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Tactics of Sexual Control and Negative Health Outcomes

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Tactics of Sexual Control and Negative Health Outcomes

by

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A thesis submitted in partial fulfillment
of the requirements for the degree of
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ABSTRACT

Intimate partner sexual violence (IPSV) is a concerning, yet relatively understudied form of intimate partner violence (IPV). Furthermore, the majority of research regarding sexual violence fails to differentiate between different forms of control used to facilitate this violence. Although IPV has been linked to a multitude of adverse physical and health outcomes, it is less clear how these outcomes vary by type of control experienced. Using data from the 2010 National Intimate Partner and Sexual Violence Survey (NISVS), the current study examines the physical and non-physical tactics used to facilitate sexual violence, and the associated health outcomes. Potential gender differences in tactics experienced and resulting victim health are also explored.

Results show that while physical force is associated with the greatest number of health outcomes, all three tactics are related to reporting adverse health. Additionally, gender analyses reveal that women are more likely to suffer from frequent headaches, injuries, sexually transmitted diseases (STDs), and to report a greater number of physical health outcomes and Post-Traumatic Stress Disorder (PTSD) symptoms, while men who experienced physically forced sexual violence are more likely to report overall worse mental health than their female counterparts. These findings, along with policy implications and directions for future research, are then discussed.

INTRODUCTION

Intimate partner violence (IPV) is a significant societal and health concern. It is estimated that approximately one in four women and approximately one in 10 men have experienced some form of physical, psychological, or sexual partner violence in their lifetime (Breiding et al., 2015; Tjaden & Thoennes, 2000). Intimate partner sexual violence (IPSV) is of particular concern, as it is not only found to occur frequently, but experiencing sexual violence has been described as an extremely degrading and humiliating experience for an individual (Jewkes, Sen, & Garcia-Moreno, 2002). Additionally, IPSV is uniquely detrimental due to the very nature of sexual violence. In other words, in order to gain sexual control, one must first exert physical or psychological (non-physical) control over his or her partner (Jewkes, Sen, & Garcia-Moreno, 2002). This means that actions that typically constitute physical or psychological partner violence can be viewed as tactics used to gain control over one's partner and facilitate sexual violence. This is not to say that physical and psychological abuse do not frequently occur within these same relationships separately from the end goal of committing sexual violence, but rather that failing to consider these actions as physical and non-physical tactics of control in the context of sexual violence may result in a distorted picture of the experience of IPSV.

Despite the prevalence and detrimental nature of IPSV, very few studies have explored the role of differing control tactics within the context of sexual violence (see Abbey, BeShears, Clinton-Sherrod, & McAuslan, 2004; McCauley et al., 2009; Testa et al., 2003; Tiwari et al., 2014; and Zinzow et al., 2010), and even fewer have examined this violence between intimate partners (see Tiwari et al., 2014). To date, and to the author's knowledge, there are no known studies which examine the effects of both physical and non-physical control tactics on IPSV

victims' physical and mental health. Thus, the first goal of the current study is to examine the prevalence of victimization through physical and non-physical control tactics within a nationally representative sample of IPSV victims.

Not only is there a lack of research on physical and non-physical tactics of control, but research on IPSV is largely focused on the victimization of women. The small body of research which does include men, however, provides some evidence that they may be just as likely to experience violence by an intimate partner (Black et al., 2011). Additionally, Johnson's (2006) research on marital conflict shows that men and women experience different forms of IPV. The second goal of current study, therefore, is to provide much needed insight into the types of control tactics experienced by men who are victims of IPSV, and to compare the prevalence rates of these victimizations to those experienced by women.

IPV is associated with a multitude of adverse physical and mental health outcomes. These range from broken bones and physical scarring (Browne, 1993) to increased substance use and lasting trauma-related disorders (Campbell, 2002; Golding, 1999). Victims of IPV are consistently found to be more likely to experience negative health effects than non-victims (Decker et al., 2014), yet specific health outcomes and the strength of these associations with IPV vary across different studies. The majority of research examining these health outcomes are limited to samples of women, however, men who are victims of IPSV also report negative health outcomes (Randle & Graham, 2011). Due to the relatively small body of research including men, it is unknown whether they experience the same negative health outcomes as women, and whether these health outcomes vary by type of control experienced. The third goal of the current study, therefore, is to fill these two gaps within the literature.

The current study analyzes data from the 2010 National Intimate Partner and Sexual Violence Survey (NISVS) in order to achieve these goals and provide much needed insight into IPSV victimization of both women and men, and the physical and mental health outcomes associated with physical and non-physical tactics of control. This study is the first to examine tactics of sexual control and the resulting physical and mental health outcomes within a nationally representative sample of victims of IPSV.

The remainder of this study proceeds as follows. First, relevant literature is reviewed and the research questions this study seeks to answer are discussed, followed by an overview of the data used, the variables included, and the analytic strategy utilized. Results are then presented. This study is concluded with a discussion of the implications stemming from this work, as well as limitations and directions for future research.

LITERATURE REVIEW

Intimate Partner Violence

Intimate partner violence (IPV) is a significant and prevalent societal concern (Bagwell-Gray, Messing, & Baldwin-White, 2015; Breiding et al., 2015; Decker et al., 2014; Garcia-Moreno et al., 2006; Halpern et al., 2004; Kann et al., 2014; Thompson et al., 2006; Tjaden & Thoennes, 2000). It has been estimated that approximately one in four women and approximately one in 10 men have experienced IPV (Breiding, 2015; Tjaden & Thoennes, 2000). IPV is typically categorized into three different types: physical violence, sexual violence, and psychological abuse. Examining IPV through breaking it down into these three main types of violence allows for a more comprehensive understanding of the specific acts victims experience, as well as more precise estimates of the prevalence of IPV.

According to the National Center for Injury Prevention and Control, physical violence, or physical assault, involves any intentional use of physical force that has the potential to cause harm, injury, or death (Breiding et al., 2015). Within the context of IPV, this includes actions such as hitting, kicking, choking, burning, or restraining one's partner. According to data collected by the NISVS, nearly one in four women and one in seven men have been the victim of severe physical violence by an intimate partner (Black et al., 2011).

The second type of IPV is psychological violence, also known as psychological aggression, psychological abuse, or emotional abuse. Psychological abuse is the use of either verbal or non-verbal communication with the intent to cause emotional or mental harm, or to exert control over another individual (Breiding et al., 2015). Acts of psychological aggression

range from humiliation and degradation to the use of coercive control. Coercive control encompasses tactics such as the use of, “lies, guilt, false promises, continual arguments, and threats to end the relationship, or ignoring verbal requests by the victims to stop” (Degue & DiLillo, 2003). Threats to hurt themselves or a victim’s children or pets, as well as attempts to control a victim’s finances and day to day decision-making are also common forms of coercive control (Breiding et al., 2015). It has also been estimated that nearly half of the United States population over the age of 18 has been the victim of psychological aggression by an intimate partner (Black et al., 2011).

The last type of IPV is sexual violence, which includes any non-consensual act that is sexual in nature, such as forcible rape, pressure to have sex, substance-facilitated sexual incidents, and any unwanted touch (Breiding et al., 2015). The NISVS estimates that over half of the women who reported having experienced forcible rape said that the perpetrator was an intimate partner (Black et al., 2011). Additionally, 15% of women and 9.5% of men reported IPSV other than rape (Black et al., 2011).

Although IPSV occurs at alarmingly high rates (Bagwell-Gray, Messing, & Baldwin-White, 2015; Black et al., 2011; Coker, Smith, McKeown, & King, 2000; McFarlane & Malecha, 2005), there is a lack of research which focuses on this type of victimization independently from physical victimization. The majority of literature considers sexual violence as a subtype of, or tangent off of, physical violence, rather than as a unique form of abuse (Logan, Walker, & Cole, 2015), leaving a relatively small body of literature looking specifically at sexual violence victims. The current study, therefore, focuses on the experiences of a sample of self-identified victims of IPSV.

Physical, psychological, and sexual IPV frequently occur separately from one another, yet many times victims experience more than one type of abuse (Alasker et al., 2012; Browne, 1993; Campbell & Lewandowski, 1997; Katz, Moore, & May, 2008; Watts & Zimmerman, 2002). For example, victims of both physical and sexual partner violence have been found to report significantly high rates of psychological aggression, partner monitoring, emotional abuse, and intimidation (Katz, Moore, & May, 2008), all of which are indicative of psychological violence. This co-morbidity of victimization is an especially important discussion when examining sexual violence. This is because one must gain physical or psychological (non-physical) control over his or her partner in order to attain sexual control (Alsaker et al., 2012; Jewkes, Sen, & Garcia-Moreno, 2002; Katz, Moore, & May, 2008; Mohammadkhani et al., 2009). Within this context, actions that are typically associated with physical abuse and psychological aggression can be viewed as tactics of control used to facilitate sexual abuse (Basile, 2002; Breiding et al., 2015; Campbell, 2002; Logan, Walker, & Cole, 2015; Koss, Gidycz, & Wisniewski, 1987).

Physical tactics involve physical force, such as restraining or holding one's partner down, as well as actions related to drug and alcohol intoxication, where the victim is rendered unconscious or is incapacitated due to substance use. Basile (2002) found that 10% of women who reported unwanted sex from an intimate partner said that they had been physically forced to have sex. Within a sample of students, 8% of the young women and 4% of the young men reported having experiencing unwanted sex after being given drugs or alcohol (Koss, Gidycz, & Wisniewski, 1987).

