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# PREVALENCE OF INTIMATE PARTNER VIOLENCE IN LATIN AMERICAN COUNTRIES AND THE CO-OCCURRENCE OF PHYSICAL AND INAPPROPRIATE DISCIPLINE

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PREVALENCE OF INTIMATE PARTNER VIOLENCE IN LATIN AMERICAN COUNTRIES AND THE CO-OCCURRENCE OF PHYSCIAL AND INAPPROPRIATE DISCIPLINE

A DISSERTATION APPROVED FOR THE
DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

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# DEDICATION

I dedicate this dissertation to my husband David, who provided me with an infinite amount of support, friendship, love, encouragement, and wisdom, my daughter Mattingly, who brings me joy and laughter, and to my family, who supported me in multiple ways throughout this entire process.

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ABSTRACT

This study used data from Demographic and Health Surveys to identify risk factors for intimate partner violence (IPV) and to examine the co-occurrence between intimate partner violence and child physical punishment in six Latin American countries: Bolivia, Colombia, Dominican Republic, Haiti, Nicaragua, and Peru. A Bayesian hierarchical spatial analysis will examine regional differences among IPV prevalence rates. Population-based analyses adjusting for complex sampling designs will be used to predict the likelihood of experiencing intimate partner violence based on known risk factors such as age, income, education, region, employment, and decision-making power. Finally, design-based subgroup analyses will be used to examine the relationship between IPV and child physical punishment among women with children. Results found that the prevalence of intimate partner physical violence ranges from 13% to 39%. In this study strong similarities in rates were found among neighboring regions in Columbia, Peru, and the Dominican Republic. Additionally, among urban areas in Columbia, Peru, and Nicaragua, results found higher average rates of physical non-sexual IPV and in Columbia and Nicaragua higher rates for sexual IPV. Risk factors associated with IPV include, women who co-habitat, are not as educated, who are middle class, employed, who do not make joint decisions with their partner, and have three or more children. There were mixed finding for the age of the woman. Results also found that women who experience IPV are more likely to physically discipline their children when compared to women who do not experience IPV. The author hopes to inform the literature on global issues regarding the prevalence of intimate partner and

family violence in Latin America, and build upon previous studies focused on IPV and child maltreatment in Latin America.

# INTRODUCTION

In the United States, one in three women (32.9%) have experienced physical violence by an intimate partner and one in ten (9.4%) have been raped by an intimate partner in their lifetime (Black, Basile, Breiding, Smith,Walters, Merrick, Chen, & Stevens, 2011). Intimate Partner Violence (IPV) is a worldwide phenomenon, as evidenced in the literature (Advocates for Human Rights, 2006; World Health Organization (WHO), 2010; WHO, 2005). Globally, one in three women will experience violence in their lifetime, most at the hands of a family member (The United Nations Development Fund for Women, 2003). The Advocates for Human Rights (2006) found that "between one quarter and one half of all women in the world are abused by intimate partners" (Prevalence of Domestic Violence section, para. 2). Although IPV is bi-directional, this study specifically focuses on male-to-female violence. IPV is defined by the US Department of Justice, Office on Violence Against Women (2011), as

> A pattern of abusive behavior in any relationship that is used by one partner to gain or maintain power and control over another intimate partner. Domestic violence can be physical, sexual, emotional, economic, or psychological actions or threats of actions that influence another person. This includes any behaviors that intimidate, manipulate, humiliate, isolate, frighten, terrorize, coerce, threaten, blame, hurt, injure, or wound someone. (What is Domestic Violence section, para. 1).

The Centers for Disease Control and Prevention (2010) defined IPV as, "physical, sexual, or psychological harm by a current or former partner or spouse" (Intimate

Partner Violence: Definitions section, para. 1). In the United States one in four women has experienced severe intimate partner violence (Black et al., 2010). Globally, IPV is found to be a pervasive and increasingly widespread concern (Garcia-Moreno, Jansen, Ellsberg, Heise, & Watts, 2006; WHO, 2005). Interestingly, the prevalence of IPV has been found to be varied across countries. For example, reports of IPV prevalence near 13% in Japan (13%) starkly contrast with the 61% prevalence found in some subpopulation groups of Peru. Japan's low percentage of sexual abuse victims (6%) also pales in comparison to the 59% prevalence of Ethiopia (WHO, 2005). Studies show that certain demographics such as age (Hindin, Kishor, & Ansara, 2008; Kishor, Sunita, & Johnson, 2004), income (Tichy, Becker & Sisco, 2009; Yount, 2005), education (Hindin, Kishor, & Ansara, 2008; Kishor, Sunita, & Johnson, 2004; Simister & Makowiec, 2008; Kim-Goh & Baello, 2008; Flake & Forste, 2006), employment (Adam & Schewe, 2007; Hindin & Adair, 2002; Hindin, Kishor, & Ansara, 2008), family size (Hindin, Kishor, & Ansara, 2008; Kishor, Sunita, & Johnson, 2004), and region (WHO, 2005; Gilbert, Widom, Browne, Fergusson, Webb, & Janson, 2009; Sebre et al., 2004; Hindin, Kishor, & Ansara, 2008; Kishor, Sunita, & Johnson, 2004; Hindin & Adair, 2002) tend to be positively associated with higher rates of IPV. In addition, relational factors, particularly decision making, have commonly been associated with IPV (Kishor, Sunita, & Johnson, 2004; Hindin & Adair, 2002 Flake & Forste, 2006).

Globally, little seems to be known about the co-occurrence of IPV and discipline strategies. There have been only two known published articles in this area (Gage & Silvestre, 2010; Dalal, Lawoko, & Jansson, 2010). Some contend that witnessing IPV constitutes a form of child victimization (Hamby, Finkelhor, Turner, & Ormrod, 2010).

Research in the United States has consistently found co-occurrences of IPV with harsher discipline strategies and with child maltreatment (Chang, Theodorec, Martin, & Runyan, 2008; Taylor, Lee, Gunterman, & Rice, 2010; Slep & O'Leary, 2005). This research parallels investigation conducted internationally. Specifically, two studies conducted in Peru and Egypt found IPV to be associated with harsher discipline strategies (Gagea & Silvestre, 2010; Dalal, Lawoko, & Jansson, 2010). The similarities of these studies with those conducted in the United States is remarkable, since differing cultures often create generalization challenges regarding nonequivalent definitions of harsh discipline across countries. For example, some view harsh discipline as normative, producing little adverse affective outcomes for children and families (Landsford, 2005).

**Statement of the Problem**

Latin America consists of a mixture of races, ethnicities, and cultures which are diverse in economy and leadership. Although these countries are diverse, they share an alarming rate of intimate partner violence. Despite high rates of IPV, there is relatively little research on risk factors of intimate partner violence in Latin America, let alone any updated research in this area. Furthermore, research on the association of IPV and physical punishment practices in developing countries, including countries in Latin America, is sparse. Without current epidemiology research, the progress of policy and program development will stall. This study aims to explore and identify risks for IPV against women in certain regions of Latin America. In addition, the study will identify the rate of co-occurrence of IPV and harsh parenting discipline strategies in the homes.

## Purpose of the study

Due to high rates of intimate partner violence in Latin America, it seems necessary to examine factors that contribute to IPV in this region. Similarly, the high co-occurrence between intimate partner violence and child abuse is startling and calls for an exploration of the relationship between IPV and parenting discipline (Daro, Edleson, & Pinderhughes, 2004; Kelleher, Gardner, Coben, Barth, Edleson, & Hazen, 2006; Edleson, 1999; Appel, & Holden, 1998). Global attention to these matters is imperative in order to provide effective interventions and treatment programs. Using data from the Demographic and Health Surveys [DHS], this paper increases current knowledge of risk factors for intimate partner violence among former or currently married/cohabitating women as well as the co-occurrence between intimate partner violence and child physical punishment among women with children in six Latin America countries. These countries include Bolivia, Colombia, Dominican Republic, Haiti, Nicaragua and Peru. This study hopes to contribute to the literature on these global issues as well as identify known risks for IPV and family violence in Latin America.

## Theoretical Rationale

### Intimate Partner Violence

There are two popular theories used to conceptualize IPV. The first theory, The Ecological Framework (Heise, 1998) conceptualizes intimate partner violence as the combination of personal, situational, and sociocultural factors. This framework adapted from Belsky (1980) theory of child abuse and neglect, identifies several risk factors

within the different levels of the theory that predict IPV: individual, microsystem, exosystem and macrosystem.

The first level, *Individual*, includes factors such as witnessing domestic violence as a child, experiencing physical or sexual abuse as a child, age, as predictors of IPV against women. The second level, *Microsystem*, includes risk factors involving the current, immediate family and includes identified male control of decision making and finances, marital conflict, and use of alcohol as predictive factors of IPV. For example, women who are more submissive in relationships might feel less empowered, might make fewer personal and family decisions, and may experience higher risk for intimate partner violence, according to the microsystem of risk within the framework.

The third level, *Exosystem*, targets risk factors at the community level (low socioeconomic status, unemployment, and isolation of the woman and the family). For example, lower SES, and higher social stress and isolation, have been found to be high exosystemic risk factors for IPV (Gelles, 1985). Within this exosystem, violence results from socially structured stress (e.g. unemployment, low income). Furthermore, stress can lead to violence if it becomes an acceptable reaction to stress (Gelles, 1974). McLeod and Kessler (1990) found that low SES is associated with increased vulnerability to IPV. Additionally, lower SES puts people at greater risk for increasingly stressful events (e.g., income loss or poor health, as well as higher vulnerability to negative life events and subsequent experiences of psychological distress (McLeod & Kessler, 1990). Thus, according to exosystem risk factors within this Ecological Framework, economically disadvantaged women may feel bound to stay in an abusive relationship due to financial dependence on their partner (Heise, 1998).

Furthermore, women who are less educated than their husbands may justify the abuse or find difficulty supporting themselves and their children (Heise, 1998).

The fourth level, *Macrosystem*, is the cultural level. This includes issues of how masculinity is defined, rigidity of gender roles, men's sense of entitlement over women, and societal attitudes of acceptance of violence within relationships as predictors of IPV. From an Ecological Framework, exosystem and macrosystem level risks may be associated with regional variances in purported instances of IPV. We know that regions vary in terms of the comprehensiveness of social policy and the responsiveness of legal action. Sargot (2005) found that women who live in rural areas are denied the same access to resources or judicial options as women in urban areas. Therefore, women in rural areas may be less likely to know their rights as well as know how to respond to violence. With less access to resources, violence may be found in higher concentrations throughout rural areas.

In this study, I examine several of the predictive factors identified by the Ecological Framework described above. These include individual risk factors such as age, decision making in the home, employment, education, income, and regional differences which could be better explained by cultural influences.

Another therapy, the Feminist-political theory, is often used to describe and explain IPV found in patriarchal cultures (Taft, 2009; Gilfus, Trabold, O'Brien, & Fleck-Henderson, 2010; Dobash & Dobash, 1979). Sargot (2005) found that the "persistence of patriarchal social meanings and behavior on the part of many of the service providers and in the community at large has led to the generalized perception that family violence does not represent a real danger for women" ( p. 1304).

Patriarchical societal beliefs are reflected in intimate relationships where men are socialized to rely on more privileges and view women as unequal, which leads to an unbalanced allocation of power (Gilfus, Trabold, O'Brien, & Fleck-Henderson, 2010). This patriarchal culture might lead men to exert their power in their relationships in order to maintain their socialized status. Levinson (1989) found that societies in which men hold the power in making economic decisions in their family predicted greater amounts of violence towards women.

Machismo is a term that can be considered relevant to the Latino culture; however, some challenge this characterization, as people express new definitions of masculinity relevant to Latino cultures (Torres, Solberg, & Carlstorm, 2002; Beattie, 2002). Machismo values are not unique to Latin America; however, the machismo culture of Latin America has origins that some believe date back to the 16th century (Chon, 2011). De La Cancela (1986) defines machismo as "a socially constructed, learned, and reinforced set of behaviors comprising the content of male gender roles in Latino society. Machismo is rooted in specific social and historical contexts (i.e., societies with patriarchal roots) and reflects Latino notions of sex-role ideals" (p. 291). Men who identify with machismo values are found to have higher levels of stress and depression (Fragoso & Kashubeck, 2000) which could increase the risk of IPV (Gelles, 1985). Additionally, perceived gender norms have been associated with patriarchy and IPV (Heaton & Foreste, 2008). Diverging from these gender roles makes women more susceptible to IPV (Okenwa, Lawoko, & Jansson, 2009).

Another social implication from a Feminist-Political theoretical perspective, involves the limited roles of women in community organizations throughout Latin

America, which tend to be dominated by men (Sargot, 2005). Socially inequitable roles can play a role in perpetuating IPV (Sargot, 2005). Specifically, the roles of female leaders in Latin American are typically unofficial, and based in personal, informal relationships with people in the community (Sargot, 2005). "These female leaders usually lack the information, skills, and policies to adequately respond to the problem; therefore, their role is limited to providing some advice" (p. 1311). A community in which women are not placed in sanctioned positions of leadership may perpetuate societal beliefs of gender inequality commonly associated with IPV (Sargot, 2005)

Per the Feminist-Political standpoint, a third concern involves issues with the judicial system, including a poor response rate to IPV reports and the system's impartial definition of abuse (Sargot, 2005). Obstacles seen in ten Latin American countries include, "inadequate laws and incorrect application of the specific legislation on family violence; excess bureaucracy and long, inefficient procedures; little privacy for women who report the offense; lack of specialized personnel; and lack of response or slowness to face emergencies except in extreme situations" (Sargot, 2005, p. 1306). Another concern is that "Violence is only recognized as a crime if the resulting injuries take ten or more days to heal and for those injuries lasting ten or more days, the result is a misdemeanor" (p. 1308). This societal attitude, that harming your partner is not a serious criminal offense, can also perpetuate violence in the community. Although there have been advances in Latin America, such as more women entering the workforce, dedicated women's groups who provide aid to victims of violence and violence awareness, and prevention programs in schools, given cultural issues, few women leaders, and reported judicial problems, intimate partner violence continues to remain.

Along with the proposed Ecological Framework, Feminist-Political Theory guides this study in identification of specific factors relevant to the occurrence of IPV in Latin America. Specifically, normative cultural and judicial concerns, identified by Feminist-Political Theory, may help understand instances of increased IPV within these countries. Taken together, these theories may help to contextualize study findings and to shape subsequent prevention and intervention programs.

## Child Maltreatment

In addition to addressing issues of prevalence and correlates of IPV, this study aims to identify factors that perpetuate child maltreatment. The Theory of Child Maltreatment, presented below, provides a multilevel theoretical framework relevant to present concerns identified within Latin American countries. In the current study, the theory is presented in the context of its relevance in determining contributing factors of child abuse and/or harsher parental discipline.

**Theory of child maltreatment.** One theory of child maltreatment is Belsky's (1980) proposed theoretical framework on child maltreatment. This theory draws heavily from Bronfenbrenner's (1979) theory of human development which integrates Burgess's (1978) use of Tinbergen's (1951) behavioral developmental model to the problem of child maltreatment. This integrative framework proposes that "child maltreatment is multiply determined by forces at work in the individual, in the family, and in the community and culture in which the individual and the family are embedded and that these multiple determinants are ecologically nested within one another" (p.320). The levels include (a) Ontogenic development, (b) Microsystem, (c) Exosystem, and (d) Macrosystem.

Ontogenic development refers to how the individual parent was reared as a child and how that contributes to their parenting. The Microsystem, is where the child maltreatment occurs within the immediate family and the stressors found within this structure. "Since the parent child system (the crucible of child maltreatment) is nested within the spousal relationship, what happens between husbands and wives—from an ecological point of view—has implications for what happens between parents and their children" (Belsky,1980, p.326). IPV has been shown to negatively impact the victim as well as their parenting (Gustafsson, Cox, & Blair, 2012; Cox and Harter, 2003; Tajima, 2000). Increased maternal stress (Taylor, Guterman, Lee, & Rathouz, 2009; Margolin & Gordis, 2003; Crouch, & Behl, 2001; Tajima, 2000) and maternal depression (Taylor, Guterman, Lee, Rathouz, 2009; Hazen, Connelly, Kelleher, Landsverk , & Barth, 2003) are associated with both child maltreatment and IPV victimization. The increased presence of these risks may make mothers affected by IPV less emotionally available to their children and more likely to view their children's behaviors as problematic, resulting in a skewed negative perception of their children. Thus, the risk of poor parenting, utilizing harsher discipline, or abusing their child may be exacerbated. Sokolowski, Hans, Bernstein, and Cox (2007) found that mothers of infants, who experienced conflict with the infant's father, had a higher likelihood of having a distorted view of the infant. Additionally, McGuigan, Vuchinich, and Pratt (2000) found that couples, who experienced IPV during their child's first year, developed significantly more negative cognitions about their child. As a result of the parent's negative cognitions, there was a significant increase in the likelihood of child abuse. More support comes from Gustafsson, Cox, and Blair (2012) who found that IPV

crossed over into the parent-child relationship where toddlers experienced harsher intrusive parenting.

Furthermore, psychological distress has been related to negative, less effective parenting (Prelow, H. M., Weaver, S. R., Bowman, M. A., & Swenson, R. R., 2010; Spieker, S. J., Gillmore, M., Lewis, S. M., Morrison, D. M., & Lohr, M., 2001; Berkman, 1998). This is particularly troubling, as child adjustment has been found to be associated with parenting practices (Ellens, 2009; Levendosky & Graham-Bermann, 2001). This creates the potential for a dynamic relational interaction in which poor parenting practices negatively affect child adjustment, reciprocally demanding a greater need for more effective parenting. Thus, these mothers and their children may endure long-term secondary effects of IPV exposure that may ultimately affect the trajectory of the parent-child relationship.

The third level within this framework is the Exosystem, i.e., work (unemployment) and neighborhood (social isolation, limited social support). Risk factors such as unemployment or financial stress as well as problems found within their community can cause significant stress which often results in more physical and emotional abuse between partners and parents and their children (Graham-Bermann & Howell, 2011).

The last level, Macrosystem, is the culture (attitudes towards violence, acceptance of physical punishment). The Latin American culture has been associated with stricter gender roles (Sargot, 2005; De La Cancela, 1986). This study aims to look at three of the levels believed to perpetuate child maltreatment: Microsystem (is IPV prevalent), Exosystem (parent's employment status and where they live), and

Macrosystem (cultural attitudes towards violence) and whether these forces in the Latin America region play a role in harsher discipline strategies.

**Research Questions and Hypothesis**

RQ1. Is the prevalence of Domestic Violence related to region? Is there an intra-region correlation among prevalence rates? Do rates differ across urban and rural locales?

Hypothesis 1: Prevalence rates vary across regions, are moderately correlated within clusters of neighboring regions, and will generally be higher in rural areas.

RQ2.What is the association between intimate partner violence and women's age, education, income, number of children, work history, and spousal differences in attitudes towards IPV.

Hypothesis 2: Prevalence of IPV is greater in younger women, with a lower education level, not employed, low income, who have more children, and are in a non-egalitarian relationship with their spouse.

RQ 3. What is the relationship between child maltreatment/harsh punishment and intimate partner violence?

Hypothesis 3: Mothers who had experienced IPV will be more likely to resort to physical forms of punishment toward their children than mothers who had not experienced IPV.

# LITERATURE REVIEW

## Prevalence of Intimate Partner Violence in Latin American Countries

Three known studies utilized data from the Demographic and Health Surveys to study the prevalence of IPV in Latin America. (Vadnais, Kols, & Abderrahim, 2006; Hindin, Kishor, & Ansara, 2008; Flake & Frost, 2006). Vadnais, Kols, and Abderrahim (2006) found the following percentages of ever married women who had experienced physical only forms of IPV within the following Latin American countries: Bolivia (2003) 54%, Columbia (2005) 43%, Dominican Republic (2002) 22%, Haiti (2000) 29%, and Peru (2000) 42%. Hindin, Kishor, and Ansara (2008) found that in Bolivia (2003/2004) 52% experienced physical violence and 14% experienced sexual violence perpetrated by their current husband/partner. In Haiti (2005) 12 % of women experienced physical violence, and in the Dominican Republic (2002), 5% of women experienced sexual violence and 15 % experienced physical violence. Similarly, Flake and Frost (2006) found the following IPV rates in the countries of Colombia (1995) 19%, the Dominican Republic (1999) 23%, Haiti (2000) 16%, Nicaragua (1998) 26%, and Peru (2000) 39%. This study will provide prevalence rates for newly emerged data (Bolivia 2008; Columbia 2010; Peru 2004). Although the Dominican Republic, Haiti, and Nicaragua have had previous reported prevalence rates, I choose these countries so that I could examine specific regions in the country where IPV is more prevalent. This question, regarding specific regions, has not been previously addressed in the literature.

## Risk Factors for Intimate Partner Violence

Although certain risk factors have been shown to be associated with IPV, there is still more to be understood. By identifying which characteristics are linked to intimate

partner violence, we can begin to distinguish risk factors associated with an increased risk of experiencing intimate partner violence. Literature shows that age, income, education employment, family size, decision making, and region are common risk factors associated with IPV. These identified variables will be examined in this study to see if they too are found to be significant risk factors in these countries.

**Age.** Younger women are found to be more at risk of experiencing intimate partner violence across multiple countries (Abramsky, Watts,Garcia-Moreno, Devries, Kiss, Ellsberg, Jansen,& Heise, 2011; WHO, 2010; Kishor, Sunita, & Johnson, 2004). In the Dominican Republic, recent experience of violence is highest for women between the ages of 15 and 24 (Kishor, Sunita, & Johnson, 2004). The same age range was found for Nigerian women who have experienced abuse (Okenwa, Lawoko, & Jansson, 2009). After age 24, experience of violence in the past year was found to decline with age among women in Dominican Republic (Jackson, 2008; Kishor, Sunita, & Johnson, 2004) and Nicaragua. In Haiti, however, inconsistent age relationships have been found (Hindin, Kishor, & Ansara, 2008; Kishor, Sunita, & Johnson, 2004)). In Peru, younger women (ages 15-19) experienced IPV 41% of the time, whereas, older women (ages 45-49) experienced IPV 8% of the time (WHO, 2005). Contrary to these findings, Hindin, Kishor, and Ansara (2008) found that older women in Bolivia (ages 35-44) were more likely to report experiencing violence and in the Dominican Republic women ages 25-34 were more likely to experience violence. Another study showed that women in the United States, ages thirty-five to forty-nine, were found to be most at risk of experiencing nonfatal IPV (Bureau of Justice Statistics, 2007).

**Income.** The wealth of a household, specifically low SES, is found to be a risk factor of IPV (Oshiro, Poudyal, Poudel, Jimba, & Hokama, 2011; WHO 2010; Cunradi, Caetano, & Schafer, 2002; Jewkes, 2003). Although not based in Latin America, Tichy, Becker and Sisco (2009) found in their sample from India that, "Women from a higher income were less likely to have an accurate perception of domestic violence as well as less likely to report domestic violence as a problem that crosses all societal classes" (p. 555). Another study from India found that women who were of high SES were not as likely to experience spousal physical violence (Jeyaseelan, Kumar, Neelakantan, Peedicayil, Pillai, & Duvvury, 2007). Similar findings are found for Egyptian women in wealthier households who are less likely to have been beaten in the prior year (Yount, 2005).

**Education.** The association between education and IPV differ amongst countries. In Haiti (Hindin, Kishor, & Ansara, 2008; Kishor, Sunita, & Johnson, 2004) and India (Ackerson,Kawachi, Barbeau, & Subramanian, 2008) women with more education than their husbands/partners are at increased risk for violence. Additionally, in Nicaragua and Peru, women with more education than their partners experienced a higher likelihood of abuse than women who have the same amount of education as their partners (Flake & Forste, 2006). On the other hand, higher educated woman in Columbia and Peru are less likely to experience violence (Kishor, Sunita,& Johnson, 2004). Similar results were found in Egypt; women with more education than their husbands are not as likely to be beaten (Yount, 2005). Education was found to reduce violence as well as the acceptance of violence in a sample from India (Simister & Makowiec, 2008). Other international studies found that Korean and Vietnamese

Americans that have less than a high school education are predictive of more pro-violent attitudes (Kim-Goh & Baello, 2008). Forty-nine percent of Egyptian women with 6–17 fewer years of schooling are more likely to be beaten by their husbands as well as justify the beating (Yount, 2005). In the Dominican Republic women with less education than their husbands/partners are at decreased risk (Hindin, Kishor, & Ansara, 2008; Kishor, Sunita, & Johnson, 2004). Other international studies have found no association between education and IPV (Hindin & Adair, 2002).

**Employment.** Employment tends to be positively associated with IPV (Adam & Schewe, 2007); however, past findings have been mixed. Kocacik, Kutlar, and Erselcan (2007) found women are more likely to experience IPV if working. In Colombia, the Dominican Republic, Haiti, and Peru, women who report that they are currently working and earning cash report significantly higher levels of ever experiencing violence than did women who are not currently working. Riger, Ahrens, and Blickenstaff (2000) found that even seeking employment has been related to increase violence. Yet, Hindin, Kishor, and Ansara (2008) found that employed women in Bolivia and the Dominican Republic were at decreased risk for partner violence. On the other hand, employment instability was significantly associated with IPV (Benson, Fox, DeMaris, & van Wyk, 2003). Hindin and Adair (2002) found in a sample of Philippine women that IPV is more common in homes were the husband is unemployed, but no significant difference were found when the wife was unemployed. Staggs and Riger (2005) found that women in the USA who have recently experienced IPV were found to have less stable employment. Similarly, unemployment was found to be

associated with physical and psychological abuse in a sample of Spanish women (Zorrilla et al., 2010).

**Family size.** Having a child in the home was a significant risk factor for IPV in Nigeria (Okenwa, Lawoko, & Jansson, 2009) as well in Turkey (Kocacik, Kutlar, & Erselcan, 2007). Another study showed that more children in the home are associated with the risk of partner violence in Bolivia and Haiti (Hindin, Kishor, & Ansara, 2008). Kishor, Sunita, and Johnson (2004) showed that the percentage of violence increased with number of children in Peru and the Dominican Republic. For example, in Peru, 22% of women, who have no children, report ever experiencing violence, as compared with 53% of women with five or more children. In Haiti, however, more spousal abuse is reported in homes with no children and violence decreased as the number of children increased.

**Decision making.** Rates of IPV tend to be lower for couples in equalitarian relationships than for couples in which the husband or the wife makes household decisions alone (Kocacik, Kutlar, & Erselcan, 2007; Kishor, Sunita, & Johnson, 2004). Similarly, Hindin and Adair (2002) found in their sample of Philippine women, that women are less likely to experience IPV when decisions were made jointly (6% reported IPV), as compared to women who reported no decisions were made jointly (25% reported IPV). Patterns of IPV are found higher when women or men dominate decision making, as compared to women and men who make joint decisions. "These decision making patterns are consistently seen across regions (urban versus rural residence), age difference (whether the wife is older or younger than the husband), income practices (if the husband turns over his money to spouse for household

expenses), and alcohol consumption (whether the household spends any money on alcohol)" (p. 1397). Lastly, Flake and Forste (2006) found that female-dominant decision-making is positively associated with intimate partner violence across countries.

**Region.** The Census Bureau (2000) defines an urbanized area or an urban cluster as:

> A densely settled territory, which consists of: core census block groups or blocks that have a population density of at least 1,000 people per square mile and surrounding census blocks that have an overall density of at least 500 people per square mile. The Census Bureau's classification of "rural" consists of all territory, population, and housing units located outside of urban areas and clusters. (Urban and Rural Classification section, para. 4)

Mixed findings are found when looking at the association between IPV and rural vs. urban areas. In Bolivia, Dominican Republic, Haiti, Columbia, Peru, and Philippines, women living in urban areas are more likely to report partner violence as compared to women living in rural areas (Hindin, Kishor, & Ansara, 2008; Kishor, Sunita, & Johnson, 2004; Hindin & Adair, 2002). No significant urban/rural differences were found in Haiti; however, there is a slight increase in currently experiencing spousal violence in rural areas (Kishor, Sunita, & Johnson, 2004). However, other studies revealed the greatest amount of violence reported by women living in rural versus urban settings in Bangladesh, Ethiopia, Peru, and the United Republic of Tanzania (WHO, 2005). The prevalence of physical IPV in poor urban areas (33.8%) was significantly higher than in general areas (19.9%) in Nepal (Oshiro et al., 2011).

The World Health Organization (2010) found that prevalence of IPV is higher in lower income countries.

In regards to child abuse, Gilbert et al. (2009) found higher rates in rural areas than in urban areas and an international study in four post-communist bloc countries found the same results (Sabre et al., 2004).

## Child Maltreatment and Intimate Partner Violence

Data from 2001-2005, found that 38% of children under the age of 12 resided in a home with a female IPV victim whereas 21% of IPV cases with a male victim had children under the age of 12 in the home. Other research showed that out of 3,750 cases of IPV filed in state courts, 60% of the children who were present during the incident witnessed the violence (Bureau of Justice Statistics, 2009). There are short- and long-term negative effects of IPV for the entire family system. Multiple negative consequences are present, not only for women and/or men who experience IPV, but also for their children. Child victims are susceptible to the adverse consequences of witnessing IPV, and to becoming inadvertent, unintended targets of violence that occurs in the home (McWhirter, 2011; Graham-Bermann, 2000). In addition, as previously described, IPV has been associated with negative parenting practices (Gustafsson, Cox, & Blair, 2012). Child victims are subject to parents who are less emotionally present, more likely to perceive their child's behaviors as problematic, and more likely to engage in less effective and harsher discipline strategies. These multiple risks place children exposed to IPV at greater risk for child maltreatment.

**Witnessing IPV (WPV).** Seventy-five percent of the time children are present when IPV occurs in the home (Hutchusin & Hirschel, 2001). When compared to a

national average, Osofsky (2003) found that children who witnessed IPV were fifteen times more likely to be abused. Hamby, Finkelhor, Turner, & Ormrod (2010) in a national sample found that one-third (33.9%) of youth who witnessed partner violence also have been maltreated in the past year and about half (56.8%) had experienced maltreatment when assessed over the lifetime. Of the WPV youth, 31% reported physical violence, 70% reported sexual abuse, and 60% reported neglect. Not only are children exposed to IPV at a greater risk to experience child abuse, 40% to 60% of school age children who are exposed to IPV fall in the clinically significant range on internalizing and externalizing problems (Wolfe, Crooks, Lee, McIntyre-Smith, & Jaffe, 2003).

**Child maltreatment.** The co-occurrence between IPV and child maltreatment is well documented (Gagea & Silvestre, 2010; Malik & Rizvi, 2009; Changa, Theodorec, Martin, & Runyan, 2009; DiLauro, 2004; Kelleher et al. 2008; Lee, Kotch, & Cox, ,2004; Tajima, 2002; McGuigan & Pratt, 2001; Ross, 1996). Other studies show IPV as a strong risk for child maltreatment (Taylor, Guterman, Lee, & Rathouz, 2009; Tajima, 2000). Specifically, Changa et al. (2009) found children experienced psychological abuse in families where both parents psychologically abused each other. Similarly, Kelleher et al. (2008) found that mothers who were victims of IPV reported more neglectful and engaged in higher rates of both psychologically, and physically aggressive disciplinary measures. McGuigan and Pratt (2001) found greater instances of all three types of child maltreatment among families who have experienced IPV, as compared with families who have not. In families with reported IPV, neglect and

psychological abuse are over twice as likely to be confirmed and physical abuse is over three times more likely to be confirmed.

**Punishment practices.** Several studies have found an association between the co-occurrence of IPV and harsh discipline strategies, e.g. corporal punishment (Taylor, Gunterman, Lee, & Rathouz, 2009; Slep & O'Leary, 2005; Dubowitz et.al, 2001; Tajima, 2000). Kanoy, Ulku-Steiner, Cox, and Burchinal (2003) found that marital conflict increased the likelihood of severe and frequent physical punishment. Additionally, Taylor, Gunterman, Lee, and Rathouz (2009) found in a national longitudinal study that mothers of three year olds who are victims of IPV had higher levels of parenting stress and used psychological and physical aggression more frequently. Furthermore, victims of IPV are found to show a greater probability of spanking. Rodriguez (2006) looked at which factors might contribute to child abuse potential among IPV victims. The author found that emotional problems (depression and anxiety) and an insecure attachment style played a significant role in potential child abuse.

**Child outcomes.** Children who are victims of IPV experience many adverse outcomes. Child maltreatment or physical punishment increases the risk of aggression (Lansford, 2005; Gershoff , 2002) antisocial behavior (Duong, Schwartz, Chang, Kelly, & Tom, 2009; Straus, Sugarman, & Giles-Sims, 1997; Grogan-Kaylor, 2004), poor educational achievement (Boden, Horwood , & Fergusson, 2007), externalizing problems (McDonald, Jouriles, Tart, & Minze, 2009), health risk factors (Felitti et al., 1998), and poor mental health outcomes (Afifi, Brownridge, Cox, & Sareen, 2006; Gershoff ,2002). Specifically, Landsford et al. (2005) found an association between

countries that had higher use of physical discipline with increased anxiety and aggression in children. Anxiety and aggression levels were dependent on whether the child perceived the discipline as customary. Afifi, Brownridge, Cox, and Sareen (2006) found that physical punishment was associated with adult depression and psychiatric disorders. Additionally, the amount of disorders was significantly correlated to physical punishment and child abuse. Ten of eleven meta-analyses on the association of corporal punishment and child behaviors and experiences found higher rates of: childhood and adult aggression, delinquent behavior, child mental health problems, victimization, child and spousal abuse, and low quality of the parent-child relationship (Gershoff, 2002).

**International Studies on Intimate Partner Violence and Physical Discipline**

There continues to be debate in international parental violence studies on defining what constitutes physical discipline. Most of the studies of child abuse prevalence have come from the United States and Western cultures (Creighton, 2004). Regional and cultural standards will shape the definition of abuse (WHO, 1999). Indeed some countries view abusive punishment by caregivers as being grounded in cultural patterns of childrearing (Korbin, 2003). Durrant (2008) observes a cultural change in how people's perception of physical punishment has shifted from acceptable to risky. She attributes this shift to three areas of social change: "(a) the emergence and growth of pediatric psychology, (b) greater understanding of the nature of parental violence against children, and (c) increasing recognition of children as bearers of rights" (p.55).

There is an increase in global awareness of child maltreatment which has resulted in more preventive efforts (WHO, 2011; Butchart & Harvey, 2006). Although

there is greater awareness, there are few international studies conducted on IPV and use of childhood physical punishment. Two studies found a strong association between IPV and negative parenting practices. Gage and Silvestre (2010) found a high probability of Peruvian mother's use of physical punishment on her children when the mother experienced intimate partner emotional violence (69% of women), intimate partner physical violence (42% of women), and childhood history physical punishment (67% of women). The study also revealed that 22% of Peruvian mothers used slapping/spanking and 42% used beating to discipline their children.

Dalal, Lawoko, and Jansson (2010) examined the association between IPV and maternal practices in Egyptian women. Most of the women are found to use violent measures such as shouting (90.6%), striking (69.1%) and slapping (39.3%) to correct their child behavior. Only 7% of mothers utilized explaining as their choice of maternal practice. Women who are exposed to IPV and who endorse tolerant attitudes of IPV are at higher risk to use violent maternal practices to correct child behaviors. It is clear by the lack of international studies in the literature that more research is needed in examining the co-occurrence between IPV and child maltreatment.

## METHODS

### Population

The report is based on women who were selected to take the IPV survey measure, ages fifteen to forty-nine, who have ever (current or past) been married or ever current or past) lived with a partner. Women, who were selected for the IPV measure, but privacy could not be guaranteed, were excluded from the analysis. Data from six countries, Bolivia (2008), Colombia (2010), Dominican Republic (2007), Haiti (2005-

2006), Nicaragua (1998), and Peru (2000, 2004-2008) were included in this study. Demographic and Health Surveys, which is funded by U.S. Agency for International Development and is implemented by ICF International, are nationally representative population-based surveys with large sample sizes (usually between 5,000 and 30,000 households). In all households, women age 15-49 are eligible to participate. There are three core questionnaires in DHS surveys: A Household Questionnaire, a Women's Questionnaire, and a Male Questionnaire. Additionally, Demographic and Health Surveys include data regarding intimate partner violence in selected countries. Some of the many areas the surveys assess are child health, education, family planning, prenatal care, HIV/AIDS, domestic violence, infant and child mortality, nutrition, and women's empowerment.

**Instrumentation**

**Measurement of Demographics.** Demographic information was obtained from the Women's Questionnaire (Measure A). The questions include the identified woman's age (current age at interview), education level (none, primary, secondary, higher), wealth index (constructed for each country, separately, this constructed score is based on an individual's number of household assets, e.g., number of consumer items, type of drinking water source, etc.; the index represents the quintile location of an individual score and ranges from lowest to highest), work history for women (not employed, worked in the past year, currently working), family size (number of births, sons and daughters in the home), and region (urban vs. rural, whether DHS considered the residence an urban or rural sampling area).

**Administrative Regional Strata.** Indicators of administrative regional sampling strata were used in an ecological analysis to assess the impact of location on varying rates of IPV. Spatial analyses improve our understanding of how location is related to health status, leading to more effective interventions. All countries were included in the analysis.

**Measurement of Intimate Partner Violence.** The part of the module specific to spousal violence uses a modified version of the Conflict Tactics Scales (Straus, 1990; Straus, 1979), which includes questions that ask women whether their current or most recent (if divorced, separated, or widowed) husband/partner ever perpetrated emotional, physical, or sexual violence previously or in the past year (Measure B). Bolivia was treated uniquely, in discussions below, due to the nature of the IPV items which asked if IPV occurred only in the past year. Hence, estimates from Bolivia are referred to as incidence rather than prevalence below. Any direct comparison of prevalence rates from other countries and from Bolivia needs to be pursued with extreme caution.

Questions regarding partner violence include two categories, physical non-sexual IPV, and sexual IPV. The first analysis consisted of common core questions for Colombia (2010), Dominican Republic (2007), Haiti (2005-2006), Nicaragua (1998), and Peru (2004-2008).

Questions regarding partner violence include four categories, control, emotional, physical non-sexual IPV, and sexual IPV. The first analysis consisted of common core questions for Colombia (2010), Dominican Republic (2007), Haiti (2005-2006), Nicaragua (1998), and Peru (2004-2008).

Questions assessing control for the five countries include, (a) is he jealous, (b) suspicious of unfaithfulness, (c) does he limit contact with girlfriends, (d) limit contact with family, (e) needs to know your whereabouts. Questions common with Bolivia were, a) is he jealous, (b) suspicious of unfaithfulness, and (c) does he limit contact with family. Questions assessing emotional abuse ask if they have been humiliated by their spouse. All counties except Columbia asked both or at least one of these questions.

Questions assessing physical non-sexual IPV were divided into a two broad categories: "mild/moderate/or severe" IPV (all IPV survey questions) and a "moderate/severe" IPV (limited to four questions). The mild to severe IPV category was designed to assess the overall rate of IPV. Common questions for the five countries include, (a) Push/Shook/Threw something, (b) slap, (c) punch with fist or object, (d) kick/drag, (e) choke/burn, (f) threaten with a knife/gun. Questions common to all six countries include, (a) Push/Shook/Threw something, (b) punch with fist or object, and (c) kick/drag, (d) choke/burn.

The moderate to severe IPV category was designed to assess the overall rate of more severe violence. The four questions lumped into the moderate/severe category were (a) punch with fist or object, (b) kick/drag, (c) choke/burn, (d) threaten with a knife/gun (this question was not included for Bolivia and, therefore, was left out). Sexual IPV for all six countries was measured similarly, (a) did he force sex.

Certain measures were put in place to make the data collection for this module ethical. The current DHS domestic violence module is accompanied by guidelines on its ethical implementation. These guidelines were adapted from corresponding World Health Organization guidelines. Special training was given to the data collectors such

as safety procures and handling crisis situations. The module was done in private with only one person allowed to be in the room. Referrals were given if necessary.

**Measure of Punishment.** Data was obtained from the Individual Questionnaire which is a part of the Demographic Health Surveys (Measure C). Countries that measured IPV as well as punishing practices in Latin America were limited to Bolivia (2008) Columbia (2010), Nicaragua (1998), and Peru (2000). Similar to the IPV descriptive analysis, Bolivia was analyzed separately in order to compare the other three countries that looked at prevalence rather than incidence. Some countries/years were more detailed than others, e.g., Bolivia (2008) asked more disciplinary methods then most countries/years. Mothers with biological children in residence (in Columbia, step-children are included) were asked who was the primary caregiver (mother, father, step-parent, sibling, grand-parent) as well as who was the disciplinarian (biological mother, father, someone else, and children not punished). In Nicaragua the survey asked about punishment methods of the "usual" disciplinarian. Also in Nicaragua, the survey asked about punishment in the last month and only asked parents about discipline if they have had a child since 1992. Because Peru (2004-2008) did not include questions about child punishment, data was used from the Peru (2000) data set. In the year 2000 data, there was only a single IPV item which asked whether woman had ever been pushed, shaken or attacked by husband/partner. A yes response on this item will be considered to have experienced mild to severe form of IPV.

IPV response categories were again divided into mild to severe IPV and moderate to severe IPV for this bivariate analysis. Punishment response categories were divided into physical punishment and inappropriate non-physical punishment. Because

one country did not include items that would be considered an appropriate form of discipline, e.g. talking to child, an "appropriate punishment" category was not included. It is important to note, that most of the inappropriate nonphysical questions would be considered a form of neglect, e.g. withholding food, locking them up. The outcomes measured physical punishment used by the mother and/or other household member. Analyses report on the relationship involving mother's use of punishment, separately.

Physical punishment items include (a) pulling ears, (b) slapping, (c) beating, (d) spanking, (e) pushing, and (f) hitting with an object. Nicaragua only included physical punishment items. Inappropriate non-physical punishment items include (a) withholding food, (b) leaving them outside, (c) throwing water on them, (d) taking away their clothes, (e) locking them up, and (f) insulting.

**Measure of Decision Making.** Questions focused on who made certain decisions in the household from the Women's Questionnaire and the Women's Status Module (Measure D). Women were asked if they made the decision alone, jointly, or if the husband made the decision alone. Seven questions were asked related to decision making. They are as follows (a) what food to cook/serve each day, (b) health care, (c) final say on small expenditures, (d) final say on visits to family, friends, or relatives, (e) final say on large household purchases, (f) how to spend money, and (g) final say on spending husband's earnings. Not all counties asked all seven questions.

## Statistical Analysis

A descriptive analysis was, first, conducted to identify the prevalence of IPV and child punishment in the home at the level of each country. These population-based estimates used the Survey package (Lumley, 2004) of R statistical software and

adjusted for each country's complex sampling design (incorporated the regional strata, clusters, and the sampling weights in the analysis under the assumption of sampling with replacement).

Hypothesis 1 was tested using hierarchical Bayesian modeling of lifetime IPV reports by DHS participants clustered within small area survey strata. Smoothed small area estimates of prevalence for each obtained survey were generated from a series of increasingly spatially-complex fully Bayesian linear mixed models. To assess all aspects of RQ1, six total models were estimated for each of the five estimates of IPV (i.e., combinations of mild/moderate/severe and physical/sexual IPV): 1) a model that assumed a constant rate of IPV reports across all sub-regions (sub-regions reflect divisions of administrative regions into rural and urban survey strata), the "Common IPV Prevalence" model; 2) a model that assumed a common prevalence for urban and rural sub-regions (communities) within each administrative region but also predicted randomly distributed (and unrelated to any geographical proximities) rate differences across these higher-level administrative regions of the country, the "Regional Heterogeneity" model; 3) a model that predicted randomly distributed rate differences among ALL rural and urban sub-regions, the "Sub-Regional Heterogeneity" model; 4) a model that assumed a smooth changing rate across the country with common IPV rates among clusters of neighboring (i.e., share a geographic boundary) regions, the "Regional Autocorrelation" model; and then two models that combine one heterogeneity component with an autocorrelation component to produce rates that are autocorrelated within small clusters of regions but also exhibit more uneven changes in the rates across 5) non-neighboring administrative regions, the "Regional Heterogeneity

+ Regional Autocorrelation" model, or 6) non-neighboring administrative urban and rural sub-regions, the "Sub-Regional Heterogeneity + Regional Autocorrelation" model. A fixed effect was also included in each model above to assess the expected rate differences between urban and rural sub-regions (averaged across all regions in a country). Each model is displayed below in equation form (equation numbers correspond to numbered text descriptions above):

$$\pi_s = \mu + \alpha + \varepsilon_s \quad (1)$$

$$\pi_s = \mu + \alpha + \upsilon_r + \varepsilon_s \quad (2)$$

$$\pi_s = \mu + \alpha + \eta_s + \varepsilon_s \quad (3)$$

$$\pi_s = \mu + \alpha + \varphi_r + \varepsilon_s \quad (4)$$

$$\pi_s = \mu + \alpha + \upsilon_r + \varphi_r + \varepsilon_s \quad (5)$$

$$\pi_s = \mu + \alpha + \eta_s + \varphi_r + \varepsilon_s \quad (6),$$

where $\pi_s$ represents the sub-region IPV proportion (design-based estimates were created for each of these sub-regions and used as outcomes in all models), $\mu$ captures the average rural proportion, $\alpha$ captures an average difference in IPV proportions among rural and urban sub-regions, $\upsilon_r$ is a regional heterogeneity effect, $\eta_s$ is a sub-region heterogeneity effect, $\varphi_r$ is a regional autocorrelation effect (estimated as a conditionally autoregressive, CAR, random effect; e.g., Besag, York, & Mollie, 1991), and $\varepsilon_s$ represents a random sampling error term at the sub-region level. All models fixed the error variances of the latter random effects, $\varepsilon_s$, to equal smoothed estimates (assuming common sub-region design effects) of the IPV sampling variances (see You, 2008, for details). Each model reflects an extension of the usual Fay-Herriot (1979)

small area estimator of area-specific proportions (similar extensions were utilized in You & Zhou, 2011).

