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Brown School

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The Role of Trauma and Mental Health Problems in the Perpetration of Intimate Partner Violence in Post-Genocide Rwanda

by
Sarah Myers Tlapek

A dissertation presented to the
Graduate School of Arts & Sciences
of Washington University in
partial fulfillment of the
requirements for the degree
of Doctor of Philosophy

December 2015
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ABSTRACT OF THE DISSERTATION

The Role of Trauma and Mental Health Problems in the Perpetration of Intimate Partner Violence in Post-Genocide Rwanda

by

Sarah Myers Tlapek

Doctor of Philosophy in Social Work

Washington University in St. Louis, 2015

Professor Carolyn Lesorogol, Chair

Exposure to political violence or war is associated with intimate partner violence (IPV) in post-conflict settings (Clark et al., 2010; Gupta, Reed, Kelly, Stein, & Williams, 2012), and civilians and veterans who develop posttraumatic stress disorder (PTSD) after exposure to combat or violence are more likely to perpetrate violence against an intimate partner (Taft, Watkins, Stafford, Street, & Monson, 2011). Rwandan health professionals estimate that after the 1994 genocide more than one-quarter of the country's population now suffers from PTSD (Munyandamutsa, Nkubamugisha, Gex-Fabry, & Eytan, 2012). Although the majority of Rwandan women (56%) have experienced IPV in their lifetime (National Institute of Statistics Rwanda, Ministry of Health (MINISANTE) [Rwanda], & ICF International, 2012), mental health problems from trauma have not yet been considered as a factor in efforts against gender-based violence (E. Rukundo, personal communication, June 14, 2011).

This study used mixed methods to document and describe the phenomena of trauma exposure, mental health problems, and intimate partner violence in Rwanda. The study examined risk and protective factors associated with the perpetration of physical, sexual, emotional, and financial intimate partner violence, with a particular focus on the role of trauma

and mental health. Twenty-nine married men and 16 of their wives from rural and peri-urban communities of Rwanda completed semi-structured in-depth interviews (IDIs). Structured, face-to-face survey interviews were conducted with a representative sample of married men over the age of 35 (N=148) from one southern Rwandan district. Bivariate analyses were conducted to test relationships between risk and protective factors of interest and prior year perpetration of IPV. A series of multivariate logistic regression models tested the relationship between trauma and mental health problems with IPV.

More than 30% of the male sample reported perpetrating at least one type of IPV in the previous year. Patriarchal attitudes, younger age, alcohol consumption, and anger were significantly associated with IPV perpetration in bivariate analyses. Although male survey respondents reported on average 11.2 lifetime traumatic events, exposure to traumatic events was not significantly associated with perpetration of IPV in bivariate analyses. Twenty-one percent of respondents met diagnostic criteria for PTSD. Men who met diagnostic criteria for PTSD were 3 times more likely to report perpetrating physical IPV compared to men without PTSD, OR = 3.13 [1.10, 8.86], and 1.4 times more likely to report emotional IPV perpetration, OR = 1.39, [0.57, 3.35]. Meeting the diagnostic cut-off for depression was associated with IPV in bivariate but not multivariate analyses. Stories from IDI respondents indicated that trauma exposure and the mental health of both male and female partners is important.

Study findings confirm the importance of studying unique factors for IPV in a post-conflict setting and indicate that interventions to address mental health should be considered in policies and programs to address IPV in Rwanda. The findings may also have implications for other populations affected by political or community violence in the United States or abroad.

Chapter 1 Introduction

Rwandan health professionals estimate that exposure to violence and trauma during the 1994 genocide in Rwanda has left more than one-quarter of the population suffering from posttraumatic stress disorder (PTSD) (Munyandamutsa et al., 2012). The high prevalence of trauma-related mental health problems in the population may put large numbers of women at heightened risk for intimate partner violence (IPV); studies have demonstrated that men exposed to war or political conflict and those who develop mental health disorders such as PTSD from exposure to violent events may be at significantly greater risk of violence perpetration in intimate relationships (Clark et al., 2010; Gupta et al., 2009, 2012; Iverson et al., 2011; Orth & Wieland, 2006; Taft et al., 2011)

The government of Rwanda and its partners have noted the high incidence of intimate partner violence and have prioritized it as a key issue of concern, but little research has been done to study the unique risk and protective factors associated with IPV in Rwanda. National policies related to gender and violence against women in Rwanda are based on the assumption that one of the primary causes of IPV in Rwanda is "women's marginalized position and their economic dependence on men" (Ministry of Gender and Family Promotion [Rwanda] (MIGEPROF), 2010, p. 9). Rwanda's "traditional" culture is portrayed as highly patriarchal with unequal power between men and women, and violence against women is attributed to the misinterpretation of or the ongoing subscription to "misguided cultural values" (MIGEPROF, 2011, p. 12). References to Rwandan proverbs, such as one proposing that "a woman not yet battered is not a real woman", support the assertion that patriarchal structures and beliefs contribute to women's risk of violence (Human Rights Watch, 1996). Consequently, policy and

programmatic strategies against IPV have focused on "sensitization" (i.e. education) and the promotion of gender equality at all levels of society.

Mental health problems from genocide trauma have not yet been considered seriously as a factor in efforts against gender-based violence, although the potential role of genocide exposure has recently been acknowledged (E. Rukundo, personal communication, June 14, 2011; MIGEPROF, 2011). However, recent quantitative and qualitative research indicates that many Rwandan men associate their experience of IPV perpetration with prior experiences of violence and trauma (Slegh & Kimonyi, 2010). Rwandans reporting perpetration of IPV were more than three times as likely to have mental health problems in one recent study (Verduin, Engelhard, Rutayisire, Stronks, & Scholte, 2013).

If trauma-related mental health problems are a significant contributor to IPV, then treating these problems should be part of the national violence prevention strategy. Because the Rwandan population's risk for domestic violence may have been uniquely heighted by exposure to trauma and violence and resulting mental health problems, interventions at individual level may be needed, in addition to the existing legislation and sensitization campaigns. Resources are limited in Rwanda and should be directed toward the most effective interventions.

Research has identified a number of risk and protective factors associated with IPV perpetration across multiple country-settings, and a number of these may be relevant for Rwanda. However, studies of IPV in Rwanda have not tested the relative contribution of trauma and mental health problems, accounting for the contribution of other risk and protective factors. This research makes an important contribution by studying context-specific risk and protective factors for intimate partner violence; policy and programmatic interventions will be strengthened by additional knowledge on the relative contribution of cultural and mental health factors

associated with IPV perpetration in Rwanda's unique context (Fulu, Jewkes, Roselli, & Garcia-Moreno, 2013; Watts & Zimmerman, 2002).

Aims and Research Questions

This dissertation study examined the experience of IPV in Rwanda and statistically tested the relationship between mental health problems, other common risk and protective factors, and perpetration of IPV. The mixed methods design combined data from in-depth qualitative interviews with 20 men with histories of IPV perpetration and 16 of their female partners with survey data from a random cluster sample of 148 adult men from one Rwandan district. Follow-up interviews with a purposive sample of survey respondents added depth and understanding to survey data. The specific aims and research questions of this study were:

AIM #1: Describe the experience of trauma, mental health problems, and intimate partner violence and the development of these events over time in a small sample (15-20) of male perpetrators of intimate partner violence and their female partners (5-10).

Q1.1 What are the traumatic experiences, including victimization from violence that male perpetrators of IPV and their partners have experienced? What was the chronological occurrence of these events? Have there been consequences of these experiences? What has been the onset and course of these consequences, if any?

Q1.2 How do male perpetrators and their female partners describe their experience of IPV? What is the onset and course of violent behavior against an intimate partner over the course of the couple's relationship life?

AIM #2: Examine participants' perception of the internal and external resources and factors that encourage or impede the perpetration of intimate partner violence.

Q2.1 To what do male perpetrators and their female partners attribute violent behavior against a spouse? Are respondents more likely to attribute violence to a) personality characteristics or stable attributes, b) current life circumstances such as stress or poor health, c) immediate precursors of violence such as situational factors, or d) a combination (Flynn & Graham, 2010)?

Q2.2 Do male and female participants discuss the role of traumatic experiences in their experience of IPV? If so, what is their understanding of this relationship?

Q2.3 What environmental, social, or individual factors (e.g. legislation, social support etc.) are perceived to enhance the ability to avoid violent perpetration of IPV? (i.e. what do men and women consider to be protective or inhibiting factors against IPV?)

AIM #3: Describe the trauma experiences, mental health status, and prevalence of recent intimate partner violence in a random community sample of Rwandan men.

Q3.1 What are the rates of self-reported IPV perpetration in a random community sample of Rwandan men, as measured by WHO and UNIFEM measures of physical, sexual, and psychological violence?

Q3.2 What are the prevalence rates of mental health disorders in a random community sample of Rwandan men, as measured by locally-adapted screening instruments for posttraumatic stress disorder, depression, and somatization disorder?

AIM #4: Statistically examine the relationship between traumatic experiences, mental health problems, other risk and protective factors, and perpetration of recent intimate partner violence in the community sample of men.

Q4.1 To what extent are prior traumatic experiences (as measured by a count of items endorsed on a trauma checklist) associated with current intimate partner violence

perpetration (any kind) in a community sample of Rwandan men, controlling for other common contributors to IPV perpetration (e.g. alcohol abuse, infidelity, economic stressors, and patriarchal attitudes)?

Q4.2 To what extent are mental health problems (PTSD, depression, or somatization disorder as measured by DSM-IV based instruments adapted for Rwandan populations) associated with current intimate partner violence perpetration (any kind) in a community sample of Rwandan men, controlling for other common contributors to IPV perpetration (e.g. alcohol abuse, infidelity, economic stressors, and patriarchal attitudes)?

Organization of the Study

The study is organized as follows. Chapter 2 presents background information on the study setting of Rwanda, including a brief history of gender relations. Chapter 2 also describes the main problem of interest in Rwanda, intimate partner violence against women, and the main risk factor of interest, trauma-related mental health problems. Chapter 3 describes the study's theoretical framework and summarizes the existing evidence related to risk and protective factors for intimate partner violence, with an emphasis on factors relevant for post-conflict populations. Chapter 4 presents the study's methodology for data collection and analysis. Chapters 5 & 6 present rich descriptions of the phenomena of trauma and mental health problems and IPV in the Rwandan sample. Chapters 7 and 8 present the mixed methods analysis of the role of risk and protective factors for IPV in Rwanda, with a focus on the role of traumatic exposure and mental health problems. The final chapter concludes with the study's implications and conclusions.

Chapter 2 Background and Problem Statement

Study Setting

The Republic of Rwanda is a small East African country of around 12 million people and landmass of approximately 26,000 square kilometers, making it the most densely populated country in Africa (Central Intelligence Agency, 2014). Rwanda was selected as an ideal location to study trauma-related mental health problems and intimate partner violence in a post-conflict setting. More than 20 years after the 1994 genocide, Rwanda has high rates of trauma exposure, mental health problems, and intimate partner violence compared to global prevalence estimates. Gender relations and violence between intimate partners is a key priority area for the Rwandan government and its development partners. This chapter provides a brief history of gender relations in Rwanda and a summary of recent legislation related to gender equality and women's promotion and protection from violence. A summary of existing knowledge regarding the prevalence and impact of the problems of intimate partner violence and mental health in Rwanda today is also presented.

Gender Relations in Rwanda

Precolonial Rwanda. Information is limited, but some scholarship indicates that conflicting ideas existed in early Rwandan culture regarding the value and worth of women. In some regards, women were highly valued, respected, and protected; in other regards, women lacked access to power and some basic human rights. Rwanda was likely populated during the Stone Age (before 2000 BC/BCE), and its early inhabitants were cattle herders and farmers (Vansina, 2005). Rather than a Western focus on individual rights and equality, the earliest known conceptions of gender in Rwanda likely focused on the division of labor; men's and women's roles were complementary, with "proportionate value" and both were necessary and

indispensable (Uwineza, Pearson, & Powley, 2009, p. 8). Women were believed to be gifted for spiritual practice or healing and held some authority in roles in these areas (Longman, 2006; Vansina, 2005). By the 17th century Rwanda was divided into small mini-kingdoms. Within these mini kingdoms a Queen Mother co-ruled with every male king (his mother), and stories of several powerful Queen Mothers may have established a precedent for women's political involvement (Uwineza et al., 2009; Vansina, 2005).

Early Rwandan families lived in a compound with three generations. The oldest male was the head of the household and the only member considered "independent"; the social status of all other family members was relative to their relationship with him. His wife had autonomy and authority over the household domain and, depending on the wealth of the family, often managed property and assets and could direct the activities of other household members, including men (Vansina, 2005). The strength of the household was considered dependent on the woman, as reflected by the Rwandan proverb: "*Ukurusha umugore akurusha urugo*" (With a great woman, a great home is assured) (Uwineza et al., 2009, p. 8).

Precolonial Rwandan culture emphasized marriage as a social contract between families and the social rite that marked passage to adulthood. Marriage and childbearing were seen as sacred and religious obligations—it was considered one's responsibility to give life to another generation (Verwijs-Vogel, 2011). Women were highly valued, respected, and protected, particularly for their roles as wife and mother. The Kinyarwanda word for mother, *umubyeyi*, also has connotations for "life giver" and "creator" (Uwineza et al., 2009). However, women's value was often tied to their duty as childbearers; they were blamed and could be divorced for infertility, considered one of the worst possible curses to befall a woman.

Intimate partner violence was both discouraged and tolerated in precolonial Rwandan society. New husbands were reminded to treat wives with care, and men could be tried in court for wife-beating. However, violence within families was considered very private, and "*kwihangana*", or enduring and bearing with marital problems, was considered a virtue for women (Uwineza et al., 2009). There was no modern legal prohibition against domestic violence until 2006.

Although women were valued and respected, men's authority in pre-colonial Rwanda was always greater than women's. A woman's influence, power, and social status were dependent on her relationship with a man, including that of the powerful Queen Mother (Uwineza et al., 2009). Women did not speak publicly and were generally considered best suited for domestic work. In pre-colonial Rwanda women did not own land, and property passed to male heirs. Men were encouraged to consult wives about land sales, but women never made final decisions about its use (Uwineza et al., 2009; Vansina, 2005; Verwijs-Vogel, 2011).

Colonial era. Colonial rule began with Germany in 1884 and continued under Belgium after 1916. Although Rwandans were stratified by occupation, social status, and ethnicity prior to colonial rule, colonization led to clear distinctions between Tutsi, Hutu, and Twa ethnic groups and increased ethnic tension (Kubai & Ahlberg, 2013; Prunier, 2008). Prior to colonial rule these ethnic groups shared a language and culture, and divisions were primarily by social class. Colonial rulers exerted power through the Tutsi monarchy and forced previously independent Hutu princedoms to submit to Tutsi oversight (Guillebaud, 2005). The Belgians issued identity cards along ethnic lines in 1933 and forbade movement across ethnic groups.

Current political rhetoric in Rwanda asserts that colonial influence introduced patriarchal ideologies into the country (Uwineza et al., 2009; MIGEPROF, 2010). Boys were favored for

education by colonial authorities, and girls who went to school were prepared only for marriage. Economic opportunities for women were limited. The influence of the European church reduced women's power as traditional spiritual leaders and healers and prohibited polygamy, in some cases worsening burdens on women (Longman, 2006). The Victorian era's influence was also felt by Rwandan women who were socialized to be more like domestic, docile European women (Carlson & Randell, 2013).

A social revolution began in the 1950's as the Belgians decided to support Hutus over Tutsis, and Hutus rebelled against colonial and Tutsi rule. The Tutsi king was overthrown in 1959, and many Tutsis were targeted and killed leading large numbers to go into exile into neighboring countries. Many Tutsis (who now form the current political party in power, the Rwanda Patriotic Front) went to Uganda and became politically affiliated with Yoweri Museveni. A number of Tutsi women were left as widows, which may have begun to accustom the population to seeing women living independently (Uwineza et al., 2009).

Post-independence. At the time of independence in 1962, a Hutu government replaced colonial rule. Tutsis in Rwanda continued to be persecuted. Over the next 30 years, those who had been exiled in neighboring countries organized into military groups who made periodic raids into Rwanda. After each raid, the Hutu government would retaliate against Tutsis in the country. The situation for women in Rwanda at this time was not favorable, particularly for Tutsi women. Women's legal rights were not protected fully, and most women were still forced to access resources through a male relative, spouse, or lover (Jefremovas, 1991). The Hutu regime did not prioritize women, and they were not well represented in government (Longman, 2006). The family code of 1992 established men as the head of the household (Carlson & Randell, 2013). The ruling regime also instituted strict codes of morality which led to the mistreatment of women

who broke it (by dating a European, for example), particularly in urban areas (Taylor, 1999). However, at the same time, the Rwandans in exile in Uganda who would eventually become the Rwanda Patriotic Front were being exposed to the pro-female agenda of the Ugandan government where women shared political power; their experience would eventually influence politics in Rwanda. (Uwineza et al., 2009).

Genocide. The details of the 1994 genocide, when the country lost nearly one-tenth of its citizens, are unfortunately the part of Rwanda's history most familiar to the outside world. On April 6, 1994 the airplane carrying the Rwandan and Burundian presidents on their way back from peace talks in Arusha was shot down over Kigali by unknown assassins. This started 100 days of mass slaughter as Tutsis and moderate Hutus were pulled from their homes, detained at roadblocks, or systematically hunted down and killed. At least 800,000 people were killed in those 100 days, and many more died from sickness and continuing violence as they fled to neighboring countries as refugees.

Women were targeted for cruelty and horror during genocide. Christopher Taylor describes the way that Tutsi women were objectified, vilified and degraded through media campaigns and propaganda leading up to and during genocide (Taylor, 1999). The goal of the Hutu hate campaign was to restore their version of "ethnic purity" to the country but also to return it to a patriarchal state (Taylor, 1999). Tutsi women were seen as a "permeable boundary" between ethnic groups because many Hutu men were attracted to Tutsi women and had them as wives or mistresses, and these unions produced "mixed" offspring (Taylor, 1999). They were therefore brutally targeted for violence. Between 250,000 and 350,000 women were targeted for rape, sexual torture, sexual slavery, and forced "marriage" during genocide in Rwanda (Amnesty International, 2004; Bijleveld, Morssinkhof, & Smeulers, 2009).

Post-genocide. The Rwanda Patriotic Front, an army mainly composed of the militarily-trained Tutsis who had been exiled in Uganda, ultimately took control of the country as they defeated government forces, but stability and peace were elusive as reprisal killings and violent raids continued over the next several years (Guillebaud, 2005). The new government proclaimed itself the Government of National Unity and took steps to reduce ethnic tensions by eliminating ethnic classification from identity cards and promoting the commonalities of all Rwandans. Genocide perpetrators were prosecuted through formal and traditional courts, although many were released and returned to their home communities, causing disturbances as perpetrators and victims met again (Guillebaud, 2005).

Post-genocide Rwanda has received praise for its ambitious program of economic and social recovery. The government, led by twice- elected President Paul Kagame, is now considered politically stable and prioritizes reconstruction and development of the country. In cooperation with many multilateral and bilateral donors, the Rwandan government has embarked on an ambitious plan of development for the country, known as Vision 2020. The country is growing economically, making it an attractive option for investors. Rwanda has joined the East African community and the British Commonwealth. The country is also making rapid progress on many social indicators of development, including being on track to meet several of the Millennium Development Goals by 2015. After a decision in 2005 to decentralize power through redistricting, the government promotes and tracks development goals via annual performance contracts with district mayors that are tied to national plans in the Economic Development and Poverty Reduction Strategy (EDPRS). Annual action plans monitor progress on indicators such as strengthening health systems, promoting family planning, and building social protection schemes.

Dramatic changes related to gender took place in Rwanda after the genocide. Because of large numbers of widows, women were forced to become the sole economic providers for their families, and many of the traditional gender roles were no longer practical to maintain (Uwineza et al., 2009). Rwanda's policy environment has also been highly favorable for the protection of women's rights and the promotion of women. Under the president's leadership, and likely due to Ugandan influence, the Rwandan government claims to be committed to gender equality and mechanisms to protect it (Burnet, 2008; Debusscher & Ansoms, 2013; Longman, 2006). Rwanda has made commitments to the Millennium Development Goals, the African Charter on Human and People's Rights on the Rights of Women in Africa, and the AU Solemn Declaration on Gender Equality in Africa. The President says that gender equality is "everybody's business" and considers it a prerequisite for good governance and development in the country (Debusscher & Ansoms, 2013; Uwineza et al., 2009).

Legislation. Legislation promotes and protects women's rights and empowerment. Rwanda's constitution is gender-sensitive and explicitly promotes equal rights for all citizens, regardless of gender. The constitution established gender quotas for the Rwandan parliament, and the 64% female majority in the Rwandan parliament has drawn international acclaim and attention. A labor law and land law stipulate women's legal rights regarding labor, pay, and inheritance of land and property. Administrative bodies for women's promotion such as the Gender Monitoring Office and National Women's Councils have been established to monitor and implement women's promotion and equality. In 2009 a law preventing gender-based violence was passed which stipulates strict penalties for violations. The Ministry of Gender and Family Promotion (MIGEPROF) released a national gender policy and a gender based violence policy

that are used to guide strategic plans for government ministries and nongovernmental partners (MIGEPROF, 2010 & 2011).

Rwanda today. Life in Rwanda has improved in the 20 years since the genocide, with many changes, particularly in the area of gender equality. High political participation by women has increasingly normalized the presence of women in public life and is contributing to cultural change (Uwineza et al., 2009). Gender has become a household topic, and schools now routinely include a gender equality module in the life skills curriculum (Uwineza et al., 2009).

However, a number of reports indicate that social change may be slower than political change and not all women yet experience full gender equality in Rwanda. Many women still play subservient roles at public functions or at home, and girls are often encouraged to be silent or not to speak in public. Women with public responsibilities often continue to carry the same responsibilities at home, increasing the demands and burdens upon them (Burnet, 2008, 2011; Uwineza et al., 2009).

Intimate Partner Violence in Rwanda

One of the most serious challenges that women in Rwanda continue to face is violence from an intimate partner. The majority of research in IPV in Rwanda to date has focused on intimate partner violence perpetrated by males against their female partners, and reports of female to male violence are extremely rare (MIGEPROF, 2004; National Institute of Statistics rwanda, Ministry of Health (MINISANTE) [Rwanda], & ICF International, 2012; Slegh & Kimonyo, 2010). Accordingly, this study focuses on physical, sexual, emotional, or economic violence perpetrated by men against their female partners.

Intimate partner violence is a type of domestic violence, or violence between individuals with family relationships or who live in the same household. Domestic violence is defined

differently based on the laws of each country, but the United Nations recommends that states' definition should include physical, psychological, economic, and sexual violence (www.endvawnow.org). A World Bank definition of intimate partner violence is "a range of sexually, psychologically, and physically coercive acts used…by a current or former intimate partner, without…consent" (Skaperdas, Soares, Willman, & Miller, 2009, p. 60). Intimate partner violence can be perpetrated by men or women and can be between heterosexual or homosexual partners. This study focused on IPV in households where partners are married or cohabiting heterosexuals, as homosexual relationships are highly taboo in Rwanda.