Non-physical tactics are acts of psychological and emotional abuse, psychological aggression, and coercive control. The term sexual coercion is commonly used to refer to these

non-physical acts used to facilitate sexual violence (Logan, Walker, & Cole, 2015). A review of earlier literature found that 25% of women and 23% of men have experienced sexual coercion (Spitzberg, 1998). Another source found that about 13% of women and 6% of men have experienced sexual coercion specifically as a means to facilitate unwanted sexual penetration (Black et al., 2011). These results are similar to those of Koss, Gidycz, and Wisniewski (1987), who found that 25% of the women and 10% of the men in their sample had given in to unwanted sex because they were overwhelmed by a partner's continuous arguments and pressure. Viewing actions typically considered to be forms of physical and psychological violence as tactics of control allows for a more comprehensive understanding of the experience of sexual victimization and the resulting health outcomes, yet very few studies acknowledge and examine these physical and non-physical tactics in the context of IPSV. The current study directly addresses this gap in the literature.

Who is at Risk?

Understanding that IPV occurs frequently, it is important to explore who is at risk of becoming a victim of this type of violence. IPV victimization has been associated with a number of different risk factors. These include being a young adult (Johnson, Manning, Giordano, & Longmore, 2015; Kann et al., 2014; Lovestad & Krantz, 2012; Mohammadkhani et al., 2009; Silverman, Raj, Mucci, & Hathaway, 2001; Thompson et al., 2006), less educational attainment (Edwards, Black, & Dhingra, 2009; Jewkes, 2002; Thompson et al., 2006), lower income (Cunradi, Caetano, Clark, & Schafer, 2000; Edwards, Black, & Dhingra, 2009; Goodman, Smyth, Borges, & Singer, 2009; Jewkes, 2002; Thompson et al., 2006), having experienced abuse as a child (Bonomi et al., 2006; Coker et al., 2002; Gomez, 2011; Laporte et al., 2011; Thompson et al., 2006; Whitfield, Anda, Dube, & Felitti, 2003) or by a past intimate partner

(Coker, Smith, McKeown, & King, 2000; Smith, White, & Holland, 2003), substance use (Jewkes, 2002; Mohammadkhani et al., 2009; Stith et al., 2004), having multiple partners (Krahe & Berger, 2013), and engaging in violence against a partner (Stith et al., 2004).

Historically, when discussing IPV, men have primarily been viewed as the aggressors and women as the victims. We now know this to be untrue, as both genders are subject to violence by intimate partners (Black et al., 2011; Katz, Kuffel, & Coblenz, 2002; Lovestad & Krantz, 2012). Although men and women are at risk, victimization research is inconsistent in regard to whether there is true gender symmetry. Some studies show women to be victimized at significantly higher rates (Browne, 1993; Campbell, Kub, & Rose, 1996; Demaris & Kaukinen, 2005; Golding, 1999; Silverman, Raj, Mucci, & Hathaway, 2001). Prevalence rates of psychological violence, for example, tend to show women being victimized at a disproportionately higher rate than men (Myhill, 2015; Tanha, Beck, Figueredo, & Raghavan, 2010). Other studies find victimization rates to be fairly similar (Black et al., 2011). Black and colleagues (2011) found that 35.6% of women and 28.5% of men have experienced rape, physical violence, and/or stalking by an intimate partner, a difference of only 7.1%. These inconsistencies in victimization rates are most likely due to differences in how IPV is measured and which types of violence are examined.

Johnson (2006) speaks to this issue in his discussion of the necessity to distinguish between four types of physical partner violence in heterosexual marriages. Situational couple violence (one or both partners use violence) and violent resistance (use of violence to resist a partner's attempts to exert control) occur when partners use physical violence as means to resolve conflict, whereas intimate partner terrorism (one partner seeks to control the other) and mutual violent control (both partners attempt to control each other) occur when the motive behind the

physical violence is to control his or her partner through the use of the following actions: threats, economic control, use of privilege and punishment, using children, isolation, emotional abuse, and sexual control (Johnson, 2006). He found that 97% of the husbands in his sample who reported having ever used violence against their wives had engaged in intimate partner terrorism, whereas only 3% of wives had (Johnson, 2006). Furthermore, 96% of wives who had reported ever having used violence against their husbands had engaged in violent resistance, whereas only 4% of husbands had (Johnson, 2006). Husbands and wives reported engaging in situational couple violence and mutual violent control at fairly equal rates, however (Johnson, 2006). Although Johnson's typologies do not specifically refer to the use of control as psychological violence or coercive control, his results can be interpreted as showing that women are more likely to become victims of this type of IPV than men. In order to empirically explore this interpretation, as well as contribute to the relatively small body of literature examining men as victims of IPV, the current study investigates whether men and women experience different control tactics in the context of sexual victimization.

Health Effects of Intimate Partner Violence

IPV is a prominent health concern. It has been shown to have detrimental effects on one's overall quality of life, as well as their physical and mental health (Bonomi et al., 2006; Campbell & Lewandowski, 1997; Coker et al., 2000a; Coker et al., 2002b; Decker et al., 2014; Ellsberg et al., 2008; Hathaway, 2000). Results from a study of adolescent women residing in vulnerable urban environments around the world indicate that compared to women who never experienced physical or sexual assault, those who have experienced these forms of IPV reported greater substance use and poor overall, mental, sexual and reproductive health (Decker et al., 2014). In a population-based survey of Massachusetts women, one in every six who reported intimate

partner abuse (physical violence or psychological abuse in the form of being controlled by partner or being fearful due to a partner's threats) had sought medical attention, and more than one in three had sought counseling or therapy due to the abuse (Hathaway, 2000). Keeping in mind that these statistics represent women who actively sought help, and that a majority of women do not seek out health professionals (Plichta & Falik, 2001), these figures are potentially exclusive of many more women who needed help but were unable to obtain it.

Diminished quality of life ranges from decreases in social functioning to increases in substance use (McFarlane et al., 2005; Tyler, Melander, & Noel, 2009) and engagement in risky sexual behaviors such as not using a condom (Campbell, 2002). Golding (1999) concluded that on average, 18.5% of battered women abuse or become dependent on alcohol, and 8.9% abuse or become dependent on drugs. Many women experiencing sexual violence also feel a loss of control over their own reproductive rights (Campbell, 2002).

A larger body of research has focused on the physical and mental health problems that result from IPV. Physical harm typically includes injuries such as bruises, broken bones, burns, and cuts, and can result in long term consequences such as scars, joint damage, or partial loss of hearing or vision (Browne, 1993). Sexual violence can result in even further physical harm, including contraction of sexually transmitted diseases, damage to reproductive organs, and unwanted pregnancies (Campbell, 2002).

Although harder to detect, IPV can also harm one's mental health. Most commonly, survivors of IPV experience high rates of depressive, Post-Traumatic Stress Disorder (PTSD) related, and anxiety symptoms (Campbell, 2002; Campbell & Lewandowski, 1997; Johnson & Ferraro, 2000; Jordan, Campbell, & Follingstad, 2010; Magdol, Moffitt, & Caspi, 1997; Messing, Thaller, & Bagwell, 2014; Plichta & Falik, 2001; Tyler, Melander, & Noel, 2009). A

meta-analysis of mental health outcomes showed that among battered women (those experiencing long term physical IPV), almost half developed depression, about 18% had considered or attempted suicide, and 64% met the criteria for PTSD (Golding, 1999). Those who have had prior experiences with physical or psychological abuse report significantly higher scores in self-reported depressive, anxiety, and PTSD symptoms than those who have never experienced these types of abuse (Pico-Alfonso et al., 2006). Globally, women reporting experiences of physical or sexual IPV were found to be more likely to report poor or very poor overall health, as well as to have had suicidal thoughts, than non-victims (Ellsberg et al., 2008). Bonomi and colleagues (2006) found that women exposed to either physical or sexual IPV within the past five years were four times more likely to report severe depressive symptoms, 2.6 times more likely to report minor depressive symptoms, and almost three times more likely to report fair or poor health, compared to women who had never experienced IPV. Women having experienced non-physical only IPV (threatened, name called, or had behaviors controlled) were approximately two times more likely to report depressive symptoms (Bonomi et al., 2006).

The negative effects of IPV become more severe the longer one is exposed to the violence, as well as the more severe the abuse is (Bonomi et al., 2006; Campbell, Kub, & Rose, 1996; Golding, 1999). For example, greater severity and frequency of abuse are consistently associated with higher levels of depression in battered women (Campbell & Lewandowski, 1997). In a nationally representative sample of women, experiencing more severe physical assault, compared to less severe physical assault was associated with a greater likelihood of carrying something for personal protection (Demaris & Kaukinen, 2005). The effects of IPV have also been found to be more detrimental for victims of multiple forms of violence (Edwards, Black, & Dhingra, 2009). Further, research shows that experiencing IPSV in addition to another

form of IPV increases the severity of negative mental health and quality of life outcomes (Bonomi et al., 2007; Browne, 1993; Edwards, Black, & Dhingra, 2009; Wingood, DiClemente, & Raj, 2000). Pico-Alfonso and colleagues (2006), for example, found that women who had experienced physical or psychological abuse, as well as IPSV, were more likely to report symptoms of depression than those who had experienced physical or psychological abuse but not sexual violence.

Most of the research examining the effects of IPV on mental health focuses on women, but the small body of research which includes men finds that they are just as likely to suffer these effects (Randle & Graham, 2011). Randle and Graham (2011), for example, found IPV to be associated with increased PTSD and depressive symptoms among men. Within a sample of gay men, those who had experienced intimate partner abuse were more likely than non-victims to report at least one physical health problem, such as high blood pressure or obesity, as well as to have spoken with a mental health professional and to report depressive symptoms (Houston & McKirnan, 2007). There is a clear need for further research which examines the resulting health outcomes for men. The current study seeks to address this.