The six models above were statistically compared for predictive accuracy using the Deviance Information Criterion (DIC; Spiegelhalter et al., 2002). Comparisons of this criterion were used to assess the necessity of each component of inter- and intra-areal variability ($\upsilon_r$, $\eta_s$, and $\varphi_r$), with smaller values of the DIC preferred (i.e., suggesting better support from the data based on degree of fit and parsimony of the model). The Moran I correlation index of spatial covariation (a generalized version of the autocorrelation statistic for time series data) is also presented to assess the extent of intra-areal similarities in prevalence (e.g., correlated rates among regions that share a border). In addition to the variance component statistical comparisons, the size of the $\alpha$ effect in each model was statistically evaluated (using 95% Bayesian confidence intervals- i.e., credible sets) to assess whether sub-regional variations in IPV might be explained by urban and rural locale differences. Finally, area estimates from the best fitting models above were used to create IPV maps of prevalence for each country. All regional variation models were estimated using WinBUGS MCMC software (Spiegelhalter, Thomas, & Best, 1999). Each WinBUGS model generated 50,000 MCMC iterations after a 75,000 iteration burn-in. Final results are presented for a thinned solution using every $10^{th}$ iteration after burn-in.

The association between risk factor covariates of RQ2 and IPV prevalence were evaluated at the population-level, using complex sampling analytic adjustments. The logistic regression routine of the R Survey package was used to assess these predicted associations of Hypothesis 2. Survey adjusted logistic regression was also used to

assess Hypothesis 3. These models regressed the rate of each type of punishment on the 5 IPV binary indicators. Differences in rates of physical and inappropriate non-physical punishment among women who have experienced and have never experienced each type of IPV are reported and statistically compared.

# RESULTS

## Descriptive Statistics

**Prevalence of Intimate Partner Violence.** A descriptive analysis was done examining the prevalence rates for IPV in five Latin American countries. Questions on the IPV survey ask about occurrence of IPV in the previous or in the past year (Bolivia excluded). (Because Bolivia looks at IPV within the past year only, estimates from this country cannot reasonably be compared with prevalence rates from the other countries in this study.) In addition to examining the prevalence rates, the amount of questions the woman endorsed within each category (mean number) was calculated. Mean numbers for emotional abuse (husband/partner humiliated woman) and sexual IPV were not computed since only one question for each of these violence constructs were analyzed. Please see Table 1 for a summary of results and Table 9 for detailed results.

**Comparative means and rates across countries.** The mean numbers of endorsed IPV items per construct in Columbia were: control, 1.7 items, any physical (but non-sexual) IPV, .92, and .32 for the moderate/severe physical (but non-sexual) classification. The mean endorsed item counts across these constructs (presented in the same order) equaled 1.5, 1.0, and .46 in Peru, 1.5, .84, and .55 in Nicaragua; 1.4, .40, and .17 in the Dominican Republic, and 1.5, .33, and .14 in Haiti.

Prevalence rates for control include: Columbia, 65%, Peru (2004-08), 68%, Nicaragua, 67%, Dominican Republic, 65%, and Haiti, 68%. Prevalence rates for mild/severe physical abuse consist of: Columbia, 37%, Peru (2004-08), 39%, Nicaragua, 28%, Dominican Republic, 16%, and Haiti, 13%. Prevalence rates for moderate/severe physical abuse include: Columbia, 17%, Peru (2004-08), 26%, Nicaragua, 22%, Dominican Republic, 10%, and Haiti, 8%. Prevalence rates for sexual abuse consist of: Columbia, 10%, Peru (2004-08), 9%, Nicaragua, 9%, Dominican Republic, 5%, and Haiti, 10%. Standard errors (please refer to Table 9) rarely exceeded 0.006 units for any specific prevalence estimate, which implies that rate differences of roughly 2.4% (2*.sqrt (6%)) were statistically significant. Given the large sample size informing these estimates, however, statistical comparisons are much less useful than comparisons of clinical significance. A clinical distinction among countries on the physical (nonsexual) IPV measures is clearly evident when examining the elevated rates in Columbia, Peru, and Nicaragua relative to the much lower rates found in the Dominican Republic and Haiti. The Dominican Republic also stands apart from the rest in terms of its much lower rate of sexual IPV.

Table 1. IPV Prevalence

| | Control Issues | Mild/Severe | Moderate/Severe | Sexual |
|---|---|---|---|---|
| Columbia | 65% | 37% | 17% | 10% |
| Peru (04-08) | 68% | 39% | 26% | 9% |
| Nicaragua | 67% | 28% | 22% | 9% |
| Dominican Republic | 65% | 16% | 10% | 5% |

| | | | | |
|---|---|---|---|---|
| Haiti | 68% | 13% | 8% | 10% |
| | | | | |
| Bolivia (INCIDENCE) | 34% | 25% | 18% | 7% |

**Bolivia incidence rates.** The IPV incidence rate for Bolivia is: control, 34%, mild to severe physical (nonsexual) IPV, 25%, moderate to severe physical (nonsexual) IPV, 18%, emotional abuse, 25%, and sexual IPV, 7%. The mean number of endorsed items per construct equaled: control, .60, physical (non-sexual) IPV, .47, and moderate/severe physical (nonsexual) IPV, .25. Please see Table 1 for a summary of results and Table 9 for detailed results.

**Hypothesis Testing**

This study proposed three specific hypotheses. Results from the testing procedures (see Methods/Statistical Analysis section for details) of each hypothesis are presented below.

**Hypothesis One: Regional Prevalence of IPV.** Hypothesis 1: Prevalence rates vary across regions, are moderately correlated within clusters of neighboring regions, and will generally be higher in rural areas. The first hypothesis predicted that prevalence rates would vary across regions, be moderately correlated within clusters of neighboring regions, and generally be higher in rural areas.

To examine this hypothesis, a hierarchical Bayesian model comparison procedure was instituted to assess the possibility of regional variation, regional covariation, and an average urbanicity difference in prevalence. Summary results from

the model comparisons within each country are listed in Tables 2-4 and for detailed results please refer to Table 10.

In Columbia, the best predictive model (model associated with the lowest DIC value) for all IPV outcomes included a sub-regional heterogeneity component, suggesting that prevalence of IPV fluctuates across administrative regions of the country in an uneven fashion. This finding was partially consistent with the hypothesized distribution of rates listed above, as substantial variation over space was supported (and thus, a common prevalence across sub-regions was not supported). This finding was also partially inconsistent with the hypothesis, since models that also assumed spatial autocorrelation did not appear to improve upon the fit beyond the modeling costs of this extra level of complexity. Interestingly, the urbanicity effect from the sub-regional heterogeneity models was statistically significant (i.e., the Bayesian confidence interval for $\alpha$ did not include zero) for Mild to Severe physical nonsexual and for sexual IPV and predicted a 4.4% (95% confidence interval, C. I., of 2 to 6%) and a 1.4% (C. I. of 0.2 to 2.7%) increase (on average) in prevalence of each respective IPV type in the urban centers of each region. The same pattern was evident for moderate to severe physical nonsexual IPV (a 1.4% urban increase), but this effect fell just beyond the level of statistical significance. This finding directly opposes the a priori prediction listed above (that rural areas would report greater IPV).

Rates of these three types of IPV in Columbia are mapped in Figures 1 through 6. Despite the lack of an autocorrelation component in the best supported models highlighted above, similar patterns of clustering appeared to exist in all three IPV figures. Estimated rates were much higher in the central, western, and southern regions

of the country (relative to the eastern and northern corners). To further explore the possibility of autocorrelation in these IPV measures, the Moran's I correlation coefficient was estimated and tested (this coefficient ranges from -1 to 1 with an expectation of *just below* zero under the hypothesis of no spatial correlation; positive values are expected when outcomes are similar among neighboring regions). Results are presented in Table 11. This statistic was positive, moderately high, and statistically significant for all IPV outcomes at the "Full" Region level (combining urban and rural sub-region estimates). The same basic finding existed when looking at urban-only sub-regions or rural-only subregions.

The prevalence predictions of physical nonsexual IPV in Peru clearly favored the Sub-Regional Heterogeneity + Regional Autocorrelation model. This suggests that rates are correlated among neighboring regions and that rates often change abruptly from one regional neighborhood (i.e., a set of regions sharing a boundary) to the next. Both of the random effect components of this model support the claims of hypothesis one. For sexual IPV, the autocorrelation random effect by itself seemed best supported by the data. This again suggests strong similarity in rates among neighboring regions and also implies changes across neighborhoods are smooth (the Moran I correlations of Table 11 also support this conclusion). The urbanicity effect in Peru was only significant in the models predicting mild to severe physical IPV. This effect indicated higher rates (roughly 5% increases) among urban sites. Prevalence maps for Peru are presented in Figures 7 through 12, indicating a large cluster of elevated rates in the southern tip of the country.

In Nicaragua, it was hard to draw strong conclusions about the most preferred model. For all three main types of IPV (without considering the combined IPV types), DIC values for two or more random effects models fell within 1.0 of each other. Although models with an autocorrelation component were among top DIC producers, the Moran I values for this country were not significant and suggested a low degree of rate clustering. The consistently low DIC value of the Common Prevalence model would suggest that the IPV rates were variable across areas (supporting one proposition of Hypothesis 1). The urbanicity effect was statistically significant in mild to severe physical nonsexual and sexual IPV models, and again, these effects indicated higher prevalence (3.3-3.5% for physical nonsexual and 2.2-2.4% for sexual IPV) in urban areas. The prevalence maps for Nicaragua can be found in Figures 13 through 18.

In the Dominican Republic, modeling of the two physical nonsexual IPV indicators supported the inclusion of both a sub-regional heterogeneity component and a regional autocorrelation, just as for Peru above. This model also fit the sexual IPV data well, but the DIC favored a simpler model with only sub-regional heterogeneity, which seemed to agree with the lower Moran I coefficients for this outcome compared to the I coefficients for all other physical IPV outcomes. The effect of urban locales in this country was not statistically significant for any of the DIC-supported IPV outcome models. Prevalence maps for the Dominican Republic are presented in Figures 19 through 24. For all three types of IPV discussed, rates appeared to be highest in the south-western corner of the country.

Most random effect models (with either heterogeneity or autocorrelation components) for Haiti did not distinguish themselves on the DIC. This finding appears

to be largely an artifact caused by the small number of regions modeled in this country. With only 10 large geographical areas considered (the Departments of Haiti), it is difficult for the data to inform one particular model over the rest. Most random effect models did, however, consistently outperform the Common Prevalence model, and this provides some support for space-varying rates of IPV. There was little support for an urban/rural difference on physical nonsexual IPV in this country, but better performing models did indicate a small, statistically significant urban increase (approximately 4%) in sexual IPV. Prevalence maps for Haiti are presented in Figures 25 through 30.

**Regional incidence of IPV.** In Bolivia, none of the models with random effects distinguished themselves in terms of fit for the two physical nonsexual abuse *incidence* indicators (see Tables 2-4 for a summary of results and Table 10 for detailed results). This was not true, however, when considering the Common Incidence model, which clearly failed to match any of the fit performances demonstrated by the other, more complex models. This suggests the incidence of IPV was highly variable even among this small sample of areal units, which supports the first proposition of hypothesis 1. The Common Incidence model did not grossly underperform, relative to the rest, when predicting sexual IPV. Again the data only weakly inform any conclusions about which model best captures the pattern of rates in this country (at least at this regional level of measurement). The urbanicity effect in Bolivia was only significant in a few of the mild to severe physical nonsexual IPV random effect models. When significant, this effect suggested a slight increase (approximately 3%) within urban communities. Incidence maps for all three of these outcomes are presented in Figures 7 through 12.

Table 2. Mild to Severe Physical Nonsexual IPV

| | Best Model | Common Prevalence? | Autocorrelation? | Rural Risk Difference |
|---|---|---|---|---|
| Columbia | SubReg Het | No | Possible<br>I=0.38, p < 0.001 | 3% pts Lower |
| Peru (04-08) | SubReg Het + Autocorr | No | Yes<br>I=0.54, p < 0.001 | 5% pts Lower |
| Nicaragua | SubReg Het ?+ Autocorr | No | Possible<br>I=-0.24, p > 0.10 | 3% pts Lower |
| Dominican Republic | SubReg Het + Autocorr | No | Yes<br>I=0.38, p < 0.001 | No differences |
| Haiti | Reg Het ?+ Autocorr | No | Possible<br>I=-0.15, p > 0.10 | No differences |
| | | | | |
| Bolivia (INCIDENCE) | Reg Autocorr | No | Possible<br>I=0.13, p > 0.10 | 3% pts Lower |

Table 3. Moderate to Severe Physical Nonsexual IPV

| | Best Model | Common Prevalence? | Autocorrelation? | Rural Risk Difference |
|---|---|---|---|---|
| Columbia | SubReg Het | No | Possible<br>I=0.47, p < 0.001 | No differences |
| Peru (04-08) | SubReg Het + Autocorr | No | Yes<br>I=0.48, p < 0.001 | No differences |
| Nicaragua | SubReg or Reg Het ?+ Autocorr | No | Possible<br>I=-0.18, p > 0.10 | No differences |
| Dominican Republic | SubReg Het + Autocorr | No | Yes<br>I=0.39, p < 0.001 | No differences |
| Haiti | Reg Het ?+ Autocorr | No | Possible<br>I=-0.21, p > 0.10 | No differences |
| | | | | |
| Bolivia | All Random Effect Models | No | Possible<br>I=-0.10, p > 0.10 | No differences |

Table 4. Sexual IPV

| | Best Model | Common Prevalence? | Autocorrelation? | Rural Risk Difference |
|---|---|---|---|---|
| Columbia | SubReg Het | No | Possible<br>I=0.30, p < 0.01 | 1% pt Lower |
| Peru (04-08) | Reg Het ?+ Autocorr | No | Possible<br>I=0.57, p < 0.001 | No differences |
| Nicaragua | SubReg ?+ Autocorr | No | Possible<br>I=0.21, p < 0.10 | 2% pts Lower |
| Dominican Republic | SubReg Het ?+ Autocorr | No | Possible<br>I=0.04, p > 0.10 | No differences |
| Haiti | All Random Effect Models | No | Possible<br>I=0.20, p > 0.10 | 4% pts Lower |
| | | | | |
| Bolivia | All Random Effect Models | No | Possible<br>I=-0.36, p > 0.10 | No differences |

**Hypothesis Two: Intimate Partner Violence and Risk Factors.** A logistic regression model was used to test the second hypothesis, which predicted that the prevalence of IPV will be greater among women who are younger, have lower education, are unemployed, have lower income, have more children, and are in a non-egalitarian relationships with their spouse/partner.

**Age.** Age was associated with IPV in most countries, although, the directionality of differences across age groups was not consistent. Please see Table 5 for a summary of results and Table 12 for detailed results. In Columbia, Nicaragua, and Peru, there was a significant linear trend between age of the woman and reports of IPV. In all countries, older women were more likely to report past experience of IPV. Thirty-eight percent of Columbian women, 29% of Nicaragua women, and 41% of Peruvian women age 40-49 had experienced mild to severe physical violence, 19%

(Columbia), 24% (Nicaragua), and 30% (Peru) had experienced moderate to severe physical violence, and 12% (Columbia), 10% (Nicaragua), and 12% (Peru) had experienced forced sex. In the Dominican Republic, there was a weak, but significant, linear trend between age and IPV. The direction of this association was opposite of the other countries above, indicating *younger* woman were more likely to report IPV. Haiti's pattern, although not significant, resembled the Dominican Republic findings.

**Education.** Education was strongly associated with IPV in all countries. Please see Table 5 for a summary of results and Table 12 for detailed results. All countries exhibited a significant linear IPV trend related to a woman's education level. In all but one instance (sole exception involved secondary educated women in Peru, on mild to severe physical violence), lower educated women (no education or primary education) experienced more IPV than higher educated (secondary or higher ed) women. The vast majority of the lower educated women from each country reported some experience with primary schooling. Within this primary education subgroup, 41% of Columbian women, 19% of women from the Dominican Republic, 29% of women in Nicaragua, 40% of women in Peru, and 15% of women in Haiti reported experiencing mild to severe physical violence, 22% (Columbia), 12% (Dominican Republic), 24% (Nicaragua), 31% (Peru), and 8% (Haiti) had experienced moderate to severe physical (nonsexual) violence, and 13% (Columbia), 6% (Dominican Republic), 10% (Nicaragua), 11% (Peru), and 11% (Haiti) had experienced forced sex. These rates for primary educated women all slightly exceeded the national IPV estimates listed in Table 13. In the two countries where a substantial number of women reported no education

(marginal proportions of 19% and 35%), rates of IPV among this subgroup were either slightly elevated or equivalent to those among the primary educated women.

**Employment.** Employment was strongly associated with IPV in some countries, while weakly associated or unrelated to employment in others. Please see Table 5 for a summary of results and Table 12 for detailed results. In Columbia, Peru, and Nicaragua, there was a significant linear trend between employment in the past year and reports of IPV. These differences were largely driven by the two most populated employment response options: 1) unemployed women, and 2) women currently working. Women who were *currently working* were more likely to report IPV. Thirty-nine percent of Columbian women, 42% of Peruvian women, and 31% of Nicaraguan women had experienced mild to severe physical violence, 19% (Columbia), 28% (Peru), and 25% (Nicaragua) had experienced moderate to severe physical violence, and 12% (Columbia), 10% (Peru), and 11% (Nicaragua) had experienced forced sex. Although not statistically significant, these same trends were found in the Dominican Republic. In Haiti, there was a weak linear trend between employment and moderate/severe physical (nonsexual) IPV, but in the opposite direction. Haitian women who were not working within the past year were more likely to report this type of IPV (9%). There was no association between the other two defined types of IPV and women's working status in Haiti.

Table 5. IPV Risk Factors

| | Age | Education | Employment |
|---|---|---|---|
| Columbia | + linear trend | - linear trend | + linear trend |
| Peru | + linear trend | + linear trend for mild to severe PV, - linear trend for moderate to severe PV and SV | + linear trend |
| Nicaragua | + linear trend | - linear trend | + linear trend |
| Dominican Republic | - linear trend | - linear trend | Not sig. (currently) |
| Haiti | No sig. (younger) | - linear trend | No association |
| | | | |
| Bolivia | - Linear trend<br>- Forced sex, no sig. (older) | - linear trend | + linear trend |

**Marital Status.** In Columbia, Peru, Haiti, the Dominican Republic, and Nicaragua, women who were formally or currently living with a man, but not married, were more likely to experience mild/moderate physical abuse, moderate/severe physical abuse, and forced sex (Please see Table 6 for a summary of results and Table 13 for detailed results). Cohabitating partnerships have been found more prevalent in Latin America amongst the poor, therefore suggesting that a barrier to marriage is financial hardship (Castro, 2002).

**Income.** Income was associated with IPV, although, the trajectory of differences across groups was not consistent. Please see Table 6 for a summary of results and Table 13 for detailed results). In Columbia, Peru, and Haiti there was a significant quadratic trend between IPV and income, which generally demonstrated peaked estimates of IPV for women scoring in the *middle class* category of income. Among middle class women, 42% of Columbian women, 45% of Peruvian women, and 17% of women from Haiti had experienced mild to severe physical violence, 20% (Columbia), 30 % (Peru), and 10% (Haiti) had experienced moderate to severe physical violence, and 11% (Columbia), 11% (Peru), and 13% (Haiti) had experienced forced sex. In the Dominican Republic, a significant linear trend between income and physical and sexual violence was observed. In this country, women who were classified as *poorest and poor* were *most* likely to have experienced physical (20% and 12%) and sexual violence (6%).

**Number of children.** Number of children within the family was linearly associated with rates of IPV. Please see Table 6 for a summary of results and Table 13 for detailed results. For most countries, this trend was positively directional and linear such that greater numbers of births predicted higher likelihoods of IPV for women in Columbia, Peru, the Dominican Republic, and Nicaragua. The trend in Haiti, on the other hand, exhibited quadratic curvature with higher IPV rates among women with 2 or 3 children. These trends were generally supported (although, not always statistically significant) when also looking at the number of sons and daughters separately. The sole exception to this pattern occurred in the Dominican Republic, where the linear trend

was evident among counts of daughters, but no obvious trend existed for the number of sons.

Table 6. IPV Risk Factors

| | Marital Status | Income | Number of Children |
|---|---|---|---|
| Columbia | sig. grp. diff. | Sig. quad. trend | + linear trend |
| Peru | sig. grp. diff. | Sig. quad. trend | + linear trend |
| Nicaragua | sig. grp. diff. | | + linear trend |
| Dominican Republic | sig. grp. diff. | -linear trend | + linear trend |
| Haiti | Sig. grp. diff. for moderate to severe | Sig. quad. trend | Sig. quad. trend |
| | | | |
| Bolivia | sig. grp. diff. | Sig. quad. trend | + linear trend |

**Decision making.** Several IPV differences were found among women who belong to one of the three decision-making responder groups defined as 1) women making the sole decisions, 2) women making joint decisions with their partner, and 3) women surrendering decisions solely to their partner on important household issues. Please see Table 7 for a summary of results and Table 14 for detailed results. In Columbia, Dominican Republic, Peru, and Nicaragua, there was a similar IPV

prevalence in households where the women solely made decisions and households where the husband solely made decisions. In all countries, women and men who made joint decisions experienced the least amount of risk for IPV.

For four of the seven decision questions administered in Columbia, women who made the sole decision, regarding woman's health care, big and small expenditures, and visits to family, friends, and relatives, experienced the most IPV. For the other three questions, partners who made the sole decisions, regarding general finances, food to cook/serve, and spending the husband/partner's earnings, had the most physical violence overall.

For five of the seven decisions questions administered in Peru, women who made the sole decision, experienced the most physical violence and forced sex. Women, whose husbands' had the final say regarding his earnings, were more likely to experience physical and sexual violence. Women, whose husbands' had the final say regarding how to spend money, were more likely to experience physical violence, but when she made the sole decision regarding money, she was more likely to experience forced sex.

In Nicaragua, partners who make the sole decision on how to spend their money, and what to cook and serve, experienced the most physical and sexual violence. Women who made the sole decision on purchasing big expenditures, and who had the final say on visits to family/relatives/friends experienced more physical and sexual violence. Women who made the sole decision on their healthcare were more likely to experience physical violence; however women whose husbands' made the sole decision on their healthcare experienced the most forced sex.

In the Dominican Republic, women who made the sole decision on how to spend money, and purchase big expenditures, experienced all forms of violence. Women whose husbands' made the sole decision on purchasing small expenditures, and how to spend the husband's money were more likely to experience all forms of violence. Women who had the final say on their healthcare were more likely to experience physical violence, but when their husband made the sole decision they were more at risk for forced sex. Women's whose husbands had the final say on visits to family/relatives/friends were more likely to experience physical violence, but when the woman made the sole decision she was more at risk for forced sex.

In Haiti, patterns were consistent with the other countries; however, these group differences infrequently reached the level of statistical significance.

Table 7. Decision Making and IPV

| | **Decision Making** |
|---|---|
| Columbia | Sig. grp. diff. |
| Peru | Sig. grp. diff. |
| Nicaragua | Sig. grp. diff. |
| Dominican Republic | Sig. grp. diff. |
| Haiti | Grp. diff. |
| | |
| Bolivia | Sig. grp. diff. |

**Bolivia's risk factors.** Women who were formally or currently living with a man, but not married, were more likely to experience IPV. In Bolivia there was a significant linear direction for age and physical abuse. Younger women were more likely to experience physical abuse (ages 15-19), whereas women (30-39) were more likely to experience forced sex. There is also a significant linear trend that is driven by the much lower rate of the higher educated group. The less educated the woman, the more likely she will experience physical violence and forced sex. A significant linear trend was found between the work status variables and physical violence. Twenty-nine percent of women who have worked in the *past year* were more likely to experience mild to severe physical violence and 21% of women were more likely to experience moderate to severe physical violence. However 7% of women who were *currently* working were more likely to experience forced sex. For results on age, education, and employment please see Table 4. A significant quadratic trend was found for income and IPV, which generally demonstrated peaked estimates of IPV for women scoring in the *middle class* category of income. Among middle class women, 28% were more likely to experience mild to severe physical abuse, 22%, were more likely to experience moderate to severe physical abuse, and 9% were more likely to experience forced sex. The more births (four or more) the more likely women are going to experience physical and sexual violence. Twenty-six percent of women were more likely to experience mild to severe physical violence, 20% of women were more likely to experience moderate to severe physical violence, and 8% of women, were more likely to experience forced sex. Please see Table 5 for results on income and number of children. A significant group

difference was found in woman responses (women made the sole decision, jointly, or if the husband/other made the sole decision) when asked about decision making. There was a similar distribution between women who made the sole decisions vs. the husband who made the sole decision in the household. Women and men who made joint decisions experienced the least amount of risk for IPV. The woman's husband or other made all of the decisions on five of the six questions and of these five questions; women were more likely to experience IPV. Women who made the sole decision on their health care were found to experience IPV. Please see Table 8 for a summary of results and Table 14 for detailed results.

**Prevalence of Child Punishment**

Physical punishment rates are high across countries. Please see Table 8 for a summary of results and Table 15 for detailed results. Prevalence rates for physical punishment include: Columbia, 55%, Peru, 52%, Bolivia, 42%, and Nicaragua, 34%. Prevalence rates for inappropriate non-physical items include: Columbia, 10%, Peru, 10%, and Bolivia, 25%.

Table 8. Prevalence of child punishment

| | Physical Punishment | Inappropriate Non-Physical Punishment |
|---|---|---|
| Columbia | 55% | 10% |
| Peru | 52% | 10% |
| Bolivia | 42% | 25% |
| Nicaragua | 34% | ---- |

**Hypothesis Three: Intimate Partner Violence and child punishment.** The third hypothesis predicted that mothers who had experienced IPV will be more likely to resort to physical forms of punishment toward their children than mothers who had not experienced IPV.

Results found that exposure to IPV was a strong positive predictor of enforcing physical punishment and a strong negative predictor of neglect related (i.e., inappropriate non-physical punishment) punishment tactics. Please see Table 16 for results. In Colombia, 61% of women who experienced *mild to severe* IPV used physical punishment more than women who were not exposed to IPV (51%). The same was found for women who experienced *moderate to severe* IPV (62%), when compared to women who were not exposed to IPV (53%). Women *not exposed* to IPV were more likely to use inappropriate non-physical punishment (12% mild to severe; 11% moderate to severe) when compared to women who *were exposed* to IPV (8%). In Bolivia, 48% of women who experienced *mild to severe* IPV used physical punishment more than women who were not exposed to IPV (40%). Fifty percent of women who experienced *moderate to severe* IPV used physical punishment more than women not exposed to IPV (40%). Women *not exposed* to IPV were more likely to use inappropriate non-physical punishment (26%) compared to women who *were exposed* to IPV (20%). In Peru, 59% of women who experienced *mild to severe* IPV used physical punishment more than women who were not exposed to IPV (46%). Women *not exposed* to IPV were more likely to use inappropriate non-physical punishment

(13%) when compared to women who *were exposed* to IPV (7%). In Nicaragua, 42% of women who *were exposed* to IPV used physical punishment more than women who were *not exposed* to IPV (31%).

## DISCUSSION

### Summary of the Findings

IPV is a significant and prevalent concern in Latin America. Because most of the countries' data is fairly recent, this is the only study that compares prevalence of IPV in Columbia, Peru, Haiti, Nicaragua, and the Dominican Republic. The incidence of IPV was also found for Bolivia. Additionally, very few studies have looked at the risk factors in Latin America, let alone from this recent data (Nicaragua excluded). Furthermore, only two international studies examined the correlation between child physical punishment and IPV.

**Regional findings.** Investigation of Hypothesis 1 examined whether the prevalence in each country could be accurately summarized by a single summary rate or whether these rates varied substantially across administrative regions of the countryside. In addition, this examination explored the possibility of autocorrelated rates within small clusters of regions and a possible increase of IPV within regions associated with rural and urban community distinctions. Hypothesis one proposes that an autocorrelation will exist (neighboring regions will have similar prevalence rates) if the feminist theory was correct and cultural variations like machismo, limited roles of women in society, and poor judicial practices could help explain IPV.

Results supported the hypothesized notion of nonconstant rate fluctuations across each country. For all IPV outcomes, random effect models that described

departures from a basic common prevalence rate for all regions were best supported by the data. For a few countries (Columbia, Peru, and the Dominican Republic), random effect models and/or the Moran I correlation coefficients also supported the inclusion of an autocorrelation component. This latter finding implied strong similarities in rates among neighboring regions in these countries. This seems to provide partial support for the second aspect of Hypothesis 1, suggesting that a region does tend to exhibit a similar rate to that of its surrounding neighbors. This is an interesting finding that suggests geographically-related differences on risk factors and possibly even cultural and societal norms may strongly influence the acceptance and use of IPV. The heat-maps of IPV prevalence in Figures 1 through 36 also provide a guide for identifying immediate target areas for prevention and secondary treatment initiatives that address IPV. Finally, with regard to the possibility of higher prevalence in rural communities, the data did not support this presumption. In fact, the urbanicity effect was significant for mild to severe physical nonsexual IPV models of Columbia, Peru and Nicaragua and for sexual IPV models of Columbia and Nicaragua, but the direction of these effects indicated higher average IPV among the urban communities of these countries. Differences between urban and rural locales were less noticeable and typically not statistically significant for all other IPV type and country combinations. Previous studies have also found some support for higher urban prevalence in Bolivia, Dominican Republic, Haiti, Columbia, and Peru (Hindin, Kishor, & Ansara, 2008; Kishor, Sunita, & Johnson, 2004; Hindin & Adair, 2002).

**IPV prevalence.** Prevalence rates for IPV were found to be varied between the five Latin American countries. When looking at questions assessing for husband's

control, all countries had higher prevalence rates ranging from 65% to 68%. Peru had the highest prevalence rates for overall physical abuse (39%, 26%) while Haiti had the lowest (13%, 8%); however, Haiti had one of the highest prevalence for forced sex (10%). Women in Columbia had the same findings as Haiti for the highest rates of forced sex (10%), while women in the Dominican Republic had the lowest rates (5%). All countries except Columbia asked if the women were humiliated by their partner. Nicaragua had the highest prevalence for humiliation (28%) while Haiti had the lowest (13%) rate. Five other published studies report the prevalence rates of these countries from previous years (Vadnais, Kols, & Abderrahim, 2006; Hindin, Kishor, & Ansara, 2008; Kishor, Sunita, & Johnson, 2004; Flake & Forste, 2006; and WHO, 2005). These studies show prevalence rates for: Columbia (19% to 43%), Dominican Republic (15% to 23%), Haiti (12% to 29%), Peru (39% to 60%), and Nicaragua (26% to 30%). Reasons for possible prevalence difference could be that (a) all the data were from earlier years (for some countries five-ten years difference), (b) some of the previous studies included non-married women in their sample, (c) policies and/or programs could have been implemented, thus lowering the prevalence rates, and (d) some of the studies analyzed fewer IPV questions than the current study, making the prevalence seem lower. Despite some of these differences, you can see that the prevalence rates vary across countries and across studies.

**IPV risk factors.** Hypothesis 2 looks to replicate known IPV risk factors in Latin America. From an ecological framework, the author looked at the individual and microsystem levels to see which predictors could best explain IPV. This investigation yielded mixed results on the initial prediction that younger women would be at greater

risk for IPV. Three of the six countries (Columbia, Peru, Nicaragua) found older women at risk for IPV, while the other countries (Dominican Republic, Haiti, and Bolivia) found younger women at greater risk. These mixed findings contradict previous studies in which younger women report greater IPV, conducted within Dominican Republic (Kishor, Sunita, & Johnson, 2004), Haiti (Hindin, Kishor, & Ansara, 2008) Nicaragua and Peru (Kishor, Sunita, & Johnson, 2004; WHO 2005). Several theories emerge as to why younger women report experiencing IPV more than older women. One idea is that younger men are more violent and that IPV begins early on in relationships (WHO, 2005). Another reason proposed is that younger women have not reached a status (e.g., mother, more financially responsible, greater role in community) that older women possess, thus making them more susceptible to violence (WHO, 2005; McClusky, 2001). Additionally, Latin American is found to have one of the highest rates of youth homicide and when compared to other areas, youth violence is exceptionally high (Krug et. al., 2002). On the other hand, older women may experience IPV more than younger women because they have had more time in the relationship to experience IPV with their partner.

It was predicted that women with less education would be more at risk for IPV. Education and IPV were strongly associated in all countries. In all instances, but one (sole exception was secondary educated Peruvian women on mild to severe physical violence), lower educated women (no education or primary education) experienced more IPV than higher educated (secondary or higher education) women. Overwhelmingly, previous literature maintains that increased education serves a protective role in reducing the risk of violence (Kishor, Sunita, & Johnson, 2004;

Simister & Makowiec, 2008). Greater education provides access to resources, lessens approval of violence, and overcomes uneven gender norms (WHO, 2010). In sum, the more educated the woman, the more resourceful she is against IPV. The current study findings regarding Peruvian women are remarkable, particularly given this grounded literature base. Specifically, educated Peruvian women experience more mild to severe physical violence in comparison to their less educated counterparts. One possible explanation for this finding is that her husband feels threatened by her educational status, increasing relational tension and violence risk (Ackerson et al., 2008).

It was predicted that women who are not employed would be more at risk for IPV. The findings did not support this prediction. Currently working women, in all but one country, were found to be at risk for IPV. Only in Haiti, women who were not working (and hadn't for more than a year), experienced more physical violence. Literature does support these findings. In fact, similar findings for currently working women were found in Colombia, the Dominican Republic, and Peru (Kocacik, Kutlar, & Erselcan, 2007). Additionally, in Columbia, the Dominican Republic, Haiti, Peru, and Nicaragua, working women reported high levels of ever-experiencing violence when compared to non-working women ( Kishor, Sunita, Johnson, 2004). Findings that women who were employed are at risk for IPV suggest that partner violence may be an attempt to thwart women's independence (Kocacik, Kutlar, & Erselcan, 2007). If women are financially contributing to the household, they may expect more of a role in decision making, therefore, possibly threatening their husband's sense of masculinity and challenging the gender norms. Other findings show unemployed women at risk for

IPV, possibly because of the financial strain that unemployment brings (Zorrilla et al., 2010; National Institute for Justice, 2009; Benson, Fox, DeMaris, & van Wyk, 2003).

Another prediction was that women from low SES households would be more at risk for IPV. This prediction was not supported by the results of the current study. All countries but one (Dominican Republic) had significant quadratic trends for middle class women, found to be more at risk for IPV. Additionally, rich women in Haiti were more likely to experience moderate to severe physical violence. One theory suggests that men who have high power positions in the community command this power also in their home (Lupri, Grandin, & Brinkerhoff, 1994). Opposite findings were found in the Dominican Republic where a significant linear trend was found for women in the poorest income classes. Additionally, poor women in Peru were at risk for moderate to severe physical violence. Women feel less able to leave a violent relationship because of financial reasons (economically dependent), feelings of hopelessness (Kaukinen, 2004; Krug et al., 2002; Kalmuss & Straus, 1982), and concerns that they would not be able to financially support their children (Kalmuss & Straus, 1982). Economic instability was the number one reason women returned back to their partner after receiving help from a local Oklahoma community shelter (J. Stein, personal communication, February 22, 2012), thus demonstrating the weight of financial stability when deciding to stay or leave a violent relationship regardless of socioeconomic status.

Family size was also a risk factor for IPV. It was predicted that the more children in the family, the increased risk for IPV. These results found that all five countries, but Haiti, had four or more children residing within households in which women reported violence. In Haiti, women with two to three children were found to be

at increased risk. Literature supports these findings (Okenwa, Lawoko, & Jansson, 2009; Hindin, Kishor, & Ansara, 2008; Kishor, Sunita, & Johnson, 2004). These researchers have suggested that the more children in the home, the more stress there is on the household, financially and emotionally, resulting in increased risk for violence.

The last predictor involves IPV and decision making. It was predicted that women who are in a non-egalitarian relationship with their spouse will have a greater likelihood of experiencing IPV. Results supported this prediction. There was a similar IPV prevalence in households where the women solely made decisions and households where the husband solely made decisions. In all countries, women and men who made joint decisions experienced the least amount of risk for IPV. In Haiti, patterns were consistent with the other countries; however, these group differences infrequently reached the level of statistical significance. Literature shows similar findings (Kocacik, Kutlar, & Erselcan, 2007; Kishor, Sunita, & Johnson, 2004).

**Child punishment.** It was hypothesized that mothers who had experienced IPV will be more likely to resort to physical forms of punishment toward their children than mothers who had not experienced IPV. Results found this hypothesis to be supported.

Results found that physical punishment is more prevalent than non-physical inappropriate punishment. Results found that exposure to IPV was a strong positive predictor of enforcing physical punishment. In all four countries women who *were exposed* to IPV enforced physical punishment more than women who *were not* exposed to IPV. Another finding from the results showed that exposure to IPV was a strong negative predictor of neglect related (i.e., inappropriate non-physical punishment) punishment tactics. In all four countries, women who *were not* exposed to IPV enforced

non-physical inappropriate discipline more than women *who were* exposed to IPV. Two other international studies, from Peru and Egypt, also showed a strong association between IPV and negative parenting practices (Gage & Silvestre, 2010; Dalal, Lawoko, & Jansson, 2010). It could be that women who are exposed to IPV resort to physical violence as a first response. Dalal, Lawoko, and Jansson (2010) suggest that women who are abused themselves, might be more accepting of violence and therefore might be more accepting of using physical punishment with their children. Additionally, within the country's society there may be a greater acceptance of using physical punishment and caregivers might not recognize it as abuse. Another explanation is that women who use physical punishment might be perpetuating the cycle of violence (Gelles, 1987). Although intergenerational abuse was not examined in this study, research does show a link between adults who were abused and then being an abuser (Graham-Bermann & Howell, 2011). It could be that women in this study were not only abused by their husband, but also experienced abuse as children, thus having a greater acceptance for abuse.

## Implications

**Prevention and intervention.** Results from this study found that prevalence rates are high in Latin America and there is a need for services. Results showed that IPV rates did differ across regional areas, so treatments should be targeted for areas demonstrating elevated risks. In this study strong similarities in rates were found among neighboring regions in Columbia, Peru, and the Dominican Republic. Additionally, among urban areas in Columbia, Peru, and Nicaragua, results found higher average rates of IPV than in rural areas. By knowing which regions are shown to have greater

prevalence of IPV, we can begin to look at these neighboring regions and target interventions to this area. Furthermore, we can ensure these regions have greater availability of resources and services. If resources are found to be available, we can begin to examine why prevalence continues to be high in these areas. We can also compare and look what has been done in neighboring regions where IPV prevalence is not as high and either replicate services or compare factors that have contributed to lower prevalence rates.

Prevention programs can be targeted in many ways. Individually, prevention programs should by targeted to all ages. Even though there is a positive linear trend for age, IPV rates are still high for younger women (Abramsky et al., 2011; WHO, 2010). Interventions aimed at youth may benefit Latin America. Interventions focused on (a) developing healthy relationships, (b) learning effective ways to communicate and solve conflicts among peers, and (c) improving communication and conflict resolution within relationships at work and home.

It is also beneficial to aim preventive services at young couples who are either expecting or just starting a new family. By targeting this group, you can promote effective communication skills, healthy parent-child relationships (teaching them other models of healthy parent-child relationships), and effective ways to manage their children's behavioral problems in order to endorse a non-violent strategy in addressing a child's behavior. Krug et al. (2002) believed that preventative programs and policies can also be found in the community and larger society implemented in school systems, job force, criminal system, and other organizations, (e.g., church, community centers, medical centers). Additionally, because the results from this study show that middle

class women experience the most IPV, prevention programs should be targeted to all socioeconomic classes rather than focusing on areas of low SES.

Black et al. (2011) recommends that we begin to address societal messages, beliefs, and attitudes that excuse intimate partner violence. We can start by implementing prevention programs to the youth in hopes of changing community norms. Another way to address these societal beliefs is by revising policies and enforcing current policies against violence (Black et al., 2011).

Results show that homes that experience IPV are also at risk for children being abused. Therefore, it is important to assess for both IPV and child abuse when working with either population. If parent(s) are in treatment for IPV (whether at a shelter, court referred, or self-referred treatment) it would be beneficial to incorporate positive parenting skills and effective behavior management strategies in aims to reduce child violence. Furthermore, when working with families in the child welfare system who have abused their children, assessing for IPV and providing support and resources if needed (Casanueva, Martin, & Runyan, 2009). Several authors (Murphy, 2010; Chang et al., 2008) suggest a need for child welfare to work with IPV programs to develop appropriate screening for IPV and child maltreatment.

Fang and Corso (2008) found that children who have a history of child abuse are good candidates for IPV prevention. Therefore, when working with adolescent children who have experienced abuse, it will be advantageous to incorporate additional sessions aimed at educating about healthy relationships.

**Limitations**

First, there is not a universal definition of violence which makes it difficult to compare results across countries (Krug et al., 2002; Creighton, 2004; Flake & Forste, 2006; Finkelhor, 1994). This study utilized a crude measure of violent types, i.e., it was difficult to distinguish between mild, moderate, and severe violence that was occurring. Additionally, this study used archival data; therefore, there was no control over what each country assessed. Each country operationalized IPV differently; few countries asked the same questions about IPV and discipline strategies, even within countries. For example, discipline questions were assessed initially in Peru (2000), but were not assessed in future data collections, (Peru, 2004-2008). Another example is that one country had very few questions about discipline and/or IPV and another country had many questions on their survey. The same issue is found true for operationalizing child abuse. This is observed in this study as well as other research by interchanging either harsh discipline strategies or child abuse. Finkelhor (1994) concluded in his epidemiology study of child abuse that comparing across multiple countries would not be possible and would be inappropriate due to the many ways child abuse was distinguished in each country.

Secondly, several other known risk factors were not included in the analysis due to limiting the amount of factors analyzed and certain countries excluding survey questions that would assess these variables. However, it is important to acknowledge that partner's alcohol consumption (Graham-Bermann & Howell, 2011; Hindin, Kishor, & Ansara, 2008; Kishor, Sunita & Johnson, 2004; Coker, Smith, McKeown, & King, 2000), attitudes towards violence (Alio, Clayton, Garba, Mbah, Daley, & Salihu, 2011;

Dhaher, Mikolajczyk, Maxwell, & Krämer, 2010) and intergenerational abuse (Graham-Bermann & Howell, 2011; Ehrensaft, Cohen, Brown, Smailes, Chen, & Johnson, 2003) are known risk factors associated with IPV and child abuse.

A third limitation was that women were excluded from this study if their privacy was not obtainable. The idea was that women who had guaranteed privacy would be more honest with their responses, however by excluding this set of women, it left out women who might be experiencing IPV, but were not included in the overall prevalence rate. Additionally, because of self-reporting bias and a limit of what types of questions were included on the surveys, there might be an underestimate of IPV.

A fourth limitation is that prevalence rates might be underreported because the five countries ask the women to report on their most recent partner. You will not capture previous violent relationships by limiting the questions to their recent partner.

This study only reported on the victims' use of physical punishment rather than the perpetrator's use or other household members. By only focusing on one parent, this could have underestimated the child's experience of being physically punished.

Another limitation is that this study focused on male-to-female IPV. There were only a few countries in the Demographic Health Surveys that asked if the woman ever hit her husband. Since there were limited countries who asked this question, the author chose not to examine this question. I also chose to focus on male-to-female IPV not only because is it an international problem, but because there is more documented research on female victimization; however, research shows that men too are victims of IPV (Nowinski, & Bowen, 2012; Allen-Collinson, 2009). Black et al., (2011) found that in the United States one in four men are victims of IPV in their lifetime, mostly physical

abuse. Additionally, IPV does not always follow a straight linear pattern and more research is looking at bi-directional violence (Whitaker, Haileyesus, Swahn, & Saltzman, 2007; Caetano, Ramisetty-Mikler, & Field, 2005).

**Future Research**

This study was one of few that showed the co-occurrence of IPV and child physical punishment as well as prevalence rates for IPV in several Latin American countries. Additional studies are needed to further obtain knowledge about the prevalence of these two issues while recognizing the contribution of the country's societal beliefs when studying either IPV or child maltreatment.

In order to gain an accurate prevalence rate of IPV or child abuse, future research aimed at using a homogeneous definition of IPV or child maltreatment, creating standardized measures, or utilizing uniform measures to use across countries is needed. Development and implementation of uniform, standardized measures would allow more accurate comparison of data across countries.

Another focus area is preventative educational programs targeting youth. Due to a woman's young age being a risk factor for IPV, it appears that possibly younger couples are engaging in IPV. Preventive programs in the US are being implemented in middle and high schools, but research on these programs are still in the early stages (Whitaker et al., 2006). There is limited information about early preventative programs in other parts of the world. Therefore, it would be beneficial to focus future research aimed at creating preventative programs in the schools to examine if these programs help prevent violence seen in young couples.

In this study, more women experienced IPV if they were middle class. Since most of the literature has found an association with low SES and IPV, future research aimed at conceptualizing the association between these two will be helpful in understanding more about IPV.