Rwandan legislation and dialogue regarding violence in families or between intimate partners often uses the term gender-based violence (GBV), defined in Rwanda as "an act of physical, sexual, or economic violence perpetrated against someone on account of gender" (MINISANTE, 2010). Under this definition, the perpetrator of the violence is not defined and can include community members, family members, authority figures such as teachers, or spouses or romantic partners. The national gender-based violence policy notes that GBV is categorized in Rwanda as economic violence (denying rights of property or succession or employment), physical violence (using physical force to cause harm, injury, disability, or death), psychological violence (causing trauma to a victim by acts, threats of acts, or coercive tactics), and sexual violence (forcing another individual to engage in sexual behavior against his/her will) (MIGEPROF, 2011). As noted, this study will focus on male violence perpetrated against women within an intimate relationship and will therefore use the term intimate partner violence, rather than gender-based violence.

Prevalence of IPV. A 2009 national survey found that 57% of Rwandan women reported experiencing lifetime intimate partner violence, and at least 38% of men admitted to

having perpetrated violence against women (Slegh & Kimonyo, 2010). A recent rigorous nationally representative survey of women (N = 13,671) by the National Institute of Statistics in Rwanda (NISR) confirmed this; 56% of ever-married women reported experiencing physical or sexual intimate partner violence at some point in their lifetime, and 44% reported IPV in the 12 months prior to the survey (NISR et al., 2012).

An earlier study by the Rwandan Ministry of Gender and Family Promotion (MIGEPROF) and the International Rescue Committee (IRC) included measures of emotional and economic violence. They found that 51% of women reported emotional or psychological abuse in the past year, 27% of women experienced restrictions on freedom of movement and visits to family, 21% had been refused money for family needs by their partners, and 47% had been subjected to insults and verbal cruelty (MIGEPROF, 2004).

The lifetime rates of IPV against women reported in Rwanda are substantially higher than the rate of 20% lifetime victimization of physical or sexual partner violence estimated globally (Venis & Horton, 2002). However, the rate of IPV in Rwanda is similar to the rates reported in neighboring East African countries such as Kenya (47% of women reporting lifetime IPV) and Tanzania (50% of women reporting lifetime IPV) (Kenya National Bureau of Statistics and ICF Macro, 2010; Tanzania National Bureau of Statistics and ICF Macro, 2011). Pre-genocide statistics on IPV are rare, making it difficult to compare IPV prevalence reports with rates before the genocide. The government of Rwanda estimated that about 20% of women experienced IPV before the genocide; this suggests that rates have increased, but no longitudinal studies exist (Human Rights Watch, 1996). The numbers of cases of gender-based violence reported to police did increase between 1991 (54 cases reported) and 2007 (2,935 cases reported), although this may be due to increased reporting rather than an actual increase in prevalence (UNIFEM, 2008).

UNIFEM's 2008 report noted that the majority of reported abuses were related to abuses against children and that spousal violence was rarely reported to authorities and largely underreported in official statistics (UNIFEM, 2008).

Consequences of IPV. Intimate partner violence has serious consequences, particularly for women in a low-resource country such as Rwanda. Committing an act of violence toward another person on the basis of gender is clearly in violation of that person's human rights (UNIFEM, 2008). The immediate risks to an individual victim include the threat of death (murder), suicide, homicide (murder of perpetrator), disease infection, fetal mortality, and other physical, mental, and reproductive health problems. The World Bank estimates that 9 million disability adjusted life years (DALY) are lost globally every year from rape and domestic violence (Skaperdas et al., 2009). In addition to the direct and indirect costs of health care, domestic violence also causes a loss of economic productivity. Studies in other developing countries estimated a loss in earnings from domestic violence between 1.6 and 2.0% of GDP (Skaperdas et al., 2009). Loss of economic productivity can be particularly damaging in post-conflict countries that are working to rebuild damaged economies.

The consequences of domestic violence extend to the victim's family, community, and the society overall. The impact may also endure beyond the victim's lifetime, as multiple studies have linked adverse outcomes for children who witness domestic violence between their parents (Skaperdas et al., 2009). One study found that children of women abused by their partners were six times more likely to die before the age of five (White, Smith, Koss, & Figueredo, 2000). Other studies estimated that children are abused in 30 – 60% of families where a husband abuses his wife (White et al., 2000). Violence is often cyclical, such that children exposed to violence are more likely to either perpetrate or be victimized by violence in their lifetimes (Clark et al.,

2010). Children of victims are not only potentially traumatized but are also at significantly greater risk of becoming perpetrators or victims of interpersonal violence in the future (Ehrensaft et al., 2003; Heise, 1998).

In Rwanda, violence against women is considered a major obstacle to social and economic development and the country's timely accomplishment of the Vision 2020 development goals for the country (UNIFEM, 2008). The national policy on gender-based violence notes that gender-based violence impedes the participation of all citizens—viewed as necessary for poverty reduction in the country—and posits that gender-based violence draws away resources better directed toward economic growth (MIGEPROF, 2011).

Trauma-Related Mental Health Problems in Rwanda

Mental health problems in post-conflict settings. The terms "trauma-related mental health problems" and "trauma-related mental health distress" refer to symptoms or signs of emotional distress that take place after exposure to traumatic events. In the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) (4th ed.[1], text rev.;*DSM-IV-TR*; American Psychiatric Association, 2000) posttraumatic stress disorder is classified as an anxiety disorder which requires exposure to a stressor that threatens one's own or loved one's life; and symptoms of re-experiencing the event, avoidance of reminders of the event, and increased arousal. The DSM-IV diagnostic criteria for major depressive disorder require a depressed mood, loss of interest in life activities, and symptoms that cause significant functional impairment (4th ed., text rev.;*DSM-IV-TR*; American Psychiatric Association, 2000). The terms "posttraumatic stress" or "PTSD symptoms" refer to the experience of some of the symptoms of PTSD when full

[1] Although the DSM-V now exists, at the time of proposal development, the DSM-IV was the most up-to date version, and mental health measures were based on DSM-IV criteria.

diagnostic criteria are not measured or met. The term "depression symptoms" is used in a similar manner.

This study investigated the relationship between mental health problems and IPV in a post-conflict population but did not examine the potential causes of mental health problems in Rwanda. Levels of posttraumatic stress and depression in Rwanda prior to genocide are unknown. However, exposure to war is associated with the development of trauma-related mental health problems, such as posttraumatic stress disorder (Mollica et al., 2004). This relationship is theorized to follow a dose-response relationship, such that those exposed to more violence are more likely to develop PTSD (Neugebauer et al., 2009). Some studies have indicated the possibility that a person who has experienced highly extreme conditions may have his or her resiliency against psychopathology nearly completely destroyed (Neugebauer et al., 2009).

The development of mental health problems after exposure to traumatic events is not assumed to be automatic or universal for all individuals. A body of research has focused on the presence and role of potential moderating factors in the development of mental health problems after war; i.e. population members with different characteristics will have different mental health outcomes depending on those characteristics. Proposed moderators include prior childhood trauma, social support, the type of exposure, and the number of exposures to violent events (Galea, Nandi, & Vlahov, 2005; Owens et al., 2009; B. Roberts, Ocaka, Browne, Oyok, & Sondorp, 2008). A number of researchers assert that in resource-poor post-conflict settings, much of mental health distress is related to other problems common after war, such as poverty, social isolation, and lack of basic services, in addition to trauma exposure (K. E. Miller & Rasmussen, 2010).

Trauma-related mental health problems in Rwanda. Population-representative studies are limited but indicate that the population in post-genocide Rwanda has been and continues to be affected by mental health problems, likely caused by exposure to traumatic events during genocide. Early studies reported the presence of genocide-related mental health problems in different segments of the population at subsequent points in time after genocide. Thirteen months after genocide a study of children and adolescents found that more than two-thirds of the sample had witnessed someone being injured or killed, and more than 90% believed they would die during the war (Dyregrov, Gupta, Gjestad, & Mukanoheli, 2000). An estimated 79% of the sample likely met criteria for PTSD (Dyregrov et al., 2000). A 1999 study randomly surveyed adults in one commune and found that 15.5% met three criteria for current major depression (11.2% of men and 17.7% of women). The presence of depression was associated with significantly increased difficulty in performing a number of tasks representing normal functioning (Bolton, Neugebauer, & Ndogoni, 2002).

A 2002 study randomly surveyed adults in four communes (the country's 2004 population was divided into 154 communes) and found that 24.8% of respondents met symptom criteria for PTSD (Pham, Weinstein, & Longman, 2004). Rates were higher for women; across the four communes 29.7% of women met diagnostic criteria for PTSD and 19.6% of men met criteria, using an instrument based on the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV). The authors also found that cumulative trauma exposure was statistically significantly associated with PTSD symptoms (Pham et al., 2004). In 2003 a study of Rwandan refugees in a Ugandan camp found that 31% met criteria for PTSD (Onyut et al., 2004). The 2004 MIGEPROF study of women reported that 44.8% of women tried to avoid remembering

traumatic events, 36% experienced flashbacks, 6.4% wished in the past few weeks that they could die, and 2% had attempted suicide in prior weeks (MIGEPROF, 2004).

Recent evidence indicates that trauma-related mental health problems remain prevalent in Rwanda nearly 20 years after genocide. A nationally representative survey indicated that 26.1% of Rwandans meet criteria for posttraumatic stress disorder (PTSD) and 22.7% meet criteria for major depression (Munyandamutsa et al., 2012). Over 20% of Rwandan men met criteria for PTSD (Munyandamutsa et al., 2012). A study of genocide survivors, formerly imprisoned genocide perpetrators, and their descendants (including those born after genocide) found that all groups continue to experience mental health problems as a result of genocide trauma (Rieder & Elbert, 2013). Twenty-five percent of genocide survivors, 22% of former prisoners, and 15.5% of survivor's descendants met criteria for PTSD in a survey of one Rwandan district. Prevalence rates for depression were also high: twenty-one percent of survivors, 3% of their descendants, 14% of former prisoners, and 5% of prisoner's descendants met criteria (Rieder & Elbert, 2013).

Trauma, mental health, and IPV in Rwanda. Some very preliminary research from Rwanda suggests that trauma and mental health problems may be associated with the perpetration of intimate partner violence. A study funded by the United Nations Development Project in Rwanda in collaboration with a local Rwandan organization, the Rwanda Men's Resource Center (RWAMREC) examined contributors to domestic violence by asking both men and women about IPV. Early findings indicated poverty, threats to masculinity, exposure to prior violence, and patriarchal cultural beliefs and norms to be associated with domestic violence in Rwandan families (Slegh & Kimonyi, 2010). Exposure to genocide violence was also found to be significantly associated with perpetration of IPV in a bivariate association, but rigorous measures were not used, and a multivariate model was not tested (Slegh & Kimonyi, 2010).

Qualitative findings from the study indicated that a number of men connected their current perpetration of violence against a partner with prior episodes of violence and trauma they had experienced—either in childhood or during the genocide (Slegh & Kimonyi, 2010).

Two cross-sectional surveys in Rwanda examined the relationship between mental health problems and IPV experiences. Both studies examined mental health problems as an outcome with the aim to examine IPV as a contributor to mental health problems. A survey of married Rwandan men and women who self-selected into a sociotherapy intervention study found that IPV was positively associated with mental health problems (Verduin et al., 2013). The authors examined "mutual partner violence" and categorized respondents as IPV victims, perpetrators, both, or neither. Those who reported both perpetration and victimization were more likely to report mental health problems than victims or those who did not report any IPV. Those reporting only perpetration were more than three times as likely to report mental health problems, and the authors cautiously noted that the direction of this relationship was uncertain (Verduin et al., 2013). A survey with a representative sample of Rwandan men found significant associations between experiencing physical IPV and mental disorders (depression and generalized anxiety disorder) (Umubyeyi, Mogren, Ntaganira, & Krantz, 2014). This preliminary evidence and the high rates of trauma exposure, mental health problems, and intimate partner violence support the need for a study to further investigate the relationship between trauma, mental health, and IPV in Rwanda.

Chapter 3 Theory and Evidence

This study examines intimate partner violence in a post-conflict setting through the lens of an integrative risk and protective factor framework with a particular focus on the contribution of individual-level mental health factors. The larger ecological risk and protective factor framework allows conceptualization of IPV perpetration as influenced by multiple factors. A focus on psychological risk factors at the ecological level of the individual allows examination of risk that may be unique to a population in a post-conflict setting. Psychological theories provide possible mechanisms through which intimate partner violence may occur after traumatic experiences and inform a deeper exploration of the relationship between traumatic exposure, mental health problems, and intimate partner violence perpetration in Rwandan respondents.

This chapter presents a brief overview of available theoretical approaches for the study of intimate partner violence and introduces the ecological risk and protective factor framework used to frame the research study. Evidence for risk and protective factors commonly identified as significant in empirical studies is reviewed. The evidence for psychological or mental health risk factors are then presented, along with theoretical explanations for the mechanisms by which mental health problems might contribute to IPV perpetration.

Overview of IPV Theory

Violence against women has been called the "most pervasive human rights violation in the world today" (Bunch, 1997). One World Bank report noted that it causes more ill-health than malaria and all traffic accidents, and that mortality and morbidity rates of gender-based violence rival those of cancer for women ages 15 – 44 (Venis & Horton, 2002). Consequently, much research has been directed at studying intimate partner violence against women and different theoretical perspectives have been proposed to understand and explain IPV. The following list

presents existing theoretical perspectives as categorized in *The Oxford Handbook of Close Relationships* (Finkel & Eckhardt, 2013).

1. Sociocultural models of IPV, including feminist and sociological perspectives, attribute violent behavior to socialization, norms, or shared beliefs about the acceptability of violence. Intimate partner violence is considered a deeply embedded social problem that requires social change (Ali & Naylor, 2013b).
2. Intrapersonal models examine internal factors of a perpetrator which may make him or her more likely to commit violence. This category includes social learning approaches, cognitive, personality, and clinical approaches (Finkel & Eckhardt, 2013). Biological attributions for IPV, such as head injuries, neurotransmitters, or genetics, would also fall under this category (Ali & Naylor, 2013a).
3. Interpersonal models focus on the exchange that takes place between partners, identifying behaviors, communication patterns, and processes that take place in relationship conflict.
4. Typological approaches seek to incorporate risk factors from diverse theoretical models and to identify types and subtypes of batterers by clustering the factors that contribute to IPV.
5. Integrative models include the ecological model and risk and protective factor models. They can incorporate multiple contributors from different theoretical perspectives and categorize them into logically different ecological levels or categories. This study uses an integrative model to examine IPV.
6. A recent perspective, introduced as the I^3 theory, assumes that IPV takes place when the "forces" that encourage him/her to be aggressive are stronger than the "forces"

that inhibit violent behavior. This model emphasizes processes over factors; the three key processes are *instigation* (social dynamics with the victim that trigger an urge to be aggressive), *impellance* (dispositional or situational factors that have made the individual prepared to be aggressive), and *inhibition* (dispositional or situational factors that assist the individual to resist violence) (Finkel & Eckhardt, 2013).

As noted, this study will utilize an integrative model, a risk and protective factor framework to understand the relative influence of multiple factors to IPV in post-conflict Rwanda, with a focus on intrapersonal mental health-related factors. However, the language of the I^3 theory is helpful as another way to understand that risk factors may be those that "instigate" or "impel" violence, and preventive factors may "inhibit" violence. This study seeks to understand the contribution of the impelling factors of trauma and mental health to IPV, relative to other impelling and inhibiting factors that also exist in a post-conflict environment.

Integrative Theoretical Models

An ecological model presents the perpetration of intimate partner violence as behavior influenced by multiple factors at different levels in a social ecological system, as initially conceptualized by Brofenbrenner (1979). An ecological model allows interaction between multiple explanations and helps to understand abusers (or victims) as individuals whose individual factors interact with the multiple connected systems in which each person is embedded—they allow researchers to account for both internal attributions (personal) and external attributions (environmental) to explain violent behavior (Dutton, 2006). Ecological models have utility for understanding intimate partner violence because they can incorporate contributing influences proposed by theorists from multiple disciplines or theoretical

perspectives and may allow comparison of the relative explanatory power of different theories (Corvo & Johnson, 2013).

A risk and protective framework outlines factors from multiple levels of the social ecological system (e.g. events, personality characteristics, features of the environment, beliefs, etc.) that researchers have determined or theorized to be causally associated with intimate partner violence. The risk and protective factor framework acknowledges that the population of perpetrators of IPV is heterogeneous and that different combinations of factors may lead to IPV for different individuals and/or circumstances. Risk and protective factor frameworks have been criticized because they do not attempt to outline the pathways through which the factors may cause (or reduce risk for) IPV perpetration (Finkel & Eckhardt, 2013). However, a risk and protective factor model is a pragmatic way to study the phenomenon of IPV and to identify significant risk factors that policy makers and practitioners can target in order to modify or prevent violent behavior. Identifying the salient protective factors that enable individuals to resist violent behavior may also contribute to the development of interventions to strengthen these mechanisms.

Conceptual Model

One of the earliest adaptations of a nested ecological model for intimate partner violence (see Figure 1) incorporated factors that contribute to IPV from different levels of the social ecology; personal history (e.g. childhood experiences or parental influences), the microsystem (e.g. marital conflict or influence of close relationships), the exosystem (e.g. identity groups or socioeconomic status), and the macrosystem (e.g. patriarchal attitudes in the culture) (Heise, 1998). A model similar to this was used to conceptualize risk and protective factors in the recent

World Health Organization multi-country study of intimate partner violence (Abramsky et al., 2011).

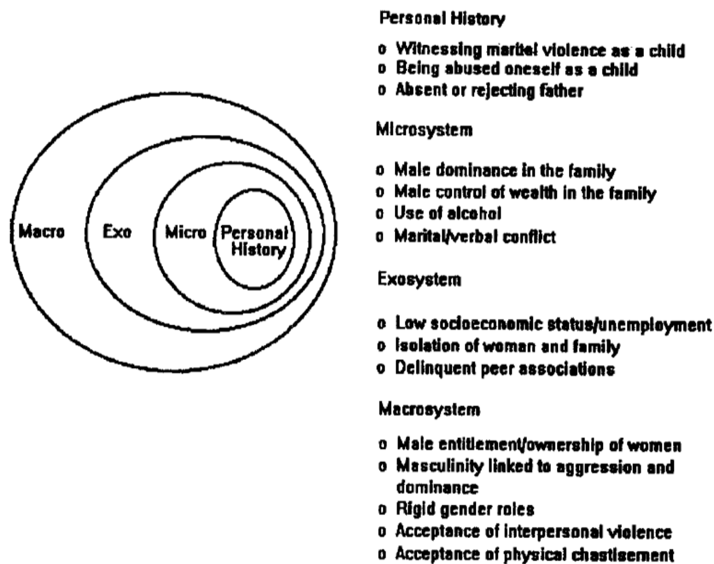

Figure 1. A Nested Ecological Model for Intimate Partner Violence as Presented by Heise, 1998.

This study uses an ecological model based on one adapted to conceptualize risk and protective factors associated with perpetration of IPV (Stith, Smith, Penn, Ward, & Tritt, 2004). Stith and colleagues based their model on the Heise model but limited their focus to factors at the exosystem, microsystem, and ontogentic (intrapersonal) level that could be assessed by clinicians to increase the model's practical utility. This model was used for a meta-analysis assessing the strength of the relationship between each risk factor and the perpetration of IPV (Stith et al., 2004).

Figure 2 presents a conceptual model for IPV perpetration in Rwanda based on the Stith et al model. This study's model focuses on the outcome of interest for this study, perpetration of intimate partner violence, and includes factors anticipated to be either positively or negatively associated with IPV. The mental health-related factors of interest for this study are included as

interpersonal factors. Focusing on potentially modifiable intrapersonal factors (although factors at other levels may also influence behavior) may be highly pragmatic for the development of interventions and programs to reduce IPV (Norlander & Eckhardt, 2005).

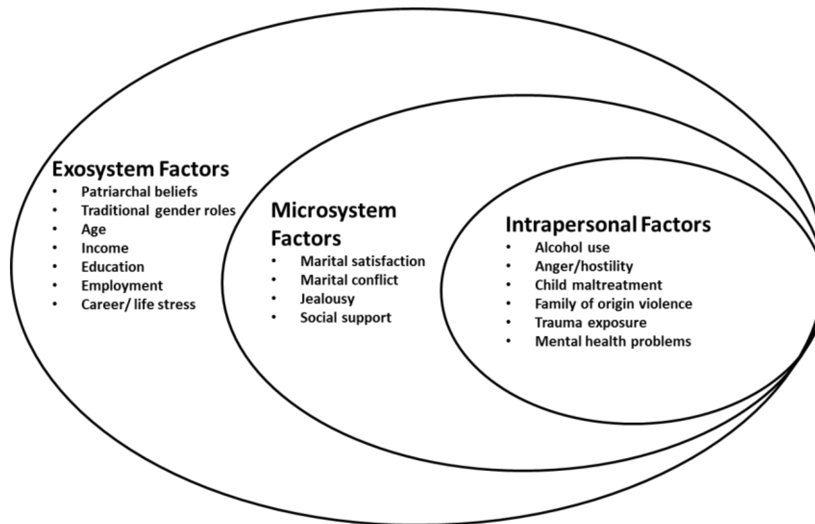

Figure 2. Conceptual Model of Risk and Protective Factors for Perpetration of Intimate Partner Violence in Rwanda. Based on Heise (1998) and Stith et al. (2004).

Evidence on Risk and Protective Factors

Although a vast body of research exists on risk and protective factors associated with IPV, the majority of it is focused on victims, and perpetration of IPV is under-researched (Fulu et al., 2013). This section summarizes the evidence that does exist on risk and protective factors consistently associated with the intimate partner violence perpetration, identified through research in multiple country settings. Per the prevalence of the ecological model to conceptualize IPV perpetration, these factors are organized and presented according to ecological level (see Figures 1 and 2), and the evidence on the relationship between each factor and IPV perpetration is summarized. To present an exhaustive list of all risk and protective factors identified would be unhelpful, therefore, this review of evidence focuses on factors that could be

measured in a survey of individuals in a post-conflict setting and does not review the evidence on macrosystem factors.

Research on perpetration generally relies on self-reported perpetration of violence either by the victim or the aggressor, except in rare studies of individuals convicted of IPV-related crimes or studies that include both partners in the sample and combine reports from both. As noted earlier, this study focuses on violence perpetrated by men against women. Accordingly, the review focuses on evidence related to male violence perpetrated against women. However, several studies of perpetration committed by both men and women are included; studies with all-female samples are not. Additionally, this review does not distinguish among types of violence perpetrated; some studies included in the review examined only one type of violence (e.g. physical or sexual) while others examined factors associated with general relationship aggression or multiple types of violence. Generally risk or protective factors were not limited to one type of violence when examined across multiple studies or contexts.