Comparisons Between Physical and Non-Physical Effects

As there is very little research comparing the health outcomes associated with physical and non-physical control tactics within the context of IPSV, it is important to discuss research which compares the health outcomes resulting from physical and psychological partner violence. It stands to reason that if differences in health outcomes exist between experiencing physical partner violence and psychological partner violence, that experiencing these same actions as tactics used to facilitate sexual partner violence will also result in differing health outcomes. Thus, an awareness of the differing physical and mental health outcomes due to physical and

psychological violence will allow for a better understanding of the impact of experiencing physical control compared to non-physical control.

Studies that examine the health effects of physical violence and psychological violence between intimate partners find that the effects of psychological abuse are no less detrimental than those of physical abuse (Coker et al., 2000; Lawrence, Yoon, & Langer, 2009; Mechanic, Weaver, & Resick, 2008; Pico-Alfonso et al., 2006). One of the first studies to examine the effects of psychological abuse within intimate partner relationships was Coker and colleagues' (2000) study which compared physical health consequences of physical IPV to those of psychological abuse by a partner. Their results show that both types of IPV are associated with increased likelihood of developing many different health detriments, such as chronic pain and arthritis, headaches, and indigestion (Coker et al., 2000).

Coker and colleagues (2002) used data from the National Violence Against Women Survey (NVAWS) to look at both physical and mental health outcomes resulting from physical violence (including sexual violence) and psychological abuse (differentiating between verbal abuse and abuse of power and control) for men and women. They found that for both genders, having experienced physical violence or the power and control form (but not the verbal abuse form) of psychological abuse was associated with reporting poorer physical health, and all forms of IPV were associated with reporting depressive symptoms (Coker et al., 2002). For women, higher psychological abuse scores were associated with a history of chronic disease, even after controlling for physical IPV (Coker et al., 2002). Additionally, for men, all forms of IPV were associated with recreational drug use, whereas for women, only the power and control form of psychological abuse was related to recreational drug use (Coker et al., 2002).

One study found that for men, psychological victimization actually produced greater adverse health outcomes than physical violence (Exner-Cortens, Eckenrode, & Rothman, 2013). Another study found that frequency of psychological victimization was a stronger predictor of mental health outcomes than any other form of IPV (Tjaden & Thoennes, 1998). Additionally, Johnson and Leone (2005) found that women who experience intimate partner terrorism (which is essentially the coercive control component of psychological violence) are twice as likely to suffer injuries, as well as to exhibit more symptoms of PTSD than women who experienced situational couple violence (which is essentially physical violence).

Although past research provides insight into the varying health effects of physical and psychological partner violence, none examine these differences specifically within a population of victims of IPSV, nor do they explore these types of violence as control tactics. Thus, there is a need to better understand the differences in specific health outcomes between physical and non-physical control tactics within the context of IPSV.

To date, only one known study compares the health effects of experiencing physical and non-physical control in the context of IPSV. Tiwari and colleagues (2014) used a sample of Chinese women to look at whether there were differences in mental health outcomes based on the type of control used to facilitate sexual aggression. They found that women who experienced physically forced sex reported higher scores in both depressive and PTSD symptoms than those who experienced non-physical sexual coercion (Tiwari et al., 2014). This study provides evidence that mental health effects vary across different control tactics, yet it is unknown whether these findings will be similar for men and women in the United States, as well as whether physical health effects will follow a similar pattern.

The remaining body of literature, which compares control tactics used to facilitate sexual violence, is small and is limited to comparing across different types of physical control. These studies find that victims' physical health (Abbey, BeShears, Clinton-Sherrod, & McAuslan, 2004), mental health (Zinzow et al., 2010), and involvement in harmful activities such as substance use (Abbey, BeShears, Clinton-Sherrod, & McAuslan, 2004; McCauley et al., 2009; Testa et al., 2003) are all impacted by experiencing sexual victimization. Within a small community sample of adult women, having experienced forcible rape was found to be associated with both a higher likelihood of injury and greater life disruption, whereas experiencing a rape due to incapacitation, which is defined as any rape occurring when an individual is too intoxicated to give consent, was associated with higher rates of alcohol use (Abbey, BeShears, Clinton-Sherrod, & McAuslan, 2004). McCauley and colleagues (2009) found that having experienced incapacitated rape, as well as substance-facilitated rape, which occurs when the perpetrator deliberately intoxicates a victim in order to gain sexual control, were both related to later substance use and binge-drinking. Forcible rape, however, was not found to be a significant predictor of either substance use or binge drinking (McCauley et al., 2009).

In regard to mental health outcomes, Zinzow and colleagues (2010) compared the effects of having experienced forcible rape (use of physical force), incapacitated rape (voluntary intoxication), and drug-facilitated rape (involuntary intoxication) on the likelihood of college age women meeting the criteria for either PTSD or a Major Depressive Episode (MDE). They found that the odds of reporting PTSD are 4.47 times greater, and the odds of reporting a MDE are 3.55 times greater, for those who had experienced forcible rape than the odds for someone who never had this experience (Zinzow et al., 2010). Second, the odds of reporting PTSD are 2.43 times greater, and the odds of reporting a MDE are 1.91 times greater, for those who had experienced

incapacitated rape than the odds for someone who never had this experience (Zinzow et al., 2010). Furthermore, they found that the odds of reporting PTSD are 3.36 times greater, and the odds of reporting a MDE are 4.02 times greater, for those who had experienced drug-facilitated rape than the odds for someone who never had this experience (Zinzow et al., 2010).

These studies provide important insight into the negative effects of different physical tactics of gaining sexual control, yet none examine the use of control tactics within the context of intimate partner relationships. As previously mentioned, these studies are also limited to examining different physical tactics, meaning that there is a need for further research which expands the comparison of type of tactics used to include those that are non-physical and occur between intimate partners. The current study, therefore, compares the physical and mental health outcomes resulting from physical and non-physical control tactics used within the context of IPSV.

Research Questions

There are several gaps within the current body of literature that the present study seeks to fill. The first of these is a need for a better understanding of the mental and physical health outcomes related to intimate partner sexual victimization. Although many negative health outcomes are associated with IPV (Bonomi et al., 2006; Campbell & Lewandowski, 1997; Coker et al., 2000; Coker et al., 2002; Decker et al., 2014; Ellsberg et al., 2008; Hathaway, 2000), the body of literature specifically examining these outcomes for victims of sexual violence by an intimate partner is small. Research also shows that health outcomes vary based on the form of IPV or abuse experienced (Coker et al., 2000; Johnson and Leone, 2005; Tiwari et al., 2014), yet it is unknown whether these health outcomes also vary across types of control tactics

experienced within the context of IPSV. Thus, the first and second research questions are as follows:

1. What are the physical and mental health outcomes associated with sexual victimization by an intimate partner?
2. Do the physical and mental health outcomes related to IPSV vary by type of control tactic experienced?

Second, the present study seeks to add to the current body of literature through exploring whether men and women experience the same types of control within the context of intimate partner sexual victimization, as well as whether the health outcomes associated with these tactics vary by gender. There is some evidence that men and women experience physical and psychological IPV at different rates (Demaris & Kaukinen, 2005; Myhill, 2015; Silverman, Raj, Mucci, & Hathaway, 2001), and that health outcomes related to these forms of IPV also vary by gender (Coker et al., 2002), yet the body of research which includes both men and women is small and tends to produce inconsistent findings. Additionally, it is unknown whether physical and mental health outcomes related to experiencing physical and non-physical tactics of control will be different for men and women who are victims of IPSV. Thus, the third and fourth research questions are as follows:

3. Within the context of IPSV, do men and women experience physical and non-physical tactics of control at the same rates?

4. Do the physical and mental health outcomes associated with each type of control vary by gender?

METHODOLOGY

Data

The current study uses data from the 2010 National Intimate Partner and Sexual Violence Survey (NISVS). This survey was conducted by the Centers for Disease Control and Prevention (CDC) and collected data on IPV, sexual violence, and stalking victimization among English and Spanish speaking adults (Black et al., 2011). Employing a random digit dial sampling design, inclusive of both landline and cellular telephone numbers, a nationally representative sample of 8,510 men and 10,447 women was constructed. The NISVS data provides the measures necessary to answer the research questions set forth in this study. It provides appropriate measures on IPV and physical and mental health outcomes, as well as for comparisons of victimization by gender. The NISVS is the only nationally representative data which allows for a comparison of the effects of physical and non-physical control tactics within the context of IPSV. Thus, it the data best suited for the current research.

The current study uses these data to examine the physical and mental health effects associated with experiencing sexual violence by an intimate partner, therefore only participants reporting intimate partner sexual victimization (IPSV) will be included in this study. Intimate partner sexual victimization is determined by responding that at least one intimate partner had done any of the following when they did not want them to: made them have vaginal sex, made them preform anal sex, made them receive anal sex, made them perform oral sex, made them receive oral sex, or had put their fingers or an object in their vagina or anus. Approximately

1,596 individuals indicated having experienced intimate partner sexual victimization, reducing the sample to this value.

Dependent Variables

Physical Health Outcomes

Physical health outcomes are assessed through seven different measures. First, participants rated their overall physical health by answering the question “would you say that in general your physical health is: excellent, very good, good, fair, or poor. The resulting variable *overall physical health* is an ordinal variable coded (1), (2), (3), (4), and (5), respectively, where (1) is poor and (5) is excellent.