In regards to future research on child abuse, research needs to include all caregivers who utilize physical punishment rather than focusing on just one caregiver. Results from this study revealed a similar pattern of abuse with other household members. This merits further research. Also, research is needed examining which factors contribute to international child abuse (vs. western societies), e.g., intergenerational abuse, family size, income, family support. Lastly, more research should address the conceptualization of why women who are not exposed to IPV are more likely to neglect vs. use physical punishment.

In addition, future research will want to investigate men's responses to IPV. It is equally important to assess whether similar risk factors are associated with male abusers. This research focus may provide insight and understanding into male victimization and/or bi-directional abuse. In addition, each country has their own societal beliefs and levels of acceptance towards violence which need to be frequently examined as the society advances (Krug et al., 2002). Therefore, future research should address societal conditions that might increase the risk for IPV (attitudes, poverty, lack of policies) and find effective ways to address these factors at a societal level (Black et al., 2011). Furthermore, there is a need to evaluate the effectiveness of current preventative educational programs. Longitudinal designs should be emphasized targeting specific regions. Examining the trends of IPV and child maltreatment across

the years can aid in evaluating the effectiveness of preventative programs or policies implemented in certain regions.

Lastly, additional research should address programmatic interventions targeting at-risk regional areas. If there are lack of resources in a particular region or if the current programs are shown to be ineffective, it will be important to aim research towards creating new cultural adaptations of treatment programs specific to that region. On the other hand, if the programs are found to be effective, then research aimed at dissemination and implementation will be essential. Since in this study, certain neighboring regions were found to experience higher prevalence of IPV, future research aimed at looking more closely at these areas to address why these regions experience higher prevalence of IPV.

Since this study found certain risk factors that are correlated with higher IPV, it would be useful to identify certain factors that will help aid in reducing violence, e.g. stress reduction, communication, problem solving. By knowing which factors could contribute to the reduction violence in these regions, targeted interventions that cover these factors could be implemented.

This study used data from Demographic and Health Surveys to identify regions in which intimate partner violence is more prevalent, identify risk factors for women relating to intimate partner violence, and to examine the co-occurrence between intimate partner violence and child physical punishment in six Latin American countries: Bolivia, Colombia, Dominican Republic, Haiti, Nicaragua, and Peru. Findings suggest that intimate partner violence is a significant problem in Latin America. Interestingly, in this study strong similarities in rates were found among

neighboring regions in Columbia, Peru, and the Dominican Republic. Additionally, among urban areas in Columbia, Peru, and Nicaragua, results found higher average rates of physical non-sexual IPV and in Columbia and Nicaragua higher rates for sexual IPV Additionally, several risk factors for IPV emerged from this study: women who cohabitate with their partner (vs. married), older woman, women with more children, women who were currently employed, women with lower education, women who are middle class, and women in non-equalitarian relationships. Findings also suggest that women who are victims of intimate partner violence are more likely to utilize physical punishment on their children. The author hopes to contribute to the literature on these global issues and help guide programs or future research when working with families who experience violence.

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# APPENDICES

# APPENDIX A

# MEASURES

Measure A

| | Options | Columbia | Dominican Republic | Haiti | Bolivia | Nicaragua | Peru 04 | Peru 00 |
|---|---|---|---|---|---|---|---|---|
| Marital Status | Current Marital Status: Currently/Formally married or Currently/Formally living with partner | X | X | X | X | X | X | X |
| Age | Current Age | X | X | X | X | X | X | X |
| | Age Group:<br>15-19<br>20-29<br>30-39<br>40-49 | X | X | X | X | X | X | X |
| Income | Wealth Index :<br>Poorest<br>Poor<br>Middle<br>Rich<br>Richest | X | X | X | X | | X | |
| | Wealth Index: Factor Score (5 decimals) | X | X | X | X | | X | |
| Education Both woman and partner | Highest Education:<br>No education<br>Primary<br>Secondary<br>Higher | X | X | X | X | X | X | X |
| Employment | Partner's Education:<br>Not working<br>Agriculture<br>Non-agriculture | X | X | X | X | X | X | X |
| | Woman:<br>Not working<br>Currently working<br>Worked in the past 12 months | X | X | X | X | X | X | X |
| | Earns more than partner | X | X | X | X | | X | |
| Family Size | Total children ever born:<br>0, 1, 2, 3 or more | X | X | X | X | X | X | X |
| | Sons at home: 0, 1, 2 or more | X | X | X | X | X | X | X |
| | Daughters at home: 0, 1, 2 or more | X | X | X | X | X | X | X |

(X) Implies the country asked this question

Measure B

| Yes/No Response | Columbia | Dominican Republic | Nicaragua | Haiti | Peru | Bolivia |
|---|---|---|---|---|---|---|
| Control | X | X | X | X | X | X |
| Humiliate | | X | X | X | X | X |
| Mild to severe | X | X | X | X | X | X |
| Moderate to severe | X | X | X | X | X | X |
| Sexual violence | X | X | X | X | X | X |

Control Questions

Husband:

1) Jealous, 2) suspicious or unfaithful, 3) limit contact with girlfriends, 4) limit contact with family, 5) need to know your whereabouts.

Humiliate

1) Does your spouse ever humiliate you?

Mild to Moderate IPV

Spouse ever:

1) Push/shook/threw something, 2) slap, 3) punch with fist or object, 4) kick/drag, 5) choke/burn, 6) threaten with a knife/gun

Moderate to Severe IPV

Spouse ever:

1) Slap, 2) punch with fist or object, 3) kick/drag, 4) choke/burn; 5) threaten with a knife/gun

Sexual Violence

1) Spouse ever forces sex when it was not wanted?

Measure C

| Types of Punishment | Peru 00 | Nicaragua | Columbia | Bolivia |
|---|---|---|---|---|
| Slapping/pulling ears | X | X | | X |
| Insulting | | | | X |
| Not giving them food | X | | X | X |
| Beatings/physical punishment | X | X | X | X |
| Pushing them | | | X | |
| Locking them | X | | X | X |
| Not allowing them to enter house hold | X | | X | X |
| Throw water at them | X | | X | X |
| Naked them | X | | X | X |
| Spanking | | X | X | |
| Lack of Punishment | | | X | |

Measure D

| Who Decides: Woman, Spouse, or other | Peru 04 | Nicaragua | Columbia | Dominican Republic | Haiti | Bolivia |
|---|---|---|---|---|---|---|
| How to spend money | X | X | X | X | X | X |
| Final say on woman's healthcare | X | X | X | X | X | X |
| Purchasing big expenditures | X | X | X | X | X | X |
| Purchasing small expenditures | X | | X | X | X | X |
| Final Say on Visits to Family/Relatives/Friends | X | X | X | X | X | X |
| Final say on what to cook/serve | X | X | X | | | |
| Final say on spending husband's earnings | X | | X | X | X | X |

# APPENDIX B

# TABLES

Table 9. Prevalence of Intimate Partner Violence

| Countries | | Control & Emotion: Control | Control & Emotion: Humiliate | Physical Non-Sexual IPV[1]: Mild to Severe | Physical Non-Sexual IPV[1]: Moderate to Severe | Sexual IPV: Forced Sex | Physical[1] or Sexual IPV: Mild to Severe | Physical[1] or Sexual IPV: Moderate to Severe |
|---|---|---|---|---|---|---|---|---|
| Columbia '10 | n=34624 | | | | | | | |
| | Mean Number Endorsed | 1.749 (0.013) | --- | 0.920 (0.012) | 0.323 (0.006) | --- | 1.018 (0.013) | 0.420 (0.008) |
| | Prevalence (Any Endorsed) | 0.646 (0.004) | --- | 0.365 (0.004) | 0.170 (0.003) | 0.097 (0.002) | 0.374 (0.004) | 0.201 (0.003) |
| Dominican Republic '07 | n=8421 | | | | | | | |
| | Mean Number Endorsed | 1.441 (0.029) | --- | 0.399 (0.021) | 0.173 (0.012) | --- | 0.445 (0.023) | 0.219 (0.014) |
| | Prevalence (Any Endorsed) | 0.647 (0.009) | 0.145 (0.006) | 0.159 (0.007) | 0.096 (0.005) | 0.046 (0.003) | 0.166 (0.007) | 0.110 (0.006) |
| Haiti '05-06 | n=2676 | | | | | | | |
| | Mean Number Endorsed | 1.546 (0.042) | --- | 0.330 (0.028) | 0.138 (0.015) | --- | 0.427 (0.032) | 0.235 (0.019) |
| | Prevalence (Any Endorsed) | 0.678 (0.015) | 0.117 (0.008) | 0.133 (0.010) | 0.075 (0.007) | 0.097 (0.009) | 0.180 (0.012) | 0.138 (0.010) |
| Peru '04 | n=22919 | | | | | | | |
| | Mean Number Endorsed | 1.483 (0.016) | --- | 1.034 (0.017) | 0.458 (0.009) | --- | 1.122 (0.019) | 0.546 (0.011) |
| | Prevalence (Any Endorsed) | 0.677 (0.005) | 0.232 (0.004) | 0.391 (0.005) | 0.257 (0.004) | 0.088 (0.003) | 0.399 (0.005) | 0.276 (0.005) |
| Nicaragua '98 | n=8466 | | | | | | | |
| | Mean Number Endorsed | 1.546 (0.022) | --- | 0.841 (0.021) | 0.446 (0.013) | --- | 0.929 (0.024) | 0.533 (0.016) |
| | Prevalence (Any Endorsed) | 0.672 (0.007) | 0.278 (0.007) | 0.277 (0.006) | 0.218 (0.005) | 0.087 (0.004) | 0.285 (0.006) | 0.232 (0.006) |
| Bolivia '08 | n=9219 | | | | | | | |
| | Mean Number Endorsed[2,3] | 0.604 (0.013) | --- | 0.470 (0.013) | 0.254 (0.008) | --- | 0.537 (0.016) | 0.321 (0.011) |
| | Prevalence (Any Endorsed)[2,3] | 0.338 (0.006) | 0.246 (0.006) | 0.245 (0.006) | 0.184 (0.005) | 0.067 (0.003) | 0.255 (0.006) | 0.200 (0.006) |

Common Control Items: 1) Jealous, 2) Suspicious of unfaithfulness, 3) Limit contact with girlfriends, 4) Limit contact with family, 4) Needs to know whereabouts

Common Physical IPV Items: 1) Push/Shook/Threw Something, 2) Slap, 3) Punch with fist or object, 4) Kick/Drag, 5) Choke/Burn, 6) Threaten with Knife/Gun

Moderate/ Severe IPV Items: ~~1) Push/Shook/Threw Something, 2) Slap,~~ 3) Punch with fist or object, 4) Kick/Drag, 5) Choke/Burn, 6) Threaten with Knife/Gun

[1]Nicaragua asks about threatening with *weapons*, slapping or *twisting an arm*, and does not ask about burning, *dragging*, *beating with or throwing objects*

[2]Bolivia Control Items: 1) Jealous, 2) Suspicious of unfaithfulness, ~~3) Limit contact with girlfriends,~~ 4) Limit contact with family~~, 4) Needs to know whereabouts~~

[3]Bolivia Physical IPV Items: 1) Push/Shook/Threw Something, ~~2) Slap,~~ 3) Punch with fist or object, 4) Kick/Drag, 5) Choke/Burn, ~~6) Threaten with Knife/Gun~~

Table 10. Results of the Regional Analysis of Prevalence Variability in Each Country

| Country | Model | Parameters | DIC | Population Average $\mu$[95% C.I.] | Urban Effect $\alpha$[95% C.I.] | Reg Variance sd($v_r$)[95% C.I.] | Sub-Reg Variance sd($\eta_s$)[95% C.I.] | Reg Autocorr Term sd($\phi_r$)[95% C.I.] |
|---|---|---|---|---|---|---|---|---|
| Columbia '10 | | Mild to Severe Phsyical Non-Sexual IPV | | | | | | |
| | Common Prevalence | $\mu+\alpha$ | 187 | 0.329[0.319,0.339] | 0.036[0.024,0.048] | --- | --- | --- |
| | Regional Heterogeneity | $\mu+\alpha+v_r$ | -230 | 0.329[0.305,0.354] | 0.044[0.031,0.057] | 0.064[0.049,0.083] | --- | --- |
| | Sub-Regional Heterogeneity | $\mu+\alpha+\eta_s$ | -238 | 0.334[0.308,0.359] | 0.037[0.003,0.073] | --- | 0.067[0.055,0.082] | --- |
| | Regional Autocorrelation | $\mu+\alpha+\varphi_r$ | 1970 | 0.314[0.303,0.324] | 0.037[0.024,0.049] | --- | --- | 0.094[0.071,0.125] |
| | Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+v_r+\varphi_r$ | -228 | 0.305[0.251,0.358] | 0.045[0.032,0.057] | 0.155[0.122,0.198] | --- | 0.036[0.016,0.081] |
| | Sub-Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\eta_s+\varphi_r$ | -231 | 0.360[0.308,0.412] | 0.035[-0.036,0.105] | --- | 0.143[0.120,0.173] | 0.037[0.016,0.077] |
| | | Moderate to Severe Physical Non-Sexual IPV | | | | | | |
| | Common Prevalence | $\mu+\alpha$ | -44 | 0.155[0.147,0.163] | 0.012[0.003,0.022] | --- | --- | --- |
| | Regional Heterogeneity | $\mu+\alpha+v_r$ | -259 | 0.159[0.143,0.175] | 0.017[0.007,0.027] | 0.038[0.029,0.051] | --- | --- |
| | Sub-Regional Heterogeneity | $\mu+\alpha+\eta_s$ | -273 | 0.162[0.145,0.178] | 0.012[-0.009,0.035] | --- | 0.041[0.033,0.050] | --- |
| | Regional Autocorrelation | $\mu+\alpha+\varphi_r$ | 6202 | 0.134[0.126,0.142] | 0.010[-0.000,0.019] | --- | --- | 0.049[0.035,0.067] |
| | Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+v_r+\varphi_r$ | -257 | 0.150[0.126,0.173] | 0.018[0.007,0.028] | 0.062[0.047,0.081] | --- | 0.031[0.015,0.056] |
| | Sub-Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\eta_s+\varphi_r$ | -261 | 0.195[0.133,0.258] | 0.009[-0.077,0.089] | --- | 0.172[0.145,0.206] | 0.032[0.015,0.066] |
| | | Sexual IPV | | | | | | |
| | Common Prevalence | $\mu+\alpha$ | -240 | 0.076[0.070,0.081] | 0.018[0.012,0.025] | --- | --- | --- |
| | Regional Heterogeneity | $\mu+\alpha+v_r$ | -319 | 0.079[0.071,0.088] | 0.016[0.009,0.023] | 0.020[0.015,0.027] | --- | --- |
| | Sub-Regional Heterogeneity | $\mu+\alpha+\eta_s$ | -321 | 0.081[0.072,0.090] | 0.014[0.002,0.027] | --- | 0.021[0.016,0.026] | --- |
| | Regional Autocorrelation | $\mu+\alpha+\varphi_r$ | 13656 | 0.094[0.089,0.100] | 0.047[0.039,0.054] | --- | --- | 0.036[0.027,0.048] |
| | Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+v_r+\varphi_r$ | -312 | 0.047[-0.017,0.112] | 0.016[0.008,0.023] | 0.188[0.148,0.238] | --- | 0.036[0.016,0.080] |

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|---|---|---|---|---|---|---|---|---|
| | Sub-Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\eta_s+\varphi_r$ | -302 | 0.028[-0.108,0.199] | -0.010[-0.226,0.186] | --- | 0.435[0.367,0.519] | 0.039[0.016,0.099] |
| | | Mild to Severe Phsyical or Sexual IPV | | | | | | |
| | Common Prevalence | $\mu+\alpha$ | 185 | 0.338[0.328,0.348] | 0.035[0.023,0.048] | --- | --- | --- |
| | Regional Heterogeneity | $\mu+\alpha+v_r$ | -231 | 0.337[0.313,0.362] | 0.044[0.031,0.057] | 0.064[0.049,0.083] | --- | --- |
| | Sub-Regional Heterogeneity | $\mu+\alpha+\eta_s$ | -237 | 0.342[0.316,0.367] | 0.037[0.003,0.073] | --- | 0.067[0.055,0.082] | --- |
| | Regional Autocorrelation | $\mu+\alpha+\varphi_r$ | -229 | 0.340[0.330,0.350] | 0.044[0.032,0.057] | --- | --- | 0.097[0.074,0.129] |
| | Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+v_r+\varphi_r$ | -229 | 0.363[0.312,0.415] | 0.045[0.032,0.057] | 0.148[0.117,0.190] | --- | 0.037[0.016,0.082] |
| | Sub-Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\eta_s+\varphi_r$ | -231 | 0.362[0.320,0.405] | 0.036[-0.022,0.094] | --- | 0.114[0.094,0.139] | 0.039[0.017,0.079] |
| | | Moderate to Severe Phsyical or Sexual IPV | | | | | | |
| | Common Prevalence | $\mu+\alpha$ | -52 | 0.183[0.175,0.192] | 0.015[0.005,0.025] | --- | --- | --- |
| | Regional Heterogeneity | $\mu+\alpha+v_r$ | -253 | 0.185[0.169,0.201] | 0.020[0.009,0.030] | 0.039[0.029,0.051] | --- | --- |
| | Sub-Regional Heterogeneity | $\mu+\alpha+\eta_s$ | -268 | 0.189[0.172,0.206] | 0.014[-0.008,0.037] | --- | 0.041[0.033,0.051] | --- |
| | Regional Autocorrelation | $\mu+\alpha+\varphi_r$ | -111 | 0.182[0.174,0.191] | 0.018[0.008,0.028] | --- | --- | 0.055[0.040,0.074] |
| | Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+v_r+\varphi_r$ | -250 | 0.203[0.167,0.240] | 0.021[0.010,0.031] | 0.102[0.080,0.131] | --- | 0.032[0.015,0.066] |
| | Sub-Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\eta_s+\varphi_r$ | -255 | 0.263[0.140,0.396] | 0.001[-0.184,0.153] | --- | 0.353[0.298,0.422] | 0.038[0.016,0.094] |

| Country | Model | Parameters | DIC | Population Average $\mu$[95% C.I.] | Urban Effect $\alpha$[95% C.I.] | Reg Variance sd($v_r$)[95% C.I.] | Sub-Reg Variance sd($\eta_s$)[95% C.I.] | Reg Autocorr Term sd($\phi_r$)[95% C.I.] |
|---|---|---|---|---|---|---|---|---|
| Peru '04 | | Mild to Severe Phsyical Non-Sexual IPV | | | | | | |
| | Common Prevalence | $\mu+\alpha$ | 42 | 0.375[0.363,0.387] | 0.044[0.028,0.060] | --- | --- | --- |
| | Regional Heterogeneity | $\mu+\alpha+v_r$ | -153 | 0.372[0.343,0.402] | 0.055[0.037,0.073] | 0.061[0.045,0.083] | --- | --- |
| | Sub-Regional Heterogeneity | $\mu+\alpha+\eta_s$ | -162 | 0.379[0.349,0.409] | 0.052[0.010,0.094] | --- | 0.066[0.051,0.084] | --- |
| | Regional Autocorrelation | $\mu+\alpha+\varphi_r$ | -154 | 0.373[0.360,0.386] | 0.054[0.036,0.071] | --- | --- | 0.087[0.062,0.120] |
| | Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+v_r+\varphi_r$ | -155 | 0.373[0.348,0.397] | 0.054[0.036,0.072] | 0.034[0.016,0.059] | --- | 0.062[0.027,0.103] |

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|---|---|---|---|---|---|---|---|
| Sub-Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\eta_s+\varphi_r$ | -169 | 0.377[0.359,0.397] | 0.053[0.027,0.079] | --- | 0.034[0.020,0.051] | 0.070[0.040,0.107] |
| Moderate to Severe Physical Non-Sexual IPV | | | | | | | |
| Common Prevalence | $\mu+\alpha$ | 79 | 0.282[0.272,0.293] | -0.028[-0.042,-0.014] | --- | --- | --- |
| Regional Heterogeneity | $\mu+\alpha+v_r$ | -162 | 0.279[0.252,0.307] | -0.008[-0.025,0.007] | 0.060[0.044,0.082] | --- | --- |
| Sub-Regional Heterogeneity | $\mu+\alpha+\eta_s$ | -173 | 0.286[0.258,0.314] | -0.012[-0.052,0.028] | --- | 0.064[0.051,0.081] | --- |
| Regional Autocorrelation | $\mu+\alpha+\varphi_r$ | -163 | 0.280[0.268,0.292] | -0.010[-0.026,0.005] | --- | --- | 0.089[0.065,0.122] |
| Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+v_r+\varphi_r$ | -164 | 0.280[0.256,0.304] | -0.009[-0.026,0.007] | 0.035[0.017,0.061] | --- | 0.062[0.026,0.104] |
| Sub-Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\eta_s+\varphi_r$ | -179 | 0.284[0.267,0.302] | -0.011[-0.035,0.014] | --- | 0.033[0.020,0.049] | 0.071[0.040,0.109] |
| Sexual IPV | | | | | | | |
| Common Prevalence | $\mu+\alpha$ | -177 | 0.088[0.082,0.094] | 0.000[-0.008,0.009] | --- | --- | --- |
| Regional Heterogeneity | $\mu+\alpha+v_r$ | -253 | 0.088[0.076,0.100] | 0.009[-0.001,0.018] | 0.024[0.017,0.033] | --- | --- |
| Sub-Regional Heterogeneity | $\mu+\alpha+\eta_s$ | -231 | 0.089[0.078,0.101] | 0.006[-0.009,0.022] | --- | 0.022[0.016,0.030] | --- |
| Regional Autocorrelation | $\mu+\alpha+\varphi_r$ | -254 | 0.089[0.082,0.095] | 0.007[-0.003,0.016] | --- | --- | 0.032[0.021,0.047] |
| Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+v_r+\varphi_r$ | -254 | 0.088[0.076,0.100] | 0.008[-0.001,0.018] | 0.019[0.012,0.027] | --- | 0.026[0.015,0.041] |
| Sub-Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\eta_s+\varphi_r$ | -245 | 0.090[0.081,0.099] | 0.007[-0.005,0.019] | --- | 0.015[0.011,0.021] | 0.028[0.017,0.043] |
| Mild to Severe Phsyical or Sexual IPV | | | | | | | |
| Common Prevalence | $\mu+\alpha$ | 49 | 0.385[0.373,0.397] | 0.040[0.024,0.056] | --- | --- | --- |
| Regional Heterogeneity | $\mu+\alpha+v_r$ | -155 | 0.382[0.352,0.411] | 0.052[0.034,0.070] | 0.062[0.046,0.085] | --- | --- |
| Sub-Regional Heterogeneity | $\mu+\alpha+\eta_s$ | -163 | 0.388[0.358,0.418] | 0.049[0.007,0.092] | --- | 0.067[0.052,0.085] | --- |
| Regional Autocorrelation | $\mu+\alpha+\varphi_r$ | -156 | 0.382[0.369,0.395] | 0.051[0.033,0.068] | --- | --- | 0.088[0.063,0.122] |
| Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+v_r+\varphi_r$ | -157 | 0.382[0.358,0.407] | 0.051[0.034,0.069] | 0.034[0.016,0.060] | --- | 0.063[0.028,0.105] |
| Sub-Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\eta_s+\varphi_r$ | -170 | 0.386[0.368,0.406] | 0.050[0.024,0.076] | --- | 0.033[0.020,0.050] | 0.072[0.041,0.110] |
| Moderate to Severe Phsyical or Sexual IPV | | | | | | | |
| Common Prevalence | $\mu+\alpha$ | 81 | 0.302[0.291,0.313] | -0.029[-0.043,-0.015] | --- | --- | --- |
| Regional Heterogeneity | $\mu+\alpha+v_r$ | -165 | 0.298[0.269,0.327] | -0.007[-0.024,0.008] | 0.062[0.046,0.084] | --- | --- |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Sub-Regional Heterogeneity | $\mu+\alpha+\eta_s$ | -171 | 0.304[0.276,0.333] | -0.011[-0.052,0.031] | --- | 0.066[0.052,0.083] | --- |
| | Regional Autocorrelation | $\mu+\alpha+\varphi_r$ | -165 | 0.299[0.287,0.311] | -0.009[-0.025,0.007] | --- | --- | 0.091[0.066,0.125] |
| | Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\nu_r+\varphi_r$ | -166 | 0.299[0.274,0.323] | -0.008[-0.025,0.008] | 0.035[0.017,0.062] | --- | 0.063[0.027,0.107] |
| | Sub-Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\eta_s+\varphi_r$ | -178 | 0.302[0.285,0.320] | -0.010[-0.034,0.015] | --- | 0.032[0.019,0.048] | 0.075[0.043,0.112] |

| Country | Model | Parameters | DIC | Population Average $\mu$[95% C.I.] | Urban Effect $\alpha$[95% C.I.] | Reg Variance sd($\nu_r$)[95% C.I.] | Sub-Reg Variance sd($\eta_s$)[95% C.I.] | Reg Autocorr Term sd($\phi_r$)[95% C.I.] |
|---|---|---|---|---|---|---|---|---|
| Nicaragua '98 | | Mild to Severe Phsyical Non-Sexual IPV | | | | | | |
| | Common Prevalence | $\mu+\alpha$ | -110 | 0.253[0.236,0.269] | 0.036[0.014,0.060] | --- | --- | --- |
| | Regional Heterogeneity | $\mu+\alpha+\nu_r$ | -112 | 0.255[0.234,0.276] | 0.034[0.010,0.058] | 0.025[0.015,0.040] | --- | --- |
| | Sub-Regional Heterogeneity | $\mu+\alpha+\eta_s$ | -114 | 0.256[0.233,0.278] | 0.033[0.002,0.064] | --- | 0.028[0.016,0.043] | --- |
| | Regional Autocorrelation | $\mu+\alpha+\varphi_r$ | -110 | 0.254[0.237,0.271] | 0.035[0.011,0.059] | --- | --- | 0.032[0.016,0.061] |
| | Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\nu_r+\varphi_r$ | -111 | 0.256[0.233,0.279] | 0.033[0.009,0.058] | 0.025[0.014,0.041] | --- | 0.029[0.015,0.056] |
| | Sub-Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\eta_s+\varphi_r$ | -114 | 0.256[0.235,0.278] | 0.033[0.003,0.063] | --- | 0.027[0.015,0.043] | 0.029[0.015,0.055] |
| | | Moderate to Severe Physical Non-Sexual IPV | | | | | | |
| | Common Prevalence | $\mu+\alpha$ | -108 | 0.204[0.190,0.218] | 0.021[0.002,0.040] | --- | --- | --- |
| | Regional Heterogeneity | $\mu+\alpha+\nu_r$ | -121 | 0.207[0.186,0.227] | 0.020[-0.000,0.041] | 0.028[0.017,0.045] | --- | --- |
| | Sub-Regional Heterogeneity | $\mu+\alpha+\eta_s$ | -120 | 0.207[0.185,0.228] | 0.018[-0.013,0.047] | --- | 0.030[0.018,0.045] | --- |
| | Regional Autocorrelation | $\mu+\alpha+\varphi_r$ | -119 | 0.206[0.192,0.220] | 0.020[-0.000,0.040] | --- | --- | 0.044[0.021,0.077] |
| | Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\nu_r+\varphi_r$ | -121 | 0.207[0.186,0.230] | 0.019[-0.002,0.040] | 0.027[0.015,0.044] | --- | 0.031[0.015,0.061] |
| | Sub-Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\eta_s+\varphi_r$ | -121 | 0.207[0.188,0.227] | 0.018[-0.010,0.045] | --- | 0.026[0.015,0.042] | 0.034[0.016,0.065] |
| | | Sexual IPV | | | | | | |
| | Common Prevalence | $\mu+\alpha$ | -135 | 0.065[0.056,0.073] | 0.027[0.015,0.040] | --- | --- | --- |
| | Regional Heterogeneity | $\mu+\alpha+\nu_r$ | -149 | 0.070[0.056,0.085] | 0.024[0.010,0.037] | 0.022[0.014,0.033] | --- | --- |

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|---|---|---|---|---|---|---|---|---|
| | Sub-Regional Heterogeneity | $\mu+\alpha+\eta_s$ | -151 | 0.071[0.057,0.085] | 0.023[0.002,0.043] | --- | 0.022[0.015,0.032] | --- |
| | Regional Autocorrelation | $\mu+\alpha+\varphi_r$ | -150 | 0.070[0.061,0.079] | 0.023[0.010,0.037] | --- | --- | 0.031[0.018,0.051] |
| | Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+v_r+\varphi_r$ | -149 | 0.071[0.056,0.087] | 0.023[0.009,0.036] | 0.021[0.013,0.032] | --- | 0.027[0.015,0.047] |
| | Sub-Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\eta_s+\varphi_r$ | -152 | 0.072[0.059,0.085] | 0.022[0.003,0.041] | --- | 0.020[0.013,0.029] | 0.027[0.015,0.046] |
| | | Mild to Severe Phsyical or Sexual IPV | | | | | | |
| | Common Prevalence | $\mu+\alpha$ | -110 | 0.262[0.246,0.278] | 0.035[0.013,0.057] | --- | --- | --- |
| | Regional Heterogeneity | $\mu+\alpha+v_r$ | -114 | 0.265[0.243,0.286] | 0.032[0.008,0.055] | 0.025[0.015,0.041] | --- | --- |
| | Sub-Regional Heterogeneity | $\mu+\alpha+\eta_s$ | -115 | 0.265[0.243,0.287] | 0.031[0.000,0.062] | --- | 0.028[0.016,0.043] | --- |
| | Regional Autocorrelation | $\mu+\alpha+\varphi_r$ | -112 | 0.264[0.247,0.280] | 0.033[0.010,0.056] | --- | --- | 0.034[0.016,0.064] |
| | Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+v_r+\varphi_r$ | -113 | 0.265[0.243,0.289] | 0.031[0.007,0.055] | 0.026[0.014,0.042] | --- | 0.029[0.015,0.057] |
| | Sub-Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\eta_s+\varphi_r$ | -115 | 0.265[0.245,0.287] | 0.031[0.001,0.061] | --- | 0.027[0.015,0.043] | 0.029[0.015,0.057] |
| | | Moderate to Severe Phsyical or Sexual IPV | | | | | | |
| | Common Prevalence | $\mu+\alpha$ | -107 | 0.218[0.203,0.233] | 0.019[-0.000,0.040] | --- | --- | --- |
| | Regional Heterogeneity | $\mu+\alpha+v_r$ | -121 | 0.221[0.200,0.242] | 0.017[-0.004,0.039] | 0.029[0.017,0.046] | --- | --- |
| | Sub-Regional Heterogeneity | $\mu+\alpha+\eta_s$ | -118 | 0.221[0.200,0.242] | 0.016[-0.015,0.045] | --- | 0.029[0.017,0.045] | --- |
| | Regional Autocorrelation | $\mu+\alpha+\varphi_r$ | -119 | 0.221[0.206,0.236] | 0.017[-0.004,0.038] | --- | --- | 0.045[0.022,0.079] |
| | Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+v_r+\varphi_r$ | -121 | 0.222[0.200,0.245] | 0.017[-0.005,0.038] | 0.027[0.015,0.045] | --- | 0.031[0.015,0.062] |
| | Sub-Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\eta_s+\varphi_r$ | -119 | 0.222[0.203,0.242] | 0.016[-0.012,0.043] | --- | 0.026[0.015,0.042] | 0.035[0.016,0.069] |

| Country | Model | Parameters | DIC | Population Average $\mu$[95% C.I.] | Urban Effect $\alpha$[95% C.I.] | Reg Variance sd($v_r$)[95% C.I.] | Sub-Reg Variance sd($\eta_s$)[95% C.I.] | Reg Autocorr Term sd($\phi_r$)[95% C.I.] |
|---|---|---|---|---|---|---|---|---|
| Dominican Republic '07 | | Mild to Severe Phsyical Non-Sexual IPV | | | | | | |
| | Common Prevalence | $\mu+\alpha$ | -161 | 0.130[0.118,0.142] | 0.015[-0.001,0.031] | --- | --- | --- |
| | Regional Heterogeneity | $\mu+\alpha+v_r$ | -203 | 0.142[0.125,0.159] | 0.003[-0.015,0.021] | 0.033[0.022,0.046] | --- | --- |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sub-Regional Heterogeneity | $\mu+\alpha+\eta_s$ | -213 | 0.144[0.126,0.162] | 0.005[-0.020,0.030] | --- | 0.036[0.026,0.047] | --- |
| Regional Autocorrelation | $\mu+\alpha+\varphi_r$ | -208 | 0.141[0.129,0.154] | 0.005[-0.013,0.022] | --- | --- | 0.051[0.033,0.073] |
| Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\nu_r+\varphi_r$ | -206 | 0.142[0.124,0.160] | 0.003[-0.015,0.022] | 0.024[0.014,0.038] | --- | 0.037[0.018,0.063] |
| Sub-Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\eta_s+\varphi_r$ | -216 | 0.144[0.127,0.162] | 0.005[-0.018,0.028] | --- | 0.029[0.018,0.041] | 0.035[0.018,0.058] |
| Moderate to Severe Physical Non-Sexual IPV | | | | | | | |
| Common Prevalence | $\mu+\alpha$ | -194 | 0.076[0.067,0.085] | 0.005[-0.007,0.018] | --- | --- | --- |
| Regional Heterogeneity | $\mu+\alpha+\nu_r$ | -240 | 0.086[0.073,0.100] | 0.000[-0.013,0.014] | 0.026[0.018,0.036] | --- | --- |
| Sub-Regional Heterogeneity | $\mu+\alpha+\eta_s$ | -248 | 0.087[0.073,0.101] | 0.001[-0.018,0.020] | --- | 0.027[0.020,0.035] | --- |
| Regional Autocorrelation | $\mu+\alpha+\varphi_r$ | -245 | 0.085[0.075,0.095] | 0.002[-0.012,0.015] | --- | --- | 0.041[0.027,0.058] |
| Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\nu_r+\varphi_r$ | -242 | 0.086[0.072,0.100] | 0.001[-0.013,0.015] | 0.021[0.013,0.031] | --- | 0.030[0.016,0.049] |
| Sub-Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\eta_s+\varphi_r$ | -251 | 0.088[0.075,0.101] | 0.002[-0.016,0.020] | --- | 0.022[0.015,0.031] | 0.029[0.016,0.047] |
| Sexual IPV | | | | | | | |
| Common Prevalence | $\mu+\alpha$ | -269 | 0.029[0.024,0.035] | 0.008[0.001,0.016] | --- | --- | --- |
| Regional Heterogeneity | $\mu+\alpha+\nu_r$ | -288 | 0.037[0.029,0.045] | 0.004[-0.005,0.013] | 0.016[0.012,0.022] | --- | --- |
| Sub-Regional Heterogeneity | $\mu+\alpha+\eta_s$ | -299 | 0.040[0.030,0.049] | 0.003[-0.010,0.015] | --- | 0.018[0.013,0.023] | --- |
| Regional Autocorrelation | $\mu+\alpha+\varphi_r$ | -285 | 0.035[0.028,0.042] | 0.005[-0.004,0.014] | --- | --- | 0.024[0.016,0.036] |
| Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\nu_r+\varphi_r$ | -285 | 0.037[0.028,0.047] | 0.004[-0.006,0.013] | 0.016[0.011,0.022] | --- | 0.019[0.012,0.030] |
| Sub-Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\eta_s+\varphi_r$ | -297 | 0.040[0.031,0.049] | 0.003[-0.010,0.016] | --- | 0.017[0.012,0.023] | 0.019[0.012,0.030] |
| Mild to Severe Phsyical or Sexual IPV | | | | | | | |
| Common Prevalence | $\mu+\alpha$ | -171 | 0.142[0.130,0.155] | 0.009[-0.007,0.026] | --- | --- | --- |
| Regional Heterogeneity | $\mu+\alpha+\nu_r$ | -207 | 0.153[0.136,0.171] | -0.002[-0.021,0.016] | 0.031[0.021,0.044] | --- | --- |
| Sub-Regional Heterogeneity | $\mu+\alpha+\eta_s$ | -214 | 0.155[0.137,0.173] | -0.001[-0.025,0.024] | --- | 0.034[0.024,0.045] | --- |
| Regional Autocorrelation | $\mu+\alpha+\varphi_r$ | -211 | 0.153[0.140,0.166] | -0.001[-0.019,0.017] | --- | --- | 0.048[0.031,0.071] |
| Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\nu_r+\varphi_r$ | -209 | 0.154[0.136,0.172] | -0.002[-0.021,0.016] | 0.024[0.014,0.037] | --- | 0.036[0.018,0.061] |
| Sub-Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\eta_s+\varphi_r$ | -217 | 0.155[0.139,0.173] | -0.001[-0.024,0.022] | --- | 0.027[0.017,0.039] | 0.034[0.018,0.058] |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Moderate to Severe Phsyical or Sexual IPV | | | | | | |
| | Common Prevalence | $\mu+\alpha$ | -209 | 0.093[0.083,0.103] | 0.006[-0.007,0.019] | --- | --- | --- |
| | Regional Heterogeneity | $\mu+\alpha+v_r$ | -240 | 0.102[0.089,0.116] | -0.002[-0.016,0.012] | 0.024[0.017,0.034] | --- | --- |
| | Sub-Regional Heterogeneity | $\mu+\alpha+\eta_s$ | -243 | 0.104[0.089,0.118] | -0.002[-0.021,0.017] | --- | 0.026[0.018,0.034] | --- |
| | Regional Autocorrelation | $\mu+\alpha+\varphi_r$ | -243 | 0.102[0.091,0.112] | -0.000[-0.015,0.014] | --- | --- | 0.039[0.025,0.057] |
| | Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+v_r+\varphi_r$ | -241 | 0.103[0.088,0.118] | -0.002[-0.017,0.013] | 0.021[0.014,0.031] | --- | 0.028[0.016,0.047] |
| | Sub-Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\eta_s+\varphi_r$ | -246 | 0.104[0.091,0.118] | -0.002[-0.020,0.017] | --- | 0.022[0.014,0.031] | 0.029[0.016,0.047] |

| Country | Model | Parameters | DIC | Population Average $\mu$[95% C.I.] | Urban Effect $\alpha$[95% C.I.] | Reg Variance sd($v_r$)[95% C.I.] | Sub-Reg Variance sd($\eta_s$)[95% C.I.] | Reg Autocorr Term sd($\phi_r$)[95% C.I.] |
|---|---|---|---|---|---|---|---|---|
| Haiti '05-06 | | Mild to Severe Phsyical Non-Sexual IPV | | | | | | |
| | Common Prevalence | $\mu+\alpha$ | -72 | 0.108[0.090,0.126] | 0.018[-0.011,0.048] | --- | --- | --- |
| | Regional Heterogeneity | $\mu+\alpha+v_r$ | -76 | 0.113[0.086,0.141] | 0.012[-0.019,0.044] | 0.030[0.016,0.053] | --- | --- |
| | Sub-Regional Heterogeneity | $\mu+\alpha+\eta_s$ | -71 | 0.113[0.087,0.139] | 0.013[-0.027,0.051] | --- | 0.025[0.014,0.043] | --- |
| | Regional Autocorrelation | $\mu+\alpha+\varphi_r$ | -75 | 0.112[0.094,0.131] | 0.013[-0.018,0.043] | --- | --- | 0.036[0.017,0.074] |
| | Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+v_r+\varphi_r$ | -76 | 0.114[0.084,0.146] | 0.010[-0.021,0.041] | 0.030[0.015,0.057] | --- | 0.033[0.016,0.070] |
| | Sub-Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\eta_s+\varphi_r$ | -72 | 0.114[0.090,0.138] | 0.011[-0.028,0.049] | --- | 0.024[0.014,0.040] | 0.033[0.015,0.069] |
| | | Moderate to Severe Physical Non-Sexual IPV | | | | | | |
| | Common Prevalence | $\mu+\alpha$ | -83 | 0.054[0.041,0.067] | 0.024[0.002,0.047] | --- | --- | --- |
| | Regional Heterogeneity | $\mu+\alpha+v_r$ | -85 | 0.062[0.040,0.084] | 0.017[-0.007,0.042] | 0.025[0.014,0.043] | --- | --- |
| | Sub-Regional Heterogeneity | $\mu+\alpha+\eta_s$ | -82 | 0.062[0.041,0.083] | 0.016[-0.017,0.048] | --- | 0.022[0.013,0.035] | --- |
| | Regional Autocorrelation | $\mu+\alpha+\varphi_r$ | -85 | 0.060[0.046,0.074] | 0.018[-0.005,0.042] | --- | --- | 0.031[0.015,0.059] |
| | Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+v_r+\varphi_r$ | -84 | 0.063[0.037,0.089] | 0.016[-0.009,0.040] | 0.026[0.014,0.047] | --- | 0.030[0.015,0.059] |
| | Sub-Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\eta_s+\varphi_r$ | -81 | 0.063[0.044,0.084] | 0.016[-0.017,0.048] | --- | 0.022[0.013,0.035] | 0.028[0.014,0.054] |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Sexual IPV | | | | | | |
| | Common Prevalence | $\mu+\alpha$ | -64 | 0.060[0.045,0.075] | 0.044[0.017,0.071] | --- | --- | --- |
| | Regional Heterogeneity | $\mu+\alpha+v_r$ | -72 | 0.071[0.046,0.098] | 0.037[0.009,0.067] | 0.030[0.017,0.053] | --- | --- |
| | Sub-Regional Heterogeneity | $\mu+\alpha+\eta_s$ | -71 | 0.072[0.046,0.099] | 0.037[-0.005,0.078] | --- | 0.029[0.016,0.048] | --- |
| | Regional Autocorrelation | $\mu+\alpha+\varphi_r$ | -72 | 0.070[0.054,0.087] | 0.036[0.009,0.065] | --- | --- | 0.039[0.019,0.075] |
| | Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+v_r+\varphi_r$ | -72 | 0.073[0.044,0.103] | 0.036[0.007,0.064] | 0.029[0.015,0.053] | --- | 0.034[0.016,0.069] |
| | Sub-Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\eta_s+\varphi_r$ | -71 | 0.073[0.050,0.098] | 0.037[-0.003,0.076] | --- | 0.026[0.015,0.045] | 0.033[0.016,0.065] |
| | | Mild to Severe Phsyical or Sexual IPV | | | | | | |
| | Common Prevalence | $\mu+\alpha$ | -49 | 0.135[0.114,0.156] | 0.052[0.018,0.088] | --- | --- | --- |
| | Regional Heterogeneity | $\mu+\alpha+v_r$ | -62 | 0.147[0.112,0.184] | 0.044[0.007,0.083] | 0.043[0.021,0.076] | --- | --- |
| | Sub-Regional Heterogeneity | $\mu+\alpha+\eta_s$ | -59 | 0.146[0.113,0.182] | 0.048[-0.005,0.102] | --- | 0.038[0.020,0.063] | --- |
| | Regional Autocorrelation | $\mu+\alpha+\varphi_r$ | -60 | 0.145[0.123,0.168] | 0.044[0.007,0.081] | --- | --- | 0.059[0.023,0.119] |
| | Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+v_r+\varphi_r$ | -62 | 0.148[0.110,0.188] | 0.043[0.004,0.080] | 0.039[0.018,0.076] | --- | 0.041[0.017,0.096] |
| | Sub-Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\eta_s+\varphi_r$ | -60 | 0.148[0.117,0.179] | 0.047[-0.003,0.096] | --- | 0.033[0.016,0.058] | 0.041[0.017,0.094] |
| | | Moderate to Severe Phsyical or Sexual IPV | | | | | | |
| | Common Prevalence | $\mu+\alpha$ | -44 | 0.088[0.071,0.105] | 0.062[0.032,0.094] | --- | --- | --- |
| | Regional Heterogeneity | $\mu+\alpha+v_r$ | -66 | 0.109[0.076,0.145] | 0.048[0.014,0.082] | 0.042[0.023,0.073] | --- | --- |
| | Sub-Regional Heterogeneity | $\mu+\alpha+\eta_s$ | -63 | 0.109[0.077,0.143] | 0.049[-0.003,0.099] | --- | 0.038[0.022,0.062] | --- |
| | Regional Autocorrelation | $\mu+\alpha+\varphi_r$ | -64 | 0.107[0.088,0.128] | 0.047[0.015,0.081] | --- | --- | 0.064[0.029,0.119] |
| | Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+v_r+\varphi_r$ | -66 | 0.110[0.074,0.148] | 0.046[0.012,0.080] | 0.038[0.018,0.072] | --- | 0.040[0.017,0.093] |
| | Sub-Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\eta_s+\varphi_r$ | -64 | 0.110[0.082,0.140] | 0.048[0.001,0.095] | --- | 0.033[0.017,0.057] | 0.040[0.016,0.089] |

| Country | Model | Parameters | DIC | Population Average $\mu$[95% C.I.] | Urban Effect $\alpha$[95% C.I.] | Reg Variance sd($v_r$)[95% C.I.] | Sub-Reg Variance sd($\eta_s$)[95% C.I.] | Reg Autocorr Term sd($\phi_r$)[95% C.I.] |
|---|---|---|---|---|---|---|---|---|

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Bolivia '08 | | Mild to Severe Phsyical Non-Sexual IPV | | | | | | |
| | Common Prevalence | $\mu+\alpha$ | -55 | 0.231[0.214,0.249] | 0.026[0.004,0.049] | --- | --- | --- |
| | Regional Heterogeneity | $\mu+\alpha+\nu_r$ | -71 | 0.234[0.207,0.263] | 0.027[0.004,0.051] | 0.031[0.017,0.053] | --- | --- |
| | Sub-Regional Heterogeneity | $\mu+\alpha+\eta_s$ | -70 | 0.235[0.207,0.263] | 0.028[-0.011,0.066] | --- | 0.030[0.018,0.048] | --- |
| | Regional Autocorrelation | $\mu+\alpha+\varphi_r$ | -72 | 0.234[0.216,0.252] | 0.027[0.004,0.050] | --- | --- | 0.044[0.023,0.079] |
| | Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\nu_r+\varphi_r$ | -71 | 0.234[0.203,0.267] | 0.028[0.004,0.051] | 0.028[0.015,0.052] | --- | 0.036[0.016,0.075] |
| | Sub-Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\eta_s+\varphi_r$ | -72 | 0.234[0.209,0.261] | 0.029[-0.007,0.064] | --- | 0.026[0.014,0.042] | 0.037[0.017,0.073] |
| | | Moderate to Severe Physical Non-Sexual IPV | | | | | | |
| | Common Prevalence | $\mu+\alpha$ | -58 | 0.181[0.166,0.197] | 0.003[-0.016,0.024] | --- | --- | --- |
| | Regional Heterogeneity | $\mu+\alpha+\nu_r$ | -77 | 0.186[0.161,0.211] | 0.004[-0.016,0.025] | 0.028[0.016,0.048] | --- | --- |
| | Sub-Regional Heterogeneity | $\mu+\alpha+\eta_s$ | -76 | 0.185[0.160,0.210] | 0.006[-0.028,0.040] | --- | 0.027[0.017,0.042] | --- |
| | Regional Autocorrelation | $\mu+\alpha+\varphi_r$ | -77 | 0.186[0.169,0.202] | 0.004[-0.016,0.024] | --- | --- | 0.042[0.022,0.075] |
| | Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\nu_r+\varphi_r$ | -77 | 0.186[0.157,0.216] | 0.004[-0.016,0.025] | 0.028[0.015,0.049] | --- | 0.033[0.016,0.067] |
| | Sub-Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\eta_s+\varphi_r$ | -77 | 0.185[0.162,0.210] | 0.006[-0.026,0.038] | --- | 0.024[0.014,0.038] | 0.034[0.016,0.067] |
| | | Sexual IPV | | | | | | |
| | Common Prevalence | $\mu+\alpha$ | -92 | 0.060[0.051,0.069] | 0.010[-0.001,0.022] | --- | --- | --- |
| | Regional Heterogeneity | $\mu+\alpha+\nu_r$ | -92 | 0.063[0.047,0.080] | 0.010[-0.002,0.022] | 0.020[0.012,0.032] | --- | --- |
| | Sub-Regional Heterogeneity | $\mu+\alpha+\eta_s$ | -93 | 0.065[0.049,0.082] | 0.008[-0.015,0.030] | --- | 0.019[0.012,0.028] | --- |
| | Regional Autocorrelation | $\mu+\alpha+\varphi_r$ | -92 | 0.062[0.053,0.072] | 0.010[-0.002,0.022] | --- | --- | 0.025[0.014,0.043] |
| | Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\nu_r+\varphi_r$ | -91 | 0.063[0.042,0.085] | 0.010[-0.002,0.022] | 0.022[0.013,0.038] | --- | 0.027[0.014,0.050] |
| | Sub-Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\eta_s+\varphi_r$ | -92 | 0.066[0.050,0.083] | 0.008[-0.016,0.031] | --- | 0.019[0.012,0.030] | 0.025[0.014,0.047] |
| | | Mild to Severe Phsyical or Sexual IPV | | | | | | |
| | Common Prevalence | $\mu+\alpha$ | -56 | 0.244[0.226,0.262] | 0.022[-0.001,0.046] | --- | --- | --- |
| | Regional Heterogeneity | $\mu+\alpha+\nu_r$ | -70 | 0.247[0.219,0.275] | 0.024[0.000,0.048] | 0.031[0.017,0.053] | --- | --- |
| | Sub-Regional Heterogeneity | $\mu+\alpha+\eta_s$ | -69 | 0.247[0.219,0.276] | 0.024[-0.015,0.063] | --- | 0.030[0.018,0.049] | --- |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Regional Autocorrelation | $\mu+\alpha+\varphi_r$ | -70 | 0.246[0.227,0.265] | 0.024[0.000,0.047] | --- | --- | 0.044[0.022,0.080] |
| Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\nu_r+\varphi_r$ | -70 | 0.247[0.215,0.279] | 0.024[0.000,0.048] | 0.029[0.015,0.053] | --- | 0.036[0.016,0.075] |
| Sub-Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\eta_s+\varphi_r$ | -71 | 0.247[0.221,0.274] | 0.025[-0.012,0.061] | --- | 0.026[0.015,0.043] | 0.036[0.017,0.074] |
| Moderate to Severe Phsyical or Sexual IPV | | | | | | | |
| Common Prevalence | $\mu+\alpha$ | -63 | 0.200[0.184,0.217] | 0.001[-0.020,0.022] | --- | --- | --- |
| Regional Heterogeneity | $\mu+\alpha+\nu_r$ | -75 | 0.204[0.179,0.230] | 0.002[-0.020,0.024] | 0.028[0.016,0.048] | --- | --- |
| Sub-Regional Heterogeneity | $\mu+\alpha+\eta_s$ | -74 | 0.204[0.178,0.230] | 0.002[-0.033,0.038] | --- | 0.027[0.016,0.042] | --- |
| Regional Autocorrelation | $\mu+\alpha+\varphi_r$ | -74 | 0.204[0.187,0.222] | 0.001[-0.020,0.023] | --- | --- | 0.040[0.020,0.072] |
| Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\nu_r+\varphi_r$ | -75 | 0.205[0.175,0.235] | 0.002[-0.020,0.023] | 0.027[0.015,0.049] | --- | 0.032[0.016,0.067] |
| Sub-Regional Heterogeneity + Regional Autocorrelation | $\mu+\alpha+\eta_s+\varphi_r$ | -74 | 0.204[0.180,0.230] | 0.003[-0.031,0.036] | --- | 0.024[0.014,0.039] | 0.033[0.016,0.067] |

Note: DIC is the Deviance Information Criterion; lower DIC values are preferred.