Exosystem Factors

Following Brofenbrenner and Heise's conceptualization, exosystem factors are those which are outside of a person that may influence him to perpetrate IPV. This level includes the formal and informal social structures that situate the individual relative to his larger culture. In at least one meta-analysis, these factors were demonstrated to have the smallest effect size in their relationship with perpetration of IPV, perhaps because they are most "distal"[2] from the violence (Stith et al., 2004). These factors may not be directly modifiable through (an individual-level) intervention. Examples of exosystem factors are place and type of work, career or life stress, support from social network, age, income or socioeconomic status, and education.

[2] Kachadourian, 2012 cites Leonard's (1993) definition of distal and proximal factors: Distal factors include personality traits, norms, and long-standing patterns—they are relatively stable. Proximal factors are more likely to change and include characteristics of an individual's current state (e.g. affective or cognitive). Intoxication would also be considered a proximal factor.

Attitudes toward violence. Individuals who believe that violence is an acceptable way to solve problems may be more likely to perpetrate IPV. Violence against women can be an accepted social norm (Jewkes, 2002). Supportive attitudes toward spousal violence are a particularly important risk factor for perpetration; attitudes condoning violence are strongly associated with abuse (Abramsky et al., 2011; Capaldi, Knoble, Shortt, & Kim, 2012; Schumacher, Smith Slep, & Heyman, 2001; Stith et al., 2004). This effect has also been found at community or state level; communities or states with more accepting attitudes toward IPV have higher rates of IPV (Boyle, Georgiades, Cullen, & Racine, 2009; Koenig, Stephenson, Ahmed, Jejeebhoy, & Campbell, 2006; Linos, Slopen, Subramanian, Berkman, & Kawachi, 2013). However, it is important to note that the majority of these studies are cross-sectional, and the relationship's direction is not established; perpetrating IPV may actually cause an individual to justify or develop beliefs about its acceptability.

"Traditional" gender roles. Each society prescribes social norms around gender roles and defines "traditional" or acceptable ways for men and women to behave and think, particularly within the context of intimate relationships (Santana, Raj, Decker, La Marche, & Silverman, 2006). The extent to which individuals hold and accept these norms, often patriarchal in nature, has been examined as a risk factor for the perpetration of IPV. Holding traditional sex-role ideology is considered a moderately strong risk factor for IPV perpetration by men, and conflicts about transgressions of gender norms are associated with increased risk for IPV (Jewkes, 2002; Stith et al., 2004). The extent of acceptance of gender equity has also been identified as an important risk factor for IPV across multiple settings to the extent that countries with higher gender equality report lower prevalence rates for intimate partner assaults on women

(Archer, 2006; Fulu et al., 2013). Men who score low on beliefs about gender equity are at greater risk for IPV perpetration (Fulu et al., 2013).

Age. An early influential narrative review noted that demographic characteristics of either the male or female partner, such as age, are not usually associated with increased risk for IPV (Jewkes, 2002). Regardless, many cross-sectional studies include age as a control factor. A small negative effect size was found in the relationship between men's age and IPV perpetration in a meta-analysis (Stith et al., 2004). Several systematic reviews report largely consistent findings that age is protective against IPV in adulthood (Capaldi et al., 2012; Schumacher et al., 2001).

Income/SES. Lower income has been associated with male-female partner violence in a number of studies (Capaldi et al., 2012; Schumacher et al., 2001). Lower socioeconomic status (SES may include other factors such as education) has also been found to be positively associated with perpetration of IPV (Riggs, Caulfield, & Street, 2000; Schumacher et al., 2001). A meta-analysis found a negative relationship between income and IPV perpetration but a small effect size (Stith et al., 2004). In some reviews poverty rather than income was identified as a significant risk factor for IPV (Fulu et al., 2013; Jewkes, 2002). Other reviews proposed that stress associated with low income or poverty may be what influences IPV perpetration (Jewkes, 2002; Riggs et al., 2000). The WHO multi-country study concluded that the influence of poverty on IPV perpetration depended on context; poverty was only a significant risk factor in developing countries, not in higher income countries (Fulu et al., 2013).

Education. A low level of education has been associated with perpetration of IPV, and men's higher education is often found to be a protective factor against IPV (Abramsky et al., 2011; Fulu et al., 2013; Jewkes, 2002; Schumacher et al., 2001). However, the effect size of the

relationship is likely small, and the association may dissipate when more proximal factors, such as relationship conflict, are included in the analysis (Capaldi et al., 2012; Stith et al., 2004).

Employment. Many cross-sectional studies support an association between unemployment and IPV, but the effect size is likely small (Capaldi et al., 2012; Riggs et al., 2000; Stith et al., 2004). Other studies focus on the employment status of partners relative to each other, and these findings are less consistent—in some settings men who worked while their partner did not were less likely to perpetrate IPV, but in other settings, this relationship was non-significant and in the opposite direction (Abramsky et al., 2011).

Career/Life stress. There is substantial evidence, primarily from cross-sectional studies, that stress is predictive of IPV perpetration, and this relationship is of medium-sized strength (Stith et al., 2004). This includes financial stress, parental stress, and work-related stress (Capaldi et al., 2012). Some evidence suggests that negative stressful life experiences, such as those measured on a life events scale are more important risk factors for IPV perpetration than day-to-day stressors, although IPV perpetration risk can be elevated in men with recent stressors, such as a financial crisis, death of a loved one, or being fired (A. L. Roberts, McLaughlin, Conron, & Koenen, 2011; Schumacher et al., 2001). Other researchers propose that the influence of recent stressors varies depending on past exposure to stress; one study found that individuals with recent stressors were at greater risk for perpetrating IPV if they also had a history of childhood adversity, compared to those with only recent stressors (A. L. Roberts et al., 2011).

Microsystem Factors

Microsystem factors were found to have strong or moderate effect sizes in the relationship to IPV perpetration (Stith et al., 2004). Microsystem factors are those characteristics of the immediate setting where violence may take place or the characteristics of the relationship

in which violence takes place. Microsystem factors include a history of partner abuse, jealousy, marital satisfaction, and other characteristics of the intimate relationship.

Marital satisfaction. An individual's satisfaction with the marriage or intimate relationship has been identified as a protective factor against perpetration of IPV. Men who perpetrate IPV report less satisfaction with their relationships than nonviolent men (Riggs et al., 2000). Two meta-analyses found a negative small-to-moderate ($r = -.27$ and $r = -.30$) overall effect size for the relationship between marital satisfaction and IPV perpetration (Stith, Green, Smith, & Ward, 2008; Stith et al., 2004).

Marital conflict. Conversely, relationships in which partners report high levels of conflict and verbal disagreements are more likely to experience violence (Jewkes, 2002). Effect sizes for the relationship between marital discord and physical IPV perpetration range from small to medium large (Schumacher et al., 2001). In longitudinal studies marital disagreements predicted higher IPV risk (Capaldi et al., 2012). The WHO multi-country study on men's perpetration of violence found quarrelling in relationships to be one of the most significant risk factors for perpetration of all types of IPV across multiple settings (Fulu et al., 2013).

Jealousy. Jealousy, or a feeling of suspicion toward a potential rival, has been associated with male to female partner abuse in both longitudinal and cross-sectional studies (Capaldi et al., 2012; O'Leary, Smith Slep, & O'Leary, 2007; Schumacher et al., 2001). However, in a meta-analysis, jealousy had the smallest effect size of all microsystem level risk factors (Stith et al., 2004).

Peers and Social support. The role of social support has been examined frequently as a protective factor against IPV victimization, rather than IPV perpetration (Capaldi et al., 2012). However, a number of studies examine the role of peer influence on men's IPV perpetration.

Longitudinal research with a US population finds that IPV perpetration is greater for men in social networks characterized by higher levels of delinquent behavior compared to those in networks characterized as less delinquent (Casey & Beadnell, 2010). Violence in men's peer networks is also important; another longitudinal study found that IPV perpetration was more likely for those in violent peer networks but only if the network was large (Ramirez, Paik, Sanchagrin, & Heimer, 2012). A number of cross-sectional and longitudinal studies examine the role of support received from peers or social networks; evidence indicates that social support is generally protective against IPV perpetration, although some studies reported non-significant relationships (Capaldi et al., 2012; Schumacher et al., 2001).

Intrapersonal Factors

Intrapersonal factors are hypothesized to be the most proximate to an individual and to therefore have the strongest effect on the risk for perpetration of IPV. Evidence indicates that intrapersonal factors have strong or moderate effect sizes in the relationship to IPV (Stith et al., 2004). Also called ontogentic factors, these factors are related to the potential offender's learned behaviors, cognitions, or mental health state. These factors can also be understood as characteristics of the individual that interact with stressors or risks at the microsystem or exosystem levels (Stith et al., 2004).

Alcohol use. Alcohol use and misuse has consistently been associated with perpetration of IPV in samples across multiple settings, and the relationship has a small to moderately strong effect size (Abramsky et al., 2011; Boden, Fergusson, & Horwood, 2012; Foran & O'Leary, 2008; Jewkes, 2002; Klostermann & Fals-Stewart, 2006; Stith et al., 2004).. Alcohol can have either direct effects (i.e. reducing inhibitions, self-control, or the ability to find non-violent solutions to conflict) or indirect effects (i.e. exacerbating stress, financial problems, or infidelity) on IPV perpetration (Capaldi et al., 2012). An analysis of risk factors for intimate partner

violence across 10 countries found men's alcohol use to be the only consistently significant predictor in all countries where it was measured (Hindin, Kishor, & Ansara, 2008). Misuse of alcohol was an important risk factor for IPV perpetration in the WHO men's study, but it varied across country contexts; for example, it was not significant in Muslim-majority societies (Fulu et al., 2013). One recent study of war-affected women in Northern Uganda found that male partner's alcohol use was one of the most significant predictors of IPV, in addition to women's prior exposure to war events and symptoms of PTSD re-experiencing (Saile, Neuner, Ertl, & Catani, 2013).

Anger/hostility. Higher levels of anger and hostility are significantly associated with the perpetration of IPV, and the relationship is moderately-sized (Capaldi et al., 2012; Schumacher et al., 2001; Stith et al., 2004). Male perpetrators of IPV consistently report higher levels of anger and hostility compared to nonviolent males (Norlander & Eckhardt, 2005). One review of 39 studies from the US, Canada, Europe, Israel, Australia, South Africa, and Sri Lanka found a mean effect size of 0.48 for the relationship between PTSD and anger and hostility (Orth & Wieland, 2006).

Child maltreatment. Having been a victim of child maltreatment is a significant risk factor for the perpetration of IPV in a number of longitudinal and cross-sectional studies, estimated to have a low to moderate significance (Abramsky et al., 2011; Capaldi et al., 2012; Fulu et al., 2013; Riggs et al., 2000; A. L. Roberts et al., 2011; Schumacher et al., 2001; Stith et al., 2004). This may include emotional, physical, or sexual abuse as well as harsh or power assertive punishment or discipline (Capaldi et al., 2012). According to attachment theory, individuals maltreated as children may learn a model of relationships in which power imbalance is central and roles are organized as victim-victimizer (Wekerle et al., 2001). However, recent

studies focus on numerous factors such as behavior problems or substance abuse which may mediate the relationship between childhood maltreatment and adult perpetration of IPV (Capaldi et al., 2012).

Family of origin violence. Exposure to or witnessing violence in one's family of origin has a low to moderate effect on perpetration of IPV, according to longitudinal studies (Capaldi et al., 2012; Ehrensaft et al., 2003). Researchers hypothesize that individuals who grow up in violent homes or witness parental IPV may be socialized to use violence to settle disputes (Stith et al., 2000). Witnessing parental IPV in childhood has been identified as a risk factor for IPV perpetration in adulthood across a number of different countries and settings (Abramsky et al., 2011; Fulu et al., 2013). As with childhood maltreatment, the relationship between exposure to family of origin violence and perpetration of IPV is likely mediated by a number of additional risk factors, including substance abuse (Capaldi et al., 2012; Ehrensaft et al., 2003).

Risk Factors for IPV in Post-Conflict Settings

The following sections present theory and evidence on risk factors for IPV for populations who have been exposed to war or political conflict.

Exposure to war or political violence. The relationship between exposure to war, political, or community violence has not been investigated in meta-analyses; however, an accumulating body of knowledge indicates that traumatic violence exposure during war or political conflict is associated with IPV. Recent cross-sectional studies from conflict-affected countries demonstrate that men's exposure to violence from war or political conflict is generally associated with higher rates of IPV perpetration, with a few exceptions (Clark et al., 2010; Gupta et al., 2009, 2012; Saile et al., 2013). In one study from Palestine, women whose partners had been exposed to political violence in the previous year, regardless of whether the exposure was

direct (e.g. insulted, detained, wounded), indirect (e.g. land confiscated, family members arrested or killed), or economic (e.g. reduced financial status or loss of job), were at increased risk for IPV (Clark et al., 2010). Exposure to conflict has also been positively associated with IPV perpetration in recent immigrants who experienced violence before entering the United States (Gupta et al., 2009). A very limited number of studies examine African conflict-affected populations; one found that South African men exposed to human rights violations during apartheid were more likely to perpetrate IPV, another determined that exposure to war crimes was associated with perpetration of IPV in Liberian men (Gupta et al., 2012; Vinck & Pham, 2013). However, one African study found a non-significant relationship between men's war exposure and perpetration of IPV (Saile et al., 2013).

Studies of women exposed to violent conflict have also found that trauma exposure increases the risk of IPV victimization. A cross-sectional study of refugee women from Burma (Myanmar) found that those victimized during conflict were nearly six times as likely to have experienced IPV in the past year (OR = 5.9) (Falb, McCormick, Hemenway, Anfinson, & Silverman, 2013). The strongest predictor of IPV in women in one Northern Uganda study was women's exposure to prior conflict trauma (Saile et al., 2013).

Trauma exposure has been associated not only with intimate partner violence but other forms of domestic violence as well. A narrative review of evidence examining domestic violence in war-affected populations concluded that families exposed to war are particularly vulnerable to violence (Catani, 2010). A study with children and their male and female guardians in Northern Uganda found that higher levels of child maltreatment were predicted by female guardian's exposure to conflict (Saile, Ertl, Neuner, & Catani, 2014).

Explanations for the relationship between traumatic exposure during conflict and IPV focus on social learning theory and psychological explanations. According to social learning theory, social norms around violence may change after political conflict, making violence against women more acceptable (Falb et al., 2013; de Watteville, 2002). Social protection normally provided by communities may also break down, or corruption and poverty in post-conflict settings may limit protection for women (Annan & Brier, 2010; Raghavan, Mennerich, Sexton, & James, 2006).

Alternative explanations focus on psychological sequelae, such as PTSD or depression, after traumatic exposure, which are associated with an increased risk of domestic violence. These explanations attribute the increased risk for IPV to changes in the mental health states of the individuals who make up the couple. Two mental health disorders, posttraumatic stress disorder (PTSD) and depression have consistently been identified as significant risk factors for the perpetration of IPV.

PTSD and IPV. Studies have consistently demonstrated that men who develop mental health disorders such as PTSD from exposure to violent events are at significantly greater risk of violence perpetration in intimate relationships (Taft et al., 2011). A meta-analysis of 31 empirical studies on the association between PTSD and intimate relationship problems found medium-sized associations between PTSD and relationship discord, physical aggression perpetration, and psychological aggression perpetration; the analysis also indicated that severity of violence may increase as severity of PTSD symptoms increase, although additional research is needed on this (Taft et al., 2011).

Much of the research on the relationship between PTSD and IPV comes from studies with US military veterans. Cumulative evidence is strongly supportive that military combat

veterans with PTSD consistently demonstrate higher rates of family relationship problems (Galovski & Lyons, 2004; Monson, Taft, & Fredman, 2009). One review found that rates of intimate relationship aggression can be up to three times higher in veterans with PTSD than in the general population (Marshall, Panuzio, & Taft, 2005). The relationship between PTSD and relationship violence also has been found in civilian populations, although the effect may be stronger in military samples (Taft et al., 2011). Very little research has included African populations, and the results have been mixed. One study of Liberian men exposed to war violence found a significant relationship between IPV perpetration and PTSD (Vinck & Pham, 2013). However, in Uganda, men's psychopathological symptoms were not associated with perpetration of IPV, although male PTSD symptom severity was associated with higher levels of maltreatment of children (Saile et al., 2014, 2013).

One longitudinal study of adult male and female Palestinians found that baseline exposure to political violence predicted psychological distress after 1 year, and psychological distress was associated with greater domestic violence measured at 18 months (Heath, Hall, Canetti, & Hobfoll, 2012). However, longitudinal evidence is limited, such that the direction of the relationship between PTSD and IPV perpetration remains unclear and may be bi-directional. Experiencing or perpetrating IPV may cause mental health problems, and some men report both victimization and perpetration (Próspero & Kim, 2009; Taft et al., 2011; Vinck & Pham, 2013). Results from a 20-year longitudinal study of male combat veterans in Israel provided support for a bi-directional relationship; posttraumatic stress symptoms predicted lower family cohesion after two years, and lower family cohesion predicted posttraumatic stress symptoms after 7 years (Zerach, Solomon, Horesh, & Ein-Dor, 2013).

PTSD mediates relationship between trauma exposure and IPV. Posttraumatic stress disorder has been tested as a mediator between traumatic exposure to conflict and IPV. Narrative reviews suggest this, and some empirical studies with veterans provide evidence (Catani, 2010; Galovski & Lyons, 2004). A study of veterans and their spouses found that both the veteran's trauma history and the spouse's trauma history had a direct effect on the veteran's perpetration of IPV. The severity of the veterans' PTSD mediated the relationship between the veteran's trauma history and IPV perpetration; the spouse's PTSD severity also mediated the relationship between the spouse's trauma history and IPV perpetration of the veteran (Wolf et al., 2013). PTSD significantly mediated the relationship between trauma in World War II military veterans and perpetration of verbal and physical aggression (O'Donnell, Cook, Thompson, Riley, & Neria, 2006). A study on dating aggression perpetration found that the effects of trauma exposure were fully indirect via PTSD symptoms (Taft, Schumm, Orazem, Meis, & Pinto, 2010).

Theory on PTSD and IPV. Researchers have examined the pathways through which having a mental health problem can interfere with one's ability to interact normally with others and to have healthy interpersonal relationships. A person's expectations for their adult relationships may be changed by mental health problems (Kimerling, Alvarez, Pavao, Kaminski, & Baumrind, 2007). A person affected with posttraumatic stress disorder may experience hypervigilance and arousal which can lead to aggression or violence perpetration. Survival mode theory hypothesizes that those with PTSD have lower thresholds for judging situations as threatening, and a person's automatic survival mode of flight or fight is more easily activated (Orth & Wieland, 2006). Alternatively, the traumatized person may exhibit dissociation and avoidance which contribute to victimization (Wekerle et al., 2001). Couples in which one partner had PTSD were found to be more likely to display hostility or psychological abuse and

less likely to express humor or acceptance in a study observing communication patterns in video-recorded conversations (M. W. Miller et al., 2013). Shame and hopelessness are other factors implicated in the relationship between violence exposure and aggression (Gupta et al., 2009; Lawrence & Taft, 2013).

A review of theoretical models to explain interpersonal hostility of Vietnam veterans focused on learning theory, information-processing, and cognitive explanations (Beckham, Moore, & Reynolds, 2000). Mowrer's two-factor learning theory was used to explain the way that people exposed to war violence learn to associate neutral stimuli with fear and avoidance. They become conditioned to fear and can experience stimulus generalization by which other neutral stimuli become associated with a fear or anxiety response. The individual may react by trying to alleviate the discomfort of this response by avoidance or violence, which causes problems in intimate relationships (Beckham et al., 2000). Foa's fear avoidance theory posits that people feel more comfortable lashing out in anger than they do feeling fear, as anger is viewed as a more positive emotion (Orth & Wieland, 2006).

Similarly, information-processing and cognitive models propose that memories are stored in networks that hold information about the meaning, interpretation, and appropriate response to a stimulus. Emotions that cause a high level of arousal will be more easily remembered and will last longer. Exposure to trauma will cause high emotions; thereafter these memory networks associate previously neutral stimuli with danger and with a strong response that was appropriate for the traumatic situation (e.g. violent or aggressive) but is not appropriate for their current situation. The person with PTSD has a difficult time regulating this response and inhibiting violent or aggressive reactions (Beckham et al., 2000). Responses to experiencing traumatic events may also include substance abuse and depression, which reduce energy and motivation

and diminish a person's cognitive capacity to avoid a perpetrator of violence (Cougle, Resnick, & Kilpatrick, 2009). Other symptoms of mental health problems such as anxiety, inability to sleep or intrusive thoughts might affect a person's ability to concentrate or pay attention to the risk of new violence (Cougle et al., 2009; M. A. Dutton, 2009; Kimerling et al., 2007).

A growing area of research focuses on neurobiological models and seeks explanations for interpersonal violence in neuropsychological deficits of the survivor of war violence. Research in this area is not conclusive, but theorizes the existence of differences in frontal lobe processing between those with and without PTSD. Some very recent research has examined biological changes in the amygdala and anterior insula regions of the brains of violence-exposed populations. For soldiers who have witnessed trauma and violence, this region is more reactive, which indicates either changes to the brain after exposure or a predisposition to react differently than others exposed to the same stimuli and experiences (McCrory et al., 2011).

Neurochemistry models have also received attention, proposing that serotonin helps modulate information-processing in the brain, and stress can cause changes to the neurobiological response to stress, possibly leaving a person in a "hyperaroused, vigilant, sleep-deprived and potentially explosive state that worsens over time" (Beckham et al., 2000, p. 458). Recent research on military veterans has focused on the role of traumatic brain injury; posttraumatic stress disorder; and the emotional, behavioral, cognitive, and somatic symptoms that may persist long after a head trauma or concussion. Traumatic brain injury may be a risk factor for developing PTSD; one study found that 44% of Iraq war veterans with a traumatic brain injury also met criteria for PTSD, compared to 9% of veterans with no brain injury (Summerall & McAllister, 2010).

As noted previously, the relationship between PTSD and intimate partner violence is not straightforward and is likely bi-directional. PTSD may contribute to problems in intimate relationships, but intimate relationship problems may also place those involved at risk for PTSD (Taft et al., 2011). A recent study looked at the changes in mental health and relationship discord that took place after one partner was exposed to military combat and proposed that relationship difficulties may stem from: 1) secondary or vicarious traumatization of the non-combat-exposed partner, 2) difficulty from the ambiguity about future health or well-being of the military partner, and 3) caregiver burden that causes stress on the relationship (Dekel & Monson, 2010).