Physical health is also assessed through a series of dichotomous variables. Prior research has found each of these outcomes to be associated with IPV (Campbell, 2002; Coker et al., 2000; Johnson & Leone, 2005; Reingle, Jennings, Piquero, & Maldonado-Molina, 2014). Respondents answered whether they have: chronic pain, frequent headaches, or difficulty sleeping, as well as whether they were ever physically injured as a result of sexual violence by an intimate partner, and whether they ever contracted a sexually transmitted disease (STD) or other infection. Each of these five measures are coded as (1 = yes, 0 = no). Additionally, each of these outcomes are summed into a variable (ranging from 0 to 5) assessing the number of *physical health outcomes* an individual exhibits.

Mental Health Outcomes

Mental health is assessed through two different measures. First, participants rated their overall mental health by answering the question “would you say that in general your mental health is: excellent, very good, good, fair, or poor. The resulting variable *overall mental health* is

an ordinal variable coded (1), (2), (3), (4), and (5), respectively, where (1) is poor and (5) is excellent.

The second measure of mental health assesses the presence of Post-Traumatic Stress Disorder (PTSD) symptoms. Prior research shows PTSD to be one of the most common mental health outcomes associated with IPV (Golding, 1999; Pico-Alfonso et al., 2006). Participants were asked to answer the following in regard to their past victimization: did you ever have nightmares about it?; did you ever try hard not to think about it or go out of your way to avoid being reminded of it?; did you ever feel like you were constantly on guard, watchful, or easily startled?; and did you ever feel numb or detached from others, your activities, or your surroundings? According to the Diagnostic and Statistical Manual of Mental Disorders fifth edition (DSM-5,) a diagnosis of PTSD requires the presence of intrusion symptoms (such as flashbacks or distressing dreams), persistent avoidance of associated stimuli, marked alterations in arousal and reactivity, and negative alterations in cognition and mood for a duration of at least one month after experiencing actual or threatened death, injury, or sexual violence. Each of the four dichotomous variables above (coded 1 = yes, 0 = no) correspond to one of the criteria necessary for diagnosing an individual with PTSD, and are thus summed together to create one interval level variable (ranging from 0 to 4) assessing the overall number of *PTSD symptoms*.

Independent Variable

The independent variable of interest in this study is the type of control tactic victims have been subjected to by an intimate partner. Within this variable there are three indicators: physical incapacitation, physical force, and coercive control. The first of these, *physical incapacitation*, examines whether an individual has experienced the physical control tactic of incapacitation. Respondents were asked to report whether an intimate partner had vaginal sex with them, made

them preform anal sex, made them receive anal sex, made them perform oral sex, or made them receive oral sex while they were drunk, high, drugged, or passed out and unable to consent. Responses are collapsed into one dichotomous variable where 1 represents those who reported at least one of these experiences and 0 represents those who did not indicate any of these experiences.

The second independent variable is *physical force*. Respondents were asked to report whether an intimate partner has ever used physical force or threats to physically harm them to make them have vaginal sex, make them preform anal sex, make them receive anal sex, make them perform oral sex, make them receive oral sex, or put their fingers or an object in their vagina or anus. Responses are collapsed into one dichotomous variable where 1 represents those who reported at least one of these experiences and 0 represents those who did not indicate any of these experiences.

The third independent variable, *coercive control*, measures whether an individual experienced sexual violence due to non-physical means of control. Respondents were asked to report whether they had vaginal, anal, or oral sex with an intimate partner after this individual pressured them through tactics such as, making promises about the future they knew were untrue, threatening to end the relationship, or threatening to spread rumors about them; wearing them down by repeatedly asking for sex, or showing them that they were unhappy; or using their influence or authority over them. Responses are collapsed into one dichotomous variable where 1 represents those who reported at least one of these experiences and 0 represents those who did not indicate any of these experiences.

Control Variables

In order to reduce possible omitted variable bias, a number of additional variables are examined. Informed by prior research (Edwards, Black, & Dhingra, 2009; Jewkes, 2002; Kann et al., 2014; Thompson et al., 2006), the following variables are included: *gender* of respondent (male = 0, female = 1), *race* of respondent (White = 0, Black = 1, other = 2), *age* of respondent (18-24 = 0, 25-34 = 1, 35-44 = 2, 45-54 = 3, 55 or older = 4), *level of highest education* attained by the respondent (some high school or less = 0, high school graduate = 1, technical or vocational schooling = 2, some college = 3, 4-year college degree = 4, postgraduate = 5), and whether the respondent falls below the *poverty* line. According to the U.S. Census Bureau, in 2010 the poverty line was set at \$14, 216 for a household of two (2016), thus anyone reporting an income of \$15,000 or less is considered to be impoverished (no = 0, yes = 1).

It is also necessary to control for experiences of physical violence and coercive control unrelated to those used as a facilitator of sexual violence. This ensures that any significant findings are a true reflection of the outcomes related to the independent variables of interest. Physical violence consists of two measures. The first, *any physical violence*, measures whether a respondent has experienced any physical violence by an intimate partner outside of the context of IPSV. Respondents were asked to report whether an intimate partner had ever slapped them, pushed or shoved them, hit them with an object, kicked them, slammed them into something, pulled their hair, choked them, beaten them, purposely burned them, or used a weapon against them. Responses are collapsed into one dichotomous variable where 1 represents those who reported at least one of these experiences and 0 represents those who did not indicate any of these experiences.

The second measure of physical violence, *severe physical violence*, measures whether an individual has experienced physical violence by an intimate partner that has the potential to result in bruising, bleeding, burns, scars, or other lasting damage. Respondents were asked whether an intimate partner had ever hit them with an object, kicked them, slammed them into something, choked them, beaten them, purposely burned them, or used a weapon against them. Responses are collapsed into one dichotomous variable where 1 represents those who reported at least one of these experiences and 0 represents those who did not indicate any of these experiences.

Any coercive control is a measure of whether a respondent has experienced coercive control outside of the context of IPSV. Respondents are asked to report whether an intimate partner has ever: acted very angry in a way that scared them; told them they were a loser or failure; called them names such as ugly, fat, or crazy; insulted, humiliated, or made fun of them in front of others; told them that no one else would want them; tried to keep them from seeing family or friends; made decisions for them that they should have been able to make themselves; demanded to know what they were doing and where they were; kept them from leaving the house; withheld money; destroyed something belonging to them; or threatened to hurt or kill themselves, a pet, or a loved one. Responses are collapsed into one dichotomous variable where 1 represents those who reported at least one of these experiences and 0 represents those who did not indicate any of these experiences.

Analytical Strategy

The first step in this analysis is to obtain descriptive statistics for all dependent variables, as well as obtain rates of victimization for each control tactic for males and females. Next, a series of models are run in order to fully answer the research questions proposed. Model 1

examines the effect that experiencing each control tactic has on overall physical health. Model 2 examines the same effects on overall mental health. These models are first run as ordinal regression models (ORM). If found to be in violation of the parallel forms assumption, meaning that it cannot be assumed that each possible value within the dependent variable is equidistant from the next, ordinal generalized linear models are used instead. Models 3 through 7 examine the effect experiencing each control tactic has on the five physical health outcomes. As each of these dependent variables are dichotomous, these analyses are completed using logistic regression. Model 8 assesses the effect of each control tactic on the number of physical health outcomes reported using Poisson regression. Similarly, model 9 analyzes the effect of the three control tactics on the number of PTSD symptoms reported through Poisson regression. In the case of over-dispersion of either number of physical health outcomes or number of PTSD symptoms, negative binomial regression is used for that variable instead.

Lastly, in order to explore potential variation in health outcomes between males and females, each model is disaggregated by gender. Z-scores representing potential gender differences in the effect that experiencing each control tactic has on health outcomes are obtained using a formula deemed appropriate for testing the equality of coefficients (Clogg, Petkova, & Haritou, 1995; Paternoster, Brame, Mazerolle, & Piquero, 1998). A significant z-score reflects a substantial difference in the effect a tactic has on one gender's health outcome compared to the other.

RESULTS

Table 1 provides rates of victimization for men and women across each control tactic, and Table 2 reports descriptive statistics for the remaining variables in the analysis.

Approximately 32% of the individuals in the sample reported having experienced physical incapacitation, 42% reported having experienced physical force, and 61% reported having experienced coercive control by an intimate partner. It is also important to note that each control tactic is not mutually exclusive; many individuals reported experiencing more than one. About 11% of the individuals reported having experiencing both physical tactics of control, 12% reported having experienced physical incapacitation and coercive control, and 17% reported having experienced both physical force and coercive control. Approximately 6% of the sample reported having experienced all three forms of control. Broken down by gender, about 37% of the men and 30% of the women in the sample reported experiences of physical incapacitation, 13% of the men and 51% of the women reported experiences of physical force, and 73% of the men and 57% of the women reported experiencing coercive control. About 4% of the men and 7% of the women reported experiencing all three forms of control.

Approximately 28% of the IPSV victims in this sample reported that their overall physical health was fair or poor. This is higher than that reported by the CDC's *Health, United States, 2013* report, which estimates that among the general population only 10% of adults report fair or poor health (National Center for Health Statistics, 2014). Approximately 35% of the individuals in this sample reported suffering from chronic pain. According to a nationally representative survey of adults, about 31% of adults in the United States suffer from chronic pain (Johannes et al., 2010). Approximately 29% of the individuals in this sample said that they suffer

from frequent headaches, whereas the previously mentioned CDC data reports that in 2010, only 17% of adults suffered from frequent headaches or migraines (National Center for Health Statistics, 2014). Another source reports that approximately 1% of the United States population over 16 years of age suffers from insomnia, which is difficulty falling or staying asleep (Ram, Seirawan, Kumar, & Clark, 2010), while 44% of the individuals in this sample reported difficulty sleeping.