Table 11. The Moran I Descriptive Correlations of Spatial Autocorrelation in Prevalence Rates

| | | 1st Order Neighborhood Moran's I Correlation Coefficients (and Variance) | | | | |
|---|---|---|---|---|---|---|
| | | Physical Non-Sexual IPV[1] | | Sexual IPV | Physical[1] or Sexual IPV | |
| Country | | Mild to Severe | Moderate to Severve | Forced Sex | Mild to Severe | Moderate to Severve |
| Columbia '10 | Subregion Type | | | | | |
| | Full Region | 0.383(0.013)*** | 0.469(0.013)*** | 0.298(0.013)*** | 0.379(0.013)*** | 0.461(0.013)*** |
| | Urban | 0.376(0.013)*** | 0.357(0.012)*** | 0.185(0.012)† | 0.358(0.013)*** | 0.348(0.013)*** |
| | Rural | 0.368(0.013)*** | 0.343(0.013)*** | 0.163(0.013)† | 0.383(0.013)*** | 0.339(0.013)** |
| Dominican Republic '07 | Subregion Type | | | | | |
| | Full Region | 0.378(0.013)*** | 0.393(0.013)*** | 0.040(0.013) | 0.375(0.013)*** | 0.342(0.013)*** |
| | Urban | 0.331(0.013)** | 0.277(0.013)** | 0.144(0.013) | 0.342(0.013)** | 0.261(0.013)* |
| | Rural | 0.148(0.012) | 0.235(0.012)* | 0.044(0.012) | 0.163(0.012)† | 0.194(0.012)* |
| Haiti '05-06 | Subregion Type | | | | | |
| | Full Region | -0.153(0.039) | -0.214(0.044) | 0.199(0.047) | -0.066(0.040) | -0.101(0.047) |
| | Urban | -0.176(0.021) | -0.240(0.038) | -0.300(0.046) | -0.267(0.030) | -0.268(0.047) |
| | Rural | -0.155(0.043) | -0.198(0.043) | 0.087(0.045) | -0.082(0.041) | -0.133(0.044) |
| Peru '04 | Subregion Type | | | | | |
| | Full Region | 0.543(0.017)*** | 0.483(0.017)*** | 0.570(0.017)*** | 0.551(0.017)*** | 0.494(0.017)*** |
| | Urban | 0.513(0.018)*** | 0.415(0.018)*** | 0.500(0.017)*** | 0.521(0.018)*** | 0.449(0.018)*** |
| | Rural | 0.368(0.018)** | 0.437(0.018)*** | 0.500(0.018)*** | 0.378(0.018)** | 0.441(0.018)*** |
| Nicaragua '98 | Subregion Type | | | | | |
| | Full Region | -0.236(0.024) | -0.175(0.023) | 0.206(0.024)† | -0.220(0.023) | -0.156(0.023) |
| | Urban | -0.184(0.023) | -0.096(0.023) | -0.106(0.022) | -0.186(0.023) | -0.114(0.022) |
| | Rural | -0.200(0.023) | -0.102(0.023) | 0.069(0.022) | -0.185(0.023) | -0.082(0.023) |
| Bolivia '08 | Subregion Type | | | | | |
| | Full Region | 0.126(0.035) | -0.097(0.029) | -0.363(0.041) | 0.103(0.037) | -0.066(0.033) |
| | Urban | 0.259(0.039)† | -0.080(0.034) | -0.143(0.039) | 0.225(0.039)† | -0.071(0.036) |
| | Rural | -0.381(0.033) | -0.113(0.037) | -0.271(0.029) | -0.341(0.031) | -0.038(0.033) |

Table 12. Intimate Partner Violence and Woman's Characteristics

*Columbia*

| Woman's Characteristics | | | Conditional IPV Proportions | | | | |
|---|---|---|---|---|---|---|---|
| | Factors and | Marginal | Physical Non-Sexual IPV | | Sexual IPV | Physical or Sexual IPV | |
| | Levels | Proportions[1] | Mild to Severe | Moderate to Severe | Forced Sex | Mild to Severe | Moderate to Severe |
| Columbia '10 | Age Group | n = 34624 | ** (lin) | *** (lin) | *** (lin) | *** (lin) | *** (lin) |
| | 15-19 | 0.046 (0.001) | 0.331 (0.014) | 0.127 (0.010) | 0.049 (0.007) | 0.339 (0.015) | 0.144 (0.011) |
| | 20-29 | 0.281 (0.003) | 0.359 (0.006) | 0.151 (0.005) | 0.075 (0.003) | 0.365 (0.006) | 0.174 (0.005) |
| | 30-39 | 0.339 (0.004) | 0.363 (0.006) | 0.171 (0.005) | 0.098 (0.004) | 0.372 (0.006) | 0.200 (0.005) |
| | 40-49 | 0.334 (0.003) | 0.377 (0.006) | 0.191 (0.005) | 0.122 (0.004) | 0.388 (0.006) | 0.232 (0.005) |
| | Education | n = 34624 | *** (lin) | *** (lin) | *** (lin) | *** (lin) | *** (lin) |
| | No Education | 0.023 (0.001) | 0.360 (0.020) | 0.207 (0.017) | 0.117 (0.012) | 0.369 (0.020) | 0.239 (0.018) |
| | Primary | 0.289 (0.004) | 0.407 (0.007) | 0.215 (0.006) | 0.126 (0.004) | 0.418 (0.007) | 0.252 (0.006) |
| | Secondary | 0.486 (0.004) | 0.373 (0.005) | 0.167 (0.004) | 0.093 (0.003) | 0.381 (0.005) | 0.195 (0.004) |
| | Higher | 0.201 (0.004) | 0.287 (0.008) | 0.111 (0.005) | 0.065 (0.004) | 0.294 (0.008) | 0.137 (0.006) |
| | Work Status | n = 34624 | *** (lin) | *** (lin) | *** (lin) | *** (lin) | *** (lin) |
| | Not Working | 0.294 (0.004) | 0.301 (0.006) | 0.129 (0.004) | 0.064 (0.003) | 0.309 (0.006) | 0.152 (0.005) |
| | Worked in Past Year | 0.129 (0.002) | 0.395 (0.009) | 0.177 (0.007) | 0.094 (0.006) | 0.404 (0.009) | 0.204 (0.008) |
| | Currently Working | 0.577 (0.004) | 0.391 (0.005) | 0.190 (0.004) | 0.116 (0.003) | 0.400 (0.005) | 0.225 (0.004) |

All table cells list the estimated population subgroup proportions alongside their Normal-distribution standard error approximations in parentheses

[1]Column contains *unweighted* responder sample sizes in gray cells and *weighted* marginal proportions and design SE's for each levels of the row factor in off-white cells

***p<0.001, **p<0.01, *p<0.05, †p<0.10 for linear trend (lin), quadratic trend (quad), or general-group difference (grpdif) tests

*Dominican Republic*

| Woman's Characteristics | | | Conditional IPV Proportions | | | | |
|---|---|---|---|---|---|---|---|
| | Factors and | Marginal | Physical Non-Sexual IPV | | Sexual IPV | Physical or Sexual IPV | |
| | Levels | Proportions[1] | Mild to Severe | Moderate to Severe | Forced Sex | Mild to Severe | Moderate to Severe |
| Dominican Republic '07 | Age Group | n = 8421 | ** (lin) | | | ** (lin) | |
| | 15-19 | 0.067 (0.004) | 0.164 (0.029) | 0.082 (0.021) | 0.030 (0.008) | 0.167 (0.029) | 0.091 (0.021) |
| | 20-29 | 0.317 (0.008) | 0.182 (0.013) | 0.104 (0.009) | 0.045 (0.007) | 0.191 (0.013) | 0.120 (0.010) |
| | 30-39 | 0.368 (0.008) | 0.158 (0.011) | 0.097 (0.009) | 0.047 (0.006) | 0.164 (0.011) | 0.112 (0.009) |
| | 40-49 | 0.247 (0.007) | 0.129 (0.013) | 0.086 (0.011) | 0.048 (0.008) | 0.136 (0.013) | 0.099 (0.011) |
| | Education | n = 8421 | *** (lin) | *** (lin) | ** (lin) | *** (lin) | *** (lin) |
| | No Education | 0.042 (0.003) | 0.156 (0.032) | 0.113 (0.027) | 0.039 (0.014) | 0.161 (0.033) | 0.120 (0.027) |
| | Primary | 0.440 (0.011) | 0.193 (0.011) | 0.122 (0.009) | 0.061 (0.006) | 0.201 (0.012) | 0.139 (0.011) |
| | Secondary | 0.338 (0.008) | 0.141 (0.011) | 0.073 (0.007) | 0.037 (0.006) | 0.148 (0.011) | 0.087 (0.008) |
| | Higher | 0.181 (0.009) | 0.107 (0.014) | 0.070 (0.013) | 0.027 (0.008) | 0.113 (0.015) | 0.078 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | (0.014) |
| | Work Status | n = 8419 | | | † (lin) | | † (lin) |
| | Not Working | 0.461 (0.008) | 0.146 (0.009) | 0.083 (0.008) | 0.038 (0.005) | 0.153 (0.010) | 0.094 (0.008) |
| | Worked in Past Year | 0.098 (0.005) | 0.236 (0.029) | 0.148 (0.022) | 0.055 (0.013) | 0.243 (0.029) | 0.160 (0.022) |
| | Currently Working | 0.442 (0.008) | 0.155 (0.010) | 0.097 (0.008) | 0.051 (0.006) | 0.163 (0.010) | 0.115 (0.009) |

All table cells list the estimated population subgroup proportions alongside their Normal-distribution standard error approximations in parentheses

[1]Column contains *unweighted* responder sample sizes in gray cells and *weighted* marginal proportions and design SE's for each levels of the row factor in off-white cells

***p<0.001, **p<0.01, *p<0.05, †p<0.10 for linear trend (lin), quadratic trend (quad), or general-group difference (grpdif) tests

## *Nicaragua*

| Woman's Characteristics | | | Conditional IPV Proportions | | | | |
|---|---|---|---|---|---|---|---|
| | Factors and | Marginal | Physical Non-Sexual IPV[2] | | Sexual IPV | Physical[2] or Sexual IPV | |
| | Levels | Proportions[1] | Mild to Severe | Moderate to Severe | Forced Sex | Mild to Severe | Moderate to Severe |
| Nicaragua '98 | Age Group | n = 8466 | * (lin) | *** (lin) | *** (lin) | * (lin) | *** (lin) |
| | 15-19 | 0.109 (0.004) | 0.246 (0.019) | 0.169 (0.018) | 0.057 (0.012) | 0.255 (0.019) | 0.183 (0.019) |
| | 20-29 | 0.358 (0.006) | 0.264 (0.009) | 0.198 (0.008) | 0.072 (0.005) | 0.269 (0.009) | 0.208 (0.008) |
| | 30-39 | 0.327 (0.005) | 0.292 (0.011) | 0.237 (0.010) | 0.099 (0.007) | 0.303 (0.011) | 0.254 (0.010) |
| | 40-49 | 0.206 (0.005) | 0.287 (0.015) | 0.243 (0.013) | 0.105 (0.009) | 0.293 (0.015) | 0.254 (0.013) |
| | Education | n = 8466 | *** (lin) | *** (lin) | † (lin) | *** (lin) | *** (lin) |
| | No Education | 0.186 (0.005) | 0.318 (0.014) | 0.265 (0.013) | 0.086 (0.008) | 0.322 (0.014) | 0.274 (0.013) |
| | Primary | 0.441 (0.007) | 0.289 (0.010) | 0.238 (0.009) | 0.096 (0.006) | 0.299 (0.010) | 0.252 (0.009) |
| | Secondary | 0.320 (0.007) | 0.252 (0.010) | 0.182 (0.009) | 0.078 (0.007) | 0.261 (0.011) | 0.199 (0.010) |
| | Higher | 0.053 (0.005) | 0.187 (0.030) | 0.108 (0.023) | 0.072 (0.015) | 0.189 (0.030) | 0.118 (0.023) |
| | Work Status | n = 8462 | *** (lin) | *** (lin) | *** (lin) | *** (lin) | *** (lin) |
| | Not Working | 0.522 (0.007) | 0.240 (0.008) | 0.189 (0.007) | 0.066 (0.004) | 0.247 (0.008) | 0.200 (0.007) |
| | Worked in Past Year | 0.056 (0.004) | 0.376 (0.035) | 0.280 (0.034) | 0.127 (0.026) | 0.385 (0.036) | 0.295 (0.034) |
| | Currently Working | 0.421 (0.008) | 0.311 (0.010) | 0.248 (0.008) | 0.108 (0.007) | 0.320 (0.010) | 0.264 (0.009) |

All table cells list the estimated population subgroup proportions alongside their Normal-distribution standard error approximations in parentheses

[1]Column contains *unweighted* responder sample sizes in gray cells and *weighted* marginal proportions and design SE's for each levels of the row factor in off-white cells

[2]Nicaragua asks about threatening with *weapons*, slapping or *twisting an arm*, and does not ask about burning, *dragging*, *beating with or throwing objects*

***p<0.001, **p<0.01, *p<0.05, †p<0.10 for linear trend (lin), quadratic trend (quad), or general-group difference (grpdif) test

## *Haiti*

| Woman's Characteristics | | | Conditional IPV Proportions | | | | |
|---|---|---|---|---|---|---|---|
| | Factors and | Marginal | Physical Non-Sexual IPV | | Sexual IPV | Physical or Sexual IPV | |
| | Levels | Proportions[1] | Mild to Severe | Moderate to Severe | Forced Sex | Mild to Severe | Moderate to Severe |
| Haiti '05-06 | Age Group | n = 2676 | | | | | |
| | 15-19 | 0.053 (0.005) | 0.179 (0.053) | 0.067 (0.029) | 0.100 (0.030) | 0.222 (0.054) | 0.137 (0.036) |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 20-29 | 0.374 (0.012) | 0.139 (0.013) | 0.081 (0.011) | 0.097 (0.012) | 0.186 (0.017) | 0.142 (0.015) |
| | 30-39 | 0.333 (0.012) | 0.130 (0.017) | 0.079 (0.013) | 0.117 (0.015) | 0.183 (0.017) | 0.156 (0.017) |
| | 40-49 | 0.240 (0.011) | 0.115 (0.017) | 0.060 (0.013) | 0.068 (0.014) | 0.157 (0.020) | 0.106 (0.019) |
| | Education | n = 2676 | ** (lin) | † (lin) | | | |
| | No Education | 0.349 (0.013) | 0.147 (0.016) | 0.084 (0.013) | 0.097 (0.014) | 0.182 (0.018) | 0.143 (0.019) |
| | Primary | 0.380 (0.012) | 0.147 (0.015) | 0.079 (0.011) | 0.114 (0.013) | 0.202 (0.018) | 0.150 (0.014) |
| | Secondary | 0.251 (0.012) | 0.094 (0.017) | 0.060 (0.012) | 0.074 (0.016) | 0.147 (0.021) | 0.117 (0.019) |
| | Higher | 0.020 (0.004) | 0.092 (0.067) | 0.010 (0.015) | 0.067 (0.047) | 0.132 (0.072) | 0.078 (0.048) |
| | Work Status | n = 2676 | | * (lin) | | | |
| | Not Working | 0.318 (0.014) | 0.144 (0.017) | 0.094 (0.014) | 0.095 (0.014) | 0.191 (0.017) | 0.148 (0.016) |
| | Worked in Past Year | 0.106 (0.009) | 0.131 (0.032) | 0.062 (0.021) | 0.107 (0.029) | 0.161 (0.036) | 0.126 (0.031) |
| | Currently Working | 0.576 (0.016) | 0.126 (0.012) | 0.066 (0.008) | 0.096 (0.012) | 0.177 (0.015) | 0.134 (0.013) |

All table cells list the estimated population subgroup proportions alongside their Normal-distribution standard error approximations in parentheses

[1]Column contains *unweighted* responder sample sizes in gray cells and *weighted* marginal proportions and design SE's for each levels of the row factor in off-white cells

***p<0.001, **p<0.01, *p<0.05, †p<0.10 for linear trend (lin), quadratic trend (quad), or general-group difference (grpdif) tests

*Peru*

| Woman's Characteristics | | | Conditional IPV Proportions | | | | |
|---|---|---|---|---|---|---|---|
| | Factors and | Marginal | Physical Non-Sexual IPV | | Sexual IPV | Physical or Sexual IPV | |
| | Levels | Proportions[1] | Mild to Severe | Moderate to Severe | Forced Sex | Mild to Severe | Moderate to Severe |
| Peru '04 | Age Group | n = 22919 | *** (lin) | *** (lin) | *** (lin) | *** (lin) | *** (lin) |
| | 15-19 | 0.029 (0.001) | 0.261 (0.020) | 0.156 (0.017) | 0.037 (0.008) | 0.269 (0.020) | 0.166 (0.017) |
| | 20-29 | 0.282 (0.004) | 0.351 (0.009) | 0.207 (0.007) | 0.061 (0.004) | 0.358 (0.009) | 0.222 (0.007) |
| | 30-39 | 0.392 (0.005) | 0.413 (0.008) | 0.273 (0.007) | 0.093 (0.004) | 0.420 (0.008) | 0.293 (0.007) |
| | 40-49 | 0.297 (0.005) | 0.413 (0.009) | 0.295 (0.008) | 0.112 (0.005) | 0.422 (0.009) | 0.314 (0.009) |
| | Education | n = 22919 | ** (lin) | *** (lin) | *** (lin) | *** (lin) | *** (lin) |
| | No Education | 0.046 (0.003) | 0.349 (0.018) | 0.301 (0.017) | 0.120 (0.011) | 0.363 (0.018) | 0.324 (0.018) |
| | Primary | 0.337 (0.006) | 0.395 (0.008) | 0.308 (0.007) | 0.105 (0.005) | 0.406 (0.008) | 0.327 (0.007) |
| | Secondary | 0.378 (0.006) | 0.432 (0.009) | 0.271 (0.007) | 0.087 (0.004) | 0.438 (0.009) | 0.288 (0.008) |
| | Higher | 0.239 (0.006) | 0.330 (0.010) | 0.157 (0.007) | 0.061 (0.005) | 0.335 (0.010) | 0.173 (0.008) |
| | Work Status | n = 22918 | *** (lin) | *** (lin) | *** (lin) | *** (lin) | *** (lin) |
| | Not Working | 0.228 (0.005) | 0.319 (0.010) | 0.186 (0.008) | 0.048 (0.004) | 0.326 (0.010) | 0.202 (0.008) |
| | Worked in Past Year | 0.103 (0.003) | 0.387 (0.015) | 0.244 (0.012) | 0.092 (0.008) | 0.395 (0.015) | 0.269 (0.013) |
| | Currently Working | 0.669 (0.005) | 0.416 (0.007) | 0.284 (0.006) | 0.101 (0.003) | 0.424 (0.007) | 0.302 (0.006) |

All table cells list the estimated population subgroup proportions alongside their Normal-distribution standard error approximations in parentheses

[1]Column contains *unweighted* responder sample sizes in gray cells and *weighted* marginal proportions and design SE's for each levels of the row factor in off-white cells

***p<0.001, **p<0.01, *p<0.05, †p<0.10 for linear trend (lin), quadratic trend (quad), or general-group difference (grpdif) tests

## *Bolivia*

| Woman's Characteristics | | | Conditional IPV Proportions | | | | |
|---|---|---|---|---|---|---|---|
| | Factors and Levels | Marginal Proportions[1] | Physical Non-Sexual IPV Mild to Severe | Physical Non-Sexual IPV Moderate to Severe | Sexual IPV Forced Sex | Physical or Sexual IPV Mild to Severe | Physical or Sexual IPV Moderate to Severe |
| Bolivia '08 | Age Group | n = 9219 | *** (lin) | ** (lin) | | *** (lin) | ** (lin) |
| | 15-19 | 0.050 (0.003) | 0.297 (0.026) | 0.214 (0.023) | 0.058 (0.012) | 0.303 (0.026) | 0.222 (0.023) |
| | 20-29 | 0.325 (0.006) | 0.276 (0.010) | 0.199 (0.009) | 0.063 (0.006) | 0.285 (0.010) | 0.216 (0.009) |
| | 30-39 | 0.361 (0.006) | 0.236 (0.009) | 0.180 (0.008) | 0.072 (0.006) | 0.246 (0.009) | 0.197 (0.009) |
| | 40-49 | 0.264 (0.006) | 0.208 (0.010) | 0.164 (0.009) | 0.068 (0.006) | 0.220 (0.011) | 0.182 (0.010) |
| | Education | n = 9219 | *** (lin) | *** (lin) | *** (lin) | ** (lin) | *** (lin) |
| | No Education | 0.059 (0.004) | 0.271 (0.024) | 0.239 (0.022) | 0.070 (0.013) | 0.279 (0.024) | 0.249 (0.022) |
| | Primary | 0.497 (0.008) | 0.246 (0.008) | 0.198 (0.008) | 0.075 (0.005) | 0.255 (0.008) | 0.215 (0.008) |
| | Secondary | 0.292 (0.007) | 0.277 (0.012) | 0.191 (0.010) | 0.066 (0.006) | 0.288 (0.012) | 0.208 (0.010) |
| | Higher | 0.151 (0.007) | 0.169 (0.012) | 0.100 (0.009) | 0.041 (0.007) | 0.181 (0.012) | 0.119 (0.010) |
| | Work Status | n = 9219 | ** (lin) | ** (lin) | | ** (lin) | ** (lin) |
| | Not Working | 0.254 (0.007) | 0.211 (0.010) | 0.152 (0.009) | 0.062 (0.007) | 0.222 (0.010) | 0.174 (0.009) |
| | Worked in Past Year | 0.100 (0.005) | 0.289 (0.017) | 0.206 (0.016) | 0.060 (0.009) | 0.298 (0.017) | 0.223 (0.016) |
| | Currently Working | 0.646 (0.008) | 0.251 (0.008) | 0.193 (0.007) | 0.070 (0.004) | 0.261 (0.008) | 0.207 (0.007) |

All table cells list the estimated population subgroup proportions alongside their Normal-distribution standard error approximations in parentheses

[1]Column contains *unweighted* responder sample sizes in gray cells and *weighted* marginal proportions and design SE's for each levels of the row factor in off-white cells

***p<0.001, **p<0.01, *p<0.05, †p<0.10 for linear trend (lin), quadratic trend (quad), or general-group difference (grpdif) tests

Table 13. Intimate Partner Violence and Family Characteristics

*Columbia*

| Partner and Family-Level Characteristics | | | Conditional IPV Proportions | | | | |
|---|---|---|---|---|---|---|---|
| | Factors and Levels | Marginal Proportions[1] | Physical Non-Sexual IPV: Mild to Severe | Physical Non-Sexual IPV: Moderate to Severe | Sexual IPV: Forced Sex | Physical or Sexual IPV: Mild to Severe | Physical or Sexual IPV: Moderate to Severe |
| Columbia '10 | Marital Status | n = 34624 | *** (grpdif) | *** (grpdif) | | *** (grpdif) | *** (grpdif) |
| | Formerly/Currently Living with man | 0.660 (0.004) | 0.385 (0.004) | 0.182 (0.003) | 0.099 (0.003) | 0.394 (0.004) | 0.211 (0.004) |
| | Formerly/Currently Married | 0.340 (0.004) | 0.326 (0.006) | 0.148 (0.004) | 0.095 (0.003) | 0.334 (0.006) | 0.180 (0.005) |
| | Wealth Index | n = 34624 | *** (quad) | *** (quad) | *** (quad) | *** (quad) | *** (quad) |
| | Poorest | 0.183 (0.004) | 0.334 (0.007) | 0.167 (0.006) | 0.096 (0.005) | 0.344 (0.007) | 0.198 (0.006) |
| | Poor | 0.210 (0.005) | 0.390 (0.007) | 0.190 (0.006) | 0.101 (0.004) | 0.399 (0.007) | 0.221 (0.006) |
| | Middle | 0.219 (0.004) | 0.415 (0.008) | 0.204 (0.006) | 0.114 (0.005) | 0.425 (0.008) | 0.236 (0.007) |
| | Richer | 0.206 (0.004) | 0.365 (0.008) | 0.154 (0.006) | 0.093 (0.005) | 0.372 (0.008) | 0.184 (0.006) |
| | Richest | 0.181 (0.004) | 0.307 (0.009) | 0.130 (0.006) | 0.081 (0.005) | 0.316 (0.009) | 0.156 (0.006) |
| | Total No. Births | n = 34624 | *** (lin) | *** (lin) | *** (lin) | *** (lin) | *** (lin) |
| | 0 | 0.080 (0.002) | 0.229 (0.011) | 0.080 (0.007) | 0.037 (0.005) | 0.237 (0.011) | 0.097 (0.007) |
| | 1 | 0.240 (0.003) | 0.318 (0.007) | 0.125 (0.005) | 0.063 (0.004) | 0.324 (0.007) | 0.147 (0.005) |
| | 2 | 0.299 (0.003) | 0.366 (0.006) | 0.166 (0.005) | 0.094 (0.004) | 0.373 (0.006) | 0.195 (0.005) |
| | 3 | 0.198 (0.003) | 0.406 (0.008) | 0.202 (0.006) | 0.124 (0.005) | 0.417 (0.008) | 0.240 (0.007) |
| | 4 or more | 0.182 (0.003) | 0.441 (0.008) | 0.243 (0.007) | 0.147 (0.006) | 0.453 (0.008) | 0.285 (0.007) |
| | Total No. Sons | n = 34624 | *** (lin) | *** (lin) | *** (lin) | *** (lin) | *** (lin) |
| | 0 | 0.383 (0.003) | 0.335 (0.005) | 0.154 (0.004) | 0.086 (0.003) | 0.344 (0.005) | 0.182 (0.004) |
| | 1 | 0.396 (0.003) | 0.379 (0.006) | 0.176 (0.005) | 0.097 (0.003) | 0.387 (0.006) | 0.205 (0.005) |
| | 2 or more | 0.221 (0.003) | 0.393 (0.007) | 0.189 (0.006) | 0.119 (0.005) | 0.403 (0.007) | 0.228 (0.006) |
| | Total No. Daughters | n = 34624 | *** (lin) | *** (lin) | *** (lin) | *** (lin) | *** (lin) |
| | 0 | 0.402 (0.003) | 0.341 (0.005) | 0.151 (0.004) | 0.083 (0.003) | 0.350 (0.005) | 0.180 (0.004) |
| | 1 | 0.399 (0.003) | 0.371 (0.006) | 0.173 (0.004) | 0.099 (0.003) | 0.379 (0.006) | 0.204 (0.005) |
| | 2 or more | 0.199 (0.003) | 0.401 (0.008) | 0.204 (0.006) | 0.124 (0.005) | 0.411 (0.008) | 0.237 (0.007) |

[1]Column contains *unweighted* responder sample sizes in gray cells and *weighted* marginal proportions and design SE's for each levels of the row factor in off-white cells

***p<0.001, **p<0.01, *p<0.05, †p<0.10 for linear trend (lin), quadratic trend (quad), or general-group difference (grpdif) tests

*Dominican Republic*

| Partner and Family-Level Characteristics | | | Conditional IPV Proportions | | | | |
|---|---|---|---|---|---|---|---|
| | Factors and Levels | Marginal Proportions[1] | Physical Non-Sexual IPV: Mild to Severe | Physical Non-Sexual IPV: Moderate to Severe | Sexual IPV: Forced Sex | Physical or Sexual IPV: Mild to Severe | Physical or Sexual IPV: Moderate to Severe |

| Dominican Republic '07 | Marital Status | n = 8421 | *** (grpdif) | * (grpdif) | * (grpdif) | *** (grpdif) | ** (grpdif) |
|---|---|---|---|---|---|---|---|
| | Formerly/Currently Living with man | 0.775 (0.008) | 0.173 (0.008) | 0.101 (0.005) | 0.050 (0.004) | 0.181 (0.008) | 0.118 (0.006) |
| | Formerly/Currently Married | 0.225 (0.008) | 0.109 (0.013) | 0.075 (0.012) | 0.031 (0.007) | 0.114 (0.013) | 0.081 (0.012) |
| | Wealth Index | n = 8421 | *** (lin) | *** (lin) | *** (lin) | *** (lin) | *** (lin) |
| | Poorest | 0.182 (0.007) | 0.198 (0.016) | 0.122 (0.012) | 0.056 (0.009) | 0.204 (0.016) | 0.134 (0.012) |
| | Poor | 0.216 (0.008) | 0.197 (0.016) | 0.122 (0.013) | 0.056 (0.009) | 0.203 (0.016) | 0.135 (0.013) |
| | Middle | 0.216 (0.009) | 0.171 (0.019) | 0.097 (0.013) | 0.054 (0.011) | 0.188 (0.022) | 0.123 (0.017) |
| | Richer | 0.201 (0.008) | 0.116 (0.014) | 0.067 (0.010) | 0.035 (0.008) | 0.119 (0.014) | 0.076 (0.011) |
| | Richest | 0.186 (0.011) | 0.107 (0.017) | 0.067 (0.013) | 0.025 (0.007) | 0.110 (0.017) | 0.077 (0.014) |
| | Total No. Births | n = 8421 | *** (lin) | ** (lin) | *** (lin) | *** (lin) | *** (lin) |
| | 0 | 0.085 (0.005) | 0.104 (0.023) | 0.061 (0.020) | 0.022 (0.009) | 0.106 (0.023) | 0.069 (0.020) |
| | 1 | 0.190 (0.007) | 0.161 (0.017) | 0.087 (0.014) | 0.029 (0.006) | 0.162 (0.017) | 0.096 (0.014) |
| | 2 | 0.224 (0.007) | 0.131 (0.013) | 0.078 (0.011) | 0.042 (0.009) | 0.143 (0.014) | 0.096 (0.012) |
| | 3 | 0.254 (0.008) | 0.175 (0.015) | 0.108 (0.012) | 0.053 (0.008) | 0.180 (0.015) | 0.118 (0.012) |
| | 4 or more | 0.248 (0.008) | 0.184 (0.014) | 0.117 (0.011) | 0.062 (0.009) | 0.195 (0.016) | 0.137 (0.012) |
| | Total No. Sons | n = 8421 | | | | | |
| | 0 | 0.388 (0.008) | 0.169 (0.011) | 0.101 (0.009) | 0.049 (0.007) | 0.173 (0.011) | 0.113 (0.009) |
| | 1 | 0.344 (0.008) | 0.154 (0.014) | 0.094 (0.010) | 0.043 (0.007) | 0.163 (0.015) | 0.112 (0.012) |
| | 2 or more | 0.268 (0.007) | 0.150 (0.011) | 0.089 (0.007) | 0.045 (0.006) | 0.159 (0.012) | 0.102 (0.008) |
| | Total No. Daughters | n = 8421 | ** (lin) | *** (lin) | | *** (lin) | *** (lin) |
| | 0 | 0.445 (0.008) | 0.139 (0.008) | 0.078 (0.007) | 0.044 (0.005) | 0.146 (0.009) | 0.094 (0.008) |
| | 1 | 0.362 (0.008) | 0.167 (0.011) | 0.100 (0.009) | 0.039 (0.005) | 0.172 (0.011) | 0.108 (0.009) |
| | 2 or more | 0.194 (0.006) | 0.187 (0.019) | 0.127 (0.016) | 0.062 (0.011) | 0.200 (0.019) | 0.148 (0.016) |

[1]Column contains *unweighted* responder sample sizes in gray cells and *weighted* marginal proportions and design SE's for each levels of the row factor in off-white cells

***p<0.001, **p<0.01, *p<0.05, †p<0.10 for linear trend (lin), quadratic trend (quad), or general-group difference (grpdif) tests

## *Nicaragua*

| Partner and Family-Level Characteristics | | | Conditional IPV Proportions | | | | |
|---|---|---|---|---|---|---|---|
| | Factors and Levels | Marginal Proportions[1] | Physical Non-Sexual IPV[2] Mild to Severe | Moderate to Severe | Sexual IPV Forced Sex | Physical[2] or Sexual IPV Mild to Severe | Moderate to Severe |
| Nicaragua '98 | Marital Status | n = 8466 | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) |
| | Formerly/Currently Living with man | 0.591 (0.007) | 0.315 (0.009) | 0.255 (0.008) | 0.104 (0.006) | 0.324 (0.009) | 0.270 (0.008) |
| | Formerly/Currently Married | 0.409 (0.007) | 0.228 (0.008) | 0.170 (0.006) | 0.064 (0.005) | 0.233 (0.008) | 0.181 (0.007) |
| | Wealth Index | | | | | | |
| | Poorest | --- | --- | --- | --- | --- | --- |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Poor | --- | --- | --- | --- | --- | --- |
| | Middle | --- | --- | --- | --- | --- | --- |
| | Richer | --- | --- | --- | --- | --- | --- |
| | Richest | --- | --- | --- | --- | --- | --- |
| | Total No. Births | n = 8466 | *** (lin) | *** (lin) | *** (lin) | *** (lin) | *** (lin) |
| | 0 | 0.082 (0.003) | 0.174 (0.019) | 0.125 (0.017) | 0.045 (0.013) | 0.181 (0.019) | 0.132 (0.018) |
| | 1 | 0.191 (0.004) | 0.195 (0.013) | 0.126 (0.011) | 0.062 (0.007) | 0.205 (0.013) | 0.142 (0.011) |
| | 2 | 0.186 (0.005) | 0.241 (0.013) | 0.181 (0.012) | 0.075 (0.008) | 0.251 (0.013) | 0.197 (0.012) |
| | 3 | 0.155 (0.004) | 0.297 (0.016) | 0.227 (0.014) | 0.089 (0.010) | 0.304 (0.017) | 0.244 (0.015) |
| | 4 or more | 0.386 (0.006) | 0.339 (0.010) | 0.288 (0.009) | 0.110 (0.006) | 0.345 (0.010) | 0.298 (0.009) |
| | Total No. Sons | n = 8466 | *** (lin) | *** (lin) | † (lin) | *** (lin) | *** (lin) |
| | 0 | 0.316 (0.005) | 0.242 (0.010) | 0.191 (0.009) | 0.075 (0.006) | 0.250 (0.011) | 0.202 (0.010) |
| | 1 | 0.329 (0.004) | 0.271 (0.010) | 0.211 (0.009) | 0.095 (0.006) | 0.280 (0.010) | 0.227 (0.009) |
| | 2 or more | 0.355 (0.005) | 0.310 (0.010) | 0.246 (0.009) | 0.090 (0.006) | 0.317 (0.010) | 0.259 (0.009) |
| | Total No. Daughters | n = 8466 | * (lin) | *** (lin) | | * (lin) | *** (lin) |
| | 0 | 0.310 (0.006) | 0.253 (0.010) | 0.184 (0.009) | 0.083 (0.006) | 0.264 (0.010) | 0.202 (0.010) |
| | 1 | 0.347 (0.006) | 0.286 (0.011) | 0.223 (0.010) | 0.093 (0.007) | 0.293 (0.011) | 0.236 (0.010) |
| | 2 or more | 0.342 (0.005) | 0.289 (0.010) | 0.242 (0.009) | 0.084 (0.006) | 0.294 (0.010) | 0.252 (0.009) |

All table cells list the estimated population subgroup proportions alongside their Normal-distribution standard error approximations in parentheses

[1]Column contains *unweighted* responder sample sizes in gray cells and *weighted* marginal proportions and design SE's for each levels of the row factor in off-white cells

[2]Nicaragua asks about threatening with *weapons*, slapping or *twisting an arm*, and does not ask about burning, *dragging*, *beating with or throwing objects*

***p<0.001, **p<0.01, *p<0.05, †p<0.10 for linear trend (lin), quadratic trend (quad), or general-group difference (grpdif) tests

## *Haiti*

| Partner and Family-Level Characteristics | | | Conditional IPV Proportions | | | | |
|---|---|---|---|---|---|---|---|
| | Factors and | Marginal | Physical Non-Sexual IPV | | Sexual IPV | Physical or Sexual IPV | |
| | Levels | Proportions[1] | Mild to Severe | Moderate to Severe | Forced Sex | Mild to Severe | Moderate to Severe |
| Haiti '05-06 | Marital Status | n = 2676 | | † (grpdif) | | | |
| | Formerly/Currently Living with man | 0.230 (0.011) | 0.152 (0.021) | 0.098 (0.018) | 0.087 (0.015) | 0.181 (0.022) | 0.141 (0.021) |
| | Formerly/Currently Married | 0.770 (0.011) | 0.127 (0.011) | 0.068 (0.008) | 0.100 (0.010) | 0.179 (0.012) | 0.137 (0.011) |
| | Wealth Index | n = 2676 | ** (quad) | ** (quad) | * (quad) | * (quad) | ** (quad) |
| | Poorest | 0.190 (0.015) | 0.121 (0.019) | 0.050 (0.011) | 0.069 (0.014) | 0.150 (0.020) | 0.095 (0.017) |
| | Poor | 0.203 (0.015) | 0.115 (0.014) | 0.069 (0.012) | 0.073 (0.013) | 0.143 (0.017) | 0.107 (0.017) |
| | Middle | 0.188 (0.014) | 0.167 (0.023) | 0.094 (0.020) | 0.125 (0.022) | 0.230 (0.024) | 0.176 (0.025) |
| | Richer | 0.246 (0.014) | 0.165 (0.031) | 0.106 (0.022) | 0.125 (0.018) | 0.212 (0.031) | 0.182 (0.029) |
| | Richest | 0.174 (0.012) | 0.084 (0.021) | 0.043 (0.012) | 0.086 (0.023) | 0.155 (0.030) | 0.117 (0.025) |
| | Total No. Births | n = 2676 | ** (quad) | * (quad) | ** (quad) | ** (quad) | * (quad) |
| | 0 | 0.101 (0.007) | 0.076 (0.019) | 0.049 (0.016) | 0.043 (0.018) | 0.095 (0.022) | 0.083 (0.023) |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1 | 0.193 (0.010) | 0.115 (0.021) | 0.055 (0.014) | 0.094 (0.019) | 0.174 (0.026) | 0.123 (0.021) |
| | 2 | 0.176 (0.008) | 0.153 (0.024) | 0.102 (0.023) | 0.109 (0.023) | 0.189 (0.026) | 0.155 (0.026) |
| | 3 | 0.130 (0.009) | 0.196 (0.036) | 0.102 (0.023) | 0.136 (0.034) | 0.238 (0.042) | 0.181 (0.038) |
| | 4 or more | 0.399 (0.011) | 0.126 (0.017) | 0.069 (0.013) | 0.094 (0.011) | 0.181 (0.017) | 0.137 (0.015) |
| | Total No. Sons | n = 2676 | | | | | |
| | 0 | 0.376 (0.012) | 0.126 (0.011) | 0.073 (0.011) | 0.099 (0.014) | 0.169 (0.014) | 0.133 (0.015) |
| | 1 | 0.318 (0.012) | 0.140 (0.020) | 0.075 (0.011) | 0.092 (0.013) | 0.186 (0.022) | 0.137 (0.018) |
| | 2 or more | 0.305 (0.011) | 0.133 (0.017) | 0.076 (0.013) | 0.099 (0.014) | 0.187 (0.018) | 0.145 (0.017) |
| | Total No. Daughters | n = 2676 | † (quad) | | | * (quad) | † (quad) |
| | 0 | 0.396 (0.012) | 0.111 (0.013) | 0.065 (0.009) | 0.085 (0.012) | 0.152 (0.014) | 0.118 (0.013) |
| | 1 | 0.319 (0.011) | 0.159 (0.020) | 0.084 (0.013) | 0.115 (0.017) | 0.217 (0.022) | 0.162 (0.021) |
| | 2 or more | 0.285 (0.011) | 0.133 (0.018) | 0.078 (0.014) | 0.093 (0.014) | 0.177 (0.018) | 0.139 (0.016) |

