interview will be destroyed.

How to withdraw from the research study: Let the Principal Investigator or the Interviewer know that you do not wish to continue the interview if you decide to withdraw from the research study during your interview.

Thank you gift: You will receive $25 in cash for participating in the research study if you complete the eligibility questions and the in-person interview.

If you have questions about the research study, please contact:
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If you have questions about your rights in the research study, please contact:
University of North Carolina at Chapel Hill
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Reference IRB #16-2274

Agreement:
I agree to participate in the research study described above.

Study Participant Signature: _____ Date: _____

Study Principal Investigator Signature: _____ Date: _____

Are you interested in attending a public presentation of research study findings?

☐ Yes ☐ No

If you are interested in being contacted for either presentation, please choose the method of contact that should be used. Research study representatives will contact you a few weeks prior to the presentations to determine your availability. No one will leave voicemail or email messages that reference intimate partner violence or domestic violence.

Select Contact Method: ☐ Home ☐ Cell ☐ Work ☐ Email

Preferred Time of Day to Contact: ☐ Weekdays 9AM-12PM (mornings)

☐ Weekdays 12PM-5PM (afternoons) ☐ Weekdays 5PM-8PM (evenings)

☐ Weekends 9AM-12PM (mornings) ☐ Weekends 12PM-5PM (afternoons)

☐ Weekends 5PM-8PM (evenings)

Okay to leave a message? ☐ Y ☐ N

You will receive a copy of this form for your records if requested.

APPENDIX C: PARTICIPANT DEMOGRAPHICS SURVEY

The Resilience Study

The purpose of the Resilience Study is to gain a better understanding of the need for and use of resources, social support, and coping strategies for women who have experienced domestic violence by multiple intimate/romantic partners (spouses, boyfriends/girlfriends, casual dating partners, and sexual partners). The overall goal of the study is to identify factors that can be changed related to support and services that can help women.

Remember - you do not have to respond to any question for which you do not feel comfortable responding. Also, we have no way of knowing which of our study participants have responded to this survey. We just want a general idea of who is participating, so we ask that you complete the questions on demographics as accurately as you can.

To participate in this study, participants must:

- Identify as a woman
- Be 18 years or older
- Be able to speak and understand written English
- Have experienced domestic violence by two or more intimate partners
- No longer be in a relationship with an abusive partner for at least three months
- For persons participating in online interviews, have access to a private phone or computer where you can conduct an interview using any of the following: Google hangout, Skype, Google Duo, FaceTime
- For persons participating in online interviews, have access to PayPal or Venmo or be able to accept a mailed gift of $25 if available

(1.0) What is your age?

☐ 18-24 years ☐ 25-34 years ☐ 35-44 years ☐ 45-54 years

☐ 55-64 years ☐ 65-74 years ☐ 75 or more years

(1.1) Which category best describes your racial group? (✓all that apply)

☐ African American/Black ☐ Asian ☐ Caucasian/White

☐ American Indian/Alaskan Native ☐ Native Hawaiian/Pacific Islander

☐ Other racial group _____ (please specify)

(1.2) What is your ethnicity?

☐ Hispanic

☐ non-Hispanic

(1.3) What is the highest level of education you have completed?

☐ Less Than High School ☐ Some High School ☐ High School Diploma

☐ Some College/Associate's Degree ☐ College Degree ☐ Graduate/Professional School

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(1.4) What is your household income level?

☐ Less than $15,000 ☐ $15,000 to $24,999 ☐ $25,000 to $49,999

☐ $50,000 to $74,999 ☐ $75,000 or more

(1.5) What is your employment status? (✓all that apply)

☐ Full-time (40+ hrs/wk) ☐ Part-time (less than 40 hrs/wk)

☐ Unemployed/Looking for Work ☐ Homemaker/Caretaker

☐ Full-time student ☐ Part-time student

(1.6) Do you have children? ☐ Yes ☐ No

(1.7) If yes, how many? _____

(1.8) What is your marital status?

☐ Married ☐ Widowed ☐ Divorced/Separated ☐ Never Married/Single

(1.9) What is your current intimate relationship status (if not currently married)?

☐ Seriously dating (in a committed relationship)

☐ Casually dating (not committed to one or more partners) ☐ Single, not dating

(1.10) How many intimate/romantic partners have ever physically or sexually abused you?