Table 1. Rates of Victimization by Tactic and Gender

Control Tactic	Coded	Full Sample N (% of sample)	Men Only N (% of Males)	Women Only N (% of Females)
Physical Incapacitation	0 = No 1 = Yes	503 (31.516)	142 (36.788)	361 (29.835)*
Physical Force	0 = No 1 = Yes	664 (41.604)	52 (13.472)	612 (50.579)*
Coercive Control	0 = No 1 = Yes	974 (61.028)	282 (73.057)	692 (57.190)*
Physical Incapacitation & Physical Force		182 (11.404)	28 (7.254)	154 (12.727)*
Physical Incapacitation & Coercive Control		192 (12.030)	54 (14.000)	138 (11.405)
Physical Force & Coercive Control		269 (16.855)	24 (6.218)	245 (20.248)*
Incapacitation, Force, & Coercive Control		98 (6.140)	16 (4.145)	82 (6.777)*

Note: The full sample has an N of 1,596. The male sample has an N of 386. The female sample has an N of 1,210.

Note: * indicates a significant difference between male and female victimization rates ($p < 0.05$).

Table 2. Descriptive Statistics

Variables	Coded	N (% of sample)	M	SD
<i>Dependent Variables</i>				
Overall Physical Health	0 = Poor/fair 1 = Good/very good/excellent	444 (27.820) 1149 (71.992)		
Chronic Pain	0 = No 1 = Yes	1031 (64.599) 560 (35.088)		
Frequent Headaches	0 = No 1 = Yes	1129 (70.739) 467 (29.261)		
Difficulty Sleeping	0 = No 1 = Yes	898 (56.266) 697 (43.672)		
Injury	0 = No 1 = Yes	1226 (76.817) 370 (23.183)		
STD/Infection	0 = No 1 = Yes	1479 (92.669) 117 (7.331)		
Number of Physical Health Outcomes	0 1 2 3 4 5	523 (32.769) 404 (25.313) 318 (19.925) 236 (14.787) 90 (5.639) 19 (1.190)	1.386	1.294
Overall Mental Health	0 = Poor/fair 1 = Good/very good/excellent	344 (21.554) 1248 (78.195)		
Number of PTSD Symptoms	0 1 2 3 4	674 (42.231) 108 (6.767) 158 (9.890) 232 (14.536) 424 (26.566)	1.764	1.706
<i>Controls</i>				
Gender				
Male	0	386 (24.185)		
Female	1	1210 (75.815)		
Race				
White	0	1303 (81.642)		
Black	1	172 (10.777)		
Other	2	110 (6.892)		
Age				
18-24	0	160 (10.025)		
25-34	1	295 (18.484)		
35-44	2	340 (21.303)		
45-54	3	402 (25.188)		
55+	4	398 (24.937)		

Table 2. (Continued)

Variables	Coded	N (% of sample)	M	SD
Level of Education				
Some High School or Less	0	120 (7.519)		
High School Graduate	1	371 (23.246)		
Technical/Vocational Schooling	2	117 (7.331)		
Some College	3	482 (30.201)		
College Graduate	4	324 (20.300)		
Post Graduate	5	182 (11.404)		
Poverty				
Above Poverty Line	0	1366 (85.589)		
Below Poverty Line	1	217 (13.596)		
Any Physical Violence				
	0 = No	387 (24.248)		
	1 = Yes	1209 (75.752)		
Severe Physical Violence				
	0 = No	652 (40.852)		
	1 = Yes	943 (59.085)		
Any Coercive Control				
	0 = No	89 (5.576)		
	1 = Yes	1502 (94.110)		

About 23% of the individuals in this sample reported sustaining an injury as a result of sexual violence. Additionally, 7% of this sample contracted an STD or other infection as the result of sexual violence. Within the general population, there were about 1.6 million new cases of syphilis, chlamydia, or gonorrhea diagnosed in 2010 (National Center for Health Statistics, 2014).

In regard to mental health, about 21% of this sample reported fair or poor overall mental health. The CDC's *Measuring Healthy Days*, however, reports that only about 10% of adult women and 7% of adult men have poor mental health (Centers for Disease Control and Prevention, 2000). Slightly over a quarter (26%) of the individuals in this sample reported all four symptoms of PTSD, while only 11% of the general adult population meet the criteria for diagnosable PTSD (Kilpatrick et al., 2013). These findings suggest that victims of IPSV report suffering from a greater number of health outcomes than the general public.

Physical Health Outcomes

Table 3 shows the results experiencing each control tactic has on each measure of physical health. Overall physical health was found to be negatively and significantly related to experiencing physical force.¹ Having experienced physical force, compared to never experiencing this form of control, decreases the odds of reporting overall good health by 40.01% ($b = -0.511$, $SE = .143$, $p < 0.001$). Neither the experience of physical incapacitation nor the experience of coercive control were significantly related to one's overall physical health.

Individual health outcomes were then assessed. Physical force was found to be positively and significantly associated with all five physical health outcomes. Having experienced the control tactic of physical force, compared to never having this experience, significantly increases the odds of reporting chronic pain by 42.91% ($b = 0.357$, $SE = 0.135$, $p = 0.008$). In other words, the odds of suffering from chronic pain are 42.91% greater for victims whose partners have used physical force to facilitate sexual violence than for those who have not experienced physical force, controlling for all other present variables. Additionally, having experienced physical force, compared to never having this experience, increases the odds of these individuals reporting frequent headaches by 47.14% ($b = 0.386$, $SE = 0.136$, $p = 0.005$), difficulty sleeping by 90.41% ($b = 0.644$, $SE = 0.129$, $p < 0.001$), an injury by 947.67% ($b = 2.349$, $SE = 0.176$, $p < 0.001$), and an STD or other infection by 427.59% ($b = 1.663$, $SE = 0.258$, $p < 0.001$), controlling for all other present variables.

¹ The ORM model was found to be in violation of the parallel forms assumption. It was then run as an ordinal generalized liner model. As a post-hoc analysis, overall physical health was also dichotomized into poor (coded 1 = poor to 2 = fair) and good health (coded 3 = good to 5 = excellent). For ease and parsimony of interpretation, results from the logistic model are reported, as results from the two models were substantially the same, with one exception. In the GLM, incapacitation was also significant.

Table 3. Physical Health Outcomes

Variables	Overall Physical Health	Chronic Pain	Frequent Headaches	Difficulty Sleeping	Injury	STD/ Infection	Number of Physical Health Outcomes
	b (SE)	b (SE)	b (SE)	b (SE)	b (SE)	b (SE)	b (SE)
Physical Incapacitation (tactic)	-0.238 (0.137)	0.032 (0.131)	-0.125 (0.133)	0.365 (0.125)*	0.638 (0.159)**	0.989 (0.209)**	0.143 (0.047)*
Physical Force (tactic)	-0.511 (0.143)**	0.357 (0.135)*	0.386 (0.136)*	0.644 (0.129)**	2.349 (0.176)**	1.663 (0.258)**	0.527 (0.051)**
Coercive Control (tactic)	-0.053 (0.138)	-0.127 (0.133)	0.101 (0.133)	0.223 (0.127)	0.276 (0.150)	0.195 (0.209)	0.064 (0.047)
Female	0.173 (0.159)	-0.117 (0.147)	0.616 (0.158)**	-0.225 (0.137)	1.177 (0.257)**	0.953 (0.308)*	0.135 (0.061)*
Black	-0.268 (0.191)	-0.584 (0.200)*	-0.278 (0.193)	-0.422 (0.182)*	-0.305 (0.235)	0.444 (0.295)	-0.197 (0.074)*
Other Race	0.119 (0.246)	-0.237 (0.233)	0.308 (0.221)	-0.052 (0.218)	0.304 (0.273)	0.443 (0.357)	0.051 (0.082)
Age 25-34	-0.293 (0.268)	1.064 (0.287)**	-0.015 (0.223)	0.345 (0.226)	0.341 (0.317)	0.391 (0.480)	0.248 (0.099)*
Age 35-44	-0.560 (0.261)*	1.186 (0.283)**	-0.062 (0.222)	0.470 (0.223)*	0.050 (0.312)	0.229 (0.472)	0.251 (0.097)*
Age 45-54	-1.103 (0.248)**	1.699 (0.274)**	-0.194 (0.216)	0.886 (0.216)**	-0.045 (0.306)	0.556 (0.452)	0.378 (0.093)**
Age 55 and Older	-0.905 (0.253)**	1.014 (0.277)**	-0.611 (0.225)*	0.758 (0.219)*	-0.079 (0.305)	0.942 (0.469)	0.316 (0.095)*
High School Graduate	0.756 (0.240)*	-0.356 (0.246)	-0.463 (0.233)*	-0.926 (0.240)**	0.022 (0.299)	-1.086 (0.398)*	-0.277 (0.083)*
Technical/Vocational Schooling	0.837 (0.298)*	-0.138 (0.295)	-0.578 (0.292)*	-0.862 (0.291)*	-0.106 (0.366)	-0.375 (0.466)	-0.238 (0.103)*

*p<0.05 **p<0.001

Table 3. (Continued)