All table cells list the estimated population subgroup proportions alongside their Normal-distribution standard error approximations in parentheses

[1]Column contains *unweighted* responder sample sizes in gray cells and *weighted* marginal proportions and design SE's for each levels of the row factor in off-white cells

***p<0.001, **p<0.01, *p<0.05, †p<0.10 for linear trend (lin), quadratic trend (quad), or general-group difference (grpdif) tests

*Peru*

| Partner and Family-Level Characteristics | | | Conditional IPV Proportions | | | | |
|---|---|---|---|---|---|---|---|
| | Factors and Levels | Marginal Proportions[1] | Physical Non-Sexual IPV Mild to Severe | Physical Non-Sexual IPV Moderate to Severe | Sexual IPV Forced Sex | Physical or Sexual IPV Mild to Severe | Physical or Sexual IPV Moderate to Severe |
| Peru '04 | Marital Status | n = 22919 | *** (grpdif) | *** (grpdif) | * (grpdif) | *** (grpdif) | *** (grpdif) |
| | Formerly/Currently Living with man | 0.552 (0.006) | 0.415 (0.007) | 0.274 (0.006) | 0.093 (0.004) | 0.424 (0.007) | 0.293 (0.006) |
| | Formerly/Currently Married | 0.448 (0.006) | 0.362 (0.007) | 0.237 (0.006) | 0.082 (0.004) | 0.368 (0.007) | 0.255 (0.006) |
| | Wealth Index | n = 22919 | *** (quad) | *** (quad) | *** (quad) | *** (quad) | *** (quad) |
| | Poorest | 0.115 (0.006) | 0.333 (0.012) | 0.264 (0.010) | 0.087 (0.006) | 0.342 (0.012) | 0.280 (0.011) |
| | Poor | 0.217 (0.006) | 0.390 (0.010) | 0.305 (0.008) | 0.099 (0.005) | 0.400 (0.010) | 0.323 (0.008) |
| | Middle | 0.227 (0.007) | 0.446 (0.010) | 0.297 (0.008) | 0.109 (0.006) | 0.454 (0.010) | 0.320 (0.009) |
| | Richer | 0.219 (0.006) | 0.428 (0.011) | 0.257 (0.010) | 0.092 (0.006) | 0.435 (0.011) | 0.275 (0.010) |
| | Richest | 0.222 (0.008) | 0.330 (0.011) | 0.168 (0.009) | 0.053 (0.005) | 0.334 (0.012) | 0.183 (0.010) |
| | Total No. Births | n = 22919 | *** (lin) | *** (lin) | *** (lin) | *** (lin) | *** (lin) |
| | 0 | 0.051 (0.003) | 0.217 (0.018) | 0.100 (0.012) | 0.026 (0.006) | 0.224 (0.019) | 0.112 (0.012) |
| | 1 | 0.220 (0.004) | 0.330 (0.011) | 0.176 (0.008) | 0.053 (0.005) | 0.334 (0.011) | 0.191 (0.009) |
| | 2 | 0.264 (0.004) | 0.387 (0.010) | 0.238 (0.008) | 0.079 (0.005) | 0.395 (0.010) | 0.255 (0.008) |
| | 3 | 0.192 (0.004) | 0.408 (0.011) | 0.276 (0.009) | 0.092 (0.007) | 0.418 (0.011) | 0.299 (0.010) |
| | 4 or more | 0.274 (0.005) | 0.465 (0.009) | 0.358 (0.008) | 0.133 (0.006) | 0.474 (0.009) | 0.378 (0.008) |
| | Total No. Sons | n = 22919 | *** (lin) | *** (lin) | *** (lin) | *** (lin) | *** (lin) |
| | 0 | 0.306 (0.004) | 0.359 (0.009) | 0.223 (0.007) | 0.074 (0.004) | 0.366 (0.009) | 0.239 (0.008) |
| | 1 | 0.380 (0.004) | 0.390 (0.008) | 0.245 (0.006) | 0.087 (0.004) | 0.398 (0.008) | 0.263 (0.007) |
| | 2 or more | 0.315 (0.005) | 0.423 (0.008) | 0.306 (0.008) | 0.102 (0.005) | 0.432 (0.008) | 0.326 (0.008) |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Total No. Daughters | n = 22919 | *** (lin) | *** (lin) | *** (lin) | *** (lin) | *** (lin) |
| | 0 | 0.356 (0.005) | 0.361 (0.008) | 0.227 (0.007) | 0.074 (0.004) | 0.369 (0.008) | 0.245 (0.007) |
| | 1 | 0.401 (0.005) | 0.401 (0.008) | 0.261 (0.007) | 0.090 (0.004) | 0.408 (0.008) | 0.278 (0.007) |
| | 2 or more | 0.244 (0.004) | 0.418 (0.009) | 0.297 (0.008) | 0.105 (0.005) | 0.427 (0.009) | 0.316 (0.008) |

All table cells list the estimated population subgroup proportions alongside their Normal-distribution standard error approximations in parentheses

[1]Column contains *unweighted* responder sample sizes in gray cells and *weighted* marginal proportions and design SE's for each levels of the row factor in off-white cells

***p<0.001, **p<0.01, *p<0.05, †p<0.10 for linear trend (lin), quadratic trend (quad), or general-group difference (grpdif) tests

## Bolivia

| Partner and Family-Level Characteristics | | | Conditional IPV Proportions | | | | |
|---|---|---|---|---|---|---|---|
| | Factors and Levels | Marginal Proportions [1] | Physical Non-Sexual IPV Mild to Severe | Physical Non-Sexual IPV Moderate to Severe | Sexual IPV Forced Sex | Physical or Sexual IPV Mild to Severe | Physical or Sexual IPV Moderate to Severe |
| Bolivia '08 | Marital Status | n = 9219 | *** (grpdif) | *** (grpdif) | | *** (grpdif) | *** (grpdif) |
| | Formerly/Currently Living with man | 0.387 (0.008) | 0.275 (0.010) | 0.212 (0.009) | 0.072 (0.005) | 0.288 (0.010) | 0.231 (0.009) |
| | Formerly/Currently Married | 0.613 (0.008) | 0.225 (0.007) | 0.166 (0.006) | 0.064 (0.004) | 0.234 (0.008) | 0.181 (0.007) |
| | Wealth Index | n = 9219 | *** (quad) | *** (quad) | *** (quad) | *** (quad) | *** (quad) |
| | Poorest | 0.173 (0.009) | 0.252 (0.014) | 0.212 (0.013) | 0.069 (0.007) | 0.264 (0.013) | 0.228 (0.014) |
| | Poor | 0.185 (0.008) | 0.249 (0.013) | 0.197 (0.012) | 0.071 (0.008) | 0.260 (0.013) | 0.218 (0.012) |
| | Middle | 0.213 (0.008) | 0.276 (0.014) | 0.216 (0.013) | 0.089 (0.008) | 0.288 (0.014) | 0.233 (0.014) |
| | Richer | 0.225 (0.007) | 0.267 (0.013) | 0.184 (0.011) | 0.063 (0.007) | 0.278 (0.013) | 0.202 (0.011) |
| | Richest | 0.205 (0.009) | 0.176 (0.011) | 0.113 (0.008) | 0.042 (0.005) | 0.183 (0.011) | 0.126 (0.009) |
| | Partner Education | n = 9205 | *** (lin) | *** (lin) | *** (lin) | *** (lin) | *** (lin) |
| | No Education | 0.016 (0.002) | 0.281 (0.042) | 0.216 (0.036) | 0.070 (0.021) | 0.283 (0.042) | 0.219 (0.036) |
| | Primary | 0.423 (0.009) | 0.260 (0.009) | 0.213 (0.008) | 0.080 (0.005) | 0.271 (0.009) | 0.230 (0.009) |
| | Secondary | 0.366 (0.008) | 0.263 (0.010) | 0.187 (0.009) | 0.067 (0.006) | 0.273 (0.011) | 0.204 (0.010) |
| | Higher | 0.195 (0.008) | 0.172 (0.011) | 0.110 (0.008) | 0.039 (0.005) | 0.182 (0.011) | 0.128 (0.009) |
| | Partner Occupation | n = 9169 | | | | | |
| | Did Not Work | 0.014 (0.001) | 0.277 (0.043) | 0.153 (0.033) | 0.037 (0.017) | 0.283 (0.044) | 0.173 (0.035) |
| | Agricultural | 0.248 (0.010) | 0.235 (0.012) | 0.188 (0.011) | 0.062 (0.006) | 0.247 (0.012) | 0.203 (0.011) |
| | Non-Agricultural | 0.739 (0.010) | 0.248 (0.007) | 0.184 (0.006) | 0.070 (0.004) | 0.258 (0.007) | 0.201 (0.006) |
| | Balance of Earnings | n = 5192 | | | | | |
| | Partner Out earns Woman | 0.571 (0.011) | 0.254 (0.010) | 0.193 (0.009) | 0.067 (0.006) | 0.264 (0.010) | 0.208 (0.009) |
| | Woman Equal or Greater Earnings | 0.429 (0.011) | 0.236 (0.013) | 0.175 (0.011) | 0.064 (0.006) | 0.246 (0.013) | 0.190 (0.011) |
| | Total No. Births | n = 9219 | | ** (lin) | *** (lin) | | ** (lin) |
| | 0 | 0.057 (0.003) | 0.241 (0.023) | 0.172 (0.021) | 0.036 (0.009) | 0.250 (0.023) | 0.182 (0.021) |
| | 1 | 0.175 (0.005) | 0.253 (0.013) | 0.161 (0.011) | 0.047 (0.006) | 0.260 (0.013) | 0.175 (0.011) |

| | | | | | | |
|---|---|---|---|---|---|---|
| | 0.223 | 0.225 | | 0.061 | 0.241 | |
| 2 | (0.005) | (0.011) | 0.174 (0.010) | (0.007) | (0.012) | 0.196 (0.012) |
| | 0.167 | 0.239 | | 0.070 | 0.245 | |
| 3 | (0.005) | (0.013) | 0.181 (0.012) | (0.007) | (0.013) | 0.194 (0.012) |
| | 0.378 | 0.255 | | 0.083 | 0.266 | |
| 4 or more | (0.006) | (0.009) | 0.203 (0.009) | (0.006) | (0.009) | 0.220 (0.009) |
| | | | | | | |
| Total No. Sons | n = 9219 | | | *** (lin) | | † (lin) |
| | 0.289 | 0.246 | | 0.052 | 0.255 | |
| 0 | (0.006) | (0.011) | 0.179 (0.010) | (0.005) | (0.011) | 0.194 (0.010) |
| | 0.365 | 0.237 | | 0.068 | 0.249 | |
| 1 | (0.006) | (0.009) | 0.173 (0.008) | (0.006) | (0.009) | 0.192 (0.008) |
| | 0.346 | 0.252 | | 0.079 | 0.260 | |
| 2 or more | (0.006) | (0.010) | 0.199 (0.009) | (0.006) | (0.010) | 0.215 (0.009) |
| | | | | | | |
| Total No. Daughters | n = 9219 | | | * (lin) | | |
| | 0.307 | 0.251 | | 0.056 | 0.260 | |
| 0 | (0.007) | (0.011) | 0.184 (0.010) | (0.005) | (0.011) | 0.197 (0.010) |
| | 0.380 | 0.233 | | 0.070 | 0.246 | |
| 1 | (0.006) | (0.009) | 0.169 (0.008) | (0.005) | (0.009) | 0.188 (0.009) |
| | 0.313 | 0.252 | | 0.074 | 0.261 | |
| 2 or more | (0.006) | (0.011) | 0.201 (0.009) | (0.007) | (0.011) | 0.219 (0.010) |

[1]Column contains *unweighted* responder sample sizes in gray cells and *weighted* marginal proportions and design SE's for each levels of the row factor in off-white cells

***p<0.001, **p<0.01, *p<0.05, †p<0.10 for linear trend (lin), quadratic trend (quad), or general-group difference (grpdif) tests

Table 14. Intimate Partner Violence and Decision-Making Partnership

*Columbia*

| Decision-Making in Partnership | | | Conditional IPV Proportions | | | | |
|---|---|---|---|---|---|---|---|
| | | | Physical Non-Sexual IPV | | Sexual IPV | Physical or Sexual IPV | |
| | Factors and Levels | Marginal Proportions[1] | Mild to Severe | Moderate to Severe | Forced Sex | Mild to Severe | Moderate to Severe |
| Columbia '10 | How to Spend Money | n = 22175 | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) |
| | Solely the Woman | 0.791 (0.004) | 0.322 (0.005) | 0.129 (0.003) | 0.067 (0.002) | 0.330 (0.005) | 0.155 (0.004) |
| | Woman and Partner/Someone Else | 0.189 (0.004) | 0.271 (0.009) | 0.092 (0.006) | 0.038 (0.004) | 0.274 (0.009) | 0.107 (0.006) |
| | Solely the Partner or Someone Else | 0.020 (0.001) | 0.431 (0.029) | 0.196 (0.025) | 0.120 (0.019) | 0.438 (0.029) | 0.234 (0.026) |
| | Final Say on Woman's Healthcare | n = 34590 | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) |
| | Solely the Woman | 0.795 (0.003) | 0.384 (0.004) | 0.182 (0.003) | 0.107 (0.002) | 0.394 (0.004) | 0.215 (0.003) |
| | Woman and Partner/Someone Else | 0.118 (0.002) | 0.264 (0.009) | 0.107 (0.006) | 0.049 (0.004) | 0.270 (0.009) | 0.123 (0.007) |
| | Solely the Partner or Someone Else | 0.087 (0.002) | 0.330 (0.010) | 0.152 (0.008) | 0.081 (0.006) | 0.337 (0.010) | 0.176 (0.008) |
| | Final Say on Big Expenditures | n = 34363 | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) |
| | Solely the Woman | 0.332 (0.003) | 0.453 (0.006) | 0.244 (0.005) | 0.151 (0.004) | 0.465 (0.006) | 0.287 (0.005) |
| | Woman and Partner/Someone Else | 0.434 (0.004) | 0.289 (0.005) | 0.109 (0.003) | 0.055 (0.002) | 0.295 (0.005) | 0.128 (0.004) |
| | Solely the Partner or Someone Else | 0.234 (0.003) | 0.379 (0.007) | 0.180 (0.005) | 0.099 (0.004) | 0.389 (0.007) | 0.211 (0.006) |
| | Final Say on Small Expenditures | n = 34571 | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) |
| | Solely the Woman | 0.478 (0.004) | 0.412 (0.005) | 0.204 (0.004) | 0.121 (0.003) | 0.422 (0.005) | 0.241 (0.004) |
| | Woman and Partner/Someone Else | 0.335 (0.004) | 0.289 (0.006) | 0.114 (0.004) | 0.058 (0.003) | 0.295 (0.006) | 0.134 (0.004) |
| | Solely the Partner or Someone Else | 0.187 (0.003) | 0.381 (0.008) | 0.186 (0.006) | 0.106 (0.005) | 0.392 (0.008) | 0.219 (0.006) |
| | Final Say on Visits to Family/Relatives/Friends | n = 33711 | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) |
| | Solely the Woman | 0.404 (0.004) | 0.445 (0.006) | 0.236 (0.005) | 0.147 (0.004) | 0.457 (0.006) | 0.279 (0.005) |
| | Woman and Partner/Someone Else | 0.488 (0.004) | 0.287 (0.005) | 0.109 (0.003) | 0.055 (0.002) | 0.293 (0.005) | 0.128 (0.004) |
| | Solely the Partner or Someone Else | 0.108 (0.002) | 0.402 (0.010) | 0.186 (0.008) | 0.103 (0.006) | 0.412 (0.010) | 0.220 (0.008) |
| | Final Say on Food to Cook/Serve | n = 34494 | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) |
| | Solely the Woman | 0.677 (0.004) | 0.376 (0.004) | 0.179 (0.003) | 0.101 (0.003) | 0.384 (0.004) | 0.209 (0.004) |
| | Woman and Partner/Someone Else | 0.212 (0.003) | 0.310 (0.007) | 0.132 (0.005) | 0.081 (0.004) | 0.318 (0.007) | 0.159 (0.006) |
| | Solely the Partner or Someone Else | 0.111 (0.002) | 0.405 (0.010) | 0.195 (0.008) | 0.108 (0.006) | 0.416 (0.010) | 0.229 (0.009) |
| | Final Say on Spending Husband's Earnings | n = 22075 | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) |
| | Solely the Woman | 0.126 (0.003) | 0.344 (0.012) | 0.128 (0.008) | 0.057 (0.005) | 0.354 (0.012) | 0.152 (0.009) |
| | Woman and Partner/Someone Else | 0.425 (0.005) | 0.254 (0.006) | 0.085 (0.004) | 0.035 (0.002) | 0.259 (0.006) | 0.100 (0.004) |
| | Solely the Partner or Someone Else | 0.449 (0.005) | 0.364 (0.007) | 0.159 (0.005) | 0.091 (0.004) | 0.371 (0.007) | 0.191 (0.005) |

All table cells list the estimated population subgroup proportions alongside their Normal-distribution standard error approximations in parentheses

[1]Column contains *unweighted* responder sample sizes in gray cells and *weighted* marginal proportions and design SE's for each levels of the row factor in off-white cells

***p<0.001, **p<0.01, *p<0.05, †p<0.10 for linear trend (lin), quadratic trend (quad), or general-group difference (grpdif) tests

*Dominican Republic*

| Decision-Making in Partnership | | | Conditional IPV Proportions | | | | |
|---|---|---|---|---|---|---|---|
| | Factors and Levels | Marginal Proportions[1] | Physical Non-Sexual IPV Mild to Severe | Physical Non-Sexual IPV Moderate to Severe | Sexual IPV Forced Sex | Physical or Sexual IPV Mild to Severe | Physical or Sexual IPV Moderate to Severe |
| Dominican Republic '07 | How to Spend Money | n = 2822 | ** (grpdif) | *** (grpdif) | | *** (grpdif) | ** (grpdif) |
| | Solely the Woman | 0.584 (0.014) | 0.176 (0.017) | 0.114 (0.014) | 0.047 (0.008) | 0.184 (0.017) | 0.127 (0.014) |
| | Woman and Partner/Someone Else | 0.382 (0.013) | 0.095 (0.015) | 0.045 (0.009) | 0.036 (0.010) | 0.096 (0.015) | 0.062 (0.012) |
| | Solely the Partner or Someone Else | 0.034 (0.007) | 0.146 (0.062) | 0.093 (0.042) | 0.030 (0.019) | 0.153 (0.064) | 0.100 (0.044) |
| | Final Say on Woman's Healthcare | n = 6592 | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) |
| | Solely the Woman | 0.329 (0.010) | 0.175 (0.013) | 0.106 (0.011) | 0.056 (0.008) | 0.183 (0.013) | 0.119 (0.011) |
| | Woman and Partner/Someone Else | 0.553 (0.009) | 0.109 (0.009) | 0.058 (0.007) | 0.019 (0.003) | 0.113 (0.009) | 0.065 (0.007) |
| | Solely the Partner or Someone Else | 0.118 (0.006) | 0.159 (0.025) | 0.081 (0.018) | 0.045 (0.020) | 0.175 (0.032) | 0.108 (0.031) |
| | Final Say on Big Expenditures | n = 6588 | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) |
| | Solely the Woman | 0.134 (0.007) | 0.211 (0.024) | 0.139 (0.020) | 0.057 (0.012) | 0.223 (0.024) | 0.154 (0.021) |
| | Woman and Partner/Someone Else | 0.621 (0.010) | 0.107 (0.009) | 0.054 (0.006) | 0.022 (0.003) | 0.110 (0.009) | 0.062 (0.006) |
| | Solely the Partner or Someone Else | 0.245 (0.008) | 0.169 (0.014) | 0.098 (0.011) | 0.054 (0.010) | 0.181 (0.017) | 0.118 (0.016) |
| | Final Say on Small Expenditures | n = 6588 | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) |
| | Solely the Woman | 0.353 (0.009) | 0.148 (0.012) | 0.087 (0.009) | 0.038 (0.006) | 0.156 (0.012) | 0.098 (0.010) |
| | Woman and Partner/Someone Else | 0.471 (0.010) | 0.111 (0.011) | 0.058 (0.007) | 0.021 (0.004) | 0.113 (0.011) | 0.064 (0.007) |
| | Solely the Partner or Someone Else | 0.175 (0.007) | 0.184 (0.019) | 0.104 (0.014) | 0.063 (0.013) | 0.199 (0.022) | 0.133 (0.020) |
| | Final Say on Visits to Family/Relatives/Friends | n = 6585 | *** (grpdif) | *** (grpdif) | * (grpdif) | *** (grpdif) | *** (grpdif) |
| | Solely the Woman | 0.323 (0.009) | 0.160 (0.012) | 0.092 (0.010) | 0.050 (0.009) | 0.168 (0.012) | 0.109 (0.010) |
| | Woman and Partner/Someone Else | 0.566 (0.010) | 0.112 (0.010) | 0.060 (0.006) | 0.025 (0.005) | 0.117 (0.010) | 0.069 (0.007) |
| | Solely the Partner or Someone Else | 0.112 (0.006) | 0.194 (0.025) | 0.112 (0.020) | 0.039 (0.008) | 0.204 (0.025) | 0.125 (0.020) |
| | Final Say on Food to Cook/Serve | | | | | | |
| | Solely the Woman | --- | --- | --- | --- | --- | --- |
| | Woman and Partner/Someone Else | --- | --- | --- | --- | --- | --- |
| | Solely the Partner or Someone Else | --- | --- | --- | --- | --- | --- |
| | Final Say on Spending Husband's Earnings | n = 6518 | *** (grpdif) | *** (grpdif) | ** (grpdif) | *** (grpdif) | *** (grpdif) |
| | Solely the Woman | 0.090 (0.006) | 0.155 (0.031) | 0.099 (0.028) | 0.023 (0.008) | 0.160 (0.031) | 0.109 (0.029) |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Woman and Partner/Someone Else | 0.664 (0.009) | 0.117 (0.009) | 0.057 (0.007) | 0.029 (0.004) | 0.124 (0.010) | 0.069 (0.008) |
| | Solely the Partner or Someone Else | 0.246 (0.008) | 0.183 (0.015) | 0.120 (0.012) | 0.053 (0.009) | 0.188 (0.015) | 0.130 (0.012) |

All table cells list the estimated population subgroup proportions alongside their Normal-distribution standard error approximations in parentheses

[1]Column contains *unweighted* responder sample sizes in gray cells and *weighted* marginal proportions and design SE's for each levels of the row factor in off-white cells

***p<0.001, **p<0.01, *p<0.05, †p<0.10 for linear trend (lin), quadratic trend (quad), or general-group difference (grpdif) tests

## *Nicaragua*

| Decision-Making in Partnership | | | Conditional IPV Proportions | | | | |
|---|---|---|---|---|---|---|---|
| | Factors and | Marginal | Physical Non-Sexual IPV[2] | | Sexual IPV | Physical[2] or Sexual IPV | |
| | Levels | Proportions[1] | Mild to Severe | Moderate to Severe | Forced Sex | Mild to Severe | Moderate to Severe |
| Nicaragua '98 | How to Spend Money | n = 3313 | *** (grpdif) | *** (grpdif) | * (grpdif) | *** (grpdif) | *** (grpdif) |
| | Solely the Woman | 0.812 (0.009) | 0.337 (0.010) | 0.265 (0.010) | 0.121 (0.008) | 0.347 (0.010) | 0.284 (0.010) |
| | Woman and Partner/Someone Else | 0.163 (0.009) | 0.238 (0.023) | 0.180 (0.019) | 0.071 (0.013) | 0.244 (0.024) | 0.188 (0.020) |
| | Solely the Partner or Someone Else | 0.025 (0.003) | 0.350 (0.083) | 0.274 (0.077) | 0.111 (0.047) | 0.368 (0.083) | 0.292 (0.078) |
| | Final Say on Woman's Healthcare[3] | n = 5633 | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) |
| | Solely the Woman | 0.317 (0.008) | 0.366 (0.014) | 0.291 (0.014) | 0.105 (0.010) | 0.374 (0.014) | 0.304 (0.014) |
| | Woman and Partner/Someone Else | 0.569 (0.008) | 0.189 (0.007) | 0.143 (0.006) | 0.048 (0.004) | 0.195 (0.007) | 0.151 (0.006) |
| | Solely the Partner or Someone Else | 0.114 (0.006) | 0.282 (0.021) | 0.212 (0.020) | 0.106 (0.018) | 0.293 (0.022) | 0.232 (0.021) |
| | Final Say on Big Expenditures | n = 6489 | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) |
| | Solely the Woman | 0.125 (0.005) | 0.375 (0.024) | 0.300 (0.022) | 0.138 (0.016) | 0.384 (0.024) | 0.318 (0.022) |
| | Woman and Partner/Someone Else | 0.587 (0.008) | 0.210 (0.008) | 0.160 (0.007) | 0.054 (0.004) | 0.215 (0.009) | 0.168 (0.007) |
| | Solely the Partner or Someone Else | 0.289 (0.007) | 0.306 (0.013) | 0.241 (0.012) | 0.086 (0.007) | 0.314 (0.014) | 0.256 (0.012) |
| | Final Say on Small Expenditures | | | | | | |
| | Solely the Woman | --- | --- | --- | --- | --- | --- |
| | Woman and Partner/Someone Else | --- | --- | --- | --- | --- | --- |
| | Solely the Partner or Someone Else | --- | --- | --- | --- | --- | --- |
| | Final Say on Visits to Family/Relatives/Friends | n = 6749 | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) |
| | Solely the Woman | 0.156 (0.006) | 0.362 (0.019) | 0.291 (0.019) | 0.123 (0.017) | 0.373 (0.020) | 0.318 (0.020) |
| | Woman and Partner/Someone Else | 0.620 (0.007) | 0.212 (0.007) | 0.162 (0.006) | 0.051 (0.004) | 0.216 (0.008) | 0.168 (0.006) |
| | Solely the Partner or Someone Else | 0.224 (0.006) | 0.328 (0.014) | 0.258 (0.013) | 0.107 (0.010) | 0.336 (0.014) | 0.276 (0.014) |
| | Final Say on Food to Cook/Serve | n = 6655 | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) |
| | Solely the Woman | 0.587 (0.008) | 0.287 (0.009) | 0.225 (0.008) | 0.088 (0.006) | 0.297 (0.009) | 0.239 (0.008) |
| | Woman and Partner/Someone Else | 0.328 (0.008) | 0.207 (0.010) | 0.160 (0.010) | 0.049 (0.005) | 0.209 (0.010) | 0.166 (0.010) |
| | Solely the Partner or Someone Else | 0.085 (0.004) | 0.298 (0.025) | 0.237 (0.023) | 0.097 (0.016) | 0.305 (0.025) | 0.252 (0.024) |
| | Final Say on Spending Husband's Earnings | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Solely the Woman | --- | --- | --- | --- | --- | --- |
| | Woman and Partner/Someone Else | --- | --- | --- | --- | --- | --- |
| | Solely the Partner or Someone Else | --- | --- | --- | --- | --- | --- |

*Haiti*

| Decision-Making in Partnership | | | Conditional IPV Proportions | | | | |
|---|---|---|---|---|---|---|---|
| | Factors and | Marginal | Physical Non-Sexual IPV | | Sexual IPV | Physical or Sexual IPV | |
| | Levels | Proportions[1] | Mild to Severe | Moderate to Severe | Forced Sex | Mild to Severe | Moderate to Severe |
| Haiti '05-06 | How to Spend Money | n = 1541 | | | | | |
| | Solely the Woman | 0.496 (0.019) | 0.106 (0.016) | 0.068 (0.013) | 0.097 (0.016) | 0.162 (0.019) | 0.138 (0.018) |
| | Woman and Partner/Someone Else | 0.474 (0.019) | 0.106 (0.016) | 0.043 (0.010) | 0.088 (0.016) | 0.154 (0.020) | 0.113 (0.017) |
| | Solely the Partner or Someone Else | 0.030 (0.006) | 0.173 (0.087) | 0.072 (0.047) | 0.184 (0.101) | 0.299 (0.116) | 0.228 (0.105) |
| | Final Say on Woman's Healthcare | n = 2331 | | | † (grpdif) | † (grpdif) | † (grpdif) |
| | Solely the Woman | 0.286 (0.013) | 0.146 (0.016) | 0.079 (0.013) | 0.124 (0.019) | 0.211 (0.020) | 0.167 (0.019) |
| | Woman and Partner/Someone Else | 0.360 (0.015) | 0.109 (0.015) | 0.062 (0.012) | 0.081 (0.014) | 0.149 (0.019) | 0.117 (0.018) |
| | Solely the Partner or Someone Else | 0.354 (0.017) | 0.117 (0.021) | 0.070 (0.017) | 0.084 (0.016) | 0.165 (0.023) | 0.127 (0.020) |
| | Final Say on Big Expenditures | n = 2331 | * (grpdif) | † (grpdif) | ** (grpdif) | ** (grpdif) | ** (grpdif) |
| | Solely the Woman | 0.269 (0.015) | 0.160 (0.023) | 0.102 (0.021) | 0.136 (0.021) | 0.223 (0.024) | 0.188 (0.025) |
| | Woman and Partner/Someone Else | 0.411 (0.016) | 0.099 (0.012) | 0.056 (0.010) | 0.083 (0.011) | 0.142 (0.015) | 0.114 (0.014) |
| | Solely the Partner or Someone Else | 0.320 (0.016) | 0.121 (0.016) | 0.060 (0.012) | 0.073 (0.012) | 0.169 (0.018) | 0.116 (0.015) |
| | Final Say on Small Expenditures | n = 2331 | | | † (grpdif) | | |
| | Solely the Woman | 0.549 (0.016) | 0.114 (0.012) | 0.070 (0.010) | 0.110 (0.014) | 0.174 (0.015) | 0.146 (0.015) |
| | Woman and Partner/Someone Else | 0.268 (0.014) | 0.112 (0.018) | 0.059 (0.013) | 0.081 (0.015) | 0.151 (0.021) | 0.115 (0.018) |
| | Solely the Partner or Someone Else | 0.184 (0.013) | 0.161 (0.033) | 0.085 (0.022) | 0.066 (0.018) | 0.199 (0.033) | 0.129 (0.023) |
| | Final Say on Visits to Family/Relatives/Friends | n = 2330 | | | * (grpdif) | * (grpdif) | * (grpdif) |
| | Solely the Woman | 0.440 (0.017) | 0.129 (0.012) | 0.081 (0.012) | 0.115 (0.014) | 0.189 (0.014) | 0.159 (0.015) |
| | Woman and Partner/Someone Else | 0.443 (0.018) | 0.110 (0.013) | 0.060 (0.010) | 0.074 (0.011) | 0.146 (0.014) | 0.111 (0.014) |
| | Solely the Partner or Someone Else | 0.117 (0.008) | 0.142 (0.037) | 0.065 (0.019) | 0.094 (0.025) | 0.211 (0.039) | 0.136 (0.027) |
| | Final Say on Food to Cook/Serve | | | | | | |
| | Solely the Woman | --- | --- | --- | --- | --- | --- |
| | Woman and Partner/Someone Else | --- | --- | --- | --- | --- | --- |
| | Solely the Partner or Someone Else | --- | --- | --- | --- | --- | --- |
| | Final Say on Spending Husband's Earnings | n = 2293 | † (grpdif) | ** (grpdif) | | | |
| | Solely the Woman | 0.132 (0.011) | 0.160 (0.036) | 0.047 (0.018) | 0.123 (0.029) | 0.228 (0.039) | 0.149 (0.031) |
| | Woman and Partner/Someone Else | 0.557 (0.016) | 0.100 (0.013) | 0.058 (0.009) | 0.093 (0.013) | 0.158 (0.016) | 0.127 (0.014) |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Solely the Partner or Someone Else | 0.311 (0.015) | 0.149 (0.022) | 0.103 (0.019) | 0.090 (0.016) | 0.182 (0.022) | 0.146 (0.020) |

All table cells list the estimated population subgroup proportions alongside their Normal-distribution standard error approximations in parentheses

[1]Column contains *unweighted* responder sample sizes in gray cells and *weighted* marginal proportions and design SE's for each levels of the row factor in off-white cells

***p<0.001, **p<0.01, *p<0.05, †p<0.10 for linear trend (lin), quadratic trend (quad), or general-group difference (grpdif) tests

## *Peru*

| Decision-Making in Partnership | | | Conditional IPV Proportions | | | | |
|---|---|---|---|---|---|---|---|
| | Factors and | Marginal | Physical Non-Sexual IPV | | Sexual IPV | Physical or Sexual IPV | |
| | Levels | Proportions[1] | Mild to Severe | Moderate to Severve | Forced Sex | Mild to Severe | Moderate to Severe |
| Peru '04 | How to Spend Money | n = 12049 | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) |
| | Solely the Woman | 0.737 (0.006) | 0.465 (0.009) | 0.309 (0.008) | 0.124 (0.005) | 0.473 (0.009) | 0.333 (0.008) |
| | Woman and Partner/Someone Else | 0.239 (0.006) | 0.339 (0.012) | 0.194 (0.010) | 0.051 (0.005) | 0.343 (0.012) | 0.203 (0.010) |
| | Solely the Partner or Someone Else | 0.024 (0.002) | 0.469 (0.039) | 0.350 (0.038) | 0.112 (0.025) | 0.484 (0.038) | 0.373 (0.037) |
| | Final Say on Woman's Healthcare[3] | n = 22909 | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) |
| | Solely the Woman | 0.584 (0.006) | 0.437 (0.007) | 0.284 (0.006) | 0.106 (0.004) | 0.445 (0.007) | 0.304 (0.006) |
| | Woman and Partner/Someone Else | 0.207 (0.004) | 0.306 (0.009) | 0.191 (0.007) | 0.049 (0.004) | 0.310 (0.009) | 0.202 (0.008) |
| | Solely the Partner or Someone Else | 0.209 (0.005) | 0.347 (0.009) | 0.249 (0.008) | 0.077 (0.005) | 0.357 (0.009) | 0.268 (0.008) |
| | Final Say on Big Expenditures | n = 22890 | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) |
| | Solely the Woman | 0.274 (0.005) | 0.485 (0.011) | 0.340 (0.010) | 0.143 (0.007) | 0.495 (0.011) | 0.366 (0.010) |
| | Woman and Partner/Someone Else | 0.472 (0.005) | 0.338 (0.007) | 0.200 (0.005) | 0.054 (0.003) | 0.343 (0.007) | 0.214 (0.006) |
| | Solely the Partner or Someone Else | 0.254 (0.005) | 0.388 (0.009) | 0.274 (0.008) | 0.092 (0.005) | 0.397 (0.009) | 0.293 (0.009) |
| | Final Say on Small Expenditures | n = 22844 | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) |
| | Solely the Woman | 0.596 (0.006) | 0.436 (0.007) | 0.285 (0.006) | 0.104 (0.004) | 0.444 (0.007) | 0.307 (0.006) |
| | Woman and Partner/Someone Else | 0.267 (0.005) | 0.315 (0.009) | 0.200 (0.007) | 0.052 (0.004) | 0.319 (0.009) | 0.209 (0.007) |
| | Solely the Partner or Someone Else | 0.137 (0.004) | 0.351 (0.012) | 0.251 (0.011) | 0.092 (0.007) | 0.363 (0.012) | 0.271 (0.012) |
| | Final Say on Visits to Family/Relatives/Friends | n = 22693 | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) |
| | Solely the Woman | 0.309 (0.005) | 0.491 (0.009) | 0.339 (0.009) | 0.138 (0.006) | 0.501 (0.009) | 0.363 (0.009) |
| | Woman and Partner/Someone Else | 0.540 (0.005) | 0.331 (0.007) | 0.203 (0.005) | 0.057 (0.003) | 0.336 (0.007) | 0.217 (0.005) |
| | Solely the Partner or Someone Else | 0.151 (0.004) | 0.394 (0.011) | 0.277 (0.010) | 0.097 (0.006) | 0.405 (0.011) | 0.298 (0.010) |
| | Final Say on Food to Cook/Serve | n = 22853 | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) |
| | Solely the Woman | 0.740 (0.005) | 0.403 (0.006) | 0.268 (0.005) | 0.093 (0.003) | 0.411 (0.006) | 0.288 (0.005) |
| | Woman and Partner/Someone Else | 0.171 (0.004) | 0.341 (0.012) | 0.215 (0.009) | 0.059 (0.005) | 0.346 (0.012) | 0.226 (0.010) |
| | Solely the Partner or Someone Else | 0.089 (0.003) | 0.391 (0.017) | 0.253 (0.015) | 0.106 (0.011) | 0.400 (0.017) | 0.269 (0.016) |
| | Final Say on Spending Husband's Earnings | n = 19474 | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) |
| | Solely the Woman | 0.230 (0.005) | 0.427 (0.012) | 0.270 (0.010) | 0.092 (0.007) | 0.436 (0.011) | 0.290 (0.010) |
| | Woman and Partner/Someone Else | 0.528 (0.006) | 0.329 (0.007) | 0.210 (0.006) | 0.058 (0.003) | 0.334 (0.007) | 0.225 (0.006) |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Solely the Partner or Someone Else | 0.242 (0.005) | 0.475 (0.011) | 0.342 (0.010) | 0.143 (0.007) | 0.488 (0.011) | 0.366 (0.010) |

All table cells list the estimated population subgroup proportions alongside their Normal-distribution standard error approximations in parentheses
[1]Column contains *unweighted* responder sample sizes in gray cells and *weighted* marginal proportions and design SE's for each levels of the row factor in off-white cells
***p<0.001, **p<0.01, *p<0.05, †p<0.10 for linear trend (lin), quadratic trend (quad), or general-group difference (grpdif) tests

## *Bolivia*

| Decision-Making in Partnership | | | Conditional IPV Proportions | | | | |
|---|---|---|---|---|---|---|---|
| | Factors and | Marginal | Physical Non-Sexual IPV | | Sexual IPV | Physical or Sexual IPV | |
| | Levels | Proportions[1] | Mild to Severe | Moderate to Severe | Forced Sex | Mild to Severe | Moderate to Severe |
| Bolivia '08 | How to Spend Money | n = 5236 | *** (grpdif) | *** (grpdif) | ** (grpdif) | *** (grpdif) | *** (grpdif) |
| | Solely the Woman | 0.407 (0.010) | 0.270 (0.011) | 0.207 (0.010) | 0.079 (0.007) | 0.282 (0.011) | 0.227 (0.010) |
| | Woman and Partner/Someone Else | 0.563 (0.010) | 0.225 (0.010) | 0.163 (0.009) | 0.053 (0.005) | 0.232 (0.010) | 0.174 (0.009) |
| | Solely the Partner or Someone Else | 0.030 (0.003) | 0.376 (0.046) | 0.348 (0.047) | 0.096 (0.025) | 0.394 (0.046) | 0.369 (0.047) |
| | Final Say on Woman's Healthcare[3] | n = 8754 | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) |
| | Solely the Woman | 0.381 (0.008) | 0.278 (0.011) | 0.206 (0.010) | 0.092 (0.006) | 0.293 (0.011) | 0.233 (0.010) |
| | Woman and Partner/Someone Else | 0.517 (0.008) | 0.209 (0.008) | 0.155 (0.007) | 0.045 (0.004) | 0.217 (0.008) | 0.166 (0.007) |
| | Solely the Partner or Someone Else | 0.101 (0.005) | 0.261 (0.018) | 0.212 (0.017) | 0.068 (0.010) | 0.270 (0.018) | 0.224 (0.017) |
| | Final Say on Big Expenditures | n = 8748 | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) |
| | Solely the Woman | 0.136 (0.005) | 0.248 (0.017) | 0.189 (0.015) | 0.097 (0.011) | 0.261 (0.017) | 0.209 (0.016) |
| | Woman and Partner/Someone Else | 0.707 (0.007) | 0.222 (0.007) | 0.163 (0.006) | 0.051 (0.004) | 0.231 (0.007) | 0.176 (0.006) |
| | Solely the Partner or Someone Else | 0.157 (0.006) | 0.314 (0.016) | 0.250 (0.015) | 0.097 (0.012) | 0.330 (0.017) | 0.282 (0.016) |
| | Final Say on Small Expenditures | n = 8747 | *** (grpdif) | ** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) |
| | Solely the Woman | 0.654 (0.007) | 0.255 (0.008) | 0.188 (0.007) | 0.073 (0.005) | 0.267 (0.008) | 0.209 (0.007) |
| | Woman and Partner/Someone Else | 0.301 (0.007) | 0.202 (0.010) | 0.157 (0.009) | 0.042 (0.004) | 0.210 (0.010) | 0.167 (0.009) |
| | Solely the Partner or Someone Else | 0.045 (0.003) | 0.280 (0.027) | 0.217 (0.023) | 0.098 (0.017) | 0.291 (0.027) | 0.237 (0.024) |
| | Final Say on Visits to Family/Relatives/Friends | n = 8635 | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) |
| | Solely the Woman | 0.279 (0.007) | 0.263 (0.011) | 0.197 (0.009) | 0.085 (0.007) | 0.275 (0.011) | 0.218 (0.010) |
| | Woman and Partner/Someone Else | 0.638 (0.007) | 0.220 (0.008) | 0.162 (0.007) | 0.052 (0.004) | 0.230 (0.008) | 0.177 (0.008) |
| | Solely the Partner or Someone Else | 0.082 (0.004) | 0.317 (0.022) | 0.266 (0.020) | 0.104 (0.013) | 0.332 (0.023) | 0.287 (0.021) |
| | Final Say on Food to Cook/Serve | | | | | | |
| | Solely the Woman | --- | --- | --- | --- | --- | --- |
| | Woman and Partner/Someone Else | --- | --- | --- | --- | --- | --- |
| | Solely the Partner or Someone Else | --- | --- | --- | --- | --- | --- |
| | Final Say on Spending Husband's Earnings | n = 8688 | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) | *** (grpdif) |
| | Solely the Woman | 0.154 (0.005) | 0.257 (0.014) | 0.203 (0.013) | 0.091 (0.009) | 0.273 (0.014) | 0.225 (0.013) |
| | Woman and Partner/Someone Else | 0.719 (0.007) | 0.214 (0.007) | 0.157 (0.006) | 0.050 (0.004) | 0.223 (0.008) | 0.171 (0.007) |
| | Solely the Partner or Someone Else | 0.128 (0.005) | 0.358 (0.018) | 0.284 (0.017) | 0.115 (0.011) | 0.373 (0.018) | 0.309 (0.017) |

All table cells list the estimated population subgroup proportions alongside their Normal-distribution standard error approximations in parentheses

[1]Column contains unweighted responder sample sizes in gray cells and weighted marginal proportions and design SE's for each levels of the row factor in off-white cells

***p<0.001, **p<0.01, *p<0.05, †p<0.10 for linear trend (lin), quadratic trend (quad), or general-group difference (grpdif) tests

Table 15. Prevalence of Child Punishment

| Countries | | Mother Discipline Methods<br>Physical | Inappropriate Non-Physical |
|---|---|---|---|
| Columbia '10 | n=31922 | | |
| | Prevalence | 0.545 (0.004) | 0.102 (0.002) |
| Peru '00 | n=16776 | | |
| | Prevalence | 0.515 (0.005) | 0.103 (0.003) |
| Nicaragua '98 | n=7208 | | |
| | Prevalence | 0.337 (0.008) | --- |
| Bolivia '08 | n=8654 | | |
| | Prevalence | 0.419 (0.008) | 0.249 (0.006) |

[1]Refers to discipline administered by any household disciplinarian

Table 16. Intimate Partner Violence and Child Punishment

| Countries | Type of IPV | Marginal Proportions[1] | Mother Discipline Methods Physical | Inappropriate Non-Physical |
|---|---|---|---|---|
| Columbia '10 | Mild to Severe IPV[2] | n=31921.5 | *** (grpdif) | *** (grpdif) |
| | No | 0.626 (0.004) | 0.507 (0.005) | 0.116 (0.003) |
| | Yes | 0.374 (0.004) | 0.605 (0.006) | 0.080 (0.003) |
| | Moderate to Severe IPV[3] | n=31921.5 | *** (grpdif) | *** (grpdif) |
| | No | 0.799 (0.003) | 0.526 (0.004) | 0.108 (0.003) |
| | Yes | 0.201 (0.003) | 0.615 (0.008) | 0.080 (0.004) |
| Peru '00 | Mild to Severe IPV[2] | n=16769 | *** (grpdif) | *** (grpdif) |
| | No | 0.588 (0.005) | 0.461 (0.007) | 0.128 (0.004) |
| | Yes | 0.412 (0.005) | 0.590 (0.008) | 0.069 (0.004) |
| | Moderate to Severe IPV[3] | | | |
| | No | --- | --- | --- |
| | Yes | --- | --- | --- |
| Nicaragua '98 | Mild to Severe IPV[2] | n=7203 | *** (grpdif) | |
| | No | 0.715 (0.006) | 0.302 (0.008) | --- |
| | Yes | 0.285 (0.006) | 0.421 (0.014) | --- |
| | Moderate to Severe IPV[3] | n=7203 | *** (grpdif) | |
| | No | 0.768 (0.006) | 0.312 (0.008) | --- |
| | Yes | 0.232 (0.006) | 0.419 (0.015) | --- |
| Bolivia '08 | Mild to Severe IPV[2] | n=8643 | *** (grpdif) | *** (grpdif) |
| | No | 0.745 (0.006) | 0.398 (0.009) | 0.264 (0.007) |
| | Yes | 0.255 (0.006) | 0.480 (0.013) | 0.204 (0.010) |
| | Moderate to Severe IPV[3] | n=8643 | *** (grpdif) | *** (grpdif) |
| | No | 0.800 (0.006) | 0.400 (0.008) | 0.260 (0.007) |
| | Yes | 0.200 (0.006) | 0.497 (0.015) | 0.204 (0.012) |