Depression and IPV. Similar to PTSD, the research on depression and IPV perpetration is limited by the scarcity of longitudinal studies and the possibility of a bi-directional relationship (D. G. Dutton & Karakanta, 2013). However, a sizeable number of cross-sectional studies in multiple countries indicate that depression symptoms elevate risk for perpetrating aggression in intimate relationships, and the relationship is of moderate strength, with a few exceptions (D. G. Dutton & Karakanta, 2013; Fulu et al., 2013; Schumacher et al., 2001; Stith et al., 2004; Taft, Monson, Hebenstreit, King, & King, 2009; Vinck & Pham, 2013). Although symptoms of depression may include lethargy, seemingly incompatible with increased relationship aggression, depression may also elevate irritability and relationship problems (D. G. Dutton & Karakanta, 2013). It may not be necessary to meet diagnostic criteria for depressive disorder in order for symptoms to elevate risk of partner violence (Riggs et al., 2000).

Depression is often comorbid with PTSD, and the combination of both disorders may further increase risk for IPV perpetration (Taft et al., 2005). One study found that depression moderated the relationship between PTSD and relationship aggression, such that the risk for

aggressive behavior was greatest for those individuals with both PTSD and Depression symptoms (O'Donnell et al., 2006). A recent review also noted that depression and relationship aggression may be caused by an additional factor, such as genetics or attachment disorder (D. G. Dutton & Karakanta, 2013).

Theory on Depression and IPV. Explanations for the empirical relationship between depression and IPV focus on sequelae of depression that may contribute to an increased risk for aggressive behavior (D. G. Dutton & Karakanta, 2013). As with PTSD, the relationship between depression and IPV may be bi-directional. Mental health problems may contribute to problems in intimate relationships, but intimate relationship problems may also place those involved at risk for mental health problems such as depression.

Loss of social support is one explanation of the relationship between depression and aggression. Depressed individuals with negative mood or attributions may perceive or receive less social support compared to non-depressed individuals. As noted earlier, social support may be protective against aggression and its loss may reduce an individual's access to aggression-preventing resources (Capaldi et al., 2012; D. G. Dutton & Karakanta, 2013).

Increased alcohol use is another mechanism theorized to link depression and IPV. Depression and alcohol use are frequently comorbid, and researchers suggest that alcohol use may increase the risk of depression (D. G. Dutton & Karakanta, 2013). As noted earlier, alcohol use is associated with greater aggression and IPV. Alcohol is theorized to impact both distal and proximal factors such as personality traits and cognitions to create an environment in which aggression is more likely (Kachadourian, Taft, O'Farrell, Doron-LaMarca, & Murphy, 2012).

Depression is often associated with rumination, or the "recycling" of ideas or thoughts (D. G. Dutton & Karakanta, 2013). Sadness rumination, in which a depressed person attributes

negative events to himself, may lead to anger which can lead to aggression. Also described as a spiral, ruminating on negative thoughts can lead to an emotional state in which the person feels that an action (e.g. violence) is necessary to relieve the tension (D. G. Dutton & Karakanta, 2013).

A final explanation for the relationship between depression and IPV may be that both are caused by a third external factor, such as a disrupted attachment in childhood. The loss of attachment security in childhood has been theoretically and empirically linked to adulthood depression. When the formation of secure attachments is disrupted, individuals may have limited affect regulation, which may cause relationship problems (Mikulincer, Shaver, & Pereg, 2003).

Summary and Relevance for the Current Study in Rwanda

Multi-country studies, meta-analyses, and systematic reviews of risk and protective factors attempt to draw conclusions about the factors that are most frequently consistently associated with IPV perpetration. These have been reviewed here, with an emphasis on mental health risk factors. Yet, one caution related to the study of risk and protective factors[3] is that the majority of evidence relies on cross-sectional studies, and the direction of causality cannot be established. For a number of the risk and protective factors identified above, it is possible that perpetration of IPV leads to the risk factor or that the relationship is bi-directional. The majority of these studies use survey data; this is useful for comparison across multiple settings and for examining the strength of the relationship of each factor.

However, experts on IPV note that although it is possible to find some factors that are consistent across different settings, there is much about IPV that is contextually influenced. The

[3] I use the term "risk and protective factors", per common use in the literature, with the awareness that many of these factors are more correctly identified as correlates of IPV.

authors of the recent WHO multi-country study stated clearly that factors associated with perpetration do vary across countries, and some factors which are very important in one context become less important in another (Fulu et al., 2013). Women's risk of IPV is affected by her broader social context; the country or region's level of economic development, laws, religious traditions, or social norms (Vyas & Watts, 2009). This has important implications for research, policy, and practice. Country-specific research to understand contextually-relevant risk and protective factors is needed for developing policies and interventions that uniquely match the drivers of IPV in that region (Fulu et al., 2013; Watts & Zimmerman, 2002). Additional qualitative and mixed methods studies are also needed to examine possible factors not previously considered in other settings and to explore the possible mechanisms of the relationship between risk and protective factors and IPV perpetration.

Chapter 4 Methods

Methodology Overview

This chapter describes the study's methodology for data collection and analysis. The data collection for this mixed-methods study took place in two research sites in Rwanda between March and October 2013. The study included in-depth interviews with 45 male and female participants and a survey of 148 randomly selected married men. Data was collected with support from a local Rwandan organization, the Rwanda Men's Resource Center (RWAMREC) and a local university, the Kigali Health Institute (KHI). The following sections detail the study design, research sites and partners, selection of participants, instruments, and data collection and analysis procedures.

Research Design

The research design was an exploratory-sequential design that included in-depth qualitative interviews to deepen understanding of the phenomenon of IPV in Rwanda, a cross-sectional quantitative community survey to statistically test hypotheses, and in-depth qualitative follow-up interviews to aid explanation of study findings (Creswell & Plano Clark, 2011). The initial in-depth interviews were conducted with 20 married men who had participated in the activities of the community organization, RWAMREC. Sixteen of their wives also participated in separate in-depth interviews. Approximately two months later, 148 randomly selected men completed a survey interview with the research team. Nine of these survey participants completed a qualitative follow-up interview one month after the survey.

Collaborating Partners

Per guidelines from the Rwandan General Directorate of Science, Technology, and Research in the Ministry of Education, research studies conducted by foreigners in Rwanda must

be conducted in collaboration with a local Rwandan institution. This study was conducted in collaboration with two Rwandan institutions—a non-governmental community based organization and a local university. The Rwanda Men's Resource Center (RWAMREC) is a Rwandan community-based organization founded in 2006 that mobilizes men for gender equality. RWAMREC's mission is to mobilize Rwandan men to support women's leadership, prevent violence against women, and promote positive masculinity. RWAMREC was selected based on the alignment of their priorities with the aims of the research project and their experience facilitating other research teams to conduct nationally representative surveys on gender based violence and masculinity.

The Chairman and founder of RWAMREC assisted with the process of obtaining research clearance before the investigator arrived in country. During the in-country data collection, RWAMREC provided office space, administrative and human resources support, and local research team members. RWAMREC headquarters and field staff provided useful contacts and RWAMREC volunteers assisted with participant recruitment.

RWAMREC also facilitated a relationship with the Kigali Health Institute (now renamed the University of Rwanda, College of Medicine and Health Services), a local university that assisted with the research clearance process and designated a faculty member as a collaborator with expertise in mental health. The faculty collaborator provided cultural and language expertise for the community survey instrument and assisted with recruitment and training for the survey research team.

Study Sites

The data collection for the study was completed in two districts of Rwanda. Rwanda was selected as an ideal location to study trauma-related mental health problems and intimate partner

violence in a post-conflict setting. Rwanda's tightly controlled and hierarchical governing structure both aided and complicated data collection. The need to obtain permission to conduct research activities from multiple administrative levels increased time and expense; however, once permissions were given, the hierarchical system facilitated the completion of activities. Rwanda is divided into five provinces and 30 administrative districts; each district is governed by a mayor appointed directly by the president (See Figure 3). The population of a district is between 200,000 – 400,000 people. Each district is divided into sectors, cells, and villages with elected officials at each level. There are 417 sectors and 14,837 villages in Rwanda (NISR et al., 2012).

The capital city, Kigali, was used as a base for the majority of the field data collection, to facilitate communication, logistics, and planning and partnership with the two affiliating institutions. The in-depth interviews were conducted in Kamonyi District, a primarily rural area just outside of Kigali city. This district was recommended by RWAMREC senior management as a location where male participants with exposure to RWAMREC's training would be available and where RWAMREC has good relations with local authorities. RWAMREC's field staff confirmed that Kamonyi district was ideal for purposive sampling because the RWAMREC-trained volunteers who would assist with recruitment were well-trained, highly competent, and closely engaged with community members.

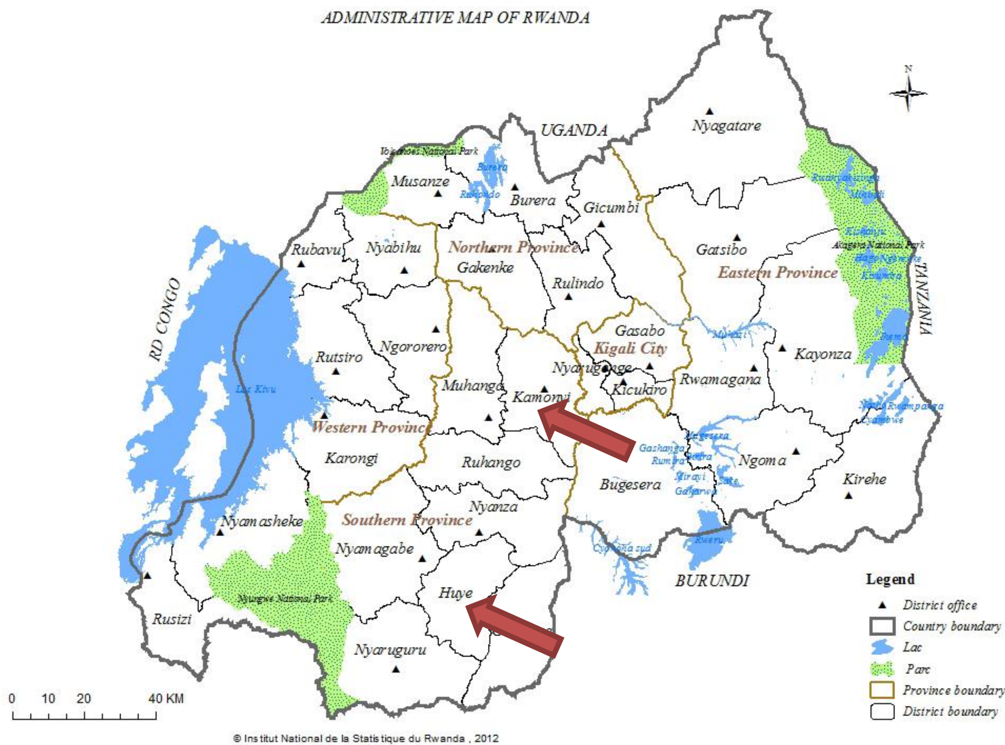

Figure 3. Administrative Map of Rwanda with Huye and Kamonyi Districts Marked

The community survey and follow-up interviews were conducted in Huye District in the southern part of the country, about 2 hours' drive from Kigali (see Figure 3). Huye district was selected for the survey based on reported rates of intimate partner violence against women in the 2010 DHS survey. The national rate of IPV against women in the 2010 DHS was 56.4%; in Huye the rate of reported IPV was 57.5%. Five districts were considered as possible locations for the community survey based on DHS 2010 IPV rates reported by women that were similar to the national average (Huye, Muhango, Gatsibo, Ruhango, and Burera). Key informants from social service organizations in Rwanda were consulted for district selection, and Huye district was chosen based on available infrastructure and cultural similarity to the rest of the country.

Inclusion and Exclusion Criteria

Three different populations were sampled for this study: men who participated in RWAMREC's programs in Kamonyi district, wives of men in RWAMREC programs, and

married men in Huye district selected for the community survey and follow-up interviews. Inclusion and exclusion criteria were similar for each population but differed slightly. The inclusion criteria for men in the in-depth interviews included: Rwandan citizenship, over 21 years of age, currently in a marriage or cohabitation relationship with a female partner, participation in RWAMREC programs or training, written consent, and availability to participate in meetings with the investigator. Exclusion criteria included cognitive impairment, foreign nationality, not in an intimate relationship, inability to participate in an oral/verbal interview, or under 21 years of age.

Female partners of the men who participated in a RWAMREC program and agreed to participate in the research study were also required to have Rwandan citizenship, be over 21 years of age, give written consent, and be available to participate in meetings with the investigator. Exclusion criteria were the same as for men.

The household survey in Huye district targeted married men who had been at least 18 years old during genocide in 1994. Inclusion criteria included: Rwandan citizenship, born in or before the year 1976, currently living with a woman in a marriage or cohabitation relationship, and written consent. Men were excluded if cognitively impaired, of foreign nationality, not in an intimate relationship, unable to participate in an oral/verbal interview, or born after 1976[4].

The inclusion and exclusion criteria for the follow-up interviews in Huye district were the same as for the survey with the following addition: Men were selected if they reported a score of 17 or greater on the PTSD symptom checklist and reported at least 3 incidents of perpetrating intimate partner violence, with one exception, detailed in the following section on recruitment for follow up interviews.

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[4] Two exceptions were made for respondents whose age was incorrect (by one year) in the sampling frame used to select respondents.

For all selected populations, any potential participants with signs of acute brain injury or acute psychosis were excluded from participation. Any participant that the research team judged to be unable to make informed consent, susceptible to lasting psychological harm, or at risk of potential functional impairment due to study participation was excluded from participation (Newman & Kaloupek, 2009).

Power Analysis and Sample Size

I conducted a power analysis to determine the appropriate sample size needed for statistical analysis of the quantitative survey. Effect size was estimated from a published meta-analysis on the relationship between posttraumatic stress disorder and intimate partner violence perpetration, measured by level of relationship discord, physical aggression perpetration, and psychological aggression perpetration (Taft et al., 2011). The meta-analysis included military and civilian samples, males and females, and populations in the United States and other countries and concluded that there was a medium-sized association between PTSD and intimate relationship violence, per guidelines from Cohen (Taft et al., 2011; Cohen, 1998). The true score correlations (rho/effect size) were: 0.38 between PTSD and intimate relationships discord, 0.42 between PTSD and intimate relationship physical aggression perpetration, and 0.36 between PTSD and intimate relationship psychological aggression perpetration (Taft et al., 2011). Using the most conservative estimate of 0.36, assuming a one tailed alpha of 0.05 and beta of 0.10 (Power = 0.9), a sample size table was used to calculate 82 participants needed (Hulley & Cummings, 2007).

Because respondents for the community survey were sampled by village (rather than using a simple random sample that would require a sampling frame listing all households), it was necessary to account for the effect of clustering in the sample size estimate. The estimated

sample size was increased by the design effect, represented by $def = 1+(\beta-1)\rho$, where beta (β) is the expected cluster size (# of respondents/village) and rho (ρ) is the expected intracluster correlation. This adjustment was necessary because of the likelihood that respondents living in the same village have more in common with each other than they do with respondents living in another village. To estimate this difference, the intracluster correlation was calculated, a measure of the amount of difference between clusters relative to the amount of difference within clusters. The expected intracluster correlation is understood as the variance between clusters/variance within clusters, and is calculated using the following: $ICC = s_b^2/(s_b^2 + s_w^2)$, where s_b^2 is between group variance and s_w^2 is within group variance. Using IPV prevalence data from Huye district from the 2010 Rwanda DHS survey in which respondents were also surveyed in village clusters, the intracluster correlation coefficient was calculated to be 0.0142. Under the assumption that 10 respondents per village would be surveyed, the design effect was calculated to be 1.128, and the needed sample size estimated to be 93 (82 x 1.128). After completing a cost and logistical analysis, I determined it that it was possible to collect additional surveys, with the target of 140 surveys. After inclusion of pilot test data, the final sample size was 148.

Sampling Strategy

For the in-depth interviews participants were purposively selected per inclusion and exclusion criteria. (See section on participant recruitment for recruitment procedures). For the community survey participants were randomly selected from one southern district of Rwanda. Because of the large population size of Huye district a simple random sample was neither cost-effective nor logistically possible. I followed a two-stage cluster sampling process to randomly select 140 households from 14 villages in the 14 sectors of Huye district.

Field staff from RWAMREC in Huye District provided a sampling frame listing the population of Huye district by sector, cell, and village. I randomly selected one cell per sector and one village per selected cell by assigning numbers to all cells and villages and generating random numbers in Excel. In all sectors except one, the survey took place in the first randomly selected village.[5] During visits to each sector authority to request permission for the study, we requested a list of households in each selected village (*ubudehe*). These household lists had been prepared in 2012 as part of a national poverty assessment required for the national health insurance scheme. The household lists were used to enumerate all men who met the inclusion criteria for the survey, using a consistent protocol for enumeration into the selection pool. Men were included in the selection pool if they were married and born in or before the year 1976. Marital status was not listed on household lists, but the sex and birthdate of each household member was listed. Men were considered married if there was a female member of the household whose birthdate was either ten years prior or 20 years after the potential male participant's birthdate. Men who met the inclusion criteria were enumerated in the sampling frame.

The total number of eligible men in the fourteen selected villages was then calculated to determine the proportion of the sample that would come from each village (*n* per village). I used probability proportionate to size (PPS) sampling to determine the target *n* per village (i.e. the number of men selected in each village was proportional to the population size of eligible men in the village). Eligible men from each village were assigned a number by the order they appeared on the list (the lists were not in alphabetical, age, or any other easily perceived order). I

[5] One exception was made in the sector of Ngoma, the sector that includes the urban center of Huye district. The household list from the initially selected village only listed 33 households because the cell/village included many prisoners and students. The research team worked with sector officials to select a village in a different cell where the population was urban but did not include the prison or the university.

generated between 20 and 50 random numbers for each village, depending on village size. Men whose number was generated were selected for inclusion in the survey. More random numbers were generated than needed. (See the following section on recruitment for details of the final selection procedure).

Participant Recruitment

Recruitment scripts and consent forms were created and translated to Kinyarwanda. Everyone who assisted with recruitment was instructed to inform potential participants that participation in the study was completely voluntary and all information confidential. Participant recruitment for all portions of the study was done with the permission and cooperation of relevant local authorities. In Kamonyi the local official for gender at district level was informed of recruitment criteria but did not participate in recruitment. Recruitment in Huye was approved by district authorities and assisted by sector, cell, and village leaders. Additional details regarding the involvement of local authorities are detailed in the section on human subjects protection.

Recruitment for in-depth interviews. Male and female respondents were purposively sampled for in-depth qualitative interviews. To increase participant comfort initial contact for recruitment was made by Rwandan community members known to participants. RWAMREC field staff provided contact information for seven trained volunteers based in Kamonyi district, called Focal Points. According to RWAMREC's training model, one or two volunteer community members are designated as Focal Points per administrative sector and continue RWAMREC's work of training and sensitization after a professional training is conducted by field staff. Focal Points also make home visits and are often contacted by individuals or local authorities to intervene in conflicts that arise between couples. According to the RWAMREC

training model, Focal Points play a highly involved and supportive role to many couples in the community. Focal Points were considered ideal for assisting with recruitment; they are aware of couples with past or present conflict, they are trusted by community members, they are not affiliated with the government, and they would provide ongoing support to participants after the study's completion.

I conducted a one-day training for seven of these volunteers on the aims and objectives of the study and explained recruitment, exclusion, and inclusion criteria. All Focal Points were given tracking sheets and recruitment scripts to guide and record the process of recruitment. Focal Points were asked to select participants who met recruitment criteria, were articulate, would feel comfortable discussing their relationships, and would be able to give informed consent regarding participation in the study. The Focal Point contacted each selected participant in-person or by telephone and invited him to participate in the research interview. If the participant agreed, the Focal Point then assisted the Principal Researcher to schedule the interviews with selected participants. Twenty men in seven administrative sectors of Kamonyi District were recruited in this manner. The Focal Point was present at the start of the interviews to introduce us to local administrative authorities, secure the private location for interviews, and introduce us to the respondents. The Focal Point generally left the office once we began the interview in the private location.

During the in-depth interview, male respondents were asked if their wives would also be willing to participate in an interview. All but two respondents responded positively and recommended that we or Focal Point contact the female partner directly regarding participation. For one participant, we judged that participant security could be jeopardized by an additional interview and the female partner was not contacted. Seventeen female partners were contacted

by Focal Points and invited to an in-depth interview with the investigator. Sixteen female respondents accepted and were interviewed. During the consent process each female respondent was again given the opportunity to decline participation and assured that her decision to participate or not would not be shared with anyone (Focal Point, husband, or others). Details of the procedures for conducting interviews are provided in the section on data collection.

Recruitment for survey participants. Recruitment in Huye was approved by district authorities and was assisted by sector, cell, and village leaders. The names of age-appropriate married men from all 14 sectors of Huye District were randomly selected from household lists for participation in the community survey. The research assistant contacted cell and village leaders in advance to notify them of survey plans and the recruitment strategy. Once names had been selected from household lists, the village leaders provided feedback on the availability of selected participants. Village leaders informed the study team if any selected participant had moved, died, divorced or become otherwise unavailable; for each name screened out by the village leader, another name was selected from the household list. The first contact with potential participants was made by a local administrative leader, generally the elected village "chief" or *chef d'umudugudu*. In some villages, the *chef d'umudugudu* was unavailable and a leader from the cell assisted with recruitment. Village leaders informed participants in person or by telephone of their selection and asked if they would be willing to have a research team member visit their house to conduct an interview. Village leaders were instructed to notify participants that participation was voluntary and could be declined. The research team worked with village leaders to schedule data collection with selected households. Village leaders did not share detailed information about the study or solicit informed consent. Survey enumerators completed recruitment at the first meeting with participants when they obtained informed

consent.

Recruitment for follow up interviews. At the conclusion of each survey interview conducted in Huye District male participants were asked about their willingness to be contacted for an additional follow up interview. Those who agreed provided the phone number of someone who could reach them. From this pool, 15 participants were purposively selected based on preliminary survey data indicating that they met inclusion criteria for high PTSD symptoms and reported IPV perpetration. One participant was an exception: he did not meet the PTSD score cutoff (14 points instead of 17) but was selected based on his endorsement of 16 incidents of IPV and a high score on the traumatic events checklist. One participant changed his mind after giving consent. Per the field notes and a conversation with the survey enumerator, two additional participants were excluded based on perceived reluctance to answer questions (i.e. not considered good candidates for an in-depth interview). One participant in a remote location was excluded for logistical reasons (it was not feasible or cost-effective to travel to his geographic region for only one interview). Ten interviews were scheduled by telephone and nine participants from five sectors met with the research team (the tenth did not keep the interview appointment).

Data Collection

This section describes procedures for data collection during in-depth interviews, pilot testing and data collection for the community survey, and procedures for the protection of human subjects.