Variables	Overall Physical Health	Chronic Pain	Frequent Headaches	Difficulty Sleeping	Injury	STD/ Infection	Number of Physical Health Outcomes
Some College	0.880 (0.234)**	-0.166 (0.238)	-0.468 (0.227)*	-0.776 (0.233)*	0.078 (0.291)	-0.376 (0.350)	-0.189 (0.080)*
College Graduate	1.447 (0.264)**	-0.865 (0.260)*	-0.845 (0.250)*	-1.089 (0.250)**	-0.591 (0.323)	-0.800 (0.412)	-0.496 (0.092)**
Post Graduate	1.817 (0.317)**	-0.712 (0.284)*	-1.105 (0.290)**	-1.105 (0.273)**	-0.160 (0.358)	-0.058 (0.430)	-0.434 (0.104)**
Poverty	-0.864 (0.163)**	0.948 (0.165)**	0.451 (0.159)*	0.606 (0.160)**	0.192 (0.197)	0.184 (0.272)	0.278 (0.056)**
Any Physical Violence	0.054 (0.229)	0.361 (0.201)	0.414 (0.200)*	0.289 (0.181)	0.852 (0.318)*	-0.344 (0.459)	0.260 (0.085)*
Severe Physical Violence	-0.637 (0.191)*	0.311 (0.165)	-0.025 (0.167)	0.323 (0.153)*	0.682 (0.232)*	0.618 (0.395)	0.187 (0.067)*
Any Coercive Control	-0.212 (0.335)	0.623 (0.326)	0.325 (0.311)	0.117 (0.267)	0.268 (0.530)	0.545 (0.765)	0.246 (0.137)
Adjusted R ²	0.094	0.095	0.036	0.058	0.264	0.111	0.085
LR Chi ²	214.081	232.252	107.799	164.302	489.723	132.352	461.197

*p<0.05 **p<0.001

Physical incapacitation was found to be positively and significantly associated with an increased likelihood of suffering from difficulty sleeping, sustaining an injury, or contracting an STD or other infection. Specifically, having experienced sexual violence through physical incapacitation, compared to never having had this experience, increases the odds of reporting difficulty sleeping by 44.00% ($b = 0.365$, $SE = 0.125$, $p = 0.004$), an injury by 89.20% ($b = 0.638$, $SE = 0.159$, $p < 0.001$), and an STD or other infection by 168.77% ($b = 0.989$, $SE = 0.209$, $p < 0.001$), controlling for all other present variables.

Having experienced sexual violence through coercive control was not significantly related to any of the physical health outcomes. Considering the strength of the relationships between these physical health outcomes and both physical tactics, it is interesting that none of these outcomes reach significance for experiences of coercive control. This suggests that physical tactics of control are more detrimental to one's physical health than non-physical control.

All five physical health outcomes were then summed together in order to assess the relationship between each control tactic and the number of physical health outcomes reported. Results indicate experiencing physical force or physical incapacitation both increase the expected number of physical health outcomes reported. Experiencing physical force, as opposed to never having experienced this form of control, increases the expected number of physical health outcomes reported by 69.31% ($b = 0.527$, $SE = 0.051$, $p < 0.001$). Experiencing incapacitation, as opposed to never having experienced this form of control, increases the expected number of physical health outcomes reported by 15.37% ($b = 0.143$, $SE = 0.047$, $p = 0.002$). In other words, the number of health outcomes one suffers is expected to be reported at a rate 1.15 times greater for victims experiencing physical incapacitation and 1.69 times greater for

victims of physical force. Having experienced coercive control was not significantly associated with the number of physical health outcomes reported.

Overall, results indicate that experiencing sexual violence through both physical force and physical incapacitation are detrimental to one's physical health. Physical force, in particular, has serious negative effects on one's overall rating of his or her physical health, as well as specific physical health outcomes and the number of these health outcomes reported.

Mental Health Outcomes

Table 4 shows the results experiencing each control tactic has on overall mental health and the number of PTSD symptoms present. Overall mental health was negatively and significantly associated with experiencing physical force.² Experiencing physical force, compared to never having experienced this form of control, decreases the odds of reporting good health by 42.33% ($b = -0.550$, $SE = 0.152$, $p < 0.001$). Neither experiences of physical incapacitation nor of coercive control were significantly related to overall mental health.

Experiencing physical force and coercive control were both found to be significantly associated with reporting a greater number of PTSD symptoms.³ Having experienced physically forced sexual violence, compared to never experiencing this form of control, increases the expected number of PTSD symptoms reported by 67.36% ($b = 0.515$, $SE = 0.057$, $p < 0.001$). Having experienced the control tactic of coercive control, compared to never experiencing this form of control, increases the expected number of PTSD symptoms reported by 36.74% ($b = 0.313$, $SE = 0.055$, $p < 0.001$). In other words, the number of PTSD symptoms is expected to be

² The ORM model was found to be in violation of the parallel forms assumption, and was then run as an ordinal generalized linear model. This produced slightly inconsistent results, thus as a post-hoc analysis, overall mental health was dichotomized into poor (coded 1 = poor to 2 = fair) and good health (coded 3 = good to 5 = excellent). For ease and parsimony of interpretation, results from the logistic model are reported.

³ This model was run as a negative binomial regression, as the test for possible overdispersion was significant.

reported at a rate 1.67 times greater for victims experiencing physical force and 1.37 times greater for victims of coercive control.

Experiencing incapacitation was not significantly associated with the number of PTSD symptoms an individual reported. This finding suggests that the number of PTSD symptoms an individual who experienced physical force or coercive control reports is much higher than for those who experienced physical incapacitation. Overall, results indicate that experiencing sexual violence through physical force is detrimental to overall mental health and that experiences of both physical force and coercive control increase the number of PTSD symptoms reported.

Gender Differences

As seen throughout Table 3 and Table 4, a few health outcomes were found to be significantly associated with gender. Women were more likely to report frequent headaches, an injury, or an STD or other infection than men, as well as report suffering from a greater number of physical health outcomes and PTSD symptoms. More specifically, being female, compared to being male, increases the odds of reporting frequent headaches by 85% ($b = 0.616$, $SE = 0.158$, $p < 0.001$), an injury by 224.39% ($b = 1.177$, $SE = 0.257$, $p < 0.001$), and an STD or other infection by 159.38% ($b = 0.953$, $SE = 0.380$, $p = 0.012$). The number of physical health outcomes suffered is expected to be reported at a rate 1.14 times greater, and the number of PTSD symptoms is expected to be reported at a rate 1.82 times greater, for female victims than male victims.

Table 5 presents a comparison of the effects of each control tactic on health outcomes after disaggregating the data by gender. Only one difference between men and women reached significance. Within individuals who reported having experienced physical force, men reported overall poorer mental health than women ($z = -2.499$, $p < 0.05$).

Table 4. Mental Health Outcomes

Variables	Overall Mental Health	Number of PTSD Symptoms
	b (SE)	b (SE)
Physical Incapacitation (tactic)	-0.223 (0.144)	-0.056 (0.055)
Physical Force (tactic)	-0.550 (0.152)**	0.515 (0.057)**
Coercive Control (tactic)	-0.090 (0.145)	0.313 (0.055)**
Female	-0.083 (0.173)	0.601 (0.071)**
Black	-0.131 (0.201)	-0.205 (0.082)*
Other Race	0.212 (0.263)	0.094 (0.095)
Age 25-34	-0.398 (0.260)	0.117 (0.103)
Age 35-44	-0.201 (0.262)	0.155 (0.101)
Age 45-54	-0.400 (0.249)	0.062 (0.100)
Age 55 and Older	-0.076 (0.259)	0.038 (0.100)
High School Graduate	0.699 (0.239)*	-0.176 (0.103)
Technical/Vocational Schooling	1.263 (0.324)**	-0.097 (0.125)
Some College	.900 (0.234)**	-0.100 (0.100)
College Graduate	1.410 (0.271)**	-0.128 (0.107)
Post Graduate	1.642 (0.330)**	-0.048 (0.119)
Poverty	-0.841 (0.165)**	0.155 (0.067)*
Any Physical Violence	-0.098 (0.245)	0.270 (0.092)*
Severe Physical Violence	-0.383 (0.203)	0.374 (0.075)**
Any Coercive Control	-0.643 (0.421)	0.706 (0.165)**
Adjusted R ²	0.068	0.065
LR Chi ²	150.831	412.855

*p<0.05 **p<0.001

Table 5. Gender Differences in Health Outcomes by Tactic of Control

Health Outcome	Males	Females	Z-score
	b (SE)	b (SE)	
Overall Physical Health			
Physical Force	-0.281 (0.332)	-0.505 (0.158)*	0.924
Chronic Pain			
Physical Force	0.186 (0.351)	0.429 (0.149)*	-0.636
Frequent Headaches			
Physical Force	-0.166 (0.424)	0.472 (0.148)*	-1.422
Difficulty Sleeping			
Physical Incapacitation	0.364 (0.291)	0.401 (0.145)*	-0.114
Physical Force	0.617 (0.343)	0.649 (0.143)**	-0.086
Injury			
Physical Incapacitation	0.621 (0.551)	0.643 (0.188)**	-0.038
Physical Force	3.281 (0.633)**	2.306 (0.188)**	1.476
STD/Other Infection			
Physical Incapacitation	2.251 (1.109)*	0.953 (0.219)**	1.148
Physical Force	3.477 (1.297)*	1.645 (0.274)**	1.382
Number of Physical Health Outcomes			
Physical Incapacitation	0.015 (0.127)	0.174 (0.052)*	-1.160
Physical Force	0.396 (0.135)*	0.559 (0.056)**	-1.114
Overall Mental Health			
Physical Force	-1.406 (0.378)**	-0.374 (0.166)*	-2.499*
PTSD			
Physical Force	0.640 (0.317)*	0.511 (0.052)**	0.403
Coercive Control	0.572 (0.307)	0.279 (0.049)**	0.942

*p<0.05 **p<0.001

Note: Within each health outcome, only control tactics where at least one gender produced significance are included.