[1]Column contains *unweighted* responder sample sizes in gray cells and *weighted* marginal proportions and design SE's for each levels of the row factor in off-white cells

[2]Refers to discipline administered by any household disciplinarian

[3]Refers to any form of mild to severe physical or sexual IPV; see footnotes of Table 1. IPV Prevalence for item detail

[4]Refers to any form of moderate to severe physical or sexual IPV; see footnotes of Table 1. IPV Prevalence for item detail

Peru '00 only asks one "yes/no" IPV item, which references experiences of mild, moderate, and/or severe acts of IPV

FIGURES

Figure 1. Prevalence of Mild to Severe Non Sexual IPV in Urban areas of Columbia

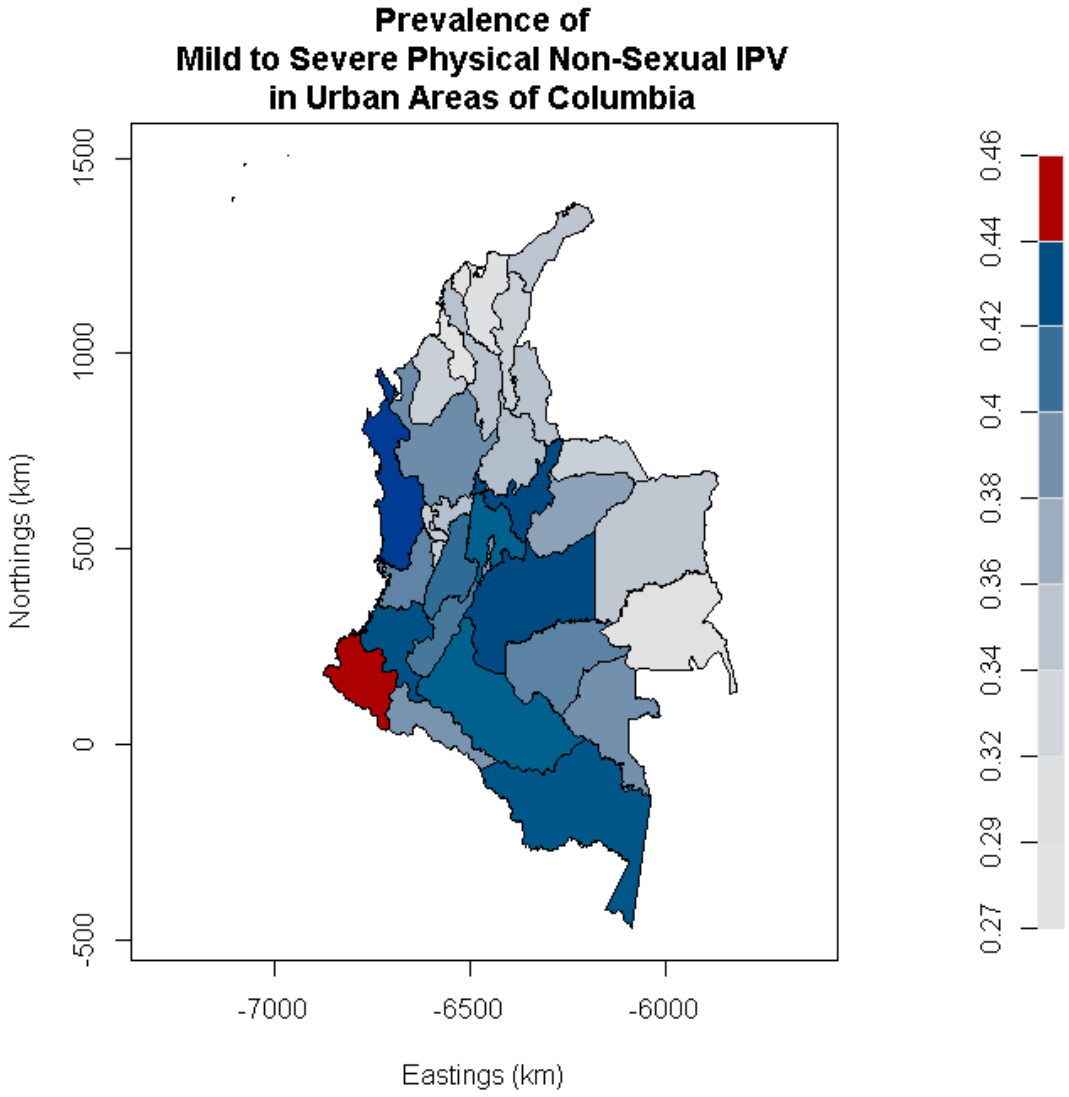


Figure 2. Prevalence of Mild to Severe Non Sexual IPV in Rural areas of Columbia

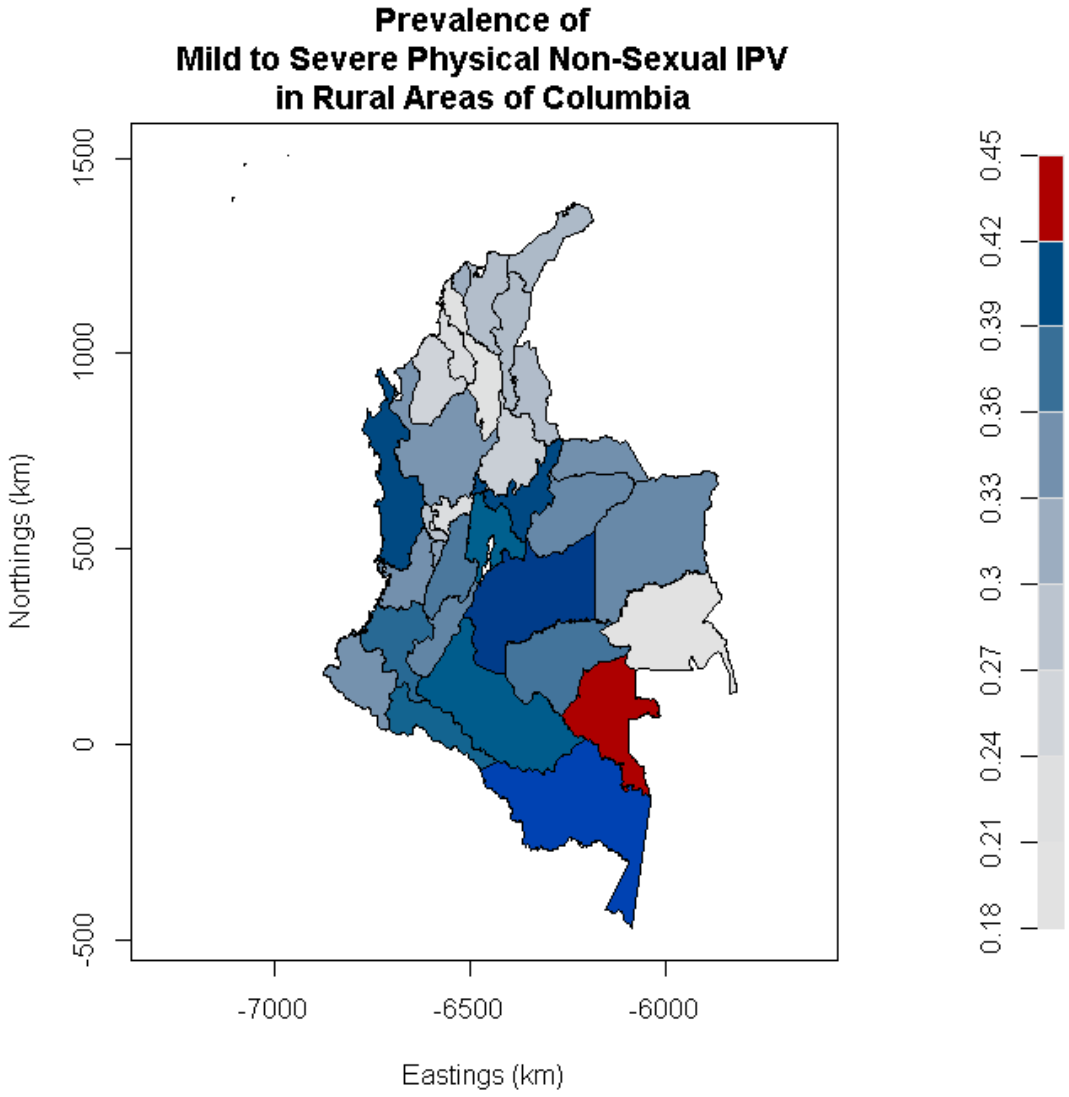


Figure 3. Prevalence of Moderate to Severe Non Sexual IPV in Urban areas of Columbia

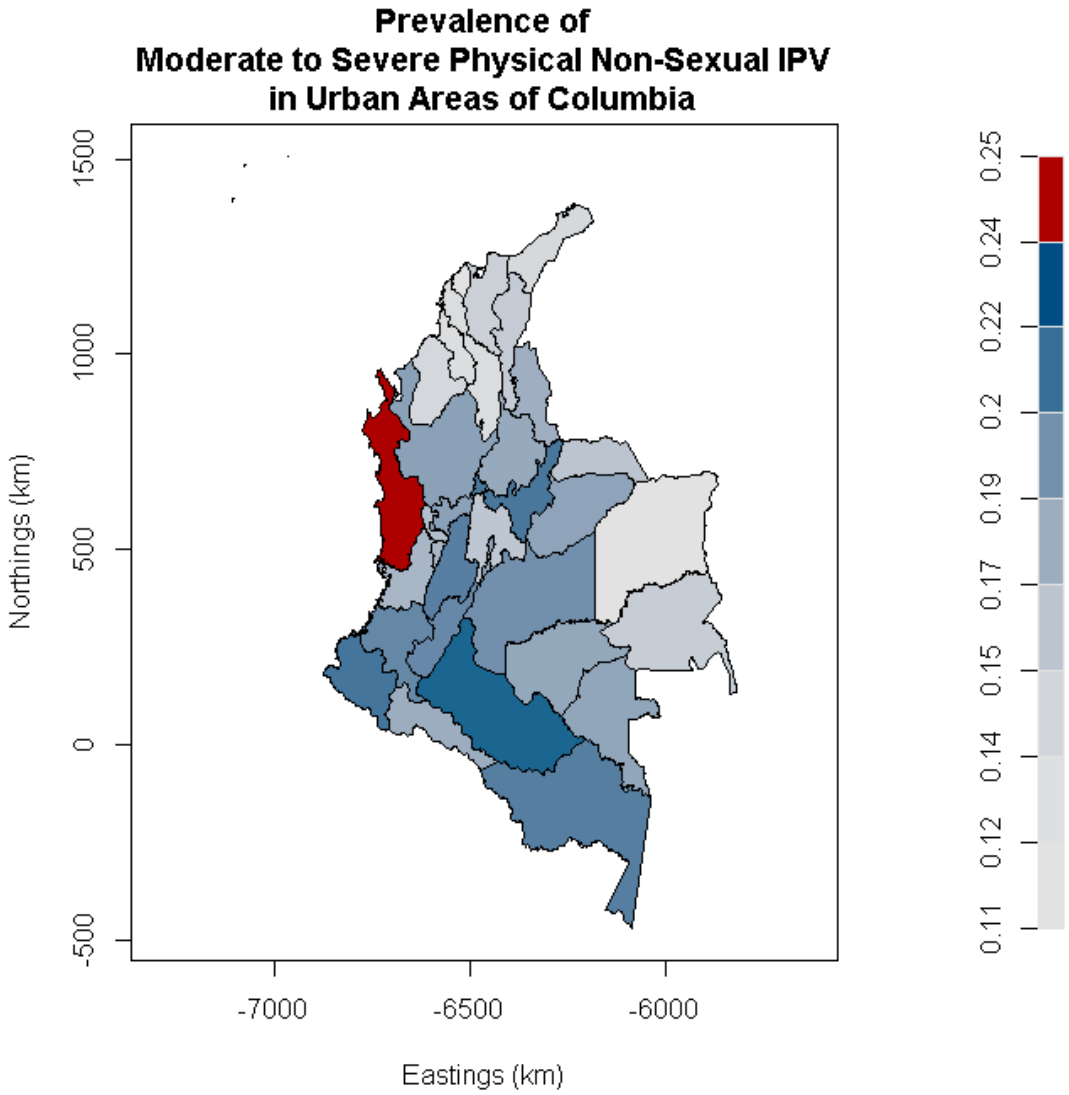


Figure 4. Prevalence of Moderate to Severe Non Sexual IPV in Rural areas of Columbia

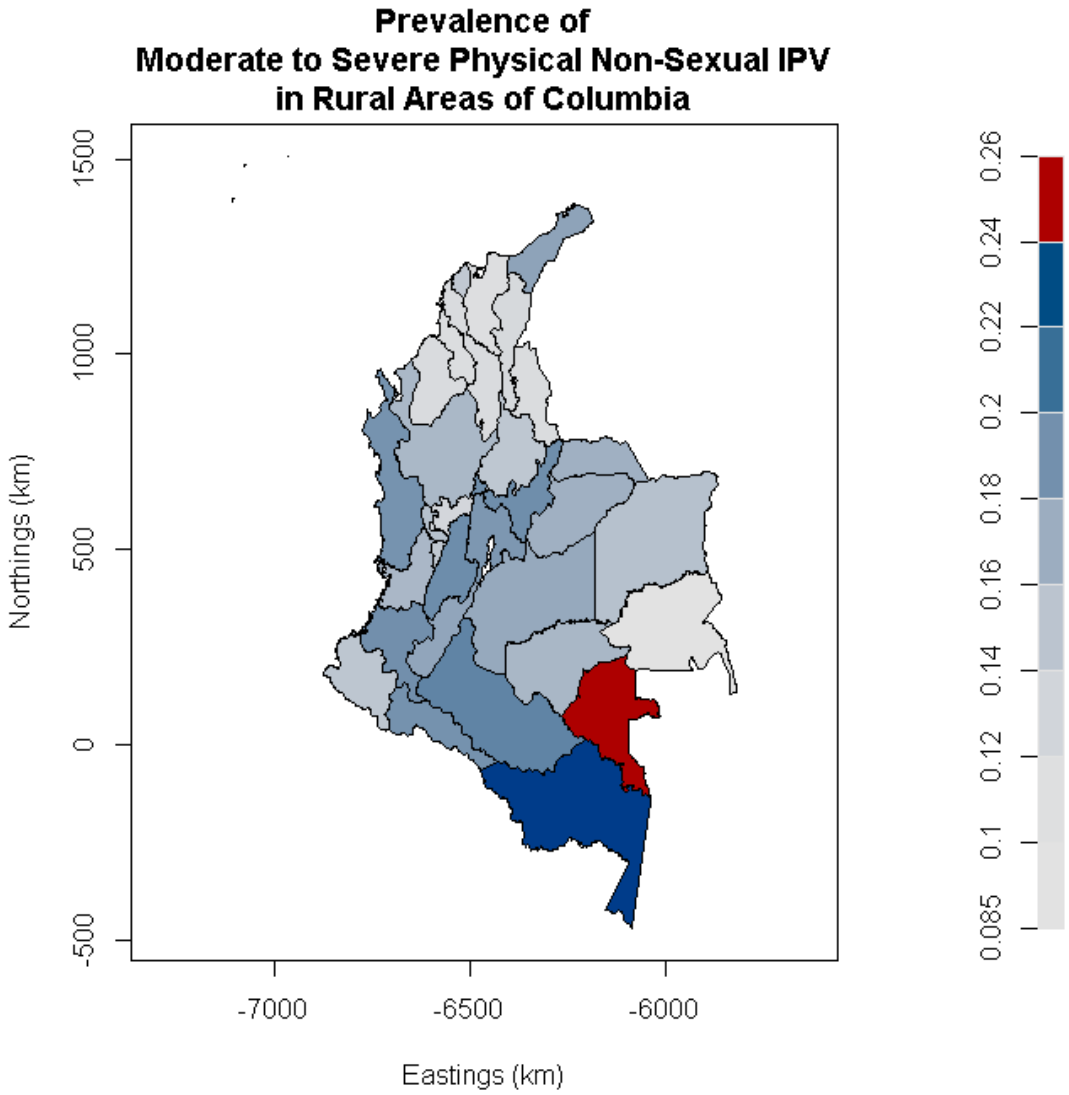


Figure 5. Prevalence of Sexual IPV in Urban areas of Columbia

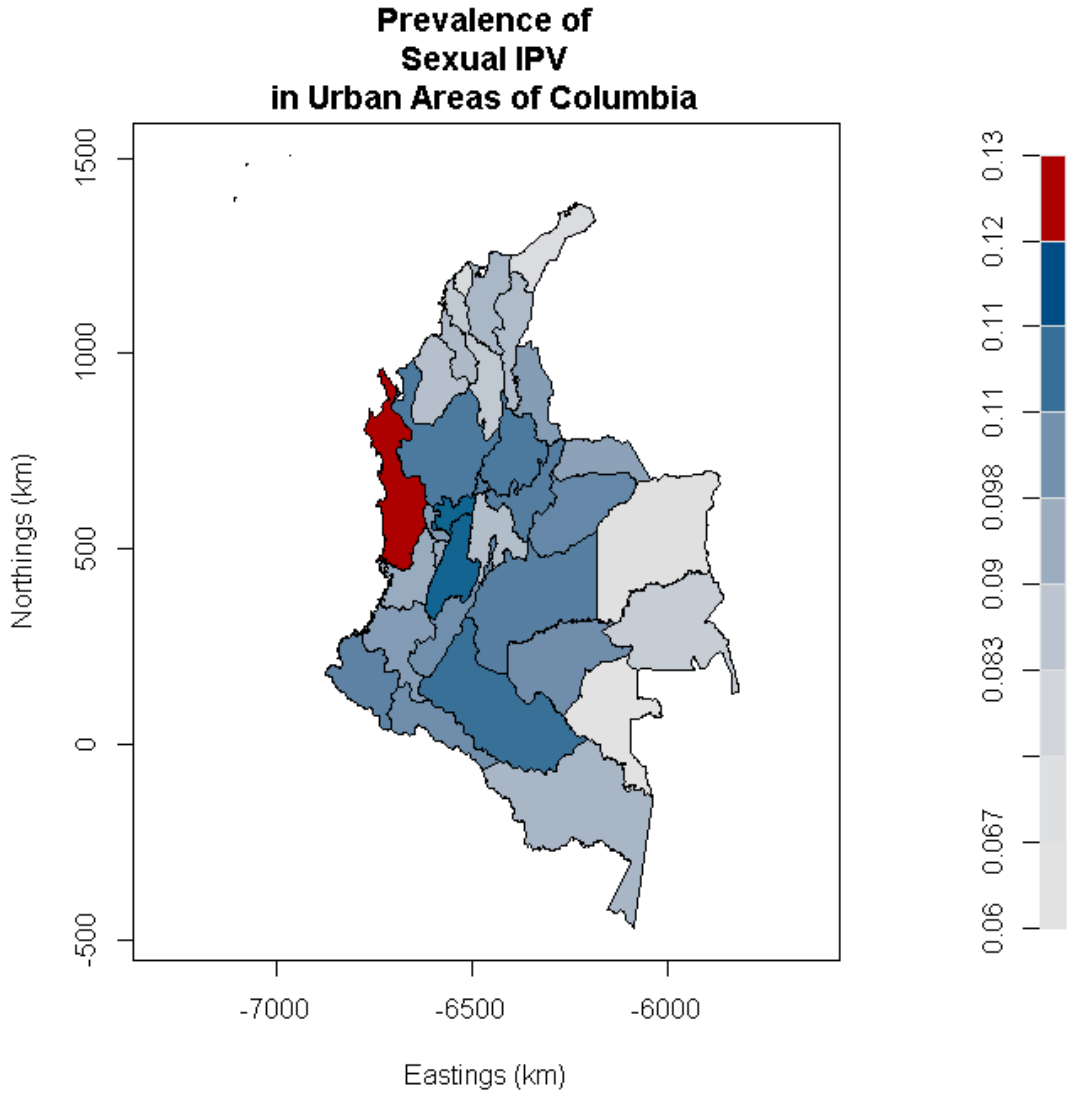


Figure 6. Prevalence of Sexual IPV in Rural areas of Columbia

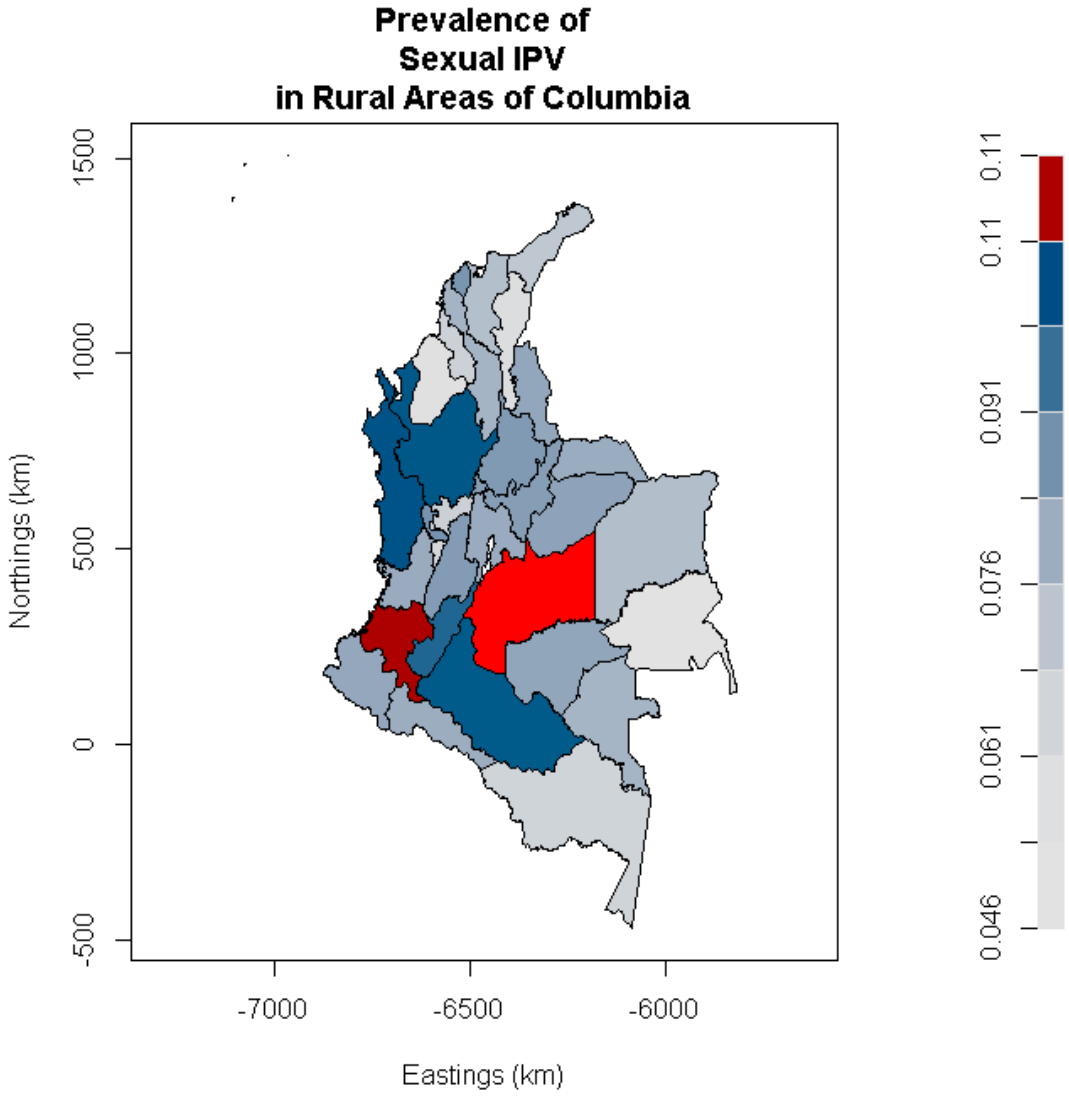


Figure 7. Prevalence of Mild to Severe Non Sexual IPV in Urban areas of Peru

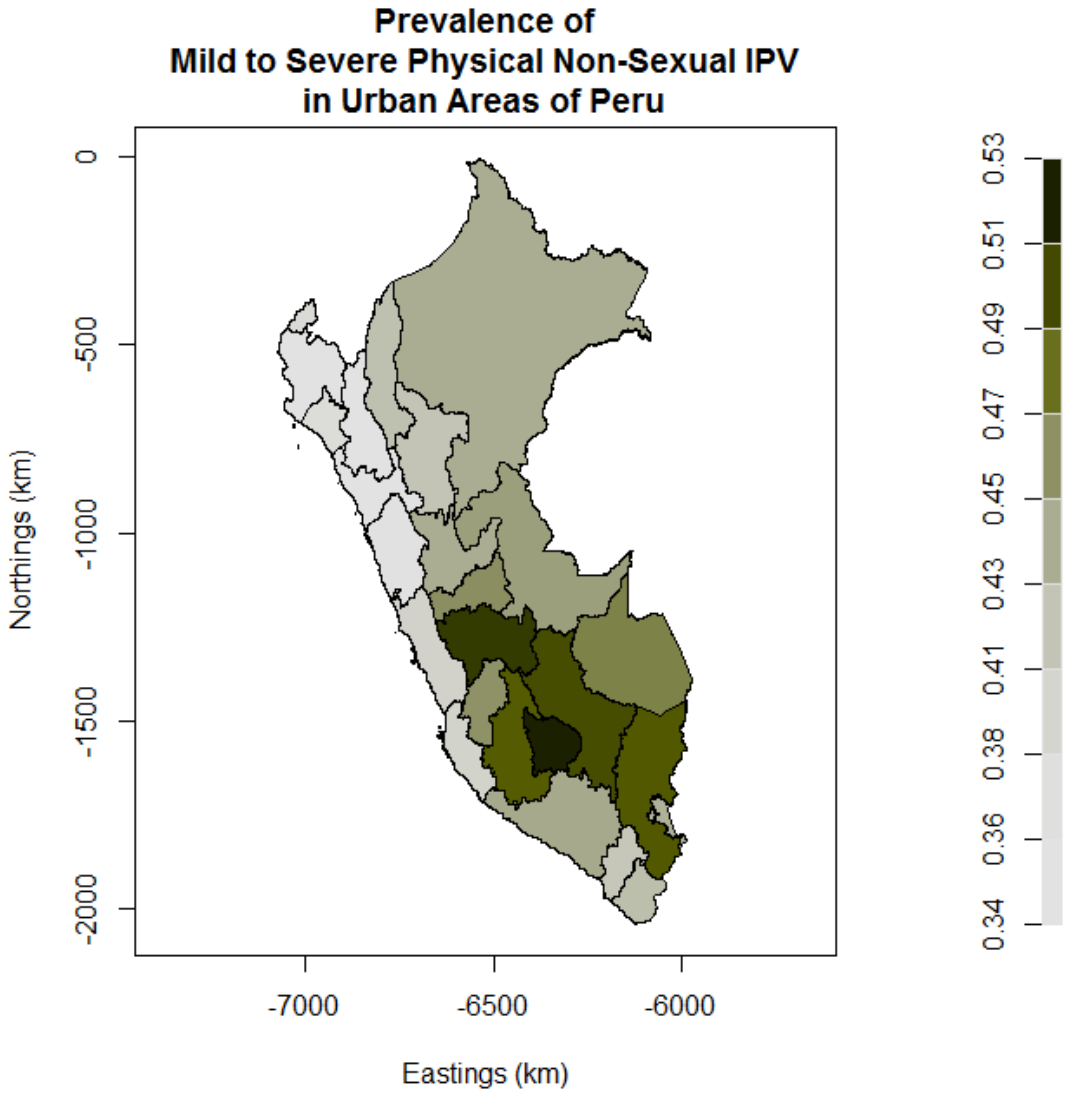


Figure 8. Prevalence of Mild to Severe Non Sexual IPV in Rural areas of Peru

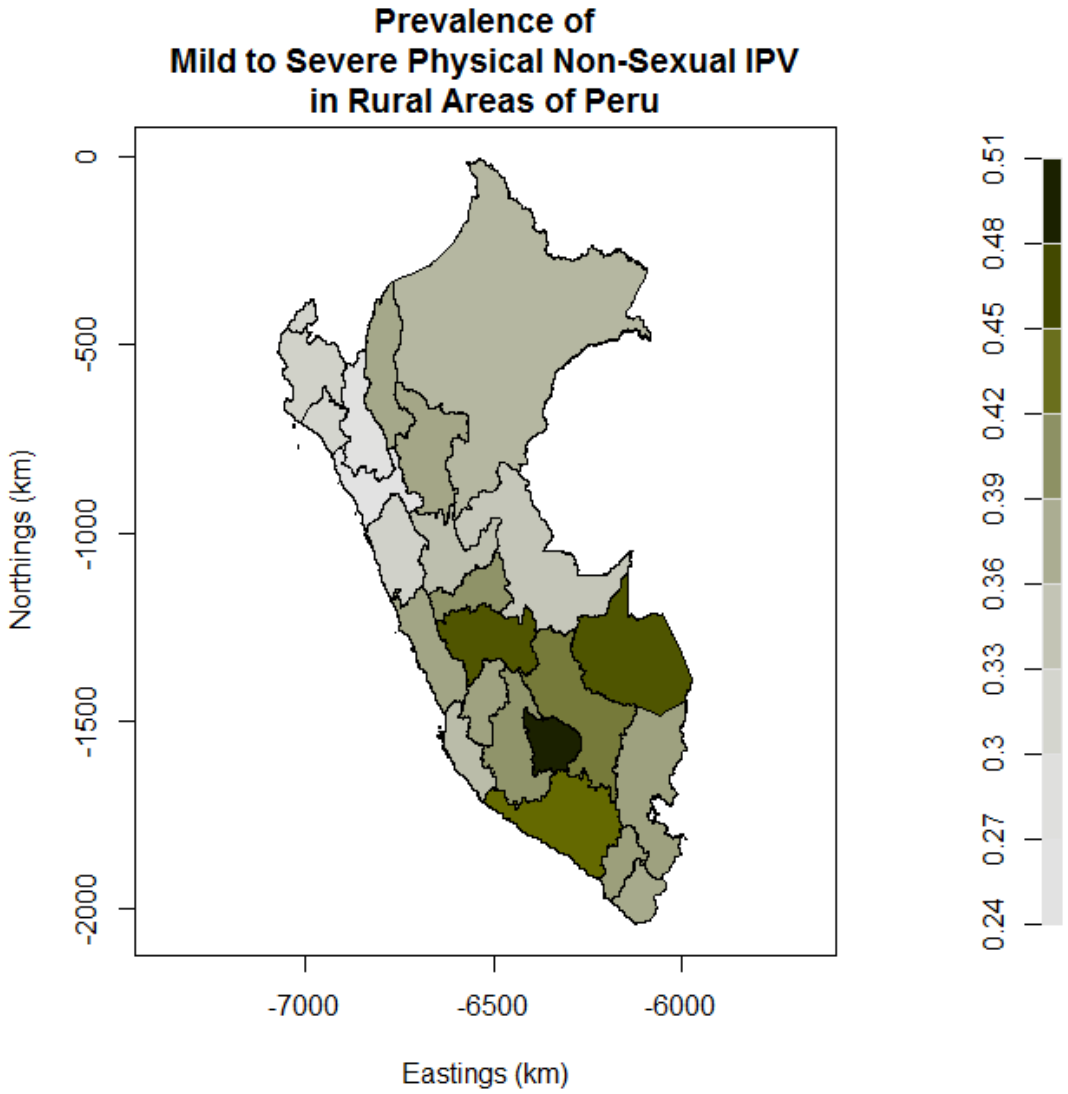


Figure 9. Prevalence of Moderate to Severe Non Sexual IPV in Urban areas of Peru

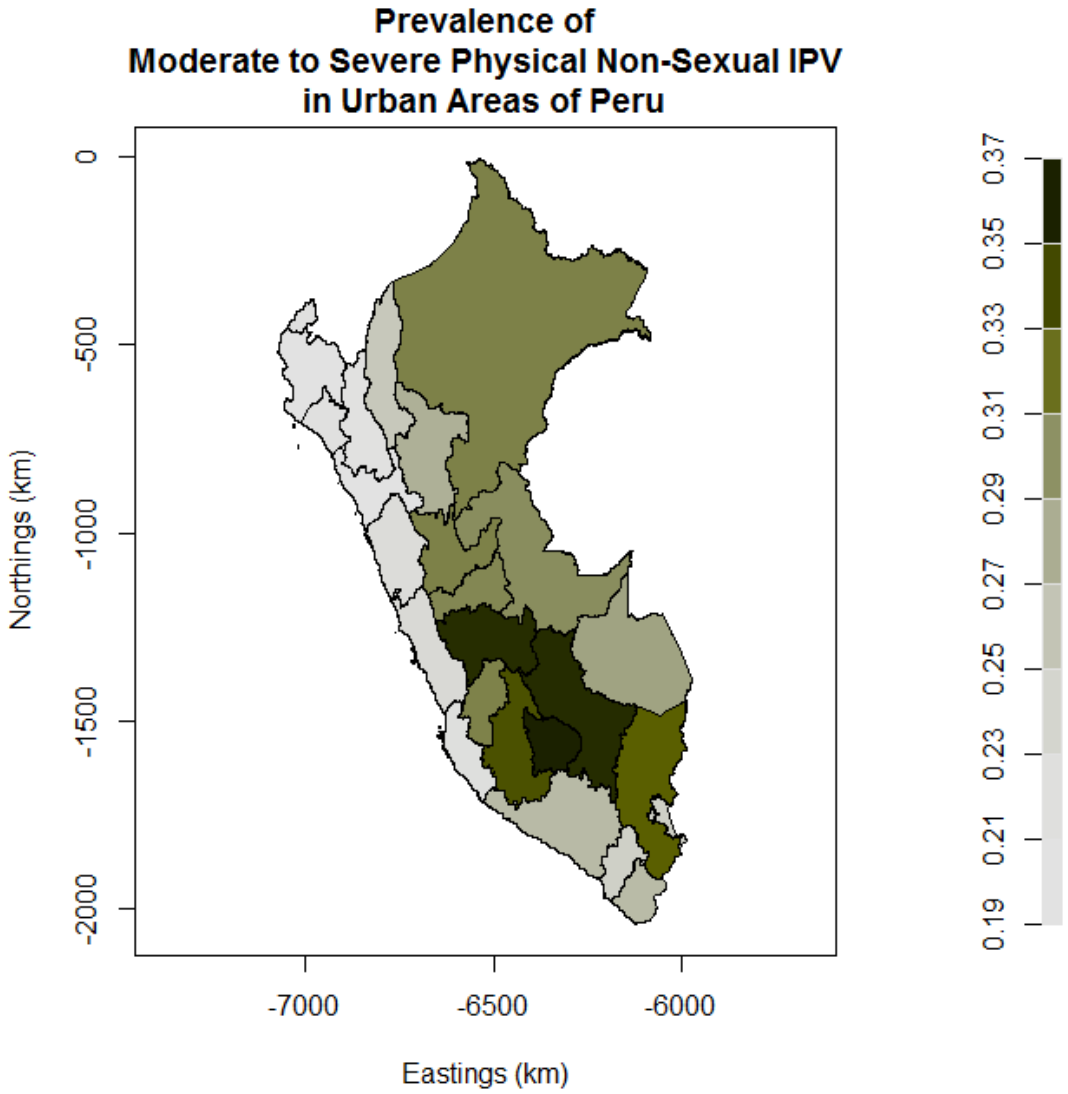


Figure 10. Prevalence of Moderate to Severe Non Sexual IPV in Rural areas of Peru

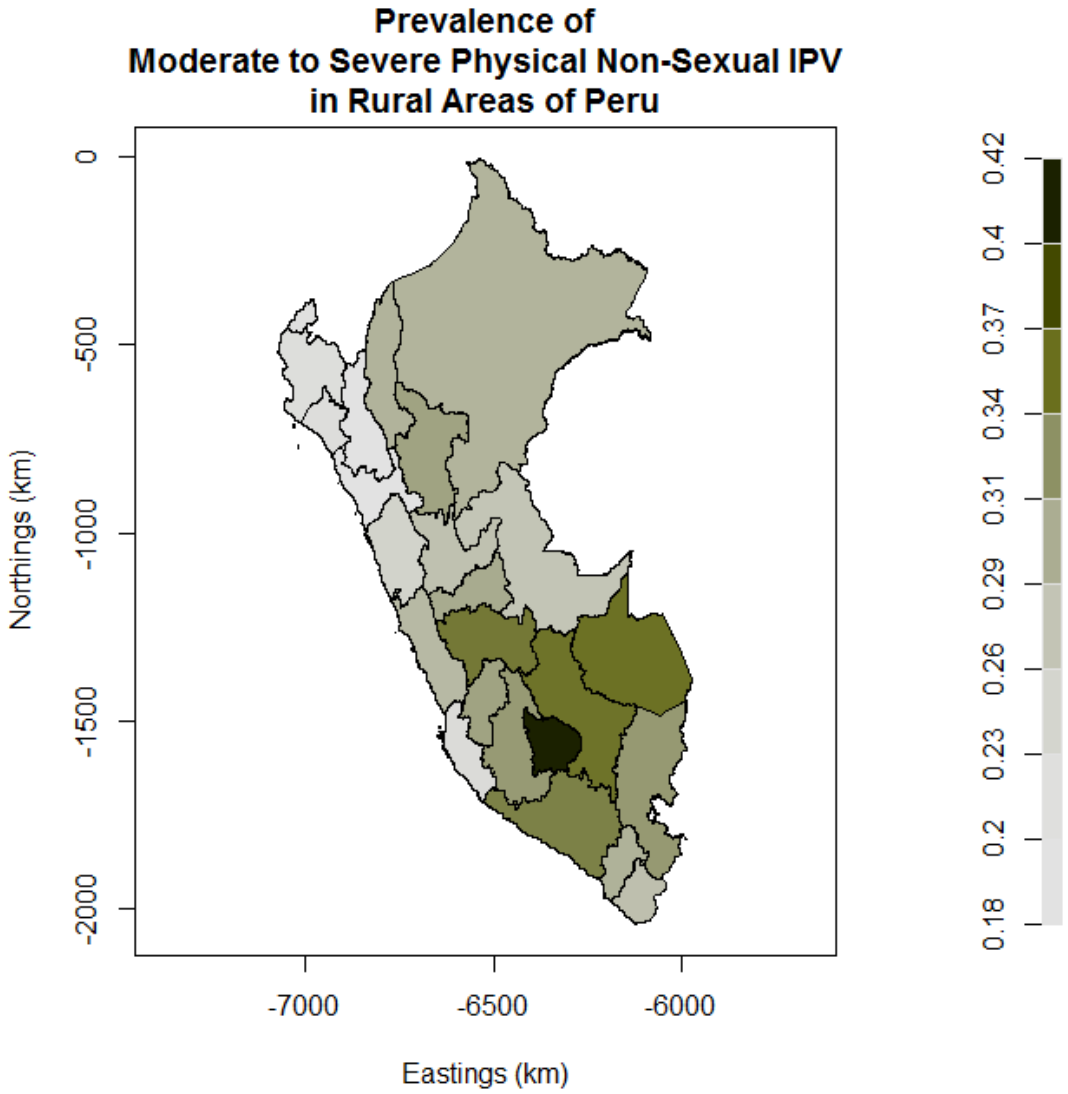


Figure 11. Prevalence of Sexual IPV in Urban areas of Peru

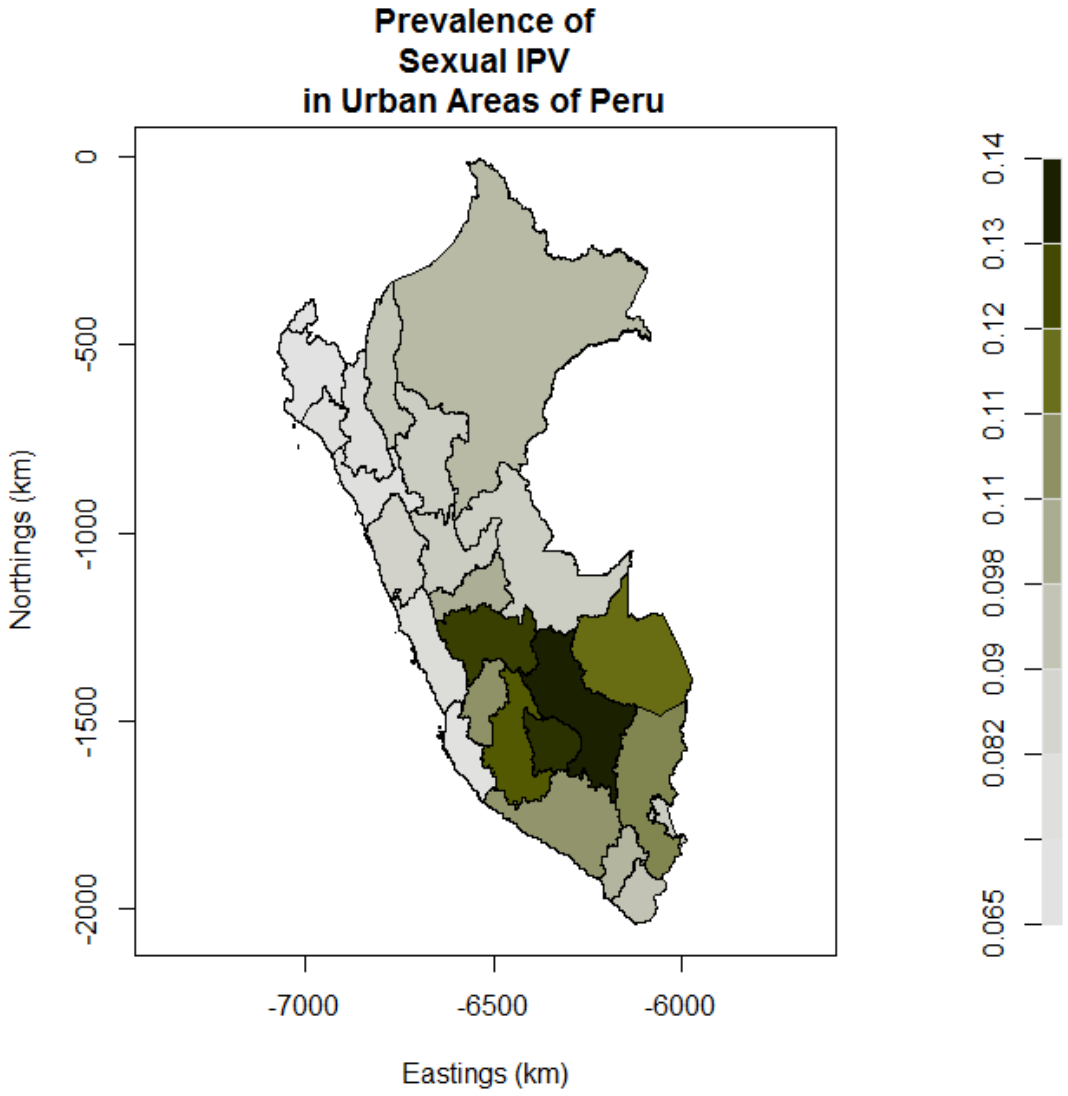


Figure 12. Prevalence of Sexual IPV in Rural areas of Peru

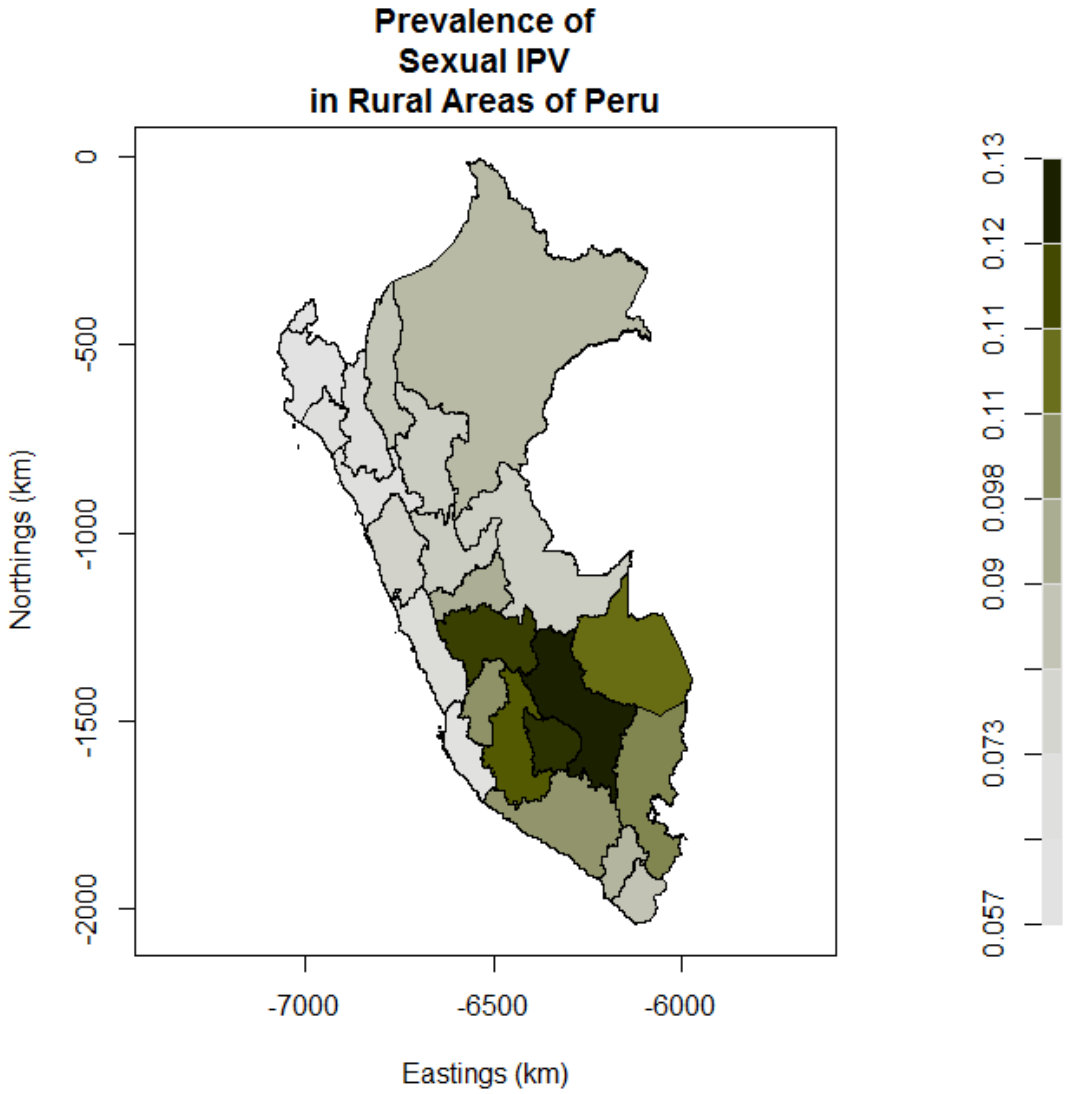


Figure 13. Prevalence of Mild to Severe Non Sexual IPV in Urban areas of Nicaragua