Data collection for in-depth interviews. I traveled with my research assistant/translator by public transportation or hired vehicle to the administrative office of each of the seven sectors to conduct the interviews. No more than three interviews were conducted per day. Male and

female participants who consented to participate in the in-depth interviews traveled to a private location in the respondent's geographic area—usually a room in the sector or cell administrative building. At the outset of this meeting I introduced the study and explained the process of the interview. The research assistant then explained the consent form in Kinyarwanda and gave the respondent the opportunity to ask questions. All participants spoke Kinyarwanda, and all interviews were conducted with the assistance of the translator (Research Assistant).

All respondents agreed to sign the consent form, and the interview commenced immediately after the signature. All participants agreed to an audio recording of the interview. The interviews followed the interview guide presented in the study protocol that explored the respondent's marital situation and life history. Two to three interviews were conducted per day in each of the seven locations. Interviews lasted from one to two hours.

Data collection for community survey. To prepare for the community survey responses from the in-depth interviews were reviewed to select concepts of interest to include in the survey questionnaire. The survey questionnaire was shared with Rwandan experts in Kinyarwanda language, gender, mental health, and survey design. The faculty contact from KHI reviewed the instrument for Kinyarwanda language translation and the relevance of mental health measures and constructs to the sample population. The KHI faculty contact and RWAMREC staff assisted with the recruitment and selection of three supervisors to assist with survey data collection, hired through a competitive selection process.

The sampling strategy, data collection method, and survey instrument were pilot tested before use with the community sample. After complete translation of the survey instrument into Kinyarwanda, one peri-urban village in Huye District was selected and the local leaders contacted. Local leaders gave their permission, and 10 participants who met inclusion criteria

were randomly selected using the sampling strategy. The study supervisors and investigator traveled to the village and met with the village leader who assisted supervisors to contact selected participants. Of the ten selected participants, the pilot test team was only able to locate six; these six completed interviews with research team members. The supervisors shared feedback on the consent procedures, selection and location procedures, cultural appropriateness of survey questions, and the accuracy of the translation; this was used to make modifications to the survey instrument and data collection procedures.

After the pilot test, survey enumerators (data collectors) were recruited with the assistance of RWAMREC staff. Potential candidates were recruited from previous RWAMREC research studies and from recommendations made by RWAMREC field staff and other local contacts. The recruitment search prioritized articulate male candidates living in Huye District who had prior research experience. The supervisors and I screened and interviewed candidates to select 14 qualified data collectors, 12 males and two females. Contracts for the research assistant, supervisors, and data collectors were with RWAMREC, and all personnel were paid at market wages for data collection, per recommendations by RWAMREC and other researchers with survey experience in Rwanda.

I trained the supervisors and data collectors for three days using a written training manual (created for the study), with the assistance of the RA and KHI contact. The research team was trained on ethical research, data collection methods, and administration of the survey questionnaire. The training also covered the approved procedures for traveling to households, contacting sampled participants, obtaining consent, respecting confidentiality, administering the survey interview, ensuring data security, and confirming data quality. In addition, all research assistants were trained on the WHO guidelines for research on domestic violence which includes

ethical and safety recommendations (World Health Organization, 2001). All research team members signed a confidentiality agreement in their employment contracts.

All survey data collection was completed in four consecutive days. The RA and supervisors communicated with village administrative leaders to coordinate arrival and location of participants. During the four days of data collection the data collectors and supervisors traveled to the selected villages with the list of selected male respondents for that village. Enumeration teams were created for data collection in rural areas; four data collectors worked independently in the four sectors closest to the urban center (Huye town). The supervisors supervised data collection in the rural areas; the RA and I supervised data collection in the sectors surrounding the urban center. Each enumeration team worked in a village for two days; five rural villages on the first two days and the remaining five rural villages on days 3 and 4. One team of data collectors working in the most remote location traveled with a vehicle each day; the other teams used public transportation (buses or motorcycles). Generally the data collectors traveled on foot after reaching the village. Each data collector conducted two to three surveys per day. The interview generally took between 90 minutes and two hours to complete, including the consent process. Some data collectors reported traveling long distances to locate participants in remote areas.

Survey enumerators and supervisors were given clear instructions for contacting and interviewing selected participants. Village leaders worked with supervisors and enumerators to locate selected participants on the scheduled date of data collection. The village leaders assisted by introducing the enumerators to survey respondents but were not present during the interview. Once data collectors located the participant they used a series of screening questions to ensure that the participant met recruitment criteria. If the participant met the criteria, the data collectors

secured a private location, generally in the respondents' home, and introduced the consent form. If the participant consented, the data collector proceeded to conduct the interview using the survey questionnaires. Enumerators were instructed to make three attempts to contact participants. If a participant was not available at the first contact with data collectors, a second appointment was made. In the rare case that data collectors were unable to locate a selected participant after repeated attempts (maximum three), the supervisor selected another respondent from the list of randomly selected men in that village. The majority of participants were available for the interview at the first point of contact with the enumerator.

Data collection for follow-up interviews. The procedure for conducting follow up interviews was similar to the process of the initial in-depth interviews. Between one and three interviews were conducted per day in five sectors of Huye district over five days. In most cases the village or cell leader assisted with helping to set up or arrange the meeting and secure the room. After participants consented to meet with us, an appointment was set at a location convenient to the participant, generally in a room in the sector or cell administrative building.

The interview guide explored current mental health symptoms, the impact of mental health symptoms on functioning and interpersonal relationships, and specific episodes of spousal violence. The interview guide also explored the participants' subjective report of his spouses' mental health and functioning and how it affected their relationship.

Prior to conducting the interview, I reviewed the participants' survey responses to the questions on perpetration of IPV and the measures of symptoms of mental health disorders. At the start of the interview I explained how this interview would differ from the survey interview and confirmed that the participant was willing to continue. The participants were given the opportunity to ask questions. All participants were asked to initial a written form indicating their

willingness to have the interview audio recorded. All participants spoke Kinyarwanda, and all interviews were conducted with the assistance of a translator.

Human Subjects Protection

Institutional review. The study was approved by ethics review committees in both Rwanda and the United States. Before arriving in Rwanda I sought and received permission to conduct the study from relevant government and research authorities, with the assistance of RWAMREC. It was necessary to obtain research permission from the following entities: Kigali Health Institute Institutional Review Board (IRB); Rwandan National Ethics Committee (RNEC); Washington University in St. Louis IRB; the Directorate of Science, Technology and Research at the Ministry of Education (DSTR at MINEDUC); Kamonyi District; Huye District; 14 Sector Executives in Huye District.

The research proposal was reviewed in two parts by the RNEC. RNEC approved what they termed “Part 1”, the qualitative in-depth interviews, after initial review (FWA Assurance No. 00001973 and IRB 00001497 of IORG0001100). An additional review and fee was required by RNEC four months later to approve “Part 2”, the community survey and follow-up interviews. Approval by DSTR at MINEDUC was determined to be unnecessary by the study’s local partners; however, the Rwandan Immigration Authority made the investigator’s visa contingent upon research clearance from MINEDUC, and MINEDUC approved the full protocol in April 2013 (MINEDUC/S&T/0128/2013). The study received full board review from the Washington University IRB and was granted approval in March 2013 (IRB ID#: 201301131).

Local RWAMREC staff assisted with obtaining permission to conduct research in Kamonyi and Huye Districts. RWAMREC works closely with the administrative officials in both districts, and RWAMREC headquarters and field staff assisted the research team to gain

either verbal or written permission for the study in both districts. Because the community survey in Huye District required cooperation from sector, cell, and village officials in all 14 sectors of the district, I visited the administrative offices of all 14 sectors with several research team members. The cell and village leaders were contacted by the study team once permission had been obtained at sector level.

The study followed both Rwandan and Washington University Institutional Review Board (IRB) guidelines for human subjects research. Trained Rwandan research assistants, volunteer NGO staff, or local Rwandan community leaders conducted all study recruitment. All study recruiters were encouraged to stress the voluntary nature of participation in the study, and potential participants were given the opportunity to discontinue participation at any time. (The recruitment process is outlined in detail in the section on participant recruitment).

Confidentiality and consent. Every study participant gave written consent to be in the study. All consent forms were translated to Kinyarwanda and explained fully by a native Kinyarwanda speaker. The research team gave participants the option to ask questions and/or to discuss the consent form with others before signing. The most common concern from in-depth interview participants was regarding the use of audio recorders and concern that the recordings would be broadcast over the radio. Typical questions from survey participants were to clarify the intent of the survey, the study authors (e.g. RWAMREC and an expatriate researcher), or the means of protecting confidentiality. During review of the consent form, the research team noted the possible risks of participation (including breach of confidentiality, emotional distress, or damage to reputation) and asked all participants to initial a statement acknowledging that participation may increase the risk of IPV. Participants in in-depth interviews also initialed a statement indicating their willingness to have the interview audio recorded for transcription. The

research team responded to all questions to ensure participant comfort with consent before asking for signatures. The study team informed all participants that they could refuse to start or could end an interview at any time without consequence or penalty.

All research team members signed a Confidentiality Agreement in their contracts which indicated the expectations for confidentiality and consequences of violating the principles of confidentiality. All audio files, transcripts, and interview data was assigned a unique ID number created to ensure the confidentiality of the data. Data security is described in the section on data management. All research interviews were conducted in a private location. In-depth interviews conducted in administrative offices were conducted in private rooms and paused if anyone entered the room. Survey interviews were generally conducted in participant homes; data collectors were instructed to find a private location before beginning the interview, often outside the house, and to pause the interview at any point when other individuals were within earshot.

Prior to data collection we identified organizations and/or individuals in each community who provided services for domestic violence and mental health. The survey data collectors distributed a resource list of these names and telephone numbers to all survey participants at the conclusion of the survey interview. The research team trained data collectors to recognize symptoms of emotional distress that may occur to traumatized participants during the interview and how to use the techniques of "grounding" and deep breathing for relaxation. Participants were offered breaks during long interviews and the option to skip questions they did not want to answer. Several survey data collectors reported that they used the techniques to help distressed participants relax (generally during the section on genocide-related traumatic events) and continue the interview. No participant requested to terminate an interview before completion because of emotional distress. One in-depth interview was paused when a female participant

became visibly distressed (e.g. shallow breathing, tears) and we attempted to end the interview, but the participant insisted on continuing to talk and share her story in spite of her distress. The RA (a trained counselor) helped to assess the situation and confirmed that the participant was calm and no longer visibly upset before leaving the participant; we encouraged her to remain in contact with the local RWAMREC volunteer for additional ongoing support. RWAMREC focal points were also encouraged by the research team to continue to provide ongoing support to participants.

Incentives. The study team followed RWAMREC guidance for reimbursing the transportation costs and time of participants. The majority of in-depth interview participants were subsistence farmers who gave up half a day's work to participate in an interview. All participants traveled to a local administrative office; one participant reported that the office was an hour's walk away from her home. Because the in-depth interviews required between 2-4 hours (including travel time, the consent process, and the interview) RWAMREC recommended that participants receive 3,000 Rwandan francs, the equivalent of $5 US Dollars, comparable to half a day's wages. Survey participants were informed that they would not be paid for participation because Rwandan authorities are working to avoid creation of a culture where community members expect payment for research or provide information for a fee. RWAMREC's policy is that participants interviewed at home do not require reimbursement. However, after pilot testing and consultation with local researchers from the National University based in Huye District, the research team provided 500 Rwandan francs (less than $1USD) to each participant for "refreshment" during the long interview.

Data management and security. In-depth qualitative interviews were recorded on digital recorders. These audio files were immediately transferred from the recorder on to the

project computer and deleted from the recorders. Research assistants who had signed confidentiality contracts made the transcripts of the recordings. All transcription files were securely stored and password protected. Names of participants were not used in the transcripts, and all participants were assigned a unique research ID number. A password-protected key stored on the project computer is the only document which links participant names with this ID number.

No survey questionnaires contained identifying information about any participant. Consent forms with participant signatures were kept in a separate folder from survey questionnaires. The cover sheet with the participant name used to locate the participant was removed from the questionnaire during the interview and given to the participant to demonstrate that identifying information had been separated from the information collection in the questionnaire. A unique identification number was created for the purpose of the study and participant names are linked with this ID number only in the password-protected key document stored on the project computer.

Supervisors collected all survey questionnaires at the end of each day and returned them immediately at a central location. Both the supervisors and I checked all surveys for data completion and errors. Because the teams of data collectors were in each location for only two days, supervisors and data collectors were encouraged to conduct the majority of the interviews on the first day in each village to allow for follow-up or rescheduled visits as needed on the second day. At the end of each day questionnaires with errors were returned to the data collector for correction; this was necessary for fewer than half of the data collectors and was rare after the initial day of data collection.

The completed questionnaires were kept and stored securely under the de-identified ID

numbers. Every effort was made to ensure the confidentiality and security of the data collected. Survey questionnaires and consent forms will continue to be securely stored until the length of time required by the ethical review committees for research.

Variables and Measures

This section describes the variables and measures included in the survey questionnaire (summarized in Table 1). All variables were measured at the level of the individual. Whenever possible, measures and questionnaire items were selected that had been developed or translated and adapted for use in Rwanda. The process of pilot testing the survey instrument is described in the section on data collection. Table 3 and Table 4 present a list of all variables used in statistical analyses, included variables created in SAS during data preparation.

Table 1. Variables And Measures Included In The Survey Instrument

	Variable	Measure/Source	Items
Dependent variables			
	Physical IPV perpetration	DHS/WHO based on revised Conflict Tactics Scale (Straus & Douglas, 2004)	7 items
	Sexual IPV perpetration	Developed from key informant interviews	1 item
	Emotional IPV perpetration	Based on UNIFEM questions (UNIFEM, 2008)	4 items
	Financial IPV perpetration	Based on UNIFEM questions (UNIFEM, 2008)	3 items
Independent variables			
	Traumatic events checklist	Rwandan Adjusted Event Scale (Schaal & Elbert, 2006) and ISTSS Trauma History Screen, 2013	25 items
	PTSD	PSS-I for PTSD per DSM IV (Foa & Tolin, 2000); Kinyarwanda version (Onyut et al., 2004)	1 Criterion A item 17 symptoms items (Criteria B – D) 1 Criterion E 7 impairment items (Criterion F)
	Depression	CES-D (Radloff, 1977) Kinyarwanda version (Betancourt et al., 2012)	20 items
Covariates			
	Accepting attitude toward spousal abuse	WHO/ DHS (NISR et al., 2012)	11 items
	Alcohol use	Based on items from University of Konstanz	3 items
	Anger	Multidimensional Anger Inventory (Siegel, 1986)	33 items
	Marital satisfaction	Based on in-depth interviews	9 items
	Poverty	Created based on procedure from (Mitra et al., 2013) and (Trani & Cannings, 2013)	18 items
	Social support	Inventory of Socially Supportive Behaviors based on (Barrera, Sandler, & Ramsay, 1981). Kinyarwanda version (Betancourt et al., 2011)	18 items

Dependent variables. Participants were asked to consider both current and all prior intimate relationships in their responses to questions about perpetration of IPV. For each question, participants were asked to state whether the following event had occurred "Never", "Once", or "More than once". If the respondent answered positively (e.g. "once" or "more than once"), he was asked to state if it had occurred in the past 12 months (yes/no).

Physical IPV perpetration. Perpetration of physical IPV was measured with five items from the domestic violence module of the Rwandan DHS survey and two items created based on in-depth interview findings and feedback from key informants. The Rwandan DHS domestic violence survey used an abbreviated version of the Conflict Tactics Scale (NISR et al., 2012; Straus & Douglas, 2004). In spite of its limitations, the CTS is the closest thing to a gold standard measure of intimate partner violence used around the world. The measure of IPV used in the World Health Organization's global prevalence studies is based on the CTS (Garcia-Moreno, Jansen, Ellsberg, Heise, & Watts, 2006).

Critics of the CTS counter that the measure is not without problems, particularly when used in non-Western populations. The measure may fail to capture aggression and violence that may be expressed in different ways—of particular relevance in other cultures. For example, partners may express aggression in indirect or passive forms, particularly if physical violence is culturally unacceptable (or illegal and punished, as in Rwanda). Indirect and passive forms of violence may include sabotage of a partner's performance or property, neglecting one's duties, or locking someone out of the house (White et al., 2000). Men's aggression may also take other forms that are not captured by the CTS such as controlling a woman's activities, isolating her, threatening to take away her children, preventing her from working outside the home, or keeping her from her family resources (White et al., 2000). Anecdotal reports from Rwandan informants

indicated that some of the criticisms of the CTS may be relevant in Rwanda; for example, some men, cognizant of sanctions for physical or sexual violence, have resorted to other less detectable tactics. Two additional items were developed to measure physical IPV based on the in-depth interviews (one question on self-defense and a question on physical fights under the influence of alcohol), and other items were included in the survey to capture other forms of IPV perpetration.

A respondent was considered to have perpetrated physical IPV in his lifetime if he gave a positive response (e.g. “once” or “more than once”) to any of the seven items. Past year physical IPV perpetration was also scored as a binary variable, with a “yes” for past year perpetration if the respondent endorsed any of the seven items as occurring in the past year.

Sexual IPV perpetration. One item was used to measure perpetration of sexual IPV: “I had sex with my partner without discussing it with her”. The item was based on an item for sexual violence from the CTS2/DHS item and modified by a Rwandan GBV expert to reflect actual situations faced by Rwandan couples. An endorsement of “once” or “more than once” was considered a positive response for lifetime sexual IPV, and a “yes” for perpetration in the past 12 months was considered a positive response for past year perpetration.

Emotional IPV perpetration. Four items measured perpetration of emotional and psychological victimization through tactics such as verbal insults, silence, “kicking out” partner from the house, and controlling partners’ movements (e.g. “I stopped talking to my spouse/partner, totally refused to discuss issues with her”). All items came from a 2008 UNIFEM survey in Rwanda on IPV, and were modified based on descriptions of IPV given by informants during the in-depth interviews. Emotional IPV perpetration was scored for lifetime and past year perpetration as two binary variables, in the same manner as physical and sexual IPV.

Economic/financial IPV perpetration. Economic or financial violence was measured using three items from the UNIFEM survey (e.g. preventing one's spouse from access to household resources or denying access to a spouse's legal inheritance[6]). Financial IPV perpetration was scored for lifetime and past year perpetration as two binary variables, in the same manner as physical, sexual, and emotional IPV.

Any IPV perpetration. Responses from the four types of IPV perpetration were combined to create measures of any lifetime and past year IPV perpetration of any type. Lifetime and past year perpetration were each scored as a binary variable. If a respondent endorsed any of the lifetime perpetration items, of any type, he was considered to have perpetrated IPV in his lifetime. Similarly, if a respondent endorsed any of the past year perpetration items of any type, he was considered to have perpetrated in the past year. I used past year IPV perpetration for all bivariate and multivariate analyses (DV1).

Independent variables. The following variables were included as the independent variables of interest:

Experience of traumatic events. Respondents' experience of traumatic events was assessed using items from the Rwandan Adjusted Event Scale and the Trauma History Screen from the International Society of Traumatic Stress Studies. This study used 20 items from the Rwandan Adjusted Event Scale developed by the research team at the University of Konstanz, Germany (Jacob, 2010; Rieder & Elbert, 2013; Schaal & Elbert, 2006), four items from the ISTSS Trauma History Screen, and one item developed based on IDI results.

One critique of events checklists is that there are subjective differences in the way that respondents perceive stressful events; therefore, a count of number of traumatic events does not

[6] Rwanda has relatively new inheritance laws that give girls the right to inherit. The 1999 law also gives both spouses equal rights to their married land.

validly report the level of stress experienced (Dohrenwend, 2006). Event checklists also often fail to define the time period in which each event happened. For this survey, the event checklist was modified to include a response scale to assess severity of impact and time period (based on (Dohrenwend, 2006; Sarason, Johnson, & Siegel, 1978). For each item on the checklist, respondents reported if the item had happened “never”, “ever”, “in relation to genocide”, or “in the past year”. If an item had ever been experienced, the respondents were asked to rate how much impact it had on their life with “extremely negative”, “negative”, or “no impact”.

Each respondents’ report of lifetime experience of traumatic experiences, regardless of severity of impact, was used to create a scale score for lifetime exposure to traumatic events. Any items endorsed as occurring “ever”, “in relation to genocide”, or “in the past year” were counted and summed into a total score out of 25. A scale score of the number of traumatic events experienced during genocide was created by summing the number of items endorsed as occurring “in relation to genocide”, and a scale score was created for traumatic events in the past year by summing the number of events endorsed as having occurred “in the past year” into a total score out of 25.

Posttraumatic stress disorder. The survey used the Kinyarwanda version of the Posttraumatic Stress Disorder Symptom Scale Inventory (PSS-I) to assess symptoms of PTSD (Foa & Tolin, 2000; Onyut et al., 2004; Rieder & Elbert, 2013). This measure was selected for its properties as a self-report measure for PTSD that assesses respondents on all six of the DSM-IV Criterion and can be used to screen for PTSD diagnosis. The measure has been found to have good reliability and validity with Rwandan and other conflict-affected populations (Ertl et al., 2010; Onyut et al., 2009).

Respondents are presented with a list of symptoms of PTSD and asked to report for each

item how frequently in the past month that symptom has bothered or disturbed them (i.e. "Not at all", "once/week or less", "2-4 times/week", or "5 or more times/week"). Each item is measured on a four-point Likert scale from (0) "Not at all" to (3) "5 or more times/week". The total severity score is calculated by summing the raw scores of the 17 items; and subscores can also be calculated for the PTSD symptom clusters of re-experiencing, avoidance, and arousal (Foa & Tolin, 2000). For the current study the total severity scale had very good internal reliability (α = 0.89).

Prior studies using the PSS-I with an East African population take advantage of the measure's inclusion of all six DSM-IV criteria to create a binary variable assessing whether or not each respondent meets diagnostic criteria for PTSD (Ertl et al., 2010; Jacob, 2010; Onyut et al., 2009; Rieder & Elbert, 2013). To aid in the interpretation of analyses using PSS-I scores, I created a binary variable for PTSD diagnosis; respondents who met all six criteria were considered to have met diagnostic criteria for PTSD.

Depression. Depression symptoms were measured with a Kinyarwanda version of the Center for Epidemiological Studies Depression Scale (CES-D). Betancourt and colleagues (2012) translated and adapted the children's version of the measure (CES-DC) for use in Rwanda; however the items are the same as the adult version. For the current study, the research team used the Betancourt measure but made slight revisions to reflect the language used in the CES-D adult version, as appropriate (e.g. substituted "people" for "kids").

The measure includes 20 items asking respondents to rate how often in the past week they experienced the listed symptoms such as low energy, loneliness, or sleep disturbance. For each item responses range from 0 to 3 (0 = rarely or none of the time, 1 = some or little of the time, 2 = moderately or much of the time, 3 = most or almost all the time). A total score is

calculated by summing the raw scores for each item and ranges between 0 and 60. Using the total sum score, internal reliability for the measure was considered excellent for the current study ($\alpha = 0.90$).