Although this was the only significant gender difference in the effect that experiencing a particular control tactic has on health outcomes, some of these disaggregated models produce significant coefficients for certain control tactics within the female group, but not within the male group. This may be reflective of a need to include a greater number of men in the analysis. Overall, when analyzing the full sample, it appears that women are more likely to report a number of individual health outcomes, whereas when comparing men and women on the degree of harm experiencing each control tactic has on their health, men are found to report overall worse mental health after experiencing physical force.

DISCUSSION

This research sought to explore the physical and non-physical tactics of control experienced by victims of IPSV, as well as to examine the physical and mental health outcomes related to this victimization. This was done by assessing the relationships between overall measures of physical and mental health and each tactic of control, and the associations between these tactics and the individual health outcomes of chronic pain, frequent headaches, difficulty sleeping, injury, STDs or other infections, and PTSD symptoms. Second, this research sought to explore potential differences in both type of control experienced and reported health outcomes for men and women through disaggregating the data by gender.

The first research question this study sought to answer was: what are the physical and mental health outcomes associated with sexual victimization by an intimate partner? All nine measures of health were significantly related to at least one of the different control tactics. Furthermore, the rates of reported physical and mental health outcomes were all higher within this sample than the national averages for adults in the United States. Although the current study was unable to explore whether these rates are significantly higher, this finding suggests that victims of IPSV suffer overall worse physical and mental health, and are more likely to endure a plethora of specific adverse health outcomes.

The second research question this study examined was: do the physical and mental health outcomes related to IPSV vary by type of control tactic experienced? In short, yes; the results of this research suggest that both physical and non-physical forms of control are associated with adverse health outcomes, yet each control tactic produced statistically significant associations

with a different set of health outcomes. Physical force was found to be related to overall worse physical and mental health, suffering a greater number of both physical health outcomes and PTSD symptoms, and a greater likelihood of reporting every individual measure of physical health. Physical incapacitation was related to reporting difficulty sleeping, sustaining an injury, contracting an STD or other infection, and an overall increase in the number of physical health outcomes reported. Experiencing coercive control, on the other hand, was found to be related to reporting an increased number of PTSD symptoms.

These findings are largely consistent with findings from the small body of research that examines the effects experiencing different forms of control have on one's health in that these physical and mental health outcomes vary by type of control experienced (McCauley et al., 2009; Tiwari et al., 2010; Zinzow et al., 2010). For example, consistent with Tiwari and colleagues' (2014) study, individuals who experienced physically forced sex reported a greater number of PTSD symptoms than those who experienced coercive control. In fact, physical force resulted in the strongest associations to every health outcome examined. This finding is consistent with Zinzow and colleagues' (2010) study, as both found experiences of physical force to be related to a greater likelihood of PTSD than experiencing incapacitation. Experiencing coercive control, interestingly, was only significantly associated with the one mental health outcome. As this type of control aims to harm one's emotional or mental health, this association is not surprising, yet it is somewhat surprising that none of the physical health outcomes were also significant, as past studies have noted a connection between psychological violence and physical health (Coker et al., 2002; Johnson & Leone, 2005; Tjaden & Thoennes, 1998). Perhaps experiencing this form of control within the context of facilitating sexual violence does not produce the same degree of

harm to one's physical health as experiencing psychological violence and coercive control outside of the context of IPSV.

This study also explored whether men and women experience each control tactic at the same rate, and whether their physical and mental health are affected differently. Results show that women experience physical force at a much higher rate than men, whereas men experience physical incapacitation at a somewhat higher rate, and coercive control at a moderately higher rate, than women. Interestingly, women reported significantly higher rates of experiencing more than one control tactic, suggesting that women are more likely than men to experience multiple control tactics. The results also show that women are also more likely to suffer from frequent headaches, injuries, and STDs or other infections than men, and report a greater number of physical health outcomes and PTSD symptoms. The only control tactic to significantly affect men and women differently was physical force, which was found to result in overall worse mental health for men than women.

To the author's knowledge, this study provides the first rates of victimization broken down by type of control within a sample of IPSV victims, thus it is difficult to assess whether these findings are expected or surprising. Past research examining overall rates of IPV victimization for men and women provides a basis for contextualizing the results found here, but this body of research presents inconsistencies in of itself. Some of these studies find that women experience victimization at higher rates (Browne, 1993; Campbell, Kub, & Rose, 1996; Demaris & Kaukinen, 2005; Golding, 1999; Silverman, Raj, Mucci, & Hathaway, 2001), while others show men and women to be victimized at fairly similar rates (Black et al., 2011; Spitzberg, 1998). Consistent with the former, women were found to experience physically forced sexual violence at a much higher rate than men, yet consistent with the latter, this study found men to

experience physical incapacitation at a slightly higher rate. Interestingly, men also experienced coercive control at a higher rate than women. This finding is inconsistent with Myhill's (2015), Tanha and colleagues' (2010), and Johnson's (2006) research, which all find that women are more likely to experience this type of violence outside of the context of sexual violence. This emphasizes the importance of examining rates of experiencing each tactic of control separately from rates of physical and psychological (non-physical) forms of IPV victimization.

It is interesting to note that overall women experienced more individual health outcomes, yet only one significant difference was found between the effects a tactic has on one gender compared to the other. There are a couple different speculations as to why this occurred. First, women may be experiencing more frequent or more severe IPSV than men. As an association between more frequent or severe abuse and greater adverse health outcomes has been documented (Bonomi et al., 2006; Campbell, Kub, & Rose, 1996; Golding, 1999), it stands to reason that if women are experiencing greater amounts of violence, they will report a greater number of health outcomes than men. Another potential explanation is that men are less likely to report their symptoms. This could be due to the fact that men are more likely to be encouraged to ignore health issues in the name of masculinity, or because they have fewer outlets to discuss their victimization. It is entirely possible, therefore, that multiple gender effects, but only one gender difference, are found because women are more likely to suffer adverse health outcomes through experiencing more IPSV or because men simply do not report their health as being affected.

One very interesting finding emerged in regard to differences in health outcomes for men and women. Although men experienced physically force sexual violence at a lower rate than women, men who did experienced physical force reported overall worse mental health than their

female counterparts. Very little research has examined male victims, but studies have found significant associations between IPV and reporting increased depressive symptoms (Houston & McKirnan, 2007; Randle & Graham, 2011) and visits to mental health professionals (Houston & McKirnan, 2007). Both of these measures theoretically contribute to reporting overall worse mental health, thus the current study's finding is consistent with this small body of research, yet it is unclear why physical force results in greater harm to men's mental health than women's. One possible explanation is that society's relative lack of acknowledgement of male victimization, compared to that given to female victims, along with the tendency to view men as perpetrators instead of victims, causes male victims of rape to feel isolated, shameful, and embarrassed, contributing over time to worsening mental health (Scarce, 1997).

There are several implications that arise from the findings of this study. First, greater attention needs to be given to IPSV. Despite consistent findings that sexual violence by intimate partners occurs frequently, researchers have produced a relatively small body of literature on this type of IPV. There is still a tendency by both society and academics to view IPSV as either a form of physical violence or to view it as a less legitimate form of IPV due to potentially blurred lines between what is consensual or not between partners (Bagwell-Gray, Messing, & Baldwin-White, 2015; Basile, 2002; Logan, Walker, & Cole, 2015). This perspective hinders progress toward understanding and detecting IPSV. As the findings of this study also suggest that sexual violence results in a multitude of adverse health outcomes, a greater importance must be placed on studying this form of IPV.

An even smaller body of research recognizes that sexual violence requires the use of physical or non-physical tactics of control. The findings of this study show that in order to fully grasp the experience and consequences of IPSV, it is necessary to distinguish between types of

control. Incapacitation, physical force, and coercive control are all associated with a different set of physical and mental health outcomes, meaning, for example, that the experience of being physically restrained affects a victim's health differently than the experience of repeatedly being told that loved ones will be harmed if he or she does not engage in sexual activity.

Coercive control is in particular need of greater attention as both a form of IPV and as a tactic used to facilitate sexual violence. The current findings indicate that a victim's mental health is most likely to be harmed by this type of sexual control. Unfortunately, as diminished mental health can be much harder to detect than poor physical health, coercive control is often times viewed as a less detrimental form of violence. Recognizing that coercive control is a serious form of abuse with detrimental consequences to victims' health will increase the likelihood that these victims are taken seriously by the criminal justice system, that their perpetrators will face the same legal consequences as perpetrators of other forms of IPV, and that victims will be connected with the appropriate services and treatment. Furthermore, researchers have noted that relational conflict that begins as coercive control can manifest into additional forms of violence between partners (Stark, 2007; Tanha, Beck, Figueredo, & Raghavan, 2010). It is then even more pertinent that the justice system intervene and react to the use of coercive control to the same degree as other forms of IPV.

Further implications for the criminal justice system and health care professionals stem from the gender-related findings in regard to rates of victimization and associated health outcomes. In order to adequately cater to all victims of IPSV and provide sufficient assistance and services, the general public, academics, and professionals alike must acknowledge that men are just as likely to become victims as women. Breaking the stigma surrounding male victimization (especially sexual victimization) and the assumption that only women experience

IPV is the first step in helping these men to come forward. Police officers called to domestic disputes will be better able to detect two-way victimization, instead of assuming that only the woman is being victimized. If judges and prosecutors are more aware of the possibility that both partners involved in a case may be perpetrators and victims of the violence, potential sentences may be amended to include referrals to victim services.