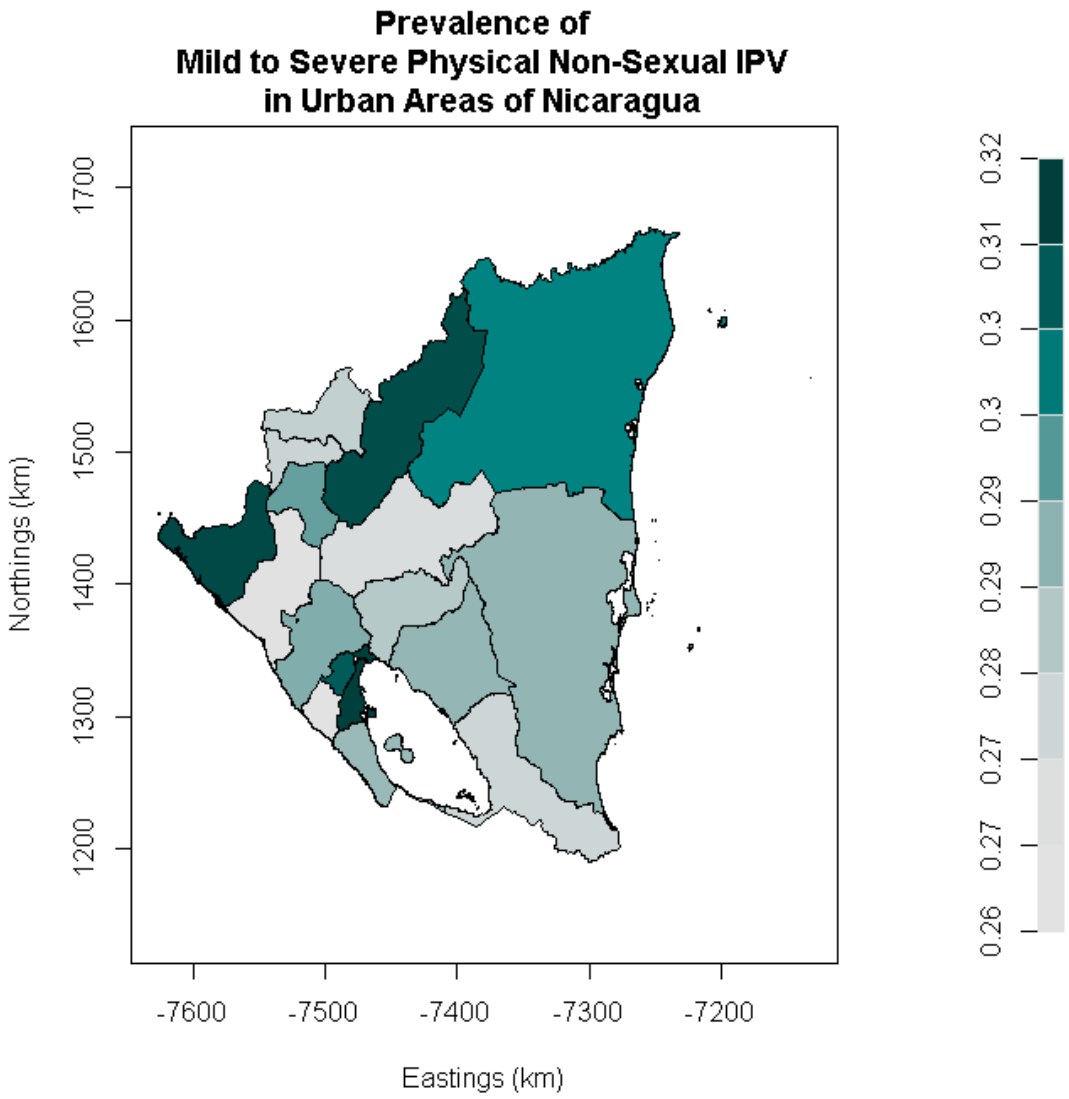


Figure 14. Prevalence of Mild to Severe Non Sexual IPV in Rural areas of Nicaragua

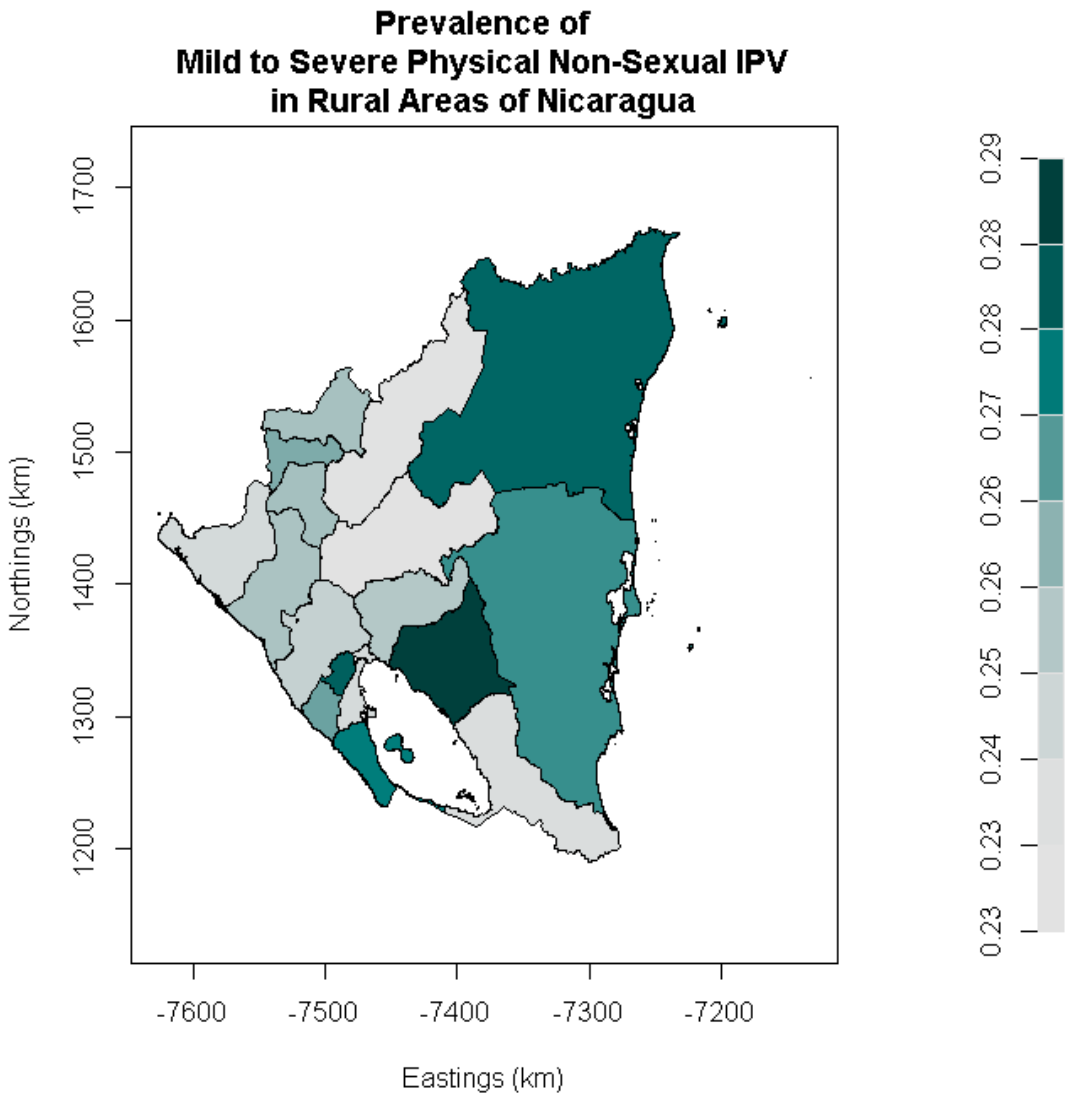


Figure 15. Prevalence of Moderate to Severe Non Sexual IPV in Urban areas of Nicaragua

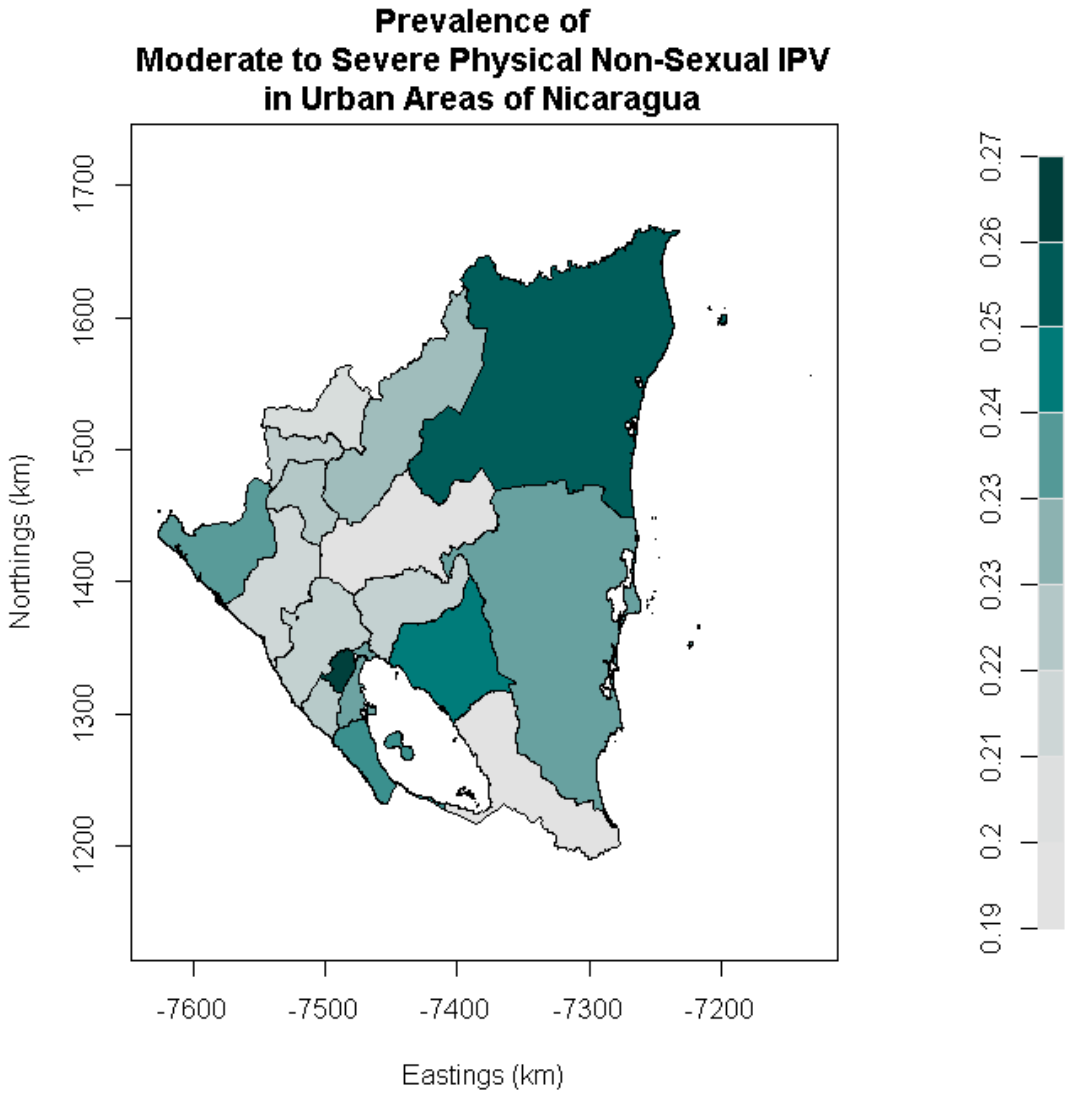


Figure 16. Prevalence of Moderate to Severe Non Sexual IPV in Rural areas of Nicaragua

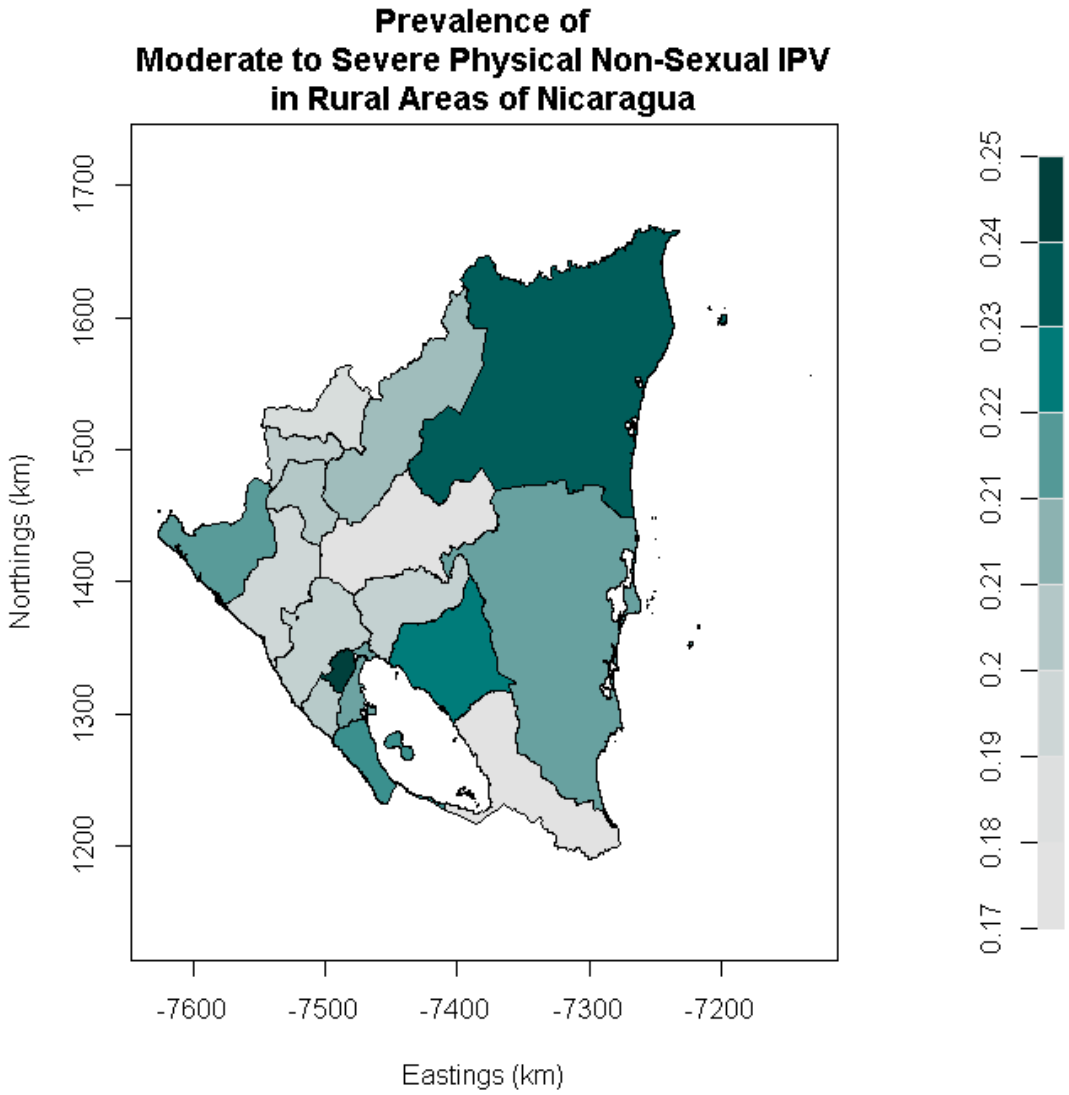


Figure 17. Prevalence of Sexual IPV in Urban areas of Nicaragua

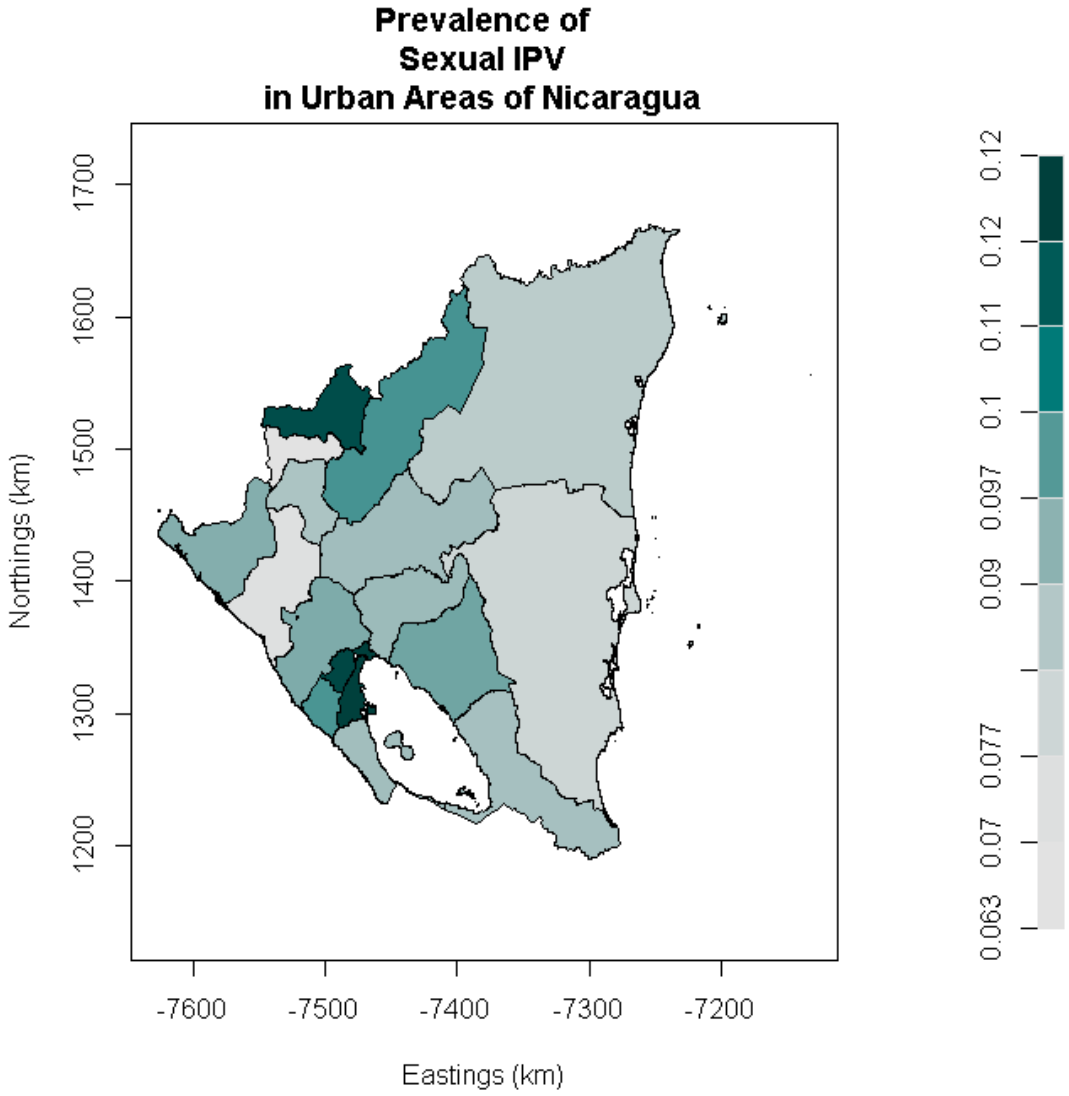


Figure 18. Prevalence of Sexual IPV in Rural areas of Nicaragua

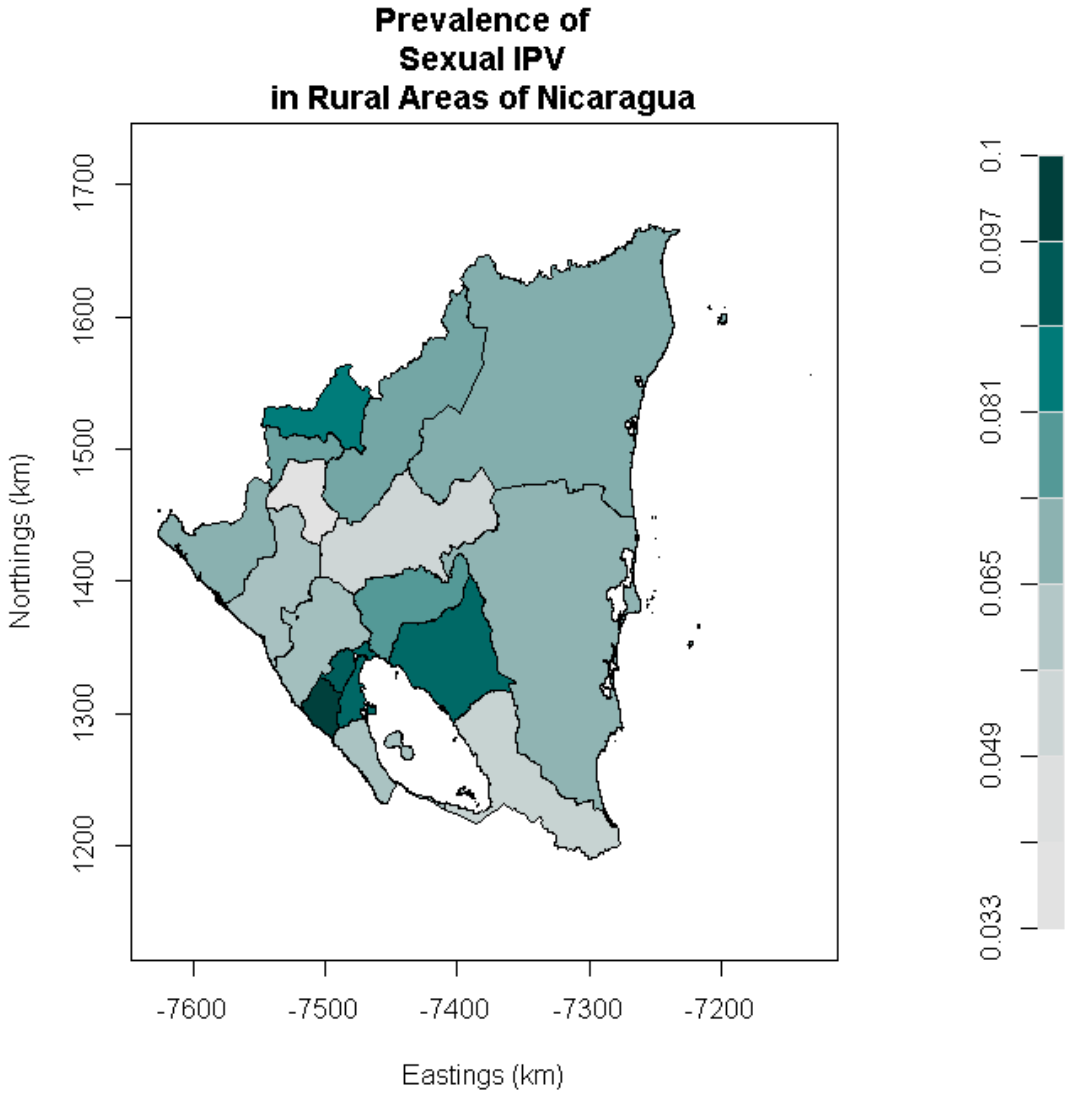


Figure 19. Prevalence of Mild to Severe Non Sexual IPV in Urban areas of Dominican Republic

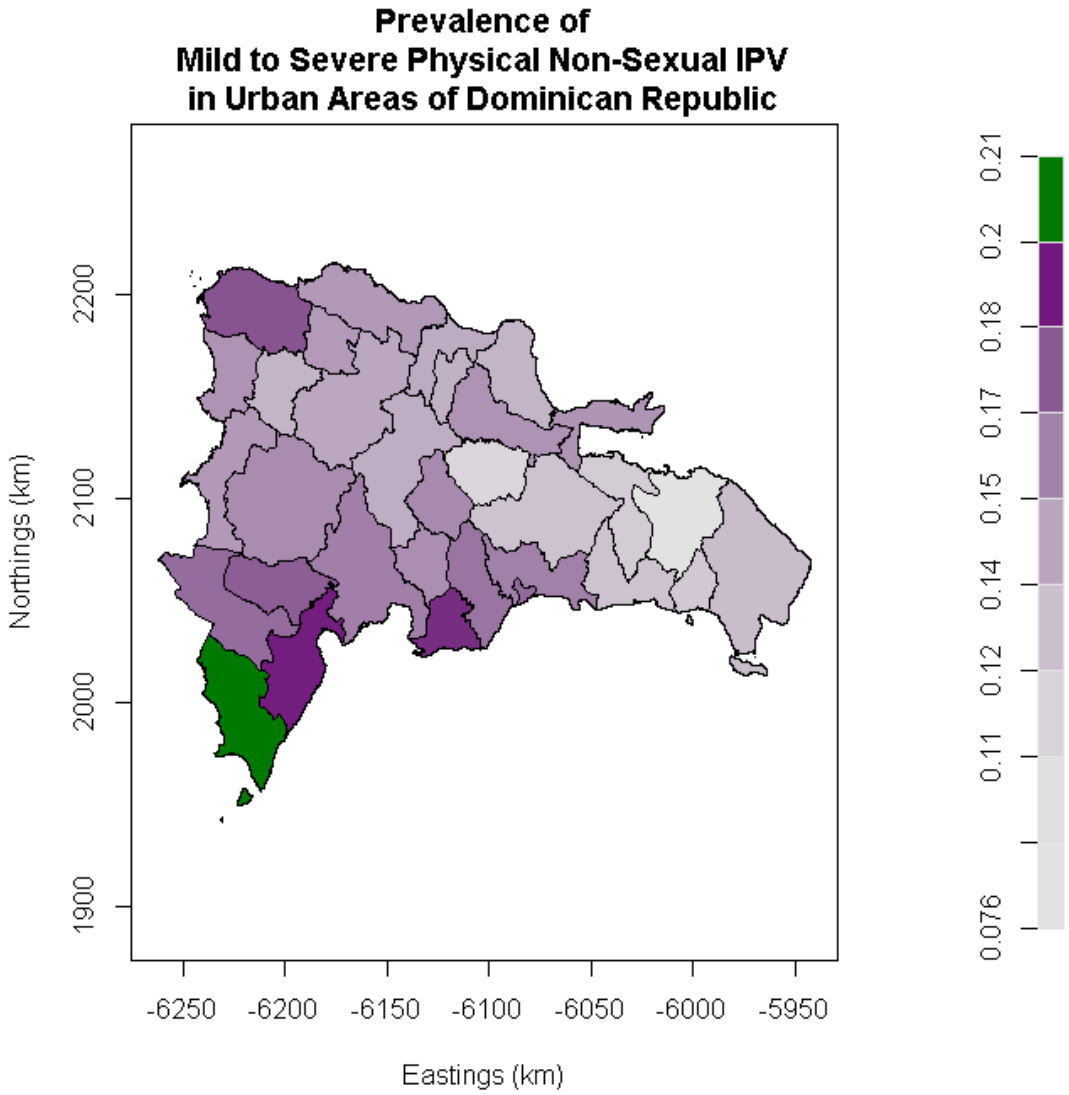


Figure 20. Prevalence of Mild to Severe Non Sexual IPV in Rural areas of Dominican Republic

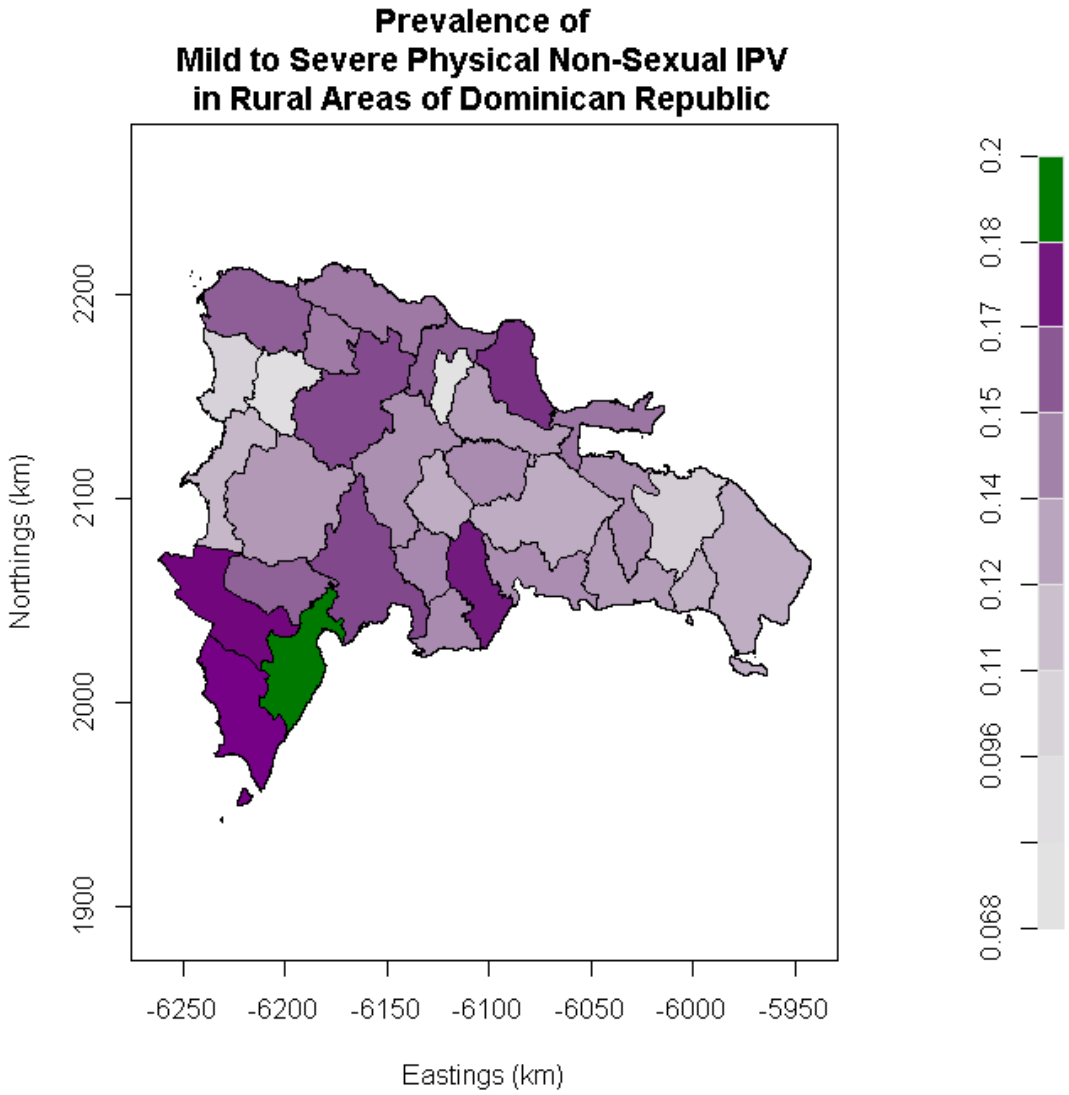


Figure 21. Prevalence of Moderate to Severe Non Sexual IPV in Urban areas of Dominican Republic

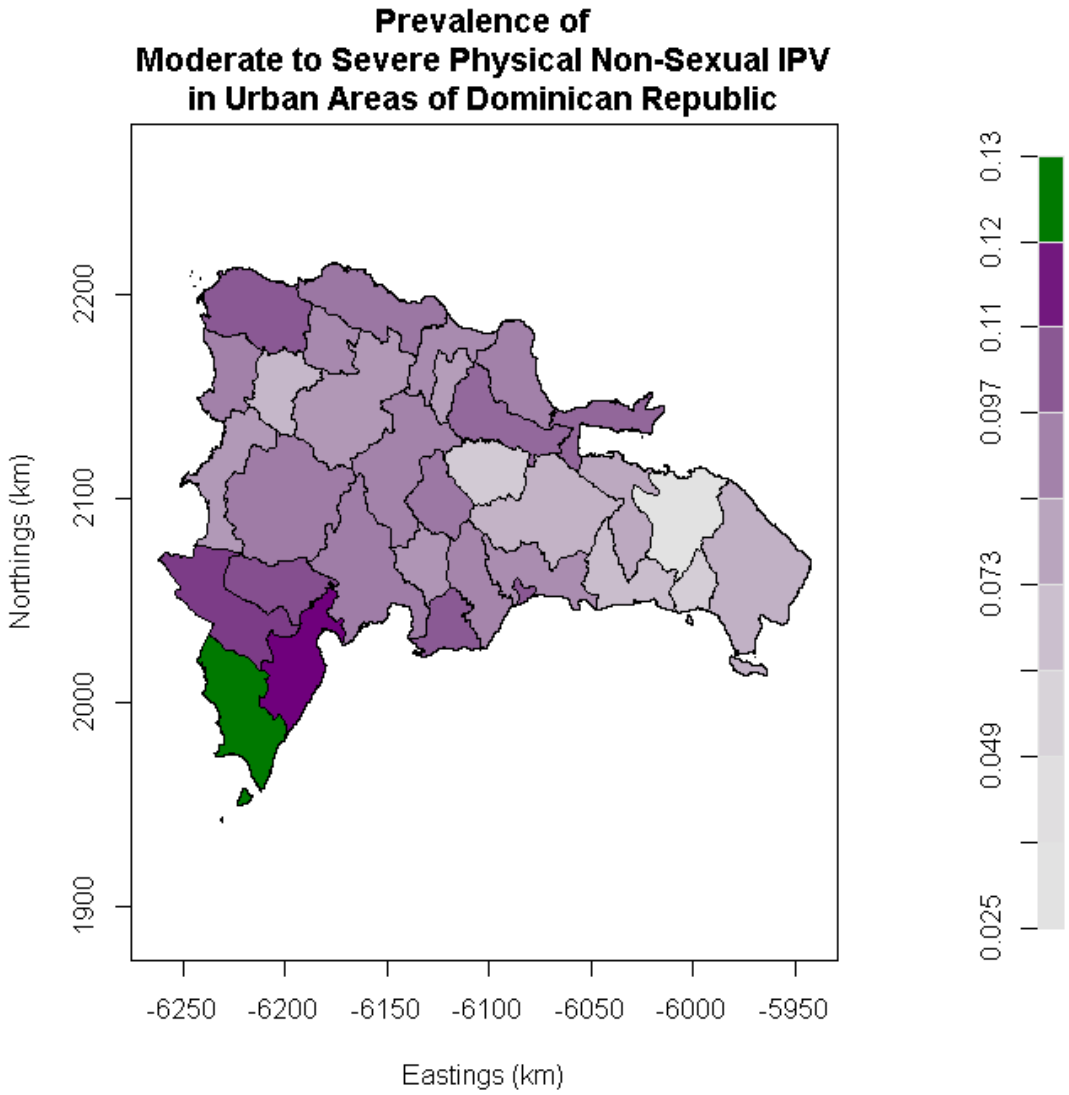


Figure 22. Prevalence of Moderate to Severe Non Sexual IPV in Rural areas of Dominican Republic