☐ No abusive partners ☐ 1 abusive partner ☐ 2 abusive partners

☐ 3 abusive partners ☐ 4 or more abusive partners

(1.11) How long has it been since you were in an intimate/romantic relationship where you experienced violence from your partner?

☐ Currently in a relationship where I am experiencing violence

☐ Less than 3 months, but not currently in a relationship where I am experiencing violence

☐ 3 months or more

Please respond to the following statements.

I understand that I am volunteering to participate in this interview and I have a right to pause or completely stop the interview at any time.

☐ Yes ☐ No

I understand that my interview will be audio recorded for the purpose of transcription and analysis along with data from the other study participants.

☐ Yes ☐ No

I understand that my name and any identifying information will not be connected with the transcript.

☐ Yes ☐ No

APPENDIX D: PARTICIPANT INTERVIEW GUIDE

Resilience Study Interview Guide for IPV Survivors

Good (morning/afternoon/evening)_____ (participant's name). I am grateful that you have agreed to have this conversation with me. Your input will help me understand more about the experiences of women who have experienced domestic violence. Specifically, I am interested in learning about your experiences with social support and dealing with anything that may have caused you stress during your relationships with romantic partners who were abusive. I also want to ask about any experiences you may have had if you used any services such as a domestic violence agency or saw a doctor or nurse because of these relationships. The overall goal of this study, The Resilience Study, is to identify things that can be changed related to support and services that can help women who have experienced domestic violence.

As a reminder, today's interview will take about 1-1.5 hours and you will receive a gift of $25 in cash as a thank you for your time.

As mentioned in the consent form, I would like to audio record this interview to make sure that I record everything that you are telling me accurately. I will also take notes as we talk. I will not use your name or any information that would make it possible for anyone to know that I interviewed you based on what I say in presentations or write in reports. Your interview data will only be associated with a code.

Thank you for signing the consent form. I want to remind you that you may end the interview at any time and you are free to skip questions you do not feel comfortable answering. You may also take a break from answering questions at any time.

Do you have any questions for me? OK, let's get started.

The first few questions are about your experiences with domestic violence. Some questions will be asked about your first relationship where you experienced domestic violence and additional questions will ask about other relationships where you experienced domestic violence.

Let's start by having you list any romantic partners who were abusive to you in the order of who you were with first. You can use this timeline to help you remember these intimate partners. Sometimes thinking about life events (e.g. graduations, birth of a child, moving to a new place, getting a new job) will help you place these relationships in time. We will throw this timeline away as soon as we finish the interview.

Before I ask the first question, I want to start by defining a few words related to domestic violence because people can interpret them in many different ways. I have also listed them on a card so you can refer to them as we are talking. (CDC.gov definitions)

- **Physical violence** – Intentional harm using physical force with the potential to cause death, disability, injury, or harm (e.g. when an intimate partner hits you)
- **Sexual violence** – Completed, attempted, or forced rape; unwanted penetration, unwanted sexual contact; and unwanted sexual experiences that do not involve contact (e.g. when an intimate partner forces you to have sex)
- **Stalking** – A pattern of repeated, unwanted attention and contact that causes fear or concern for your safety or the safety of someone else like friends or family (e.g. when an intimate partner is constantly showing up to your home/job when you have stated that you do not want him/her to come to those places)
    - **Psychological aggression**
        - Expressive aggression - Use of verbal and non-verbal communication with the intent to harm you mentally or emotionally and/or control you (e.g. when an intimate partner says that that if he/she can't have you, then no one else can)
        - Coercive control - e.g. Limiting access to money or family and friends
- I also want to define social support. **Social Support** – The type of support you get from having relationships with people who are available for you when you need psychological, physical, or financial help

You can ask me about these definitions or refer back to this card anytime as we are talking.

1. **Please tell me about your relationship with your first partner who was abusive.**
    a. **Describe to me the type(s) of domestic violence you experienced in your <u>first abusive relationship</u>).** Probes: What about physical or sexual abuse? What about causing you emotional harm? Financial harm? Stalking? What about controlling or aggressive behaviors (psychological aggression)? What about refusing to use a condom? What happened in these situations?
    b. **How did you decide to leave/end the relationship? What happened?**
    c. **When the relationship ended/you first separated/broke up, how did you manage? Where did you go?**
    d. **What was most difficult or stressful about leaving?**

2. **Thank you so much for sharing your experience with me. Now I would like to ask you, what were your most <u>immediate</u> needs after leaving this relationship.** Probes: For example, did you have any (financial (money to help with general necessities), emotional (someone to talk to), physical (temporary safe place to stay), legal assistance, or assistance for children)) needs **during and after** experiencing domestic violence in this relationship?