Additionally, an awareness of male victimization will help healthcare professionals to better perceive whether or not a client has experienced victimization by an intimate partner, leading to a greater likelihood that all victims receive sufficient assistance. This is particularly important when considering that male victims of physically forced sexual violence report overall worse mental health than female victims. As previously mentioned, male victims may feel embarrassed, emasculated, and ashamed of their victimization, as society fails to recognize them as such (Scarce, 1997). It is especially important, then, for mental health care providers to recognize IPSV within men, and to provide the necessary services and treatment.

Overall, it is important for justice system officials and health care professionals to recognize that each experience of sexual victimization by an intimate partner is different and varies by the type of control used to facilitate the sexual violence against them. Individuals completing police reports and conducting interviews should be aware of the physical and mental health detriments victims are potentially suffering. Throughout this process, they should try and acquire more specific information on the circumstances surrounding the violence and the type of control used against them. A knowledge of the results of this study and other similar research will allow for the creation of treatment plans specifically tailored to the needs of each victim. In the circumstance that a victim is uncomfortable or unwilling to discuss his or her health with justice system officials, he or she can be provided with information and directed toward the

services that similar victims have utilized in the past. Resources can also be allocated more efficiently. For example, an individual who indicates only ever experiencing sexual violence through coercive control can be referred to mental health services and primary focus can be placed on providing access to counselors and other mental health professionals, whereas for someone who has experienced physically forced sexual violence, equal priority should be given to providing both mental health services and medical treatment. This not only saves health professionals time and money, but saves the victim from undergoing extra, unnecessary steps on the path to recovery.

As with all research, there are a few limitations to this study. First, this study relied solely on self-report, secondary data. This means that all analyses were restricted to data provided by the NISVS. Although the NISVS is the best suited data available, there are a few important measures that are not included. First, prior research strongly suggests that perpetration of IPV is a risk factor associated with IPV victimization (Stith et al., 2004). Prior research also finds an individual's substance use (Jewkes, 2002; Mohammadkhani et al., 2009; Stith et al., 2004), as well as any childhood abuse (Bonomi et al., 2006; Coker et al., 2002; Gomez, 2011; Laporte et al., 2011; Thompson et al., 2006; Whitfield, Anda, Dube, & Felitti, 2003), to be significant risk factors for IPV victimization. The current study's inability to control for an individual's perpetration, substance use, and childhood abuse leaves the results open to possible omitted variable bias, and a possible distortion of the true relationship between experiences of sexual violence and health outcomes.

A second limitation stemming from the data is that the only mental health outcomes that could be analyzed were overall mental health and the number of PTSD symptoms reported. Although both of these measures adequately represent mental health outcomes associated with

IPV, prior research indicates that many IPV victims suffer from anxiety and symptoms of depression as well (Bonomi et al., 2006; Campbell & Lewandowski, 1997; Pico-Alfonso et al., 2006). Including these measures would provide a more exhaustive picture of IPSV victims' mental health.

A third limitation is that this is an incidence-level study, meaning that victims are not differentiated by the frequency of their victimization. As discussed previously, cumulative experiences with IPSV have detrimental consequences to victims' health above and beyond the effects of a single incidence of victimization. Failing to account for frequency of victimization may mask important and substantial differences between victims who have experienced one incidence of IPSV, and those who have experienced many incidences of IPSV. Including a measure of the number of experiences victims have had with sexual violence by an intimate partner will provide a more accurate depiction of how their health is negatively affected.

To the author's knowledge, this is the first study to explore the physical and mental health outcomes associated with both physical and non-physical tactics of control within a nationally representative sample of IPSV victims. The results of this study suggest there is a great need for further research in this area of IPV victimization and that it is important to continue studying the associations between different control tactics and health outcomes. It is also important to continue to explore how rates of victimization and health outcomes differ for men and women. As the few studies that examine tactics of sexual control include different measures of physical and mental health, include different victim groups in the samples, and assess the effects of different control tactics (e.g. just physical forms), it is important to complete a more expansive analysis of all these measures within the same sample to continue exploring the consequences related to experiencing IPSV. Based on the limitations of this study, further

research should include additional measures of mental health, specifically anxiety-related and depressive symptoms. Furthermore, future studies should also include a measure of frequency of IPSV, as well as a greater number of controls, such as an individual's substance use, past abuse as a child, and his or her own perpetration of IPV.

Theories of IPV victimization can further inform the need for future research to examine perpetration and the role it plays in victimization. The intergenerational transmission (IGT) of violence theory makes a strong connection between witnessing IPV as a child and later victimization (Black, Sussman, & Unger, 2010). Specifically, this theory states that an individual is more likely to experience victimization within his or her own relationships if he or she grew up in a household where IPV was common (Sellers, Cochran, & Branch, 2005). Sellers and colleagues (2005) discuss how IGT of violence closely relates to the constructs set forth by Social Learning Theory (SLT) in that the likelihood that an individual becomes involved with IPV is greater for those whose friends, family or significant others deem IPV acceptable. Thus as both witnessing IPV within the family as a child, and personal perpetration of this violence as an adult can explain later IPV victimization, future research should explore IPSV and tactics of control through these theoretical perspectives.

There are also a number of comparisons between different populations and the sample examined here that will benefit this field of research. Future research should compare victims of IPSV and the health outcomes they report to victims of this violence by non-intimate partners, as well as to non-victims. Research shows that victims of sexual violence by non-intimate partners also suffer from physical and mental health outcomes (Black et al., 2011; Vandemark & Mueller, 2008), thus comparing these two groups could provide important implications for the specific services provided to different types of victims. Comparing these victims to a sample of non-

victims will allow for an expansion of the descriptive comparisons made above to ones that are empirically-based. Comparing the health outcomes associated with IPSV victimization to those associated with physical and psychological violence victimization by an intimate partner would also provide important insight into the true nature and extent of IPV and further the discussion of how victims' health is affected.

Another direction that future research within the area of IPSV should take is furthering the discussion of the experiences of non-heterosexual victims. Based on prior research, it is reasonable to think that non-heterosexual individuals' experiences with IPV will differ from those of heterosexual individuals. Frankland and Brown (2014) found that Johnson's (2006) typologies of IPV yield very different results for same-sex couples – there were no significant differences in victimization rates for men and women across any of the four typologies. The majority of research on IPV looks at heterosexual couples – very few have examined the occurrence of this violence between same-sex couples (Krahe & Berger, 2013), and the majority that have are limited by methodological issues such as poor sampling procedures (see Halpern et al., 2004; Murray & Mobley, 2009 for discussion).

The first study to examine the prevalence of same-sex IPV within a nationally representative sample was the work of Halpern and colleagues (2004), which looked at rates of minor physical and psychological violence among adolescents. They found that about 15% of men and 26% of women in same-sex relationships had experienced psychological victimization, and about 9% of men and 13% of women experienced physical victimization (Halpern et al., 2004). A recent meta-analysis conducted by Badenes-Ribera and colleagues (2015) shows that the prevalence of sexual, physical, and psychological violence experienced by lesbians in same-sex couples is 14%, 18%, and 43%, respectively. Among gay men, it has been estimated that

about 19% have experienced unwanted sexual activities, 19% have experienced physical violence, and 21% have experienced verbal assault (Houston & McKirnan, 2007).

Some researchers find that individuals in same-sex couples are not only just as likely to experience victimization as those in opposite-sex couples, but that they are potentially even more likely to face IPV (Lewis, Milletich, Kelley, & Woody, 2012). Bisexual women have been found to actually experience greater intimate partner sexual victimization (Black et al., 2011), as well as greater psychological aggression (Walters, Chen, & Breiding, 2013) than heterosexual women. Messinger (2011) examined rates of verbal, controlling, physical, and sexual IPV using data from the National Violence Against Women Survey and found that gay, lesbian, and bisexual individuals were more likely to experience all four types of violence. Interestingly, bisexual men and women were more likely to be victimized than gay or lesbian individuals, yet offending partners were more likely to be of the opposite sex (Messinger, 2011).

It has been theorized that the higher prevalence of victimization between non-heterosexual partners may be due in part to the added element of minority stress, where individuals are subjected to factors such as internalized homophobia, fear of being “outed,” and discrimination that heterosexual couples do not face (Balsam & Szymanski, 2005; Lewis, Milletich, Kelley, & Woody, 2012; Messinger, 2011). Further research is needed to understand these findings, as well as to explore whether the control tactics used to facilitate sexual violence vary by sexual orientation. Additionally, as most of the research examining health outcomes focuses on heterosexual men and women, further research is needed to better identify specific health outcomes for this population.

In conclusion, this research examined the physical and mental health of victims of IPSV, and whether these health outcomes vary across different tactics of sexual control. Additionally, it

explored whether men and women experience these tactics at the same rates, and whether health outcomes vary by gender. Results show that physical tactics of control, particularly physical force, are detrimental to both physical and mental health, and non-physical control has detrimental effects on a victim's mental health. While physical force produced the strongest likelihood of suffering every health outcome, incapacitation was found to have significant, negative effects on many aspects of physical health. Experiencing coercive control was also found to be harmful to a victim's mental health. Furthermore, women are more likely to report individual health outcomes, such as frequent headaches or a greater number of PTSD symptoms, while men who experience physically forced sexual violence are more likely to report overall worse mental health. Further research should expand upon these findings in order to continue working toward providing a clearer picture of the experience of sexual violence by an intimate partner and subsequent health outcomes.

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