For analyses, I created a binary variable using a cut-off score to indicate whether or not depression symptoms were clinically significant or indicated the presence of a depressive disorder. In a sample of children and adolescents affected by HIV/AIDS, Betancourt et al. determined that a cut off value of 30 was optimal to distinguish between cases of major depression and non-cases with sensitivity of 81.9% and 71.9%; however, they noted that this was based on a distressed sample (HIV/AIDS and severe poverty) and may not be appropriate for a population sample (Betancourt et al., 2012).. Other researchers used a cut off score of 16 to identify depression symptoms of clinical significance and a score of 27 to indicate Major Depressive Disorder (MDD) in a sample of Rwandan adult women; this cut-off is more frequently used in adult populations in other contexts (Cohen et al., 2011; Lewinsohn & Seeley, 1997). For this study, I used the more common cut-off point of 16.

Covariates. Measures for a number of possible covariates were included in the survey instrument. These measured factors identified as commonly associated with perpetration of IPV in multiple prior studies in a number of contexts, per the literature review.

Patriarchal attitudes (acceptance of spousal violence). The level of acceptance of spousal violence was assessed with 11 items based on the WHO IPV global survey and the DHS survey (Garcia-Moreno et al., 2006; NISR et al., 2012). Respondents were asked to respond (yes/no) to 11 hypothetical scenarios under the question "In your opinion does a man have good reason to hit his wife if…". The measure was scored by creating a binary variable which was positive if the respondent endorsed any of the 11 scenarios as "yes".

Alcohol use. Three questions assessed the frequency and magnitude of respondents' use of alcohol. The questions and response set were based on DHS survey items and substance abuse questions used in Rwanda by the research team from University of Konstanz. Respondents were asked if they had ever used alcohol, and if yes, how frequently. Frequency was reported as (0) "Never", (1) "Occasionally, less than once/month", (2) "1-3 times/month", (3) "Once or twice/week", and (4) "Every day or nearly every day". Those who reported any consumption were asked about the amount consumed per use, in bottles or glasses.

The frequency and consumption amount questions were combined to create a variable estimating approximate amount of alcohol consumed per month, in liters. As has been done with other measures, such as the CTS2, midpoints for the frequency variable were used as an estimate for approximate number of times of consumption per month (i.e. 0=0, 1=0.5, 2=2, 3=6, 4=23) (Straus, 2004). For example, the response (2) "1-3 times per month" was considered to mean two occurrences of consumption per month. The amount consumed was converted to liters[7].

Anger. Anger was measured with an adapted standardized measure, the Multidimensional Anger Inventory (MAI), not previously used in Rwanda (Siegel, 1986). The original MAI is a 38-item measure that evaluates anger frequency, duration, magnitude, mode of expression, and anger-eliciting situations. The measure has a five-point response scale for each item ranging from 1 - 5 (5=completely descriptive of you, 1= completely undescriptive of you). A total score is calculated by summing responses to individual items, after correcting reverse-scored items. The original MAI has a test–retest reliability coefficient of .75, and reliability

[7] To convert to liters, the following assumptions were made: 1) all bottles standard 0.75 liter size, 2) a glass = half a bottle, 3) a small cup = ¼ of a bottle, 4) if no units were mentioned (3 cases), units = bottle (the most common response). Limitations of this conversion method include: 1) Cup and glass size may vary, 2) In spite of strict prohibitions, some rural respondents likely still drink locally brewed alcohol, which may be served in different-sized bottles—respondents were not asked to report type of alcohol consumed, nor were data collectors trained to standardize reporting of amounts consumed as has been done in other surveys of African populations (Saile et al., 2013).

coefficient of .95 with a US population; the measure has not been adapted or tested with a Rwandan population (Siegel, 1986).

For the current study the measure was translated into Kinyarwanda and reviewed by Rwandan experts in gender, mental health, language, and culture. Per feedback from these experts, six items representing the "Hostile Outlook" mode of anger expression were removed as not relevant or easily understood. After pilot testing, several of the anger-eliciting situations were modified to be more culturally appropriate and one additional item was added. The final Kinyarwanda version had 33 items, and a satisfactory internal reliability ($\alpha = 0.77$).

Marital satisfaction. Respondents reported marital satisfaction on nine items developed for the current study based on in-depth interviews in which respondents described a good marriage or a good spouse. Respondents noted the extent to which each statement was descriptive of their marriage/partnership (e.g. "My wife and I work together to build up our family"; "My wife and I talk often in a way that makes us feel close to each other"). The responses ranged from 1 to 5 (1 = completely undescriptive of you; 5 = completely descriptive of you) and were summed to create a total score.

Poverty. Eighteen items were used to create a binary variable for multidimensional poverty. The poverty measure for the current study takes into account multiple dimensions of well-being that include indicators of material deprivation as well as non-material attributes, per the Capability Approach (Sen, 1991) and per other standardized measures of poverty in Rwanda (Oxford Poverty and Human Development Initiation, 2013; Ministry of Finance and Economic Planning [Rwanda] & NISR, 2012). Seven dimensions of well-being were proposed with indicators for each, based on a literature review, and dimensions were weighted based on their relative importance for well-being, as determined by a participatory ranking process with a group

of service providers from poverty alleviation programs in Rwanda (Mitra et al., 2013). Deprivation level for each individual was determined against a measure of the "minimally-acceptable level" for each attribute; individuals who do not reach the cut-off point for that attribute were considered deprived in that dimension (Bossert, Chakravarty, & D'Ambrosio, 2013; Sen, 1992, p. 139). Cut-off points were established whenever possible based on existing measure of deprivation in Rwanda or established policy priorities for Rwandan development. Table 2 presents the seven dimensions of well-being, the indicators used to measure well-being, group rankings and resulting weights, and the cut-off points for deprivation.

I created an index by summing the weighted count of dimensions of deprivation for a continuous score (See Appendix C). Per OPHI methodology for Rwanda, these continuous deprivation scores were then used to categorize individuals into two groups: Moderately/Severely Poor (if deprived on 33.33% or more of the indicators) or Vulnerable to Poverty/Non-poor (if deprived on fewer than 33.33% of indicators) (Oxford Poverty and Human Development Initiative, 2013). See Appendix C for additional information on the creation of the poverty variable.

Table 2. **Dimensions, Indicators, Rankings, Weights, and Deprivation Cut-Offs for Poverty Variable**

Dimension	Indicators/ variables	Average rank	Priority weight	Index weight	Deprivation cut-off
1. Economic resources/ productive assets		1.45	0.21		
	• Land ownership			0.11	Total land is < .9 Ha *
	• Bank/MF account			0.11	Neither husband nor wife has bank or microfinance account†
2. Other assets		6.09	0.06		
	• Radio			0.03	No radio*
	• Mobile phone			0.03	No mobile phone*
3. Employment		2.91	0.17	0.17	No work in past 12 mos. †
	• Work in past12 mos.				
4. Health care		4.27	0.12	0.12	< 1/2 of HH members with health insurance†
	• HH members with health insurance				
5. Education		4.27	0.12	0.12	Neither husband nor wife has 5 years school*
	• Years of school				
6. Housing		3.00	0.16		
	• Own house			0.05	No house owned
	• Flooring materials			0.05	Floor made of dirt, sand, dung*
	• Electricity			0.05	No electricity*
7. Social integration		3.36	0.15	0.15	
	• 4 items from social support measure				No one to lend money, give essential items, help with activities, or help w/problems
Sum			1	1	

Note: *Based on existing deprivation cut-off for Rwanda (Sources noted in Appendix C). †Based on Rwandan development policy priority.

Social support. To measure social support, this study used 18 items from a Kinyarwanda version of the Inventory of Socially Supportive Behaviors (ISSB) adapted by Betancourt and colleagues; the wording of several items was modified slightly for use with the current study's adult population (Barrera et al., 1981; Betancourt et al., 2011). Two additional items were included from the original ISSB and translated into Kinyarwanda by the research team. The measure presents a list of activities and asks the respondent to rate how often he gets each type of support from people. Responses range from 0 to 4 for each item (0 = never; 1 = a little; 2 = some of the time; 3 = quite a lot of the time; 4 = nearly all the time). The measure is scored by summing scores from the individual items and has been found to have good internal consistency when used with samples from different cultures (Gottlieb & Bergen, 2010). For this study, the modified measure had excellent internal reliability (α = 0.90).

Demographics and household information. Demographic items included respondents' age, education level, years of marriage, and employment status. Age was measured by asking date of birth and calculating age at the time of data collection. Education level was assessed using two questions: one on the highest level of education completed (e.g. primary or secondary school or beyond) and the number of years completed at that level. These two variables were combined to create a continuous scale with range 0 – 17 where the lowest value was (0) no education, and the highest was (16) with a Ph.D. Number of years married was determined using one item asking how long respondents had been married to their current wife. Employment questions were based on the Rwandan DHS survey questionnaire. Respondents were asked if they had worked in the last 7 days, if not, they were asked if they had worked in the past 12 months. Those who worked were asked about their occupation, seasonality of work, and type of income (e.g. cash, in-kind).

Variable Transformation

After univariate analysis of continuous variables, I determined that several of the variables required transformation because they were not normally distributed. The past year trauma count variable was highly skewed and its distribution did not approximate a normal distribution, even after transformation, so the variable was changed into a categorical variable with three categories: 0) no traumatic events, 1) one traumatic event in the past year, or 2) two or more traumatic events in the past year. For both of the mental health variables, the PSS sum score for PTSD and the CES-D sum score for Depression, the binary version of the variable indicating whether or not a respondent met diagnostic criterion was selected for ease of interpretation of results and comparability with other mental health studies conducted in East Africa with the PSS-I. A log transformation (base 10) was used for the alcohol variable, estimated liters/month consumed, because the variable was highly positively skewed. Although marital satisfaction was indicated as a possible covariate from qualitative data, univariate analysis of the variable showed that there was very little variance: nearly every respondent reported very high marital satisfaction, and this variable was not used in analyses.

Data Preparation

Data preparation for in-depth interviews. Each in-depth interview was audio recorded on two devices. I also wrote interview notes by hand during each interview. I recorded these notes and any relevant information about the interview (including feedback from the translator and any data from local leaders or other key informants) into electronic documents of field notes for each interview. The research assistant and a hired translator transcribed the best quality audio recording from each interview into written transcript documents in English. Transcripts reflected the best translation from Kinyarwanda into English, even if this was not the translation made

orally during the actual interview. These files were uploaded into NVivo and Dedoose qualitative research software for analysis.

Survey data entry and cleaning. I entered data from paper surveys into an Excel spreadsheet with a team of four research assistants. We used double entry for all surveys; i.e. each survey was entered by two separate individuals into an Excel sheet created specifically for the survey data such that it limited allowable entries. I compared all entries in Excel to identify any discrepancies and used the original paper surveys and/or phone calls to data collectors to correct all data entry errors. The clean Excel dataset was imported into SAS 9.4 for final data cleaning and creation of value labels. All variable recoding and scale creation was completed in SAS.

Missing Survey Data

Every effort was made during data collection to minimize the amount of missing data in the survey dataset; accordingly missing data was minimal. Table 3 and Table 4 describe the state of missing data for dependent and independent variables in the original dataset. The third column in each table describes the amount of missing data if the most rigorous criteria are applied such that any respondent with one or more missing items from a scale is considered to be missing the entire scale. The amount of missing data on each scale ranged from 0% to 7.43%. The final column describes the amount of missing data relative to the total number of values for all scale items, and the amount ranged from 0% to 1.06%.

Table 3. Missing Data on Dependent Variables

Variable	Number of items in scale	Missing* n (%)	Missing values† n/total values (%)
Lifetime IPV perpetration, any type	15	11 (7.43	11/2220 (0.5)
DV1: Past year IPV perpetration, any type	15	11 (7.43)	11/2220 (0.5)
DV2: Physical past year IPV perpetration	7	11 (7.43)	11/1036 (1.06)
DV3: Sexual past year IPV perpetration	1	0 (0.0)	0/148 (0.0)
DV4: Emotional past year IPV perpetration	4	0 (0.0)	0/592 (0.0)
DV5: Financial past year IPV perpetration	3	0 (0.0)	0/444 (0.0)

Note: *Number of respondent scores missing if scale score = missing when one or more scale items is missing.
†Number of missing values out of all respondent responses for all items in the scale

Table 4. Missing Data on Key Independent Variables and Covariates

Variable (# items in scale)	Number of items in scale	Missing* n (%)	Missing values† n/total values (%)
Traumatic events, lifetime	25	2 (1.35)	3/3700 (0.08)
Traumatic events, genocide	25	5 (3.38)	6/3700 (0.16)
Traumatic events, past year	25	5 (3.38)	6/3700 (0.16)
PTSD symptoms (PSS-I)	17	3 (2.0)	3/2516 (0.12)
Depression symptoms (CES-D)	20	1 (0.68)	1/2960 (0.03)
Anger (MAI)	33	1 (0.68)	1/5032 (0.02)
Alcohol consumption	2	1 (0.68)	1/296 (0.34)
Attitudes toward spousal violence	11	2 (1.35)	2/1628 (0.12)
Social support (ISSB)	20	2 (1.35)	2/2960 (0.07)
Poverty	17	0 (0.0)	0 (0.0)

Note: *Number of respondent scores missing if scale score = missing when one or more scale items is missing.
†Number of missing values out of all respondent responses for all items in the scale

To ensure the most rigorous analysis, variables were considered missing if one or more items were missing from each scale. I assessed the possibility of using multiple imputation to create complete datasets for analysis but determined that the data were not missing at random and did not meet the assumption of "ignorable" required for the multiple imputation procedure (Allison, 2002; Rose & Fraser, 2008). Participants with incomplete data were not included in bivariate and multivariate analyses.

Data Analysis

Table 5 presents data source and type of analysis by research question.

Table 5. Research Questions, Data, and Analyses

Research Questions	Data	Analysis
Describe trauma and mental health in Rwanda • Prevalence & correlates (Q3.2) • Descriptions (Q1.1)	Community survey (Q3.2) In-depth interviews (Q1.1)	Descriptive statistics, Bivariate analyses, & Qualitative text analysis
Describe IPV in Rwanda • Prevalence (Q3.1) • Descriptions (Q1.2)	Community survey (Q3.1) In-depth interviews (Q1.2)	Descriptive statistics & Qualitative text analysis
Explore risk and protective factors for IPV perpetration • Identify context-specific factors (Q2.1; Q2.3) • Test for covariates	In-depth interviews (Q2.1; Q2.3) Community survey	Qualitative text analysis & Bivariate analyses
Examine relationship between trauma, mental health, and IPV perpetration (Q2.2; Q4.1; Q4.2)	Community survey (Q4.1; Q4.2) In-depth interviews (Q2.2)	Qualitative text analysis, Bivariate analyses, & Multivariate analyses

Analysis of in-depth interview data. I used data from in-depth interviews for descriptive results and to deepen understanding of the phenomena of interest (traumatic exposure, symptoms of mental health problems, and IPV) and the relationships between them. To do this, I carefully read transcripts from all interviews several times as well as the field notes taken during each interview. I identified phrases that described the experience of the phenomena of interest (traumatic exposure, symptoms of mental health problems, and IPV). I then combined the phrases from all participants, organized by *a priori* categories and phenomena of interest, and I integrated the experience of the participants into descriptions of each phenomenon (Creswell, 2013).

I examined the organized data and clustered the material into themes, using field notes and feedback from key informants and research assistants to triangulate the data from participant interviews (Creswell & Plano Clark, 2007). I created a qualitative memo on concepts and themes and used the memo for analysis and interpretation. The interpretation of in-depth interview data was informed by findings from survey data and a review of existing published literature related to each theme. I identified quotes from participants that exemplified each description and theme.

Analysis of survey data. Prior to analysis by research question, I conducted univariate analysis of the relevant variables to produce descriptive statistics. For binary and categorical variables I examined frequency distributions and percentages, and for continuous variables I examined measures of central tendency and dispersion. Continuous variables whose distributions did not approximate a normal distribution were either transformed or recoded into categorical variables; these transformations are explained further in the section on variables and measures. As part of the description of trauma and mental health in Rwanda (Q3.2) I examined

correlates of the mental health variables (PTSD and depression) with a multiple logistic regression analysis in SAS

To explore risk and protective factors for IPV perpetration and identify covariates for multivariate regression (Q2.1 & Q 2.3) I conducted bivariate analyses between the five dependent variables for IPV perpetration in the past year (DV1: any IPV perpetration, DV2: physical IPV perpetration, DV3: sexual IPV perpetration, DV4: emotional IPV perpetration, and DV5: financial IPV perpetration) and all covariates. All five dependent variables were binary; thus I used the Rao-Scott design-adjusted chi square test which accounts for clustered sample design to test bivariate relationships with categorical independent variables and covariates. I used simple regression analyses accounting for survey design to test bivariate relationships with continuous independent variables and covariates.

Prior to conducting multivariate analyses to examine the relationship between trauma, mental, health and IPV perpetration (Q4.1 & 4.2) I conducted bivariate analyses to identify any significant relationships between the five dependent variables for IPV perpetration in the past year and the three independent variables for trauma and two independent variables for mental health. These analyses were conducted to test whether or not the data met assumptions for logistic regression (i.e. (1) independence of observations, (2) nominal or ordinal dependent variable, (3) independent variables associated with the dependent variable but not perfectly, and (4) limited multicollinearity) and also helped to identify relevant covariates to include in regression models (Drake & Jonson-Reid, 2008). The survey methodology ensured that observations were independent, and multicollinearity between independent variables was assessed by regressing the dependent variable on the independent variables.

To examine the relationship between traumatic exposure and IPV perpetration I planned to conduct a multiple logistic regression analysis for each of the five dependent variables and the three independent variables for traumatic experiences, controlling for relevant covariates. If all models had met regression assumptions, this would have been 15 models; however none of the models using trauma independent variables met assumptions. (See Table 38 in Appendix G). To further examine the relationship between traumatic exposure and IPV perpetration, I conducted exploratory analyses of the possible moderating influence of PTSD and depression. For each type of IPV perpetration I estimated a three-variable regression model that included the trauma variable, the mental health variable, and an interaction term of the two.

To examine the relationship between mental health problems and IPV perpetration I conducted a multiple logistic regression analysis for each of the five dependent variables for IPV perpetration in the past year and the two binary independent variables for mental health (PTSD & depression). All logistic regression analyses modeled the outcome of "Yes, perpetrated IPV in the prior year". If all models had met regression assumptions, this would have been 10 models; however only six models using mental health independent variables met assumptions. For each model meeting assumptions, relevant covariates were included if they were associated with the dependent variable in bivariate tests. (See Table 38 in Appendix G).

All multivariate logistic regression analyses were conducted in SAS and adjusted for clustering effects in the data from the sample design[8]. For each model, I examined the Wald coefficient to assess model significance and then examined estimates and odds ratios for individual variables in the model.

[8] In SAS, using PROC SURVEY commands for bivariate and multivariate analyses.

Methodological Challenges

Collaborating partners. Working with local partners is a requirement for conducting research in Rwanda; however, some challenges were associated with cooperating with local institutions. The relationship with RWAMREC was well-defined at the outset of the study according to a written MOU that included financial reimbursement to RWAMREC for the provision of administrative support. RWAMREC suggested the partnership with Kigali Health Institute as a way to facilitate research clearance and offered to make the connections. In facilitating this partnership RWAMREC created an MOU with KHI related to this study and other projects, but this MOU was not shared with the research team until several months after work on the study had begun. This MOU raised expectations at KHI regarding funding and benefits from the study that were not possible to provide (e.g. fees and per diems for the faculty contact), and this became a source of ongoing tension. Accordingly, KHI's interest and involvement in the study was limited.

Sampling. No sampling frame was known or available for the community survey at the time of study planning. The study proposal outlined plans to randomly select villages, determine the number of respondents needed, and "count-off" households from a central geographic location. During fieldwork, local administrative offices made detailed household lists available, and I decided to use these as an alternative method of selecting the random sample. We were able to obtain lists for every selected village. The lists were prepared in a standardized spreadsheet format used across the country, but we received them in both paper and electronic format which introduced some challenges into the procedure for assigning random numbers and selecting respondents. In several cases, the research team found errors on the household list after comparing with survey data. For example, two participants were selected and interviewed who

did not meet age criteria because date of birth was incorrect on the household list. However, for other important screening criteria (e.g. residence in selected village, marital status), village leaders were consulted to verify that selected participants were eligible for the study.

Participant recruitment. As noted, participant recruitment was largely conducted by local Rwandan volunteers or administrative leaders. Sharing control of the process in a tightly controlled hierarchical state like Rwanda introduced several challenges, as noted by other researchers (King, 2009; Thomson, 2010). RWAMREC Focal Points in Kamonyi district who recruited for the in-depth interviews were trained and given written explanations of the inclusion and exclusion criteria for recruitment, but during in-depth interviews, some participants did not appear to meet these criteria in the manner anticipated. For example, the study aimed to investigate male intimate partner violence against women (the type of violence understood to be most common in Rwanda), yet Focal Points recruited several men who reported feeling abused by their wives.

The decision to use village leaders to recruit for the community survey was influenced by a number of factors including the desire to maximize participant comfort, logistical limitations on the study team, and the lack of RWAMREC staff or volunteers at village level. Village leaders are representatives of the Rwandan government but are elected by community members who choose people they consider trustworthy and "upstanding". Village leaders are consulted for all manners of issues in villages including security concerns, building permits, disputes between neighbors, and marital conflict. For this study, I anticipated that community members would trust village leaders and would feel most comfortable discussing possible study participation with a village leader, rather than a stranger or visitor from the capital city. As others have noted, it is not possible to conduct research in Rwanda without cooperation from local

leaders, and Rwandans may not participate in a study without confirming that it has been approved by local authorities (Thomson, 2010). However, the relationship between village leaders and each participant is unknown, and in a hierarchal society such as Rwanda, it was impossible to determine whether or not participants felt able to refuse an invitation from the village leader. All data collectors gave participants the opportunity to refuse participation at the time of interview, but it is possible that using village leaders was a limitation of the recruitment method. It is also unknown whether or not participants viewed the study as something coming from government, in spite of explanations that it was conducted by an independent researcher.

Human Subjects. Per guidance from the Washington University Institutional Review Board, all participants signed written consent. For the community survey, I used the standardized template for written consent suggested by the WUSTL IRB; this document, after translation, was five-pages long. Both of these decisions created some problems during data collection. Rwandan translators/research assistants expressed concern several times regarding the "weight" and cultural inappropriateness of written communication/consent for uneducated rural participants. One research assistant explained that verbal agreement is a highly trustworthy means of agreeing to transactions in rural Rwanda and the method with which the majority of people are most familiar. She explained that requesting written consent often introduced suspicion and concern for participants. Similarly, data collectors for the survey frequently complained about the standardized consent form accompanying the survey interview and noted that it caused problems for them during data collection, as both its length and written format created discomfort among participants.