3. **Can you tell me about your experiences using services in your community (e.g. domestic violence agency-related, social, medical, or legal services) related to your experiences with abuse in your relationship?**
    a. **What services were most useful to you and why? Where did you access services?**
    b. **What would have made these services more helpful?** Probes: What community or domestic violence agency services would be useful?

c. **Is there anything else that you think would have helped with the difficulties you were facing?**

4. **Can you tell me about any friends or family that you went to for help/assistance or support (e.g. emotional, informational, instrumental) related to this relationship?**
    a. **How was the support you received (from family or friends) helpful to you?**
    b. **Can you tell me about people in your life, if any, who were <u>unhelpful</u> related to your experience with this relationship?**
    (Probes: For example, can you tell me about what people did that was unhelpful? Can you tell me about how your relationship was affected because other people were unhelpful?)

The information that you shared helps us to learn what services were most useful to women. Now I want to ask you some questions about your experiences with domestic violence with other partners besides**_____(first named abusive spouse, dating partner)**.

5. **Please tell me about your relationship with other partner(s) you mentioned who was/were abusive.**
    a. **Please describe to me the types(s) of domestic violence you experienced in your <u>relationship(s)</u> with _____(other named violent intimate partners).** Probes: What about physical or sexual abuse? What about causing you emotional harm? Financial harm? Stalking? What about controlling or aggressive behaviors (psychological aggression)? What about refusing to use a condom? What happened in these situations?
    b. **What difficulties have you faced as a result of experiencing this/these relationship(s)?**

The next question is about your experiences using services related to your overall experiences with domestic violence. Again, these could be services such as those related to a domestic violence agency, social/community, medical, or legal services.)

6. **Thinking about all of these relationships, please tell me about your experiences using services.**
    a. Probes: What types did you use?
        i. What made you seek out or use services? What were some barriers to seeking out and using services?

7. **Thinking back on your experiences, what kind of social support, if any, did you seek out after experiencing domestic violence with any of these other partners?**
    a. **What made you seek out or use social support?**
        i. **How was the support you received helpful or unhelpful related to your experiences with abuse in these relationships?**
    b. **If not, what were some barriers to seeking out and using social support?**
    c. **What type of support would have been most helpful to you?**

8. **Now, thinking about all of these relationships, what are your more <u>long-term</u> needs after experiencing domestic violence?** Probes: For example, do you have any (financial (job for self-support, job training), emotional (counseling, support group), physical (permanent housing) needs because of what you experienced in these relationships?
9. **Now I want to ask how do you manage stress related to your experiences with abuse? How do you take care of yourself?**

10. **How do you think the experience of your first abusive relationship affected later relationship(s)? Secondary question: Did you experience any previous abuse growing up as a child?**

Thank you so much for sharing your experiences with me. Lastly, I'd like to ask you some more general questions about women who have experienced some things similar to you in intimate relationships.

11. **What are some reasons why you think women experience domestic violence by more than one intimate partner?** (Probes: Are there things related to their family life, physical surroundings, or the types of partners available for dating and/or mating that affect their vulnerability to abuse?)

12. **Is there anything else you would like to share with me about your experiences with intimate relationships that were violent?** Probe: Perhaps something that you wish you would have known that would be helpful for other women to know? Something that you learned about domestic violence from a service provider/agency?

<u>Closing after the interview</u>

Thank you so much for taking time out of your schedule to speak with me today and for sharing your story. Please feel free to contact me if you have any questions about The Resilience Study or have thoughts to add related to topics we discussed in the interview. I hope that the information you have provided today will make experiences better for women in the future.

For this study, I am interviewing a total of 20 women who are 18 years of age or older who are able to speak and read English and have experienced physical and/or sexual violence by two or more intimate partners (e.g. spouses, dating partners). If you know of anyone else who you think would be interested in participating in this study, please provide her with my contact information.

Thank you again for your time.

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