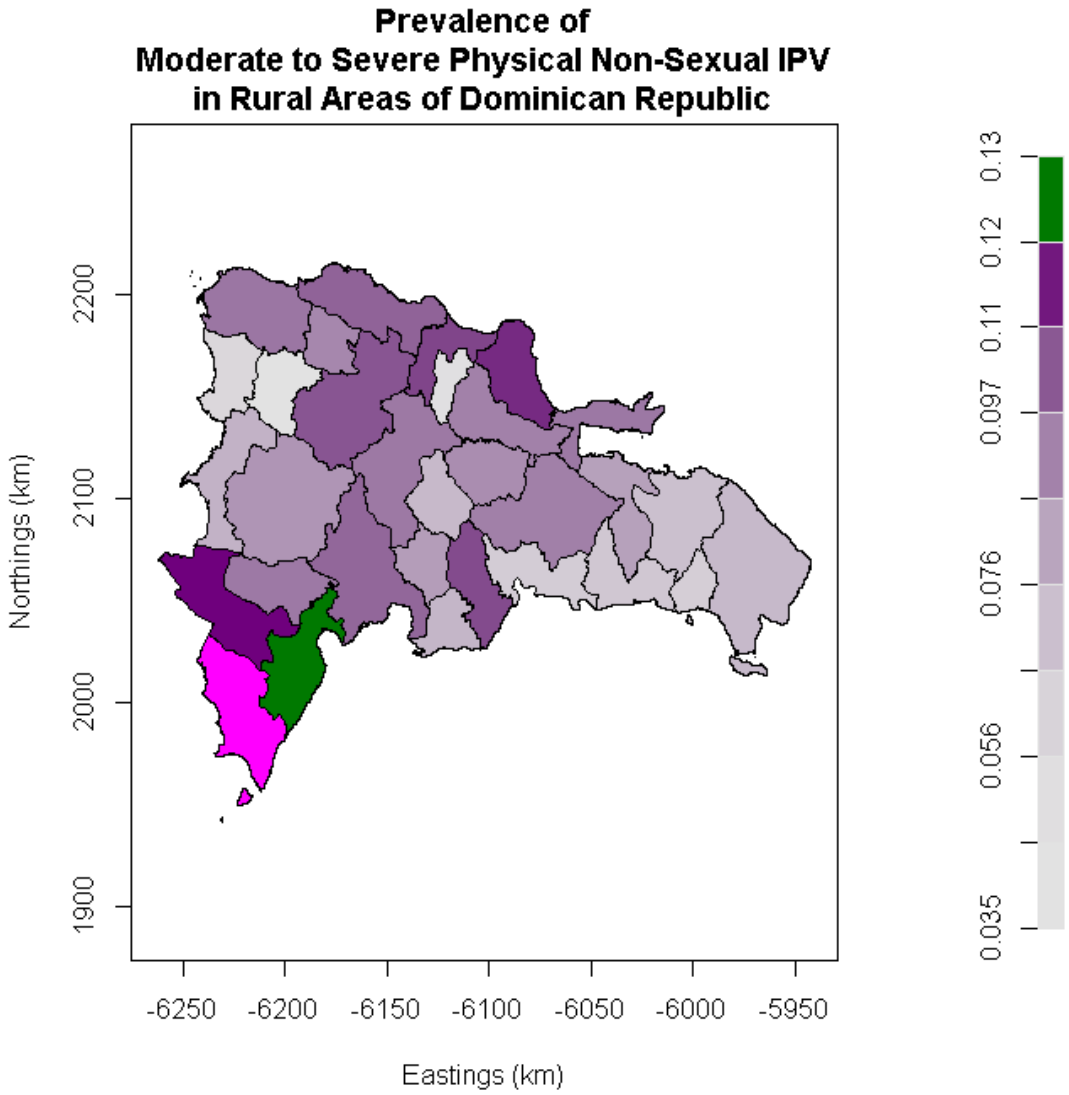


Figure 23. Prevalence of Sexual IPV in Urban areas of Dominican Republic

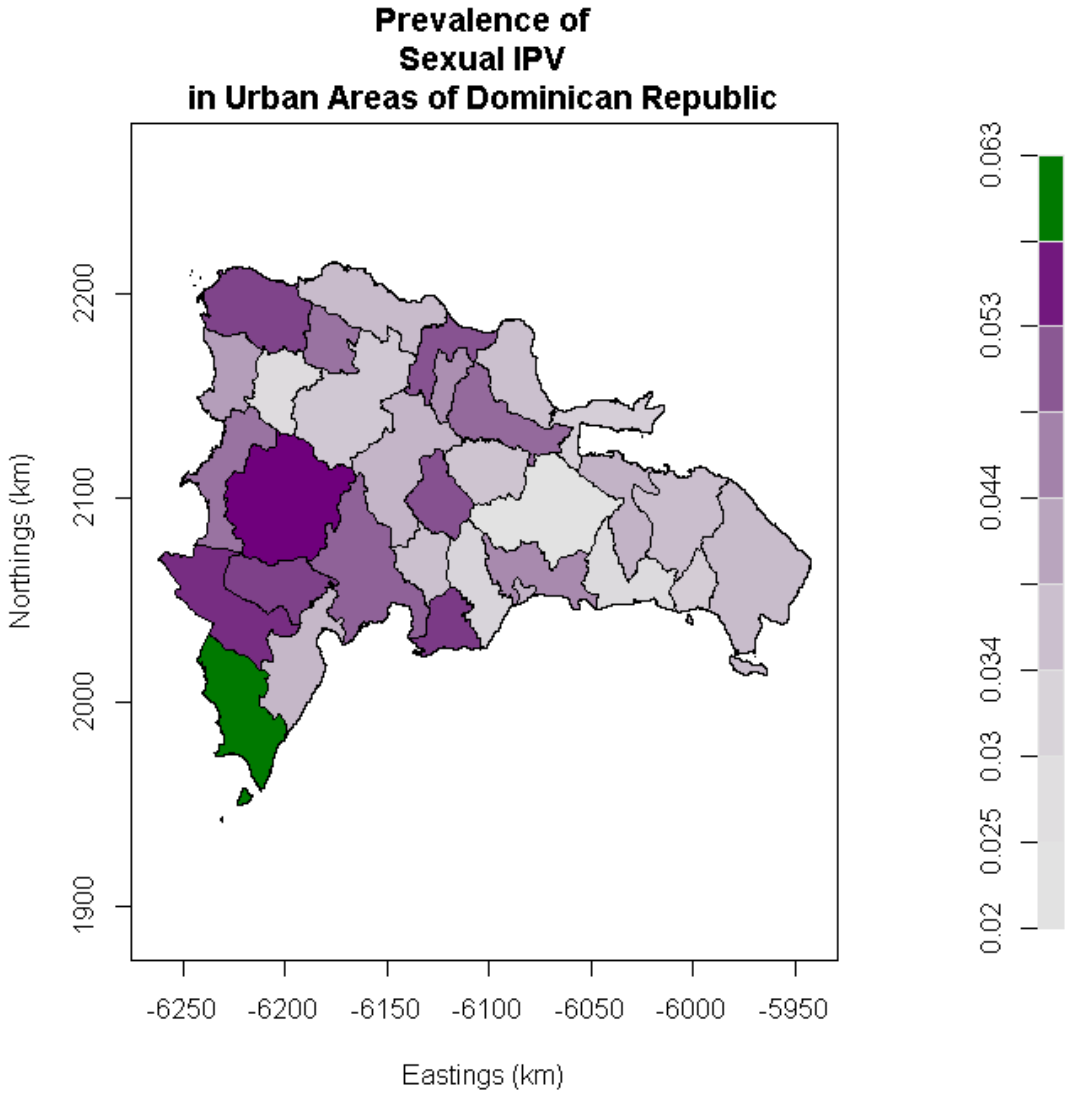


Figure 24. Prevalence of Sexual IPV in Rural areas of Dominican Republic

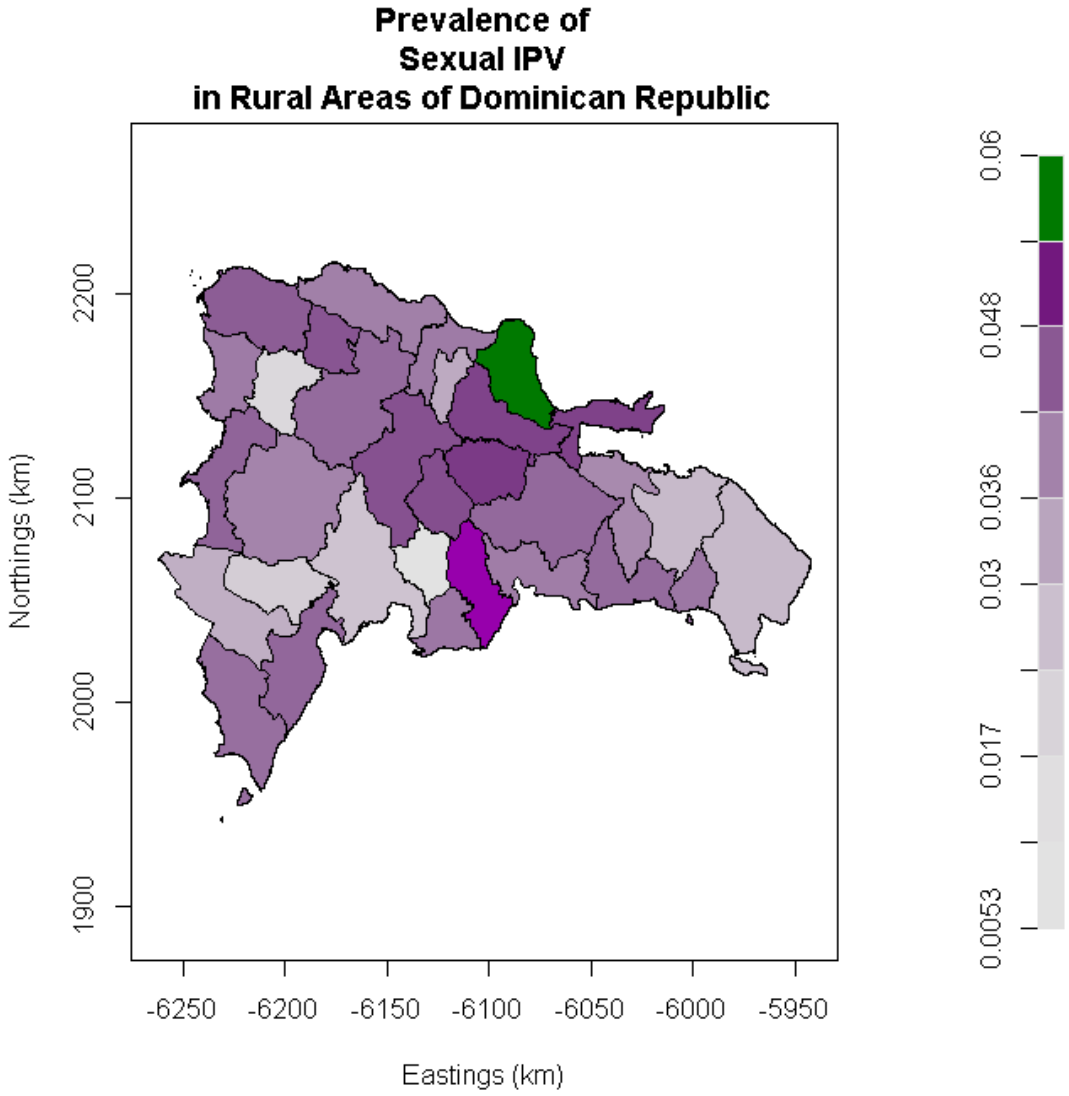


Figure 25. Prevalence of Mild to Severe Non Sexual IPV in Urban areas of Haiti

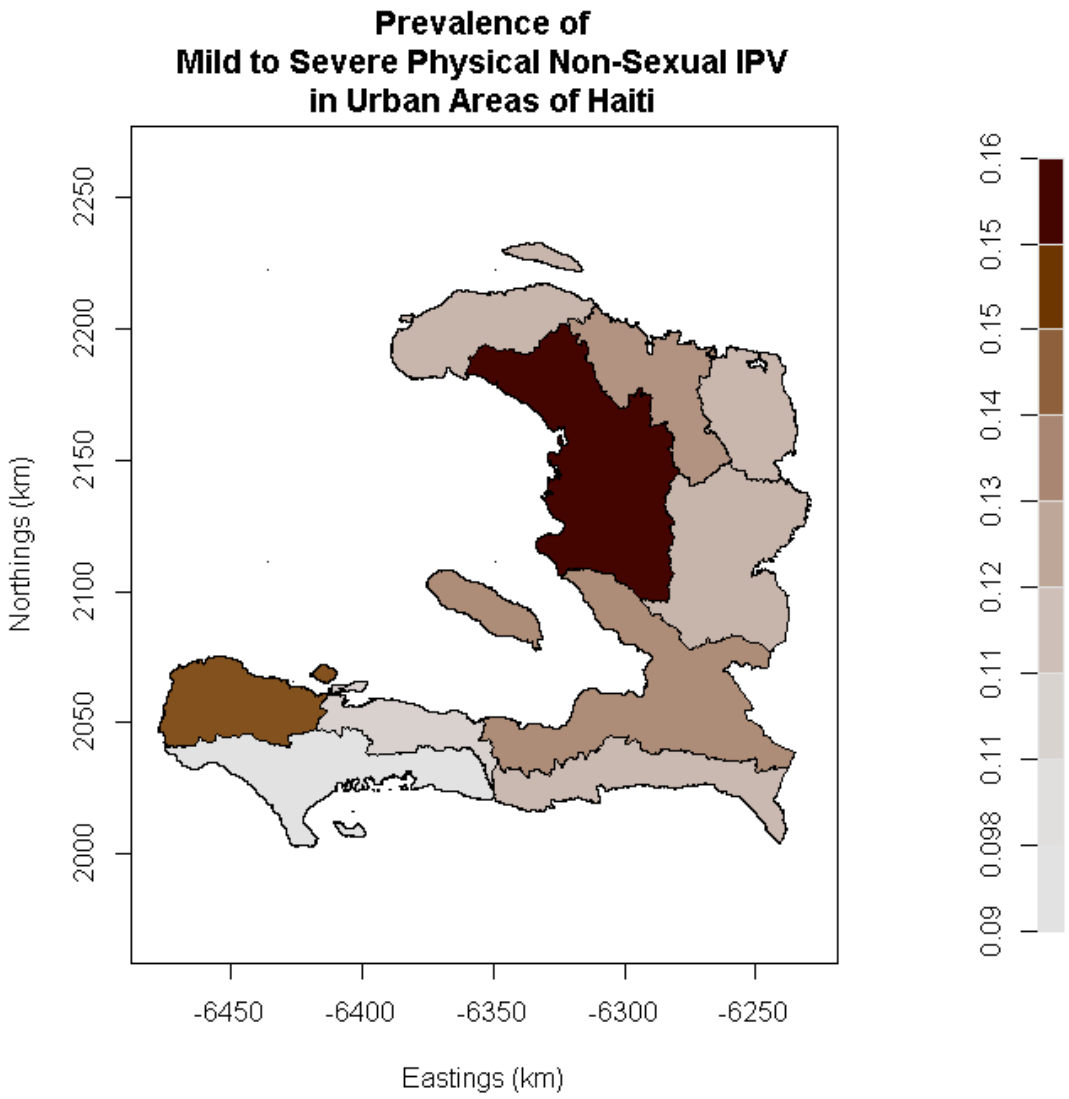


Figure 26. Prevalence of Mild to Severe Non Sexual IPV in Rural areas of Haiti

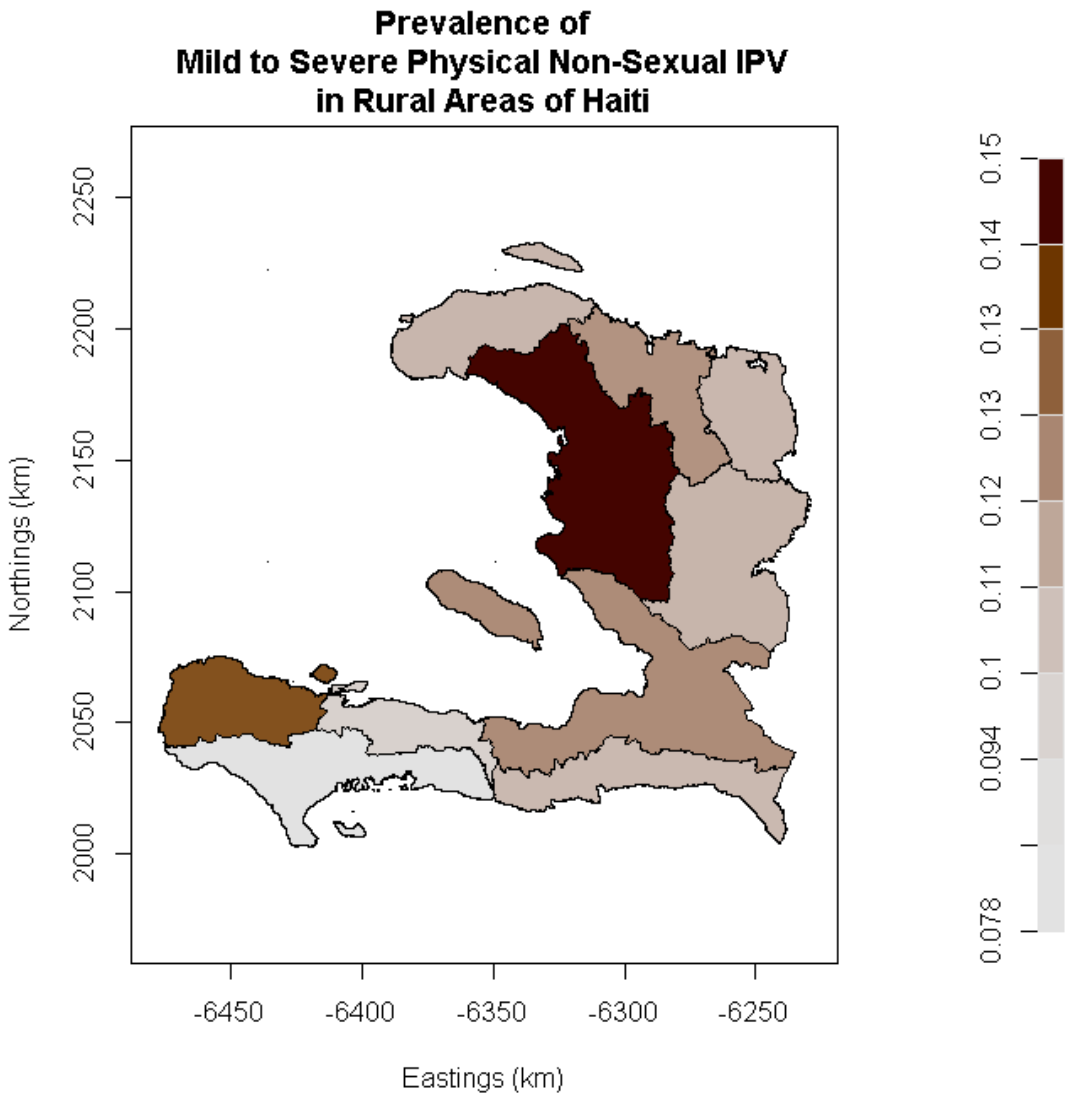


Figure 27. Prevalence of Moderate to Severe Non Sexual IPV in Urban areas of Haiti

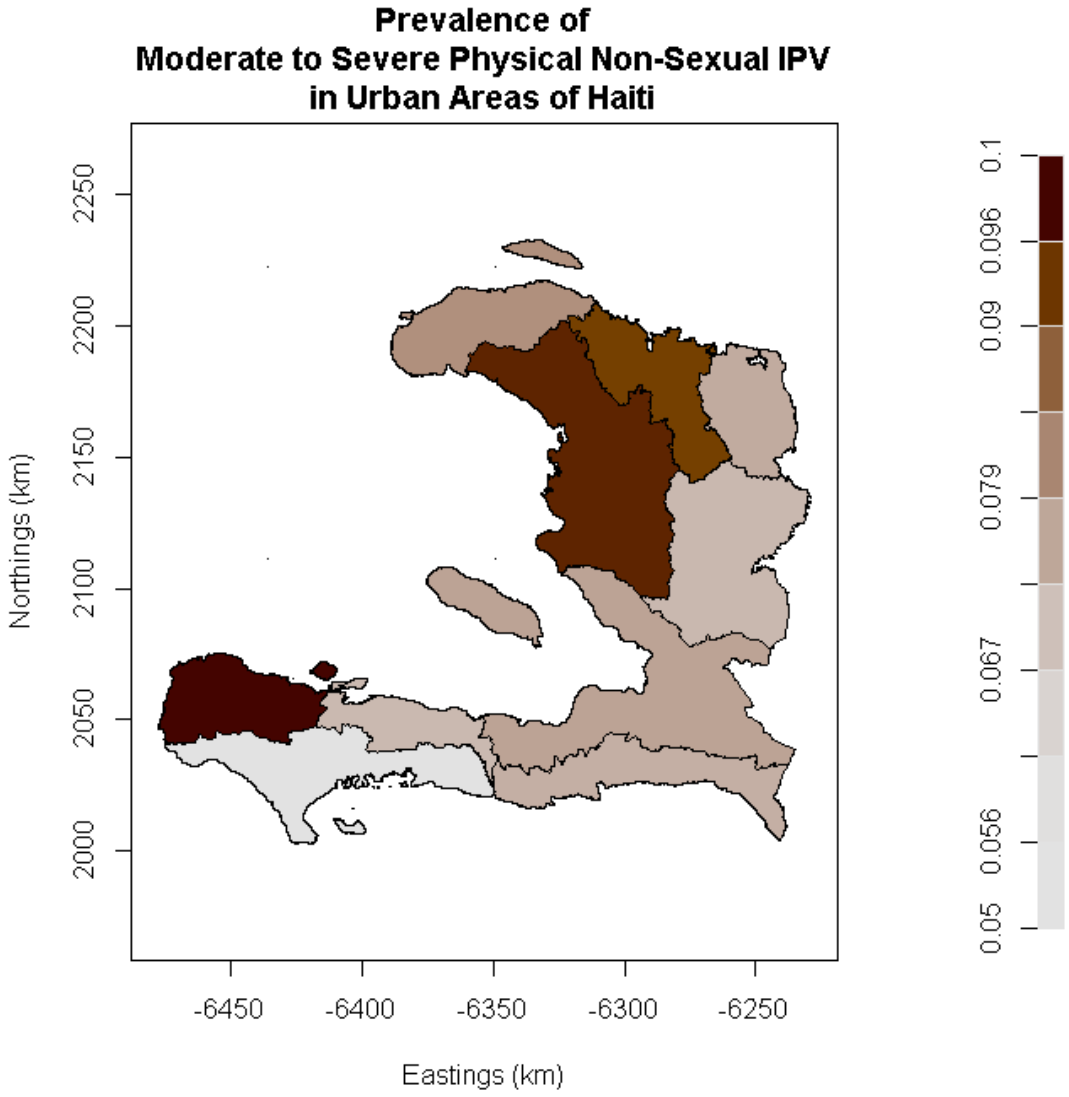


Figure 28. Prevalence of Moderate to Severe Non Sexual IPV in Rural areas of Haiti

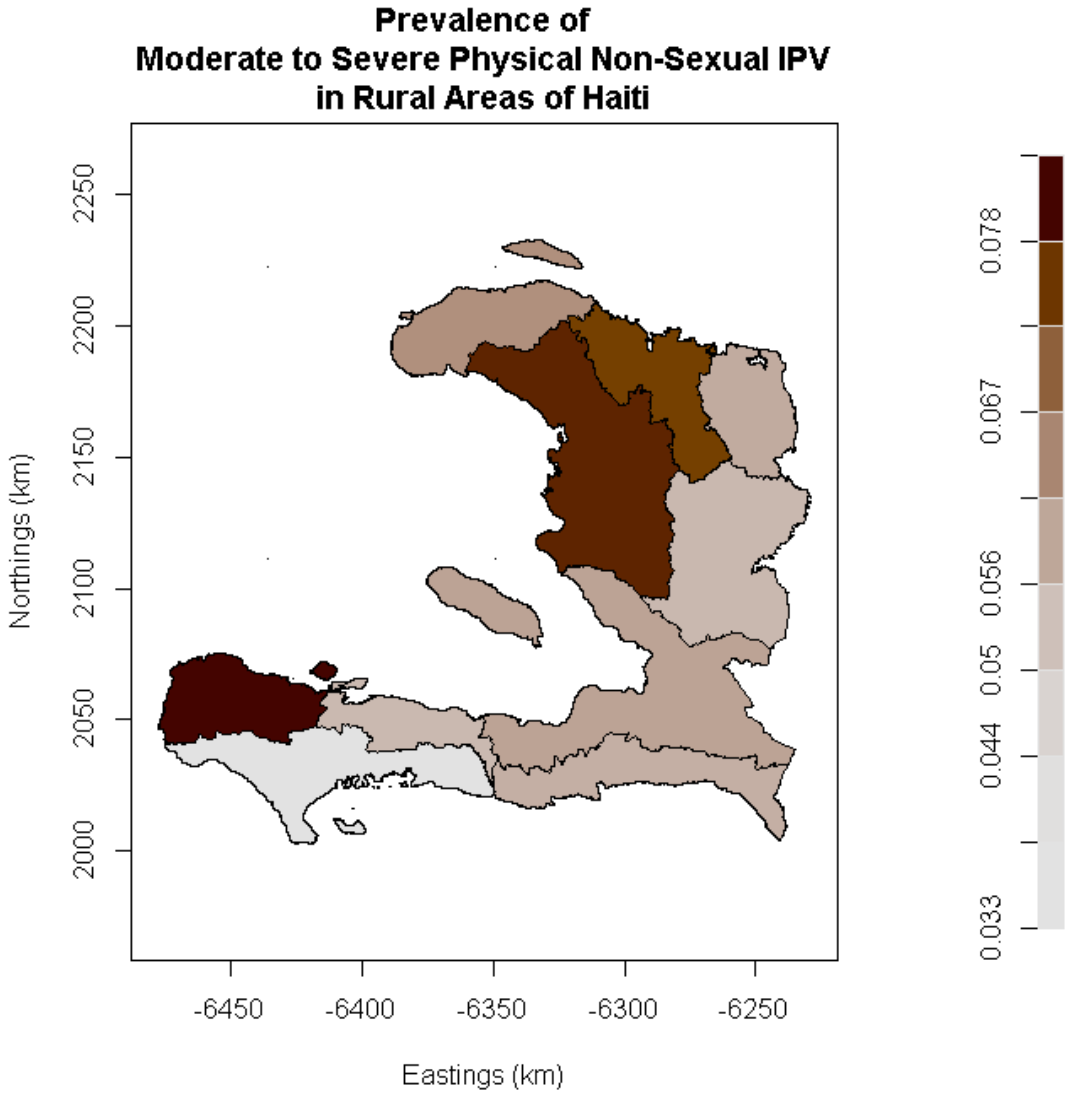


Figure 29. Prevalence of Sexual IPV in Urban areas of Haiti

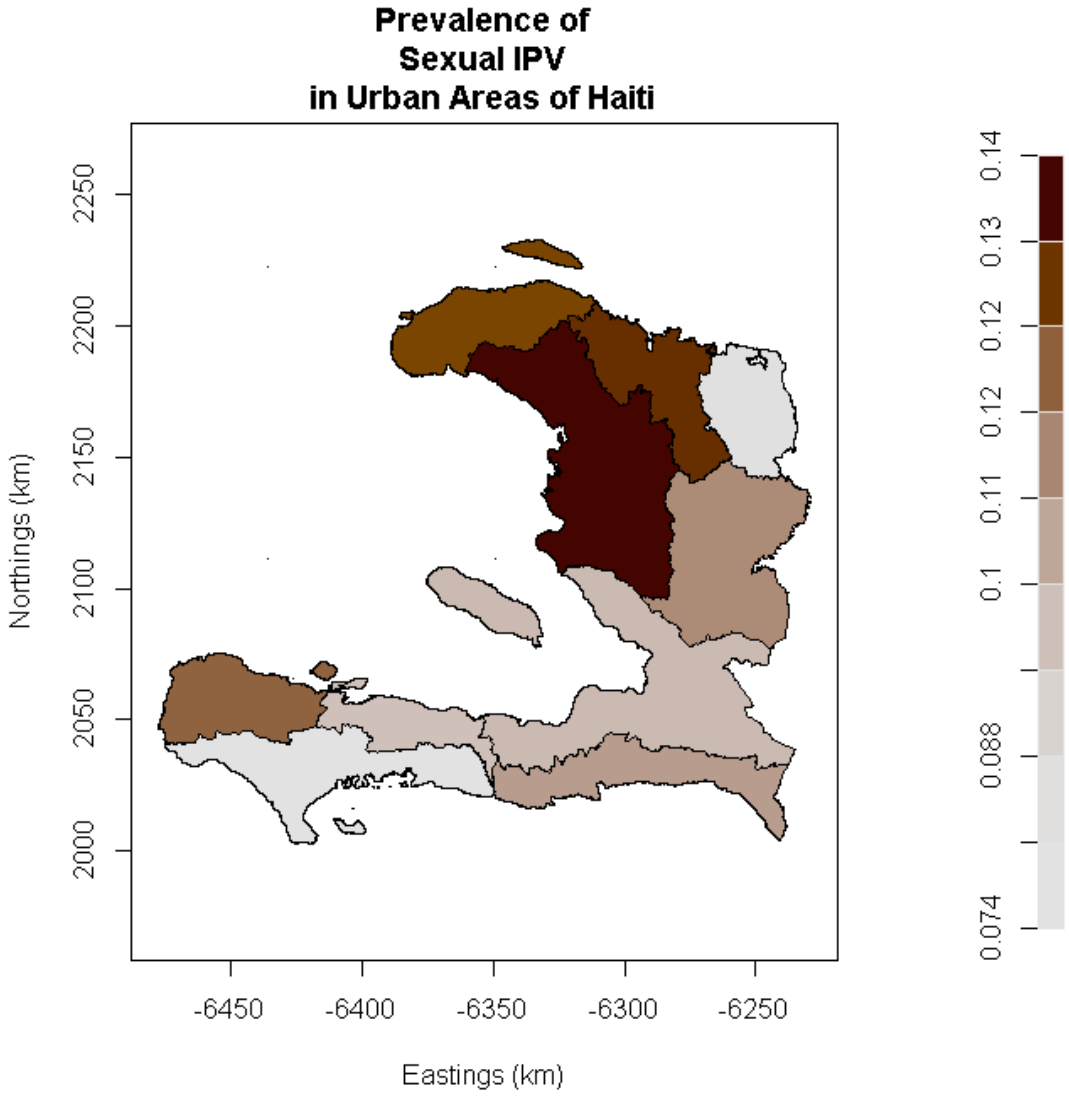


Figure 30. Prevalence of Sexual IPV in Rural areas of Haiti

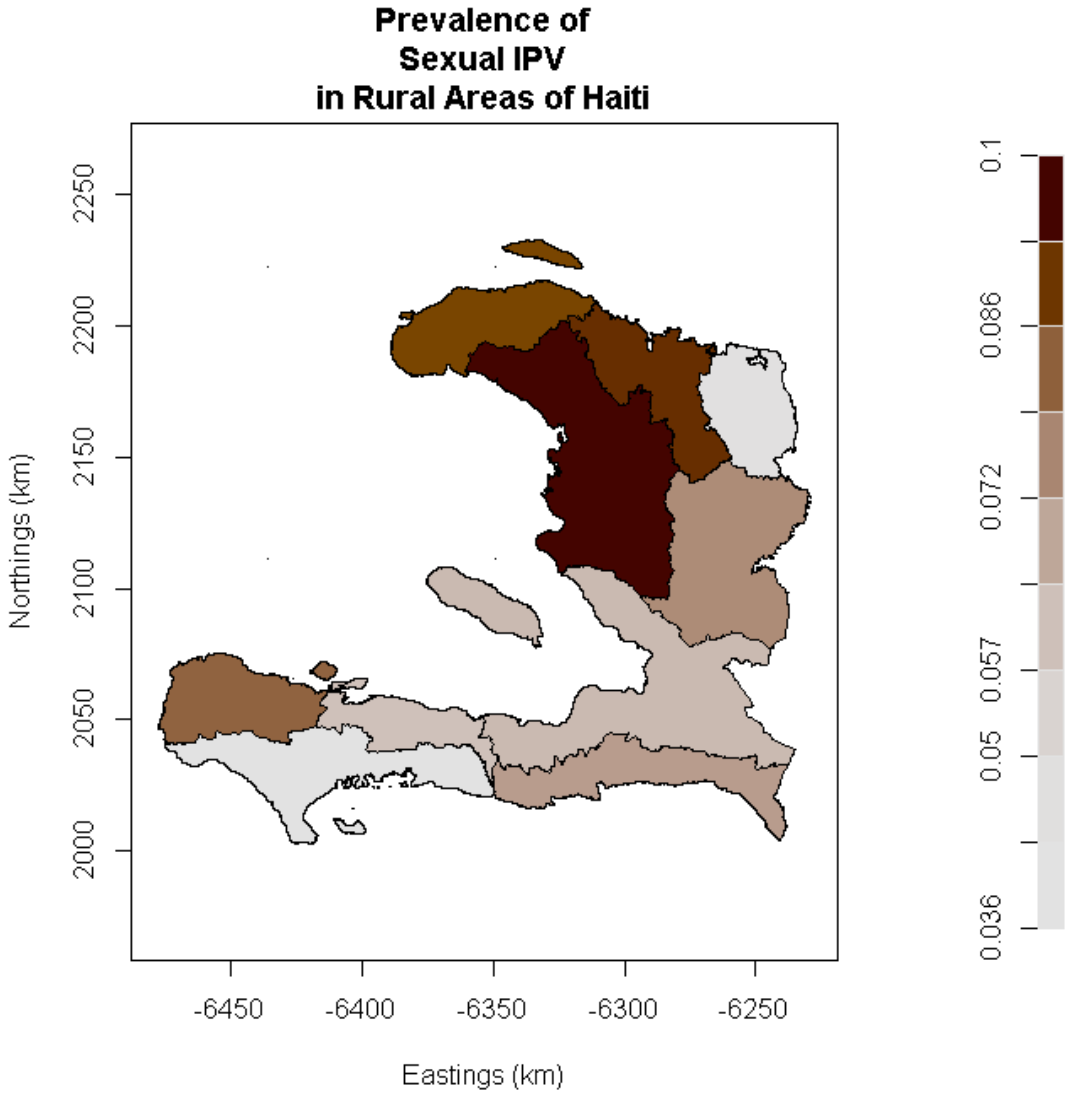


Figure 31. Prevalence of Mild to Severe Non Sexual IPV in Urban areas of Bolivia

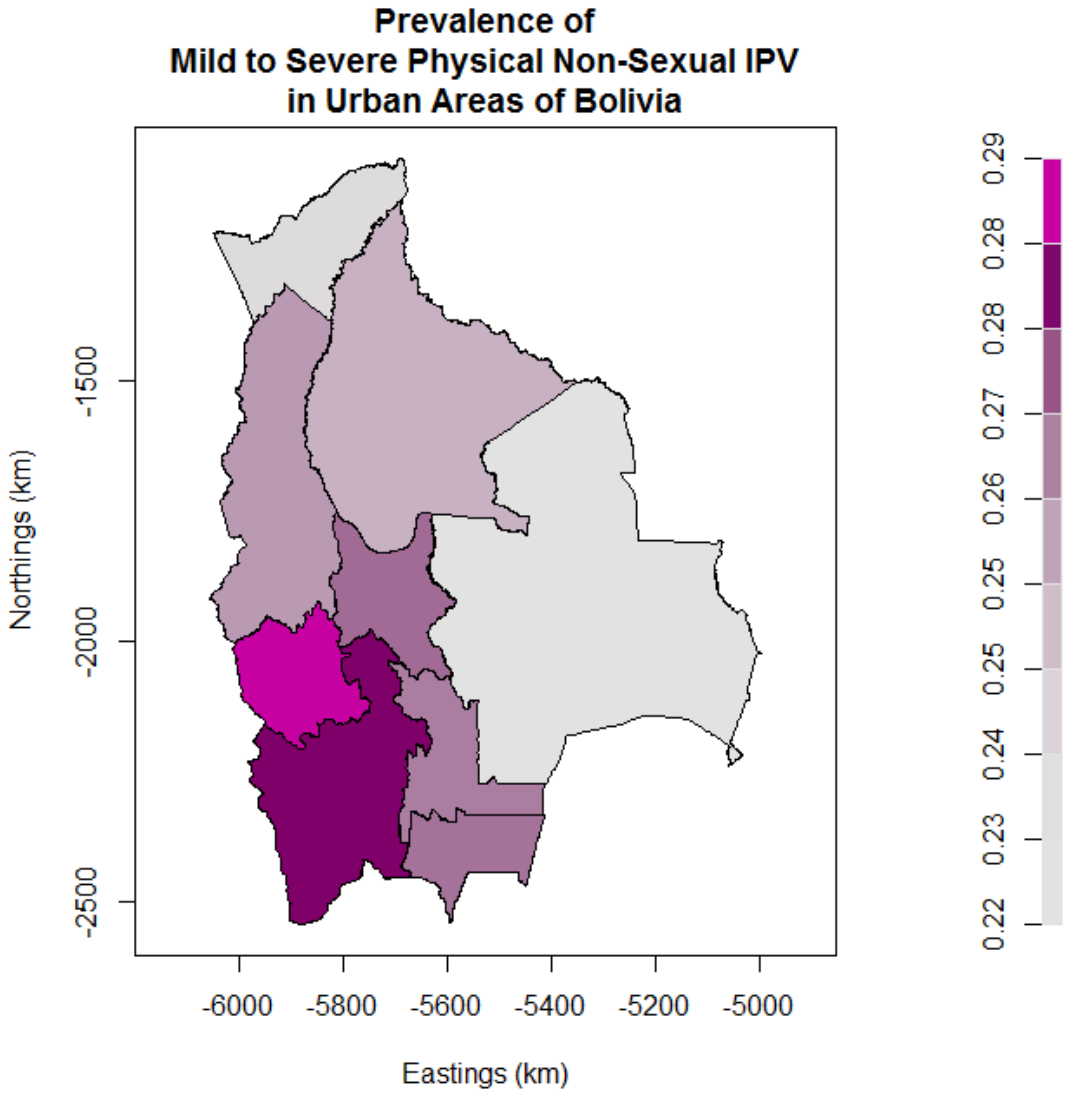


Figure 32. Prevalence of Mild to Severe Non Sexual IPV in Rural areas of Bolivia

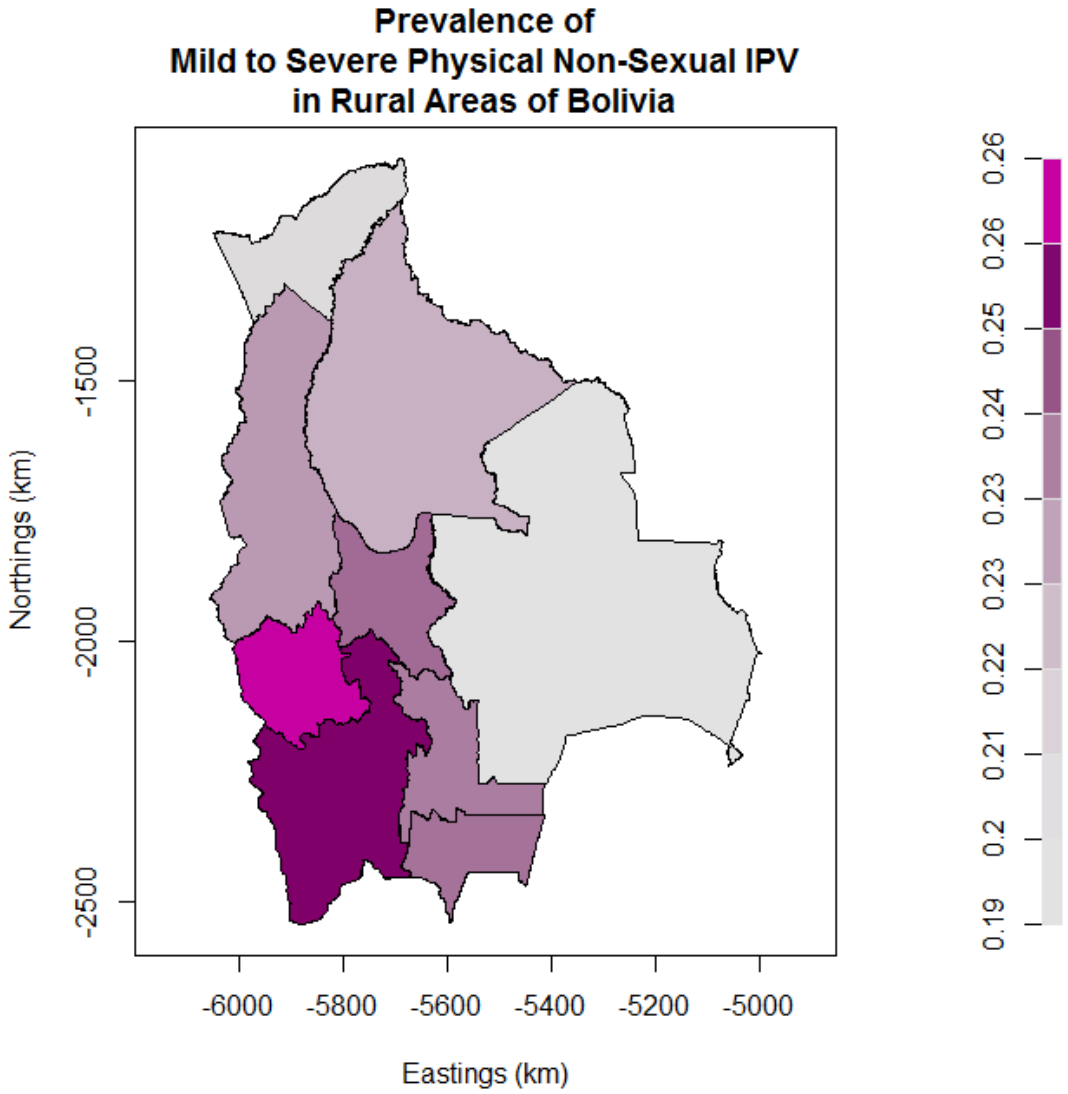


Figure 33. Prevalence of Moderate to Severe Non Sexual IPV in Urban areas of Bolivia

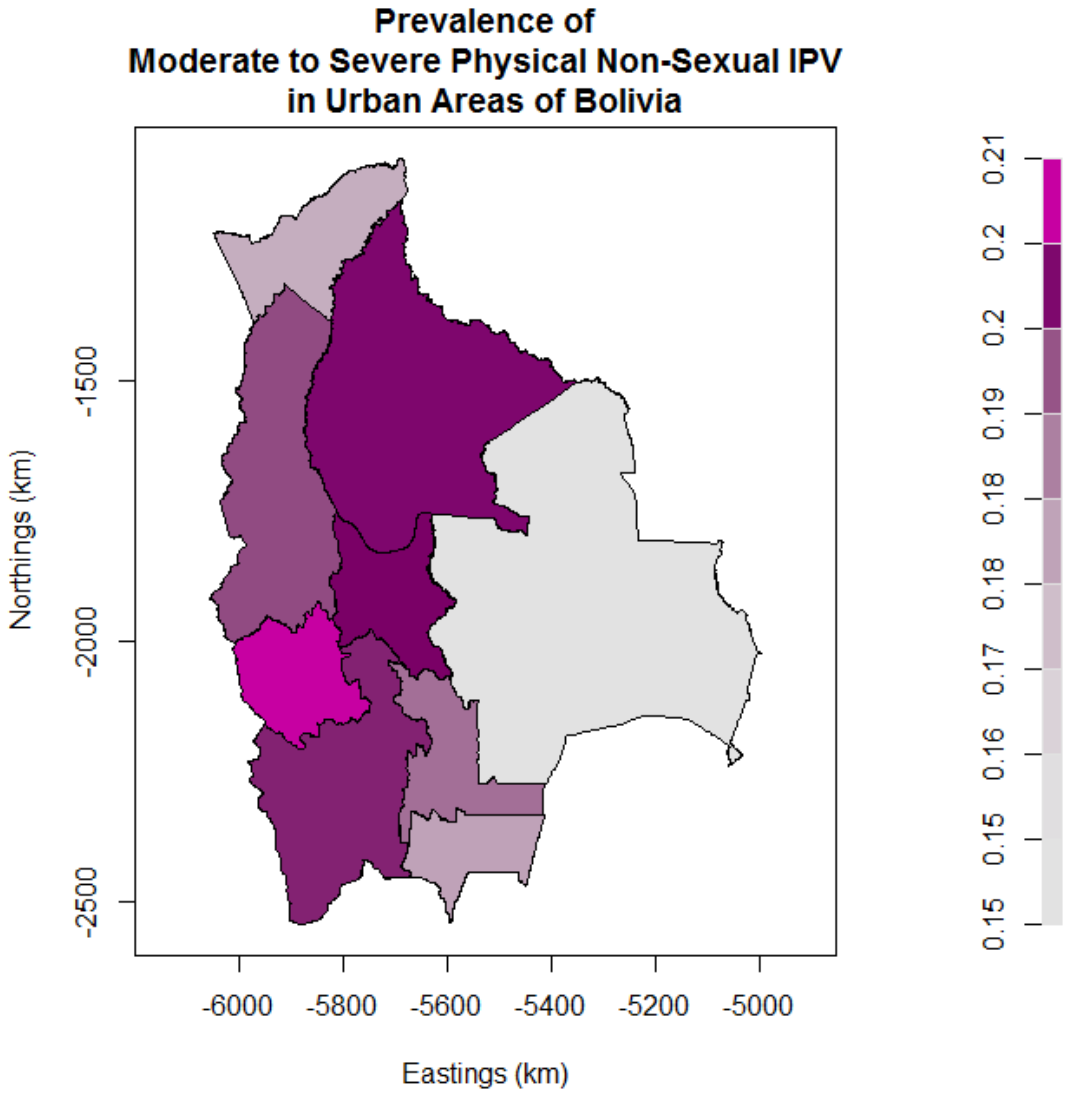


Figure 34. Prevalence of Moderate to Severe Non Sexual IPV in Rural areas of Bolivia

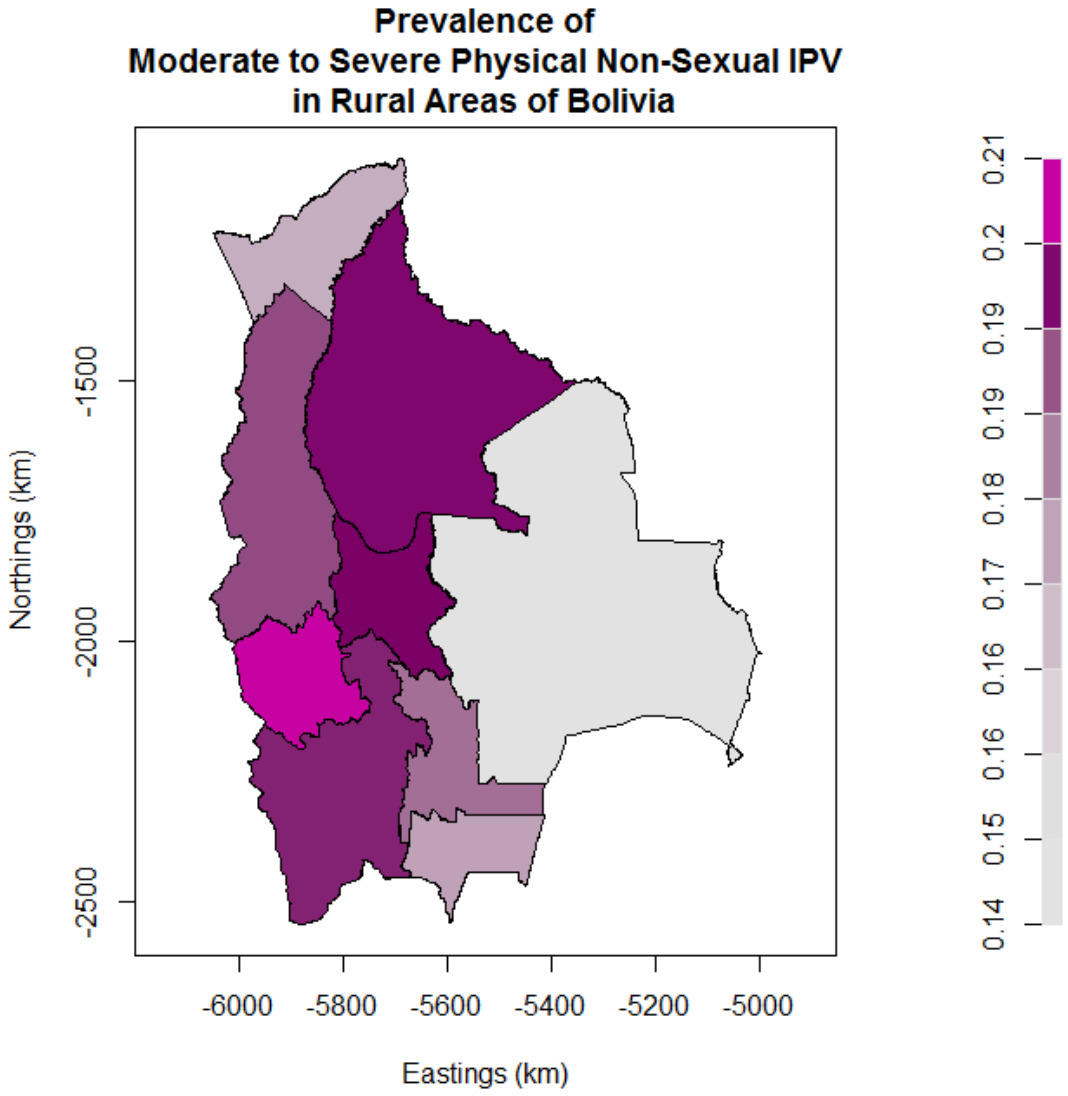


Figure 35. Prevalence of Sexual IPV in Urban areas of Bolivia

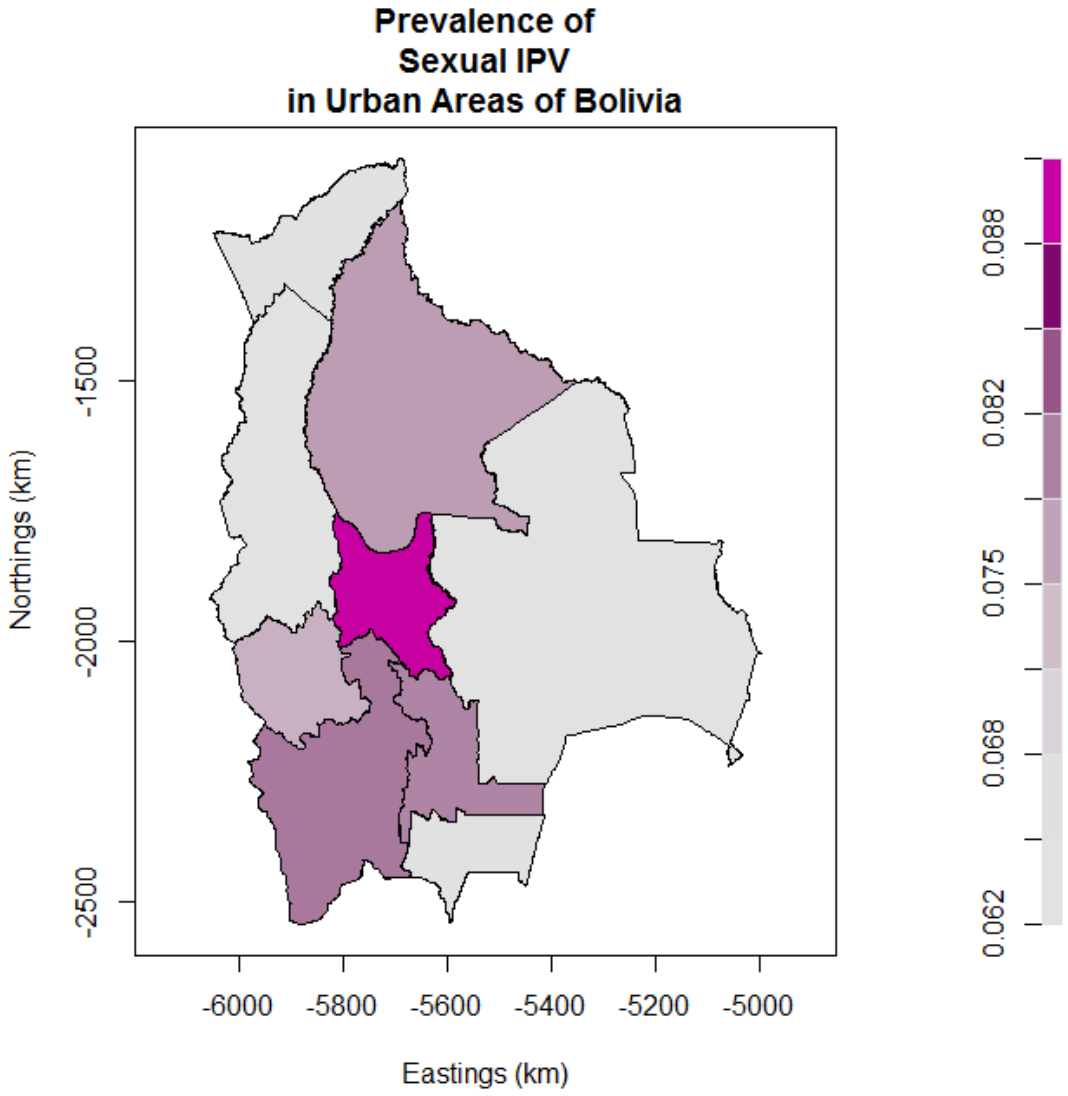


Figure 36. Prevalence of Sexual IPV in Rural areas of Bolivia