Mental health in Rwanda. A final challenge stemmed from the study's use of Western conceptions of mental health. An understanding of mental health based on Western medicine

(i.e. that mental health may be biologically determined or influenced and is part of a person's overall health) is relatively new (although promoted by the Rwandan Ministry of Health). For example, an organization in Rwanda that adapted a cognitive behavioral therapy for clients was forced to create new vocabulary words in the local language before the treatment manual could be translated because the vocabulary did not previously exist in the Kinyarwanda language. Generally, a Western understanding of mental health is limited to health professionals or those with a Western education. In addition, one of the study's research assistants explained that an awareness of or discussion of feelings is not a typical part of Rwandan culture; people discuss actions, behavior, and thoughts. Although the interview guide for the in-depth interviews was not a clinical interview, I encountered challenges with several of the questions related to the "emotional consequences" of trauma exposure, and accordingly made revisions to the interview guide after the first few interviews based on feedback and suggestions from the translator/research assistant.

The following chapters present the study's findings and discuss the results (See Table 5 for a review of data sources and analyses). Chapter 5 introduces the samples from the in-depth interviews and the Huye District survey and describes the traumatic events experienced by study participants. Chapter 6 presents data on reported experiences of IPV and explores the phenomenon of IPV in Rwanda by describing the lived experience of IPV from male and female perspectives. Chapter 7 combines analysis of participant stories of IPV with simple statistical tests of the relationship between IPV perpetration and commonly studied risk and protective factors to present a profile of factors that may be relevant in the unique context of Rwanda and to identify covariates for multivariate models. Finally, Chapter 8 examines the role of traumatic exposure and mental health problems in the perpetration of intimate partner violence using data from the survey and in-depth interviews. Chapter 8 also includes a description of an exemplar Rwandan couple as one illustration of the way that traumatic exposure and mental health problems are related to IPV. I conclude in Chapter 9 with a discussion of the implications of the study's findings for policy and practice in Rwanda and globally.

Chapter 5 Describing Trauma and Mental Health in Rwanda

In this chapter I introduce the study samples for the Huye District survey and in-depth interviews (IDI) in Kamonyi and Huye Districts. I describe the traumatic events experienced by participants and discuss possible reasons why some participants were very reluctant to discuss these events. I use IDI and survey data to present the symptoms of mental health problems that may have resulted from traumatic exposure. The chapter concludes with a discussion of participant characteristics associated with meeting diagnostic criteria for PTSD and depression using Huye District survey data.

Characteristics of the Sample

Kamonyi District IDI Respondents

In Kamonyi District I completed interviews with 20 men selected by RWAMREC and 16 of their wives. As noted previously, men and women were interviewed separately, and four of the wives were not interviewed. Table 6 presents a list of the male and female respondents and simple descriptive characteristics[9]. Per the selection criteria, all respondents were married and lived with their spouse at the time of the interview. All respondents had participated in training or counseling provided by RWAMREC. Participants came from seven different sectors of Kamonyi District, and one RWAMREC volunteer worked in each sector such that participants who lived in the same sector had been trained or counseled by the same RWAMREC volunteer.

[9] Unique ID numbers were assigned to each participant from Kamonyi District and are used to identify each quotation; male respondents have an "M" in the ID number and female respondents have an "F". The prefix denotes the sector from which each respondent was sampled.

Table 6. Characteristics of Kamonyi District IDI Respondents

Male respondent	Age	Education level	Children*	Female partner	Married (yrs)
OIKM1	56	Primary 6	8	OIKF1	19
OIKM2	31	No formal	5	OIKF2	10
OIKM3	43	P4	4	OIKF3	16
SIJM1	36	P5	3	SIJF1	20
SIJM2	46	P3	5	SIJF2	8
SIJM3	43	P8	4	SIJF3	11
UCOM1	53	P6	4	UCOF1	25
UCOM2	42	P8	3	Not interviewed	19
UCOM3	33	P6	2	UCOF3	7
UCAM1	53	P6	7	Not interviewed	33
UCAM2	40	P2	5	UCAF2	13
UCAM3	51	P6	5	Not interviewed	26
VOIM1	42	P8	4	VOIF1	16
VOIM2	unknown	unknown	4	VOIF2	6
VOIM3	32	P4	2	VOIF3	11
ZCSM1	51	P4	6	ZCSF1	20
ZCSM2	56	No formal	6	Not interviewed	38
ZCVM1	39	Secondary 3	4	ZCVF1	14
ZCVM2	33	P6	3	ZCVF2	11
ZCVM3	51	P6	4	ZCVF3	19

Note: *Based on male respondent reports.

Huye District Survey Respondents

The survey sample in Huye District consisted of 148 married men between the ages of 35 – 83 (M = 51.36, SD = 11.08). The sample was not highly educated with formal schooling; 22.97% of respondents had received no formal education. The majority of the men had been married only once (88.51%), and the average number of years married was 22.42 (SD =13.6). Although Rwandans recognize and practice "traditional marriage" (cohabitation by consent), the Rwandan government has recently encouraged all couples into formal legal unions, and more than 90% of the unions in the sample were reported as formal legal marriages.

The primary occupation named by most respondents (70.27%) was farming. Land ownership ranged from zero to 72,000 square meters, and only 25.68% of the sample met the Food and Agriculture Organization's definition of sufficient land required for sustainable

agriculture[10]. Of those who named farming as their primary occupation, 77.88% did not meet the FAO standard. Around 12% of survey respondents owned no land. Respondents who report farming as their primary occupation but own no land may rent land or work as agricultural laborers on the land of another person. Table 7 presents additional demographic characteristics for the community sample.

[10] The FAO notes that a minimum of at least 9,000 square meters or 0.9 hectares is required for sustainable agriculture in Rwanda (per National Land Policy Report cited in NISR's EICV District Profile – South – Huye,)

Table 7. Participant Characteristics for the Huye District Survey (N = 148)

	N (%)	Mean (SD)	Min	Max
Mean age		51.36 (11.08)	35	83
Spouse's age		45.29 (11.69)	27	82
Number of household members		6.14 (2.37)	2	15
Rural/Urban				
Years of formal education		4.43 (3.94)	0	16
No education	34 (22.97)			
Some or all primary	87 (58.78)			
Vocational	7 (4.73)			
Some or all secondary	11 (7.43)			
Beyond secondary	9 (6.08)			
Spouse's education		4.07 (3.76)	0	16
No education	44 (29.73)			
Some or all primary	79 (53.38)			
Vocational	9 (6.08)			
Some or all secondary	10 (6.76)			
Beyond secondary	6 (4.05)			
Number of children		4.73 (2.36)	0	15
Years married		22.42 (13.60)	2	63
Legal wedding? (*N* = 147)				
Yes	137 (92.57)			
No	10 (6.76)			
Married more than once?				
Yes	17 (11.49)			
No	131 (88.51)			
Primary occupation				
Farming	104 (70.27)			
Other	36 (24.32)			
N/A (elderly, not working)	8 (5.41)			
Employed in past 12 months				
Yes	125 (84.46)			
No	23 (15.54)			
Type of work				
Through the year	52 (35.14)			
Seasonally	68 (45.95)			
Once in a while	21 (14.19)			
N/A	7 (4.73)			
Wages				
Cash	52 (35.14)			
Cash and in kind	31 (20.95)			
In Kind	6 (4.05)			
Not paid	53 (35.81)			
N/A	6 (4.05)			
Houses owned		1.30 (0.69)	0	5
0	6 (4.05)			
1	103 (69.59)			
2 or more	39 (26.35)			
Land ownership (self + spouse) in square meters		6965.32 (2550.0)	0	72,000
Meet FAO defn. for sustainable agriculture?				
Enough land to cultivate (>0.9 hectares)	35 (25.68)			
Not enough (less than 0.9 hectares)	92 (62.16)			
No land owned	18 (12.16)			

Huye District IDI Respondents

I conducted follow-up IDIs with a small number of survey participants from Huye District whose survey responses indicated high scores on the traumatic events, PTSD, or depression measures and who agreed to be contacted for an additional interview. Table 8 presents descriptive characteristics of these nine male respondents (data taken from their survey responses).

Table 8. Characteristics of Huye District IDI Respondents

Male respondent	Age	Education	Children	Married (yrs)	Lifetime traumatic events	Met PTSD diagnosis	Met depression cutoff	Perpetrated IPV in past yr
UIZM1	51	No education	3	23	21	Yes	No	Yes
UIZM2	63	Some or all Primary	6	37	18	No	Yes	Yes
UIZM3	47	No education	5	16	21	Yes	Yes	Yes
ZEIM1	42	Some or all Primary	3	15	13	Yes	Yes	No
ZEIM2	53	No education	5	33	14	Yes	Yes	No
SQCM1	50	Some or all Primary	4	21	18	Yes	Yes	Yes
SQCM2	58	Some or all Primary	8	35	19	No	No	No
ZCAM1	62	Some or all Primary	7	44	15	Yes	No	Yes
AQUM1	54	Some or all Primary	9	33	12	Yes	No	Yes

Description of Traumatic Experiences

It is a rare Rwandan who was not affected in some way by the Rwandan genocide of 1994. Even Rwandans who lived in exile outside the country during genocide lost family members or property. Many Rwandans have also experienced traumatic events related to living in an extremely poor country such as life threatening illnesses, accidents, or poverty. The findings from the survey and IDIs indicate a population in which multiple traumatic experiences are the norm. Furthermore, this population was exposed to some of the most severe types of

traumatic experiences during genocide such as seeing family members killed, fearing for one's life, or witnessing mass murder.

Frequency of Exposure to Traumatic events

Survey respondents reported exposure to multiple types of traumatic events over a lifetime, during genocide, and in the past year. Table 9 presents descriptive statistics for the traumatic experiences reported by survey respondents in Huye District. Respondents used a traumatic events checklist to report events that occurred in the past year, events during genocide, and events that had occurred at some point in their life. Respondents experienced on average 11 traumatic events in their lifetime, six traumatic events during genocide, and one traumatic event in the year prior to the survey.

Table 9. Distribution and Percentages for Trauma Variables

Variable	N	M or n (%)	SD	Median	Skew	Kurtosis	Min[b]	Max
Sum count of traumatic events ever	146	11.21	4.76	12.0	-0.07	-0.67	1	21
Sum count of traumatic events during genocide	143	6.23	4.15	6.0	0.51	0.13	0	20
Sum count of traumatic events past year	143							
None *n (%)*		75 (52.45)						
One *n (%)*		29 (20.28)						
Two or more *n (%)*		39 (27.27)						

Description of and Reaction to Traumatic Events

Respondents in IDIs provided greater detail regarding the variety of traumatic events and the way that they were experienced by Rwandan men and women. Several respondents, particularly men, were reluctant to discuss traumatic experiences for a variety of reasons. Those who did discuss traumatic experiences often focused on marital conflict as something they considered traumatic or difficult. However, a number of respondents shared stories of traumatic events during genocide and difficult events from other points over their lifetime, including

poverty and loss of family members. Many of the events continue to have lasting practical or emotional consequences in the lives of participants.

The RWAMREC community volunteers who help to select participants in Kamonyi District were aware that trauma and mental health were topics in the study but not part of the inclusion criteria. I asked male informants during the in-depth interviews if any sad, difficult, or stressful events had occurred during their lives. This question was part of a series of questions about the respondents' life history, using a rough sketch of a timeline to encourage respondents to name key events, such as marriage, births of children, and other significant events. I asked women in Kamonyi District and male participants in Huye District IDIs about difficult or traumatic events but did not conduct the timeline exercise with them.

Reluctance to discuss traumatic events. Several of the respondents in both Kamonyi and Huye Districts appeared reluctant to discuss traumatic events. There are several possible explanations for this; in Rwanda, many people closely guard their words for cultural or political reasons, and researchers may learn from what respondents do not say as well as from what respondents do say (King, 2009; Thomson, 2010). Several of the male respondents in Kamonyi either did not answer the question or did not name any difficult events, and those who did provided only a brief mention of the event without additional description of their experience. Of those who were willing to name difficult events that had affected their lives, the most common response was to refer to marital problems. Female respondents and men in Huye District IDIs were more willing to discuss difficult life experiences but also focused on their marital problems. Several respondents displayed a particular unwillingness to discuss events related to genocide.

One possible explanation for this may be related to the recruitment process. RWAMREC community volunteers who helped to select participants in Kamonyi District were aware that

trauma and mental health were topics in the study, but volunteers were asked to select community members who had experienced IPV. The RWAMREC volunteers likely introduced the study as focused on the topic of marital conflict and violence which may have caused respondents to come to interviews prepared to discuss this topic and not others. However, in Huye District, participants had already participated in the survey and were aware that the study also covered trauma and mental health questions, in addition to IPV, yet they also preferred to discuss IPV instead of other traumatic events.

This respondent from Huye District reported on his survey 12 traumatic events in his lifetime, and his symptoms met the diagnostic cutoff for depression, yet he insists that his only problems are the recent ones involving his wife:

> *I: I was talking about bad memories, I was thinking of things that maybe happened 30 years ago or 20 years ago. Are you talking about the same things?*
>
> R: I have never experienced a bad life, only in the last 3 years I had those problems. *(AQUM1)*

There are a number of ways to interpret this. As I will discuss in Chapter 8, it is possible that for some respondents the traumatic events from their distant past no longer continue to bother them. Thus, they preferred to focus on more recent or their present problems, such as marital conflict. Some of these respondents may have "gotten over" these events on their own; others reported that participation in reconciliation activities assisted them with healing.

Respondents provided an alternative interpretation of the reluctance to discuss traumatic experiences when they described intentional efforts to focus their attention and thoughts elsewhere. Other researchers have discussed the way that Rwandans choose to intentionally

"forget" certain past experiences (i.e., genocide-related) out of necessity as a means of coping with genocide trauma and living peacefully with their neighbors, and some argue that this is an effective and culturally appropriate way to cope with the reality of life in Rwanda (Buckley-Zistel, 2006).

This respondent reported his efforts to intentionally focus on other things when he had painful memories:

> *I: When those memories try to come in your mind, do you make any effort to try to push them away?*
>
> R: Yes, I try to bring other thoughts so that I may forget it.

Later in his interview he described a number of specific strategies he used to intentionally redirect his focus away from the memories:

> *I: What are other strategies that you use other than talking to your wife?*
>
> R: I look for something else to do so that I may forget. I may go get fire wood or go to cut the sticks to hold the green beans.
>
> *I: We heard from some people that sometime there are memories that are strong, that they even have times when they feel like they are out of their senses.*
>
> R: When I'm having that I try to control myself, and when I'm with somebody I try to talk to him so I may forget that.
>
> *I: It sounds like you have a lot of strategies.*
>
> R: Yes. For example I may start to remember but I can go get grass for cows or goats so that I may forget about it.
>
> *I: What advice would you have for someone else who is having the*

memories that are so strong he feels like he is out of his senses?

R: I would try to talk to him, to talk about other things so that he may leave those thoughts. *(SQCM2)*

This respondent from Huye District presented a long explanation of a Rwandan proverb to explain the strategy of focusing on the present even though it is impossible to fully forget sad events.

> There's proverb that Rwandans used to say like this: 'when something makes you very sad, for example if the kid you love the most dies, you try to forget but it comes back again and again, then you remember him, and you imagine what your child would be like if he were alive. You try to forget it, but it never goes away. You bear with it and try to work. When you are working there's a little thing that comes back. It can't make you lose your concentration, but it is there. Then you think about your child that you lost.' *(ZCAM1)*

Several respondents explained that it was important to forget bad things from the past in order to carry on with life. This respondent shared her fear that thinking about bad times would bring them again:

> I also try [not] to remember because it is not good, it is dirty rubbish, we have to forget about that...even if [those thoughts] come, when they come I push them away because [if] I let them come and continue to think about it, things would become like [they were] before, and I don't want that. (*OIKF2)*

It is possible that these men and women use these strategies as a means for healing and "moving on" after trauma, and it is possible, as some argue, that these strategies are effective. Rwandans are also often reluctant to show sadness and participants may have been demonstrating a culturally acceptable "stoicism". A research assistant for the study explained that taking time to focus on one's own problems and past pain or trauma is a "luxury" that many Rwandans cannot afford. Rwandans, particularly poor Rwandans, must work hard and focus on the basic needs of themselves and their children in order to survive; anything else is a distraction. Intentional refocusing away from negative thoughts or attempting to forget about the past may be viewed by many Rwandans as essential in order to carry on with life. In the section (Chapter 8) on mental health problems I discuss the alternative possibility that avoidance of these memories is a symptom of posttraumatic stress disorder.

One final possible explanation for the reluctance of some respondents to discuss traumatic experiences may be specifically relevant for genocide trauma; respondents may have been hesitant to share genocide-related traumatic experiences due to fear of being associated with genocide perpetration. Anecdotal reports from the study's data collectors in the Huye District survey suggest that many of the respondents were highly suspicious of the study when the data collector began to ask questions about traumatic events during genocide. A number of participants made efforts to convince the data collector that they had not been involved in genocide. One respondent from Huye District used very guarded language throughout his IDI. When I asked about consequences for people with bad memories from genocide he ambiguously stated: "It's like a punishment, you may lose property because you are paying for the sin you committed." He added: "In addition to that, when you see someone you offended you feel

ashamed, because it reminds you what you did." However, when queried directly about it, he was quick to deny any involvement:

> *I: You talked about experiencing feelings and consequences of shame. Did I understand that correctly?*
>
> R: No! Because I didn't participate in those things happened. I'm not afraid of anything, I don't have any consequences [nor does] my family from the genocide. Maybe [there are consequences for] the other relatives and on my country but there are no consequences on my family. *(AQUM1)*

As noted previously, in Rwanda the data not shared by participants may be as interesting as the data they do share. Although many respondents provided detail regarding events they considered traumatic, the hesitance of others suggests that respondents may have experienced a fear of being associated with genocide perpetration, practiced the use of intentional forgetting, or felt that past events no longer bothered them.

Stressful events during marital conflict. Of the respondents who were willing to discuss difficult or traumatic life experiences, a substantial proportion of them chose to focus on marital conflict. Ten of the male Kamonyi IDI respondents mentioned trouble with their wife, either as the only difficult event or as one of several. Although this respondent shared about sad events, including the loss of a child, he repeatedly redirected the conversation back to his marital problems:

> Let me tell you the truth: today it is nothing big that makes me sad. I mean to say that only my wife [makes me sad]; she drove me crazy, and I ran away to [the middle of] nowhere, where I have a bad life. *(ZCAM1)*

Every female respondent in Kamonyi presented the story of her marital problems as a difficult event that she had experienced in her life. Eleven of these shared marriage problems in response to a general question about any past events that had disturbed them. This woman continued to focus on the stress she felt from her marital problems even after I asked if any other events had caused stress or depression:

> *I: You mentioned feeling traumatized from violence at home, let me ask if either you or your husband ever experienced any* ihahamuka *[traumatic stress] or* agahinda kenshi *[great sadness] from any other problem?*
>
> R: I never had joy! Even when I would be with someone and feel happy, when I saw [my husband] I would feel sad again and keep quiet.
>
> *(UCAF2)*

As noted, it is possible that the focus on marital problems is an artifact of the recruitment process; respondents may have believed the purpose of the interview was limited to discussions of marital conflict. An alternative explanation is that the emphasis placed on respondents' trauma from IPV, compared to other traumatic events, may indicate the relative weight accorded to those IPV-related traumatic events. Individuals in Rwanda may find their traumatic experiences from IPV to be particularly troubling because in many cases they were recent, unlike genocide events which occurred nearly 20 years prior to the study. Men and women may also find traumatic experiences from IPV to be more salient compared to other events because the exposure was often chronic, continuing repeatedly over a period of time; chronic trauma may have more lasting effects compared to one-time acute traumatic events. This woman explained how she experienced many traumatic events related to IPV:

> ...but that time I was talking about was very bad, I was very worried, I was desperate, if I had had a place to go I would have left because of the pain that I had...[starting to cry] To say more about that, I didn't have any security, I was feeling like I didn't want to go [to places] where other people are, I felt like I didn't have value, I was on my own, I could not be around people because I was thinking that they were being talking about me, that I was the topic of discussion. I felt lonely because I was thinking that it was my lot to live in that bad life while no one else was living the same life as me--that made me feel desperate. *(VOIF3)*

Traumatic events during genocide. The majority of IDI respondents did mention events related to genocide, even if they were hesitant to provide additional details. Ten of the Kamonyi male respondents named an event related to the genocide, including losing relatives, going into exile, and being imprisoned for genocide crimes. Four of them referred to the loss of a parent or parents during genocide, such as this respondent who explains that his parents died after they were forced to flee to Congo during genocide: "The other thing is losing parents, because we went together in exile in Congo and they stayed there." *(OIKM3).* This respondent does not admit to having participated in genocide but reports his nine-year prison term for genocide crimes as the event he found most traumatic in his life: "The thing that has traumatized my life is that I went to prison—being accused that I participated in genocide." *(ZCSM2).* Six female respondents mentioned traumatic experiences related to genocide including losing parents, relatives, children, going into exile, being beaten, and being raped. These two stories illustrate how many of the female genocide survivors experienced multiple types of traumatic experiences:

I had so many problems during the war. We got separated and I went to live in Congo...When I was living in [Congo], there were soldiers of the defeated army...They used to come to where I was living asking me to have sex with them, others wanted to make me their wife, I was young and beautiful... I had 3 children, but 2 of them were missing. I stayed with the one I was carrying on my back...I got home with that baby I was carrying on my back, but I was unfortunate because the baby died one year later... *(UCOF1)*

We were six children, eight when counting father and mother. They all died and I went through all kind of problems. The first time they [genocide perpetrators] threw me in a pit and the second time in a river. So when I add my problems of marriage, it can be heavy on you. *(ZCVF3)*

Other traumatic events. A few respondents reported difficult events that were not related to marriage or genocide, with very brief descriptions. Respondents mentioned events that had occurred at different times over the life course—some were during childhood, and some more recent. Several respondents mentioned losing a parent or being orphaned in childhood, and others noted the loss of children. One respondent had lost his house during a natural disaster and another cared for a very sick family member. Poverty was mentioned by three respondents—one was born into a poor family, another experienced poverty as an exile during war, and the third struggled financially after a two-year prison term. This respondent explains how he considered his poverty resulting from a lack of education to be very distressing for him and to have had lasting negative consequences for his life:

The thing that mostly made me sad is that I didn't finish my studies. After my father died I was in P1 and the problem I had is that at school I wasn't brilliant, I was a wanderer and liked to go to eat in the neighbors' homes, and people didn't like me well. It made me very sad because if I had finished my studies I wouldn't be like this. Another thing that made me very sad is that I was arrested when I started to make money, I had savings and it was all gone. That is the second thing that made me sad. *(SIJM1)*

Women mentioned a few events not reported by men: rejection by parents, a threat of attack in the home, lack of family support, and attempted rape by a previous fiancé. This woman shared very briefly that in addition to her marital problems, her early life had been quite difficult:

I: It is very courageous of you to share your story with us. Thank you for talking to us.

R: No problem. It would take a long time to talk about my story. When I was young, my father died in 1990 when I was 8 years old; he left us young. And my mother failed to raise us and we had a very bad life. *(SIJF3)*

These descriptions from IDIs reinforce survey findings and indicate a population with multiple highly traumatic experiences. The descriptions of these traumatic experiences suggest that respondents have experienced the kind of events that are likely to have long term economic, social, and emotional consequences not only for respondents but also for their spouses and children. The following section uses IDI participant reports to describe these consequences and explores descriptions that indicate symptoms of mental health problems. I also use survey data to provide prevalence statistics for mental health problems in the Huye District sample.

Description of Mental Health Problems

Prevalence of Mental Health Problems in the Huye District Sample

Male respondents in Huye District reported symptoms of PTSD and depression during survey interviews. Table 10 presents the number of respondents who met the criteria for a diagnosis of PTSD per DSM-IV criteria and whose scores on the depression measure were above the cut-off indicating that depressive symptoms were clinically significant. Twenty one percent of the male community sample met diagnostic criteria for PTSD, and 26.53% met criteria for depression (per 16 point cut-off on the CES-D measure). Comorbidity of PTSD and depression was relatively common for those affected by mental health problems in the Huye District survey sample; 11% of the sample met diagnostic criteria for both PTSD and depression.

Table 10. Distribution and Percentages for Mental Health Variables

Variable	N	M or %	SD	Median	Skew	Kurtosis	Min	Max
Meets diagnostic criteria for PTSD	145							
No *n (%)*		114 (78.62)						
Yes *n (%)*		31 (21.38)						
PTSD symptom score	145	9.81	8.84	8.80	0.88	0.76	0	45
Re-experiencing	148	2.90	3.15	2.0	1.0	0.32	0	13
Avoidance	148	3.84	3.85	3.0	0.90	0.17	0	17
Arousal	145	2.98	3.04	2.0	1.02	0.90	0	15
Meets diagnostic cut off (16) for Depression	147							
No *n (%)*		108 (73.47)						
Yes *n (%)*		39 (26.53)						
Depression symptom score	147	12.66	9.87	9.0	1.75	3.49	1	56
Comorbidity of PTSD and depression*	144							
Neither *n (%)*		91 (63.19)						
Only one *n (%)*		37 (25.69)						
Both *n (%)*		16 (11.11)						

Note: *Mutually exclusive categories

Participant Descriptions of Mental Health Problems

I did not ask participants in IDIs in Kamonyi District to complete a mental health screening, nor did I explore specific symptoms of mental health problems. As noted, I asked respondents if they had experienced any consequences of the traumatic experiences they had endured, and some responses included descriptions of symptoms indicating that the respondent may have experienced traumatic stress, depression, or other mental health problems (e.g. prolonged grief). Female respondents were generally willing to discuss the effects of experiencing traumatic events; only two did not discuss any consequences of the difficult things they had experienced. Male respondents were more reluctant: thirteen of the male respondents in Kamonyi District did not discuss any consequences of traumatic events, and three participants said that the event(s) they mentioned had not affected them greatly.

Participants who shared stories of what they experienced as a result of traumatic experiences noted a number of "emotional consequences" or symptoms that are likely part of past or ongoing mental health problems. Participants, particularly females, described emotional reactions to traumatic events during genocide as well as traumatic events related to IPV victimization. Respondents in Kamonyi and Huye District described sadness and crying, wanting to die or commit suicide, avoiding painful thoughts, and re-experiencing traumatic events. Others reported these symptoms in their spouses. Although several participants described a limited period of time during which they had experienced these symptoms, others described symptoms that continued to bother them up to the time of the interview.

Sadness and crying. The most frequently reported emotional response was sadness or crying. These two women shared their reactions to traumatic abuse from their husbands:

> Sometimes I would cry just like that, cry for hours. If I am sitting, I would think about it and I would realize that I am crying. That was my life. (*UCOF3)*

> There was a time I would spend days crying, spend a whole day in bed crying... *(OIKF1)*

The majority of participants who described sadness after trauma were describing past reactions, yet a few participants became emotional during the interview when sharing their stories. This was more common for female respondents, but this male became visibly upset during the interview when discussing the loss of his mother during genocide. Showing strong emotion in public is rare and taboo in Rwanda, and it made both the participant and the translator very uncomfortable such that the man asked us to change the subject:

> *I: Did you feel that you changed at all after you experienced these difficult things?*
>
> R: I get a problem but it does not cause me any other sickness. Only talking about it, I want to leave it...I want to even stop saying it [change the subject] because it still affects me even now. *(SIJM3)*

Wanting to die or commit suicide. No male respondent reported wanting to die as a result of traumatic experiences, but this was common among women. Five female respondents reported that marital problems in the past had made them feel suicidal or like they wanted to die. In their words:

> Because when I am very sad, nothing can stop me, I would even think about dying, or killing myself using some harmful products. Once I tried to drink *Tioda* [pesticide], and people stopped me from drinking it by removing it from my hands. *(UCOF1)*

> I decided to commit suicide because God had forgotten me and I was not a human being anymore, so I had nothing else to do but to kill myself. A time came when I decided that I was going to commit suicide and die because I couldn't handle life... *(UCOF3)*

> My heart was very far away and I was feeling like it was better for me to die. *(ZCVF2)*

> Before I got a child, he would come and insult me, I didn't have peace, to the point that I would I think about killing myself, I wished I could find something like *Tioda* [pesticide]; I could drink it and die. *(VOIF2)*

> A time came when I wanted to die, my life had no sense. Also I wanted to die so that he could find me dead when he came back in the hope that he would be punished by the law but it never happened. *(ZCVF2)*

Isolation or not talking. A few participants reacted to traumatic experiences by becoming isolated from others or becoming unable or unwilling to speak with other people. This woman describes how her difficult circumstances led her to decide not to talk to anyone:

> In my life the situation I passed through and that brought me consequences, because a time came when I decided to not talk anymore. I would spend like a week without talking. *(UCOF3)*

This female respondent noted that thinking about multiple problems and difficult experiences would sometimes overwhelm her and make her unable to interact with other people:

> It's a sad story that made sad, very sad and when I remember how after the war I decided to stay with him while many others refused to stay with

> theirs, and also I remember how my first marriage went wrong, I [would have] problems to the point that I couldn't talk to people. *(OIKF1)*

Avoidance. As noted earlier, several respondents described efforts to intentionally avoid remembering or thinking about difficult events. It is possible that this is an effective culturally relevant coping strategy that brings relief and healing to participants. It is also possible that these efforts to avoid thoughts or feelings associated with the trauma are a symptom of posttraumatic stress disorder. Participants, such as this woman, described the belief that it was necessary to avoid dwelling on thoughts about how life might have been different if traumatic events had not happened. Her reason given for avoidance was because she did not believe she could handle thinking too much about it:

> I think about how if things hadn't gone that way, I would be on this or that level...there's nothing to do. You think about that and it passes, you go [on] in another life... [it only affects] your own thoughts, and you can't tell anyone...So if I go deep into those thoughts, you could find that I can't handle that. *(SIJF2)*

Her story was typical for a number of participants for whom it was essential that they cope by carrying on with life and daily activities in spite of problems and troubling memories.
This man described the necessity of having another activity, such as work, to focus on when painful memories attempted to surface:

> *I: I was wondering if you would tell us what it's like when you have a day when it's difficult not to remember things?*
>
> R: You don't [look] back, instead you focus on what it is ahead. You don't go to what is behind because when something happened, actually it

> finished, and there are other things that are coming.
>
> *I: ...Are there any things that remind you and are there other things that help you to focus on the future and not think about those difficult things?*
>
> R: What can help to focus on the future is to work hard. You try to work hard then [if] something troubles [you, you] find that you have something that helps you to satisfy your needs. For example, when you work you will get the soap to wash yourself or clothes you need, then your actions will help you to forget the past. *(AQUM1)*

Re-experiencing. Participants shared stories of re-experiencing traumatic events, particularly during Rwanda's annual commemoration period of the genocide. Others re-experienced trauma from marital abuse. This woman described the way that everyday events could trigger her to re-experience the trauma from genocide:

> There's a time when it happened to me [experienced a lot of sadness] because I saw a kid who was playing football and had an accident and got hit with the ball, he was carried like a dead body. When I got home I felt traumatized. *(ZCVF3)*

She and another female respondent also mentioned the difficulty that the national annual Rwandan genocide memorial period caused. They both note that their symptoms stopped or reduced once the mourning period ended:

> When someone is in the trauma period, the symptoms are sadness and tears. And in that period nothing can stop you from crying. You cry until it stops itself... there's nothing else you can think about...only after it stops, it is when you can think about something else. *(ZCVF3)*

> I used to have them [trauma and great sorrow], I went to the hospital, I got well a little bit. In the mourning period I felt like I didn't have to go [to the place] where people are, I had so much sorrow, I felt lonely. But afterward it finished and I feel a little bit well. *(ZCSF1)*

This respondent described how she preferred to focus on her improved situation, but noted that memories of bad times came back anytime her husband started behaving abusively again:

> I also try not to think much about it. As long as we have peace at home I can't remember my past...maybe when he tries to start troubles [again], it comes back in my mind. But when we have peace, I remember the time when we were young: how we fell in love, letters that he used to write me, and I put everything else behind. Only when somebody talks to you badly, that is when everything comes back in your head, and [you] remind him: 'remember how you disappointed me, here you do it again'.... *(UCOF1)*

Other responses to traumatic events reported by women included a lack of peace, feeling like a person with no value, having no rest in one's heart, not feeling free, and a painful consistent headache. One respondent included her children's reactions in addition to her own:

> You don't feel calm, you feel traumatized; when he comes, you feel like you want to go somewhere, the children are like traumatized, "Dad is coming! We don't know…!" *(VOIF3)*

Emotional consequences experienced by participants' spouse. Several of the male respondents who had been reluctant to discuss emotional consequences of their traumatic experiences instead mentioned their wife's traumatic experiences and reactions. This man's

story was similar to other respondents who reported "recovering" from their experiences, but he notes that his wife continues to suffer from the many traumatic events she endured during genocide:

> *I: We know that sometimes people had very traumatic stressful or sad events; are there any traumatic, stressful or sad events that we can record here?*
>
> R: From the war and genocide that happened, I got a problem because of them, but after they got out of my heart, now I have peace.
>
> *I: So I'm interested in how after people experience things that are traumatic; sometimes they have changes in their life. I wonder if you experienced any changes?*
>
> R: I didn't experienced any changes in my life, but my wife she is the one who had changes in her life because she experienced more problems than me.
>
> I: *Can you tell us briefly what kind of changes you saw in her?*
>
> R: She had a very strong ordeal, she had a very large family with so many family members, but they have been all killed, she also almost died... she survived, but she was injured. She continued living like someone who has a mental problem... Even today she still has some problems but I never give up I'm still helping her. She went through so many problems.
>
> *(ZCVM3)*

This respondent reported that he had not experienced problems after genocide; he changed the subject to their marital problems and noted that during marital conflict his wife underwent drastic

weight loss (from 80 to 40 kg), considered in Rwanda to be a sign of substantial emotional distress: “I didn’t experience big changes [in my body or feelings]. It’s only that [our marriage problems] happened, and it was my wife who experienced those changes.” *(UCOM1)*

Correlates of Mental Health Problems

I examined respondent characteristics associated with meeting diagnostic criteria for PTSD or depression using survey data from Huye District. Table 11 presents the results of two logistic regression models for PTSD or depression.

Table 11. Characteristics Associated with Meeting Diagnostic Criteria for Mental Health Problems, Huye Survey Respondents

PTSD	OR	CI (95%)	Est.	SE	p
Age	0.97	0.93, 1.02	-0.03	0.02	0.187
Alcohol consumption[a]	1.42	0.58, 3.44	0.35	0.45	0.440
Anger	1.06	1.01, 1.10	0.06	0.02	0.011
Lifetime trauma exposure	1.22	1.12, 1.33	0.20	0.04	<.0001
Depression					
Age	1.02	0.98, 1.07	0.02	0.02	0.268
Anger	1.06	1.02, 1.09	0.06	0.02	0.001
Poverty[b]	5.65	2.0, 16.0	1.73	0.53	0.001
Lifetime trauma exposure	1.16	1.05, 1.27	0.14	0.05	0.002

Note : [a]Log transformed. [b]Reference category = not considered multidimensionally poor

Posttraumatic stress disorder. Among male respondents in Huye District meeting criteria for PTSD was associated with experiencing a greater number of lifetime traumatic events. Those with PTSD had experienced on average 14.1 events; those who did not meet diagnostic criteria for PTSD reported on average 10.39 traumatic events. For every additional traumatic event experienced, men were 1.2 times as likely to meet diagnostic criteria for PTSD, controlling for age, alcohol consumption and anger, OR = 1.22 [1.12, 1.33]. See Table 11. Anger was also associated with meeting criteria for PTSD. Men who met diagnostic criteria for PTSD had significantly higher scores on the anger scale. In multivariate logistic regression, for

every additional point on the anger scale, men were 1.1 times more likely to meet diagnostic criteria for PTSD, controlling for age, alcohol consumption and lifetime trauma exposure, OR = 1.06 [1.01, 1.10]. A diagnosis of PTSD was associated with greater monthly consumption of alcohol in bivariate analyses; however, this relationship was not significant after controlling for age, anger, and trauma exposure.

Depression. Anger, poverty, and lifetime trauma exposure were all associated with meeting diagnostic criteria for depression, in both bivariate and multivariate analyses. Those with depression had experienced on average 13.42 events; those who did not meet diagnostic criteria for depression reported on average 10.44 events. For every additional lifetime traumatic event, men were 1.2 times as likely to meet the diagnostic cut off for depression, controlling for age, anger, and poverty, OR = 1.16 [1.05, 1.27]. For every additional point on the anger scale, men were 1.1 times more likely to meet diagnostic criteria for depression, controlling for age, poverty and lifetime trauma exposure, OR = 1.06 [1.02, 1.09]. Poverty was identified as a significant risk factor for depression. Men below the multidimensional poverty cutoff were 5.7 times as likely to meet the depression cut-off compared to men above the poverty cutoff, controlling for age, anger, and trauma exposure, OR = 5.65 [2.0, 16.0].

Summary and Discussion

The majority of participants in the study lived in rural areas, had little formal education, relied on subsistence agriculture for a living, and had been exposed to a substantial number of traumatic experiences over their lifetime. The types of traumatic events varied widely, but respondents frequently mentioned events related to marital conflict and genocide. It was common that participants experienced either practical or emotional consequences after the traumatic events, and some of these consequences or emotional reactions continued to impact

participants up to time of the study. Male and female respondents described symptoms of mental health distress, and some of these symptoms likely reflect the presence of mental health disorders such as PTSD or depression. Data from the Huye District survey confirmed this: one-quarter of the sample met diagnostic criteria for one mental health problem, and more than 10% met criteria for both PTSD and depression. For those participants who met criteria for PTSD or depression, certain characteristics were associated with MH problems. Lifetime traumatic exposure and anger were correlated with both PTSD and depression. Being moderately or severely poor was strongly associated with depression. Some participants were reluctant to discuss traumatic events and the impact of these events, although several of these male respondents were willing to share the experiences and symptoms of their female partners.

The study population is similar to a previously-studied population of genocide survivors and former prisoners in the amount of trauma exposure; Huye District survey respondents reported an average of 11 traumatic events in their lifetime compared to 12 events reported by a sample of genocide survivors and 10 events reported by former prisoners (Rieder & Elbert, 2013). The rate of PTSD is also similar to the rate of 20.5% for men found in the 2009 national survey (Munyandamutsa et al., 2012). A more recent study limited to districts in the southern province of Rwanda reported lower rates in men for both PTSD (7.1%) and recent depressive episodes (12.1%), but this may be related to age differences; all respondents were under the age of 35 and the number of traumatic exposures was not reported (Umubyeyi et al., 2014). The respondents in the current study are likely representative of the middle-aged generation of married Rwandan men who lived through genocide as adults; their mental health problems may be greater than younger men who have not experienced the same number of traumatic events.

Women's mental health was not assessed in the Huye District survey, but stories shared in IDIs suggest that female respondents in Rwanda may more frequently experience symptoms of trauma-related mental health problems compared to men; in the 2009 national survey 30% of women met PTSD criteria compared to 20% of men (Munyandamutsa et al., 2012). Women's descriptions of suicide ideation, uncontrollable crying, re-experiencing traumatic events, and avoidant behavior indicate that respondents have suffered from grief, depression, and posttraumatic stress in response to difficult life events including genocide and IPV. The study did not examine current mental symptoms for women with any formal screening tool, which would be necessary to determine current mental health status, but IDI reports indicate that distress is ongoing for many women or that it recurs when women are presented with triggers, such as the Rwandan national mourning period.

Women's descriptions of emotional distress from IPV reinforce findings in multiple other settings (Ellsberg, Jansen, Heise, Watts, & García-Moreno, 2008; Ludermir, Schraiber, D'Oliveira, França-Junior, & Jansen, 2008; Ribeiro, Andreoli, & Ferri, 2009) and indicate an urgent need to address mental health problems for women in Rwanda who experience spousal abuse (Umubyeyi et al., 2014). However, the emotional distress and posttraumatic stress experienced by Rwandan women in a post-genocide setting likely results from multiple events, rather than one acute experience, and policies, programs or treatment for IPV will need to take this into account.

Chapter 6 Describing Intimate Partner Violence in Rwanda

This chapter explores the phenomenon of intimate partner violence in Rwanda using survey data and IDI participant descriptions of lived experience of IPV. Survey respondents provided data on the frequency of perceived perpetration and victimization, and IDI participants filled in details with specific examples of their role in IPV and the different types they experience. I use stories from couples to develop a portrait of the typical progression of violence over the course of a marriage relationship in Rwanda.

Reported Prevalence of Intimate Partner Violence

Intimate Partner Violence Perpetration

Rwandan men continue to perpetrate intimate partner violence of multiple types against their female partners, according to Huye District survey data. Huye District respondents reported on 1) lifetime and 2) past year perpetration of four types of intimate partner violence: physical, sexual, emotional, and financial. The majority (56.93%) of male respondents reported that at least once in their life they had committed at least one type of IPV against a female partner. Violence in the prior year was much less common (31.39%).

Table 12 presents the frequencies of lifetime perpetration by type (note that types of violence are not mutually exclusive). Physical perpetration was the most commonly reported type of IPV; 42.34% of the sample reported lifetime physical IPV. Financial perpetration was the least frequently reported with only 6.76% of the sample.

Table 12. Lifetime Intimate Partner Violence Perpetration Huye District Survey

Variable	n (%)	N
Any type of IPV perpetration		137
Never	59 (43.07)	
At least once in lifetime	78 (56.93)	
Physical**		137
Never	79 (57.66)	
At least once in lifetime	58 (42.34)	
Sexual**		148
Never	134 (90.54)	
At least once in lifetime	14 (9.46)	
Emotional**		148
Never	101 (68.24)	
At least once in lifetime	47 (31.76)	
Financial**		148
Never	1383 (93.24)	
At least once in lifetime	10 (6.76)	
Polyperpetration		137
Never any type	59 (43.07)	
Only one type at least once in lifetime	43 (31.39)	
Two types at least once	27 (19.71)	
Three or more types at least once	8 (5.84)	

Note: **Not mutually exclusive categories. May also have perpetrated other types of IPV.

Table 13 presents the frequencies of perpetration by type reported by survey respondents as occurring in the 12 months prior to the survey. Similar to reported lifetime perpetration, the most frequently reported type of violence was physical violence, reported by 16.79% of the sample. Financial perpetration was again the least frequently reported with only 5.41% of the sample. Rates of reported perpetration were lower for all types of violence.

Table 13. Prior Year Intimate Partner Violence Perpetration Huye District Survey

Variable	n (%)	N
Any type of IPV perpetration		137
Never	94 (68.61)	
At least once last year	43 (31.39)	
Physical**		137
Never	114 (83.21)	
At least once last year	23 (16.79)	
Sexual**		148
Never	137 (92.57)	
At least once last year	11 (7.43)	
Emotional**		148
Never	124 (83.78)	
At least once last year	24 (16.22)	
Financial**		148
Never	140 (94.59)	
At least once last year	8 (5.41)	
Polyperpetration		137
Never any type	94 (68.61)	
Only one type at least once last year	28 (20.44)	
Two types at least once	12 (8.76)	
Three or more types at least once	3 (2.19)	

Note: **Not mutually exclusive categories. May also have perpetrated other types of IPV.

For both lifetime and past year IPV, respondents who reported perpetration were most likely to report only one type of violence (reported by 31.39% for lifetime and 20.44% for past year). It was rare for respondents to report having perpetrated more than two types of violence. Only six percent reported three or more types in their lifetime, and only two percent of men reported committing three or more types of violence in the prior year.

Intimate Partner Violence Victimization

Rwandan legislation against gender-based violence aims to prevent violence against any person on the basis of gender, either male or female. However, the national strategy to prevent gender-based violence acknowledges that in Rwanda the majority of IPV in Rwanda has been male to female violence; accordingly, programs and research on IPV largely focus on violence against women (MIGEPROF, 2011). Although the current study is focused on IPV perpetration

against women, I gave male respondents the opportunity to report any experiences of victimization, and 51.35% of the Huye District sample reported at least one experience of IPV victimization in the prior year. The measure of IPV victimization and perpetration did not include a means for reporting the intent of violence (i.e. whether self-defense or mutual violence) or the impact of violence (i.e. injury), and there were no items related to sexual victimization for male respondents.

Table 14. Reported Victimization from Female Partner in the Prior Year By Male Respondents, Huye District Survey, N = 148

Type of violence	*n (%)*
Physical victimization *n (%)*	19 (12.84)
Emotional victimization *n (%)*	36 (24.32)
Financial victimization *n (%)*	56 (37.84)
Of at least one type	76 (51.35)

Male and female partners in Kamonyi District IDIs freely shared their stories of past and present IPV which provides rich detail on how Rwandan couples experience perpetration and victimization from IPV. Men's description of their role in IPV often differed from their partner's description. From respondent reports it was possible to characterize IPV into the four types of violence: physical, sexual, emotional, and financial. I present descriptions of each type of violence and then discuss the typical course of IPV over time.

Role in Intimate Partner Violence

Men's and women's reports varied somewhat in the way that the respondent characterized his or her role in IPV. Male respondents were much more likely to present themselves as both a perpetrator and a victim than women; nine men's narratives were recounted in a way attributing blame to both themselves and their wives. Eight men presented themselves

as only a perpetrator, and three men presented themselves as only a victim, reporting no instances in which they perpetrated IPV.

Every female respondent presented herself as victimized by IPV, and no woman presented herself as only a perpetrator. However, of men who reported only victimization, only one of their three wives were interviewed (see Table 6). A limited number of women acknowledged that, after training or intervention from RWAMREC or others, they had also seen areas where they felt their behavior should change; this was usually related to the use of household finances. For example, one woman noted that she had previously kept money aside, hidden from her husband (as he did from her), and that now she and her partner were both more transparent. This may help to explain the high rates of financial victimization that men reported in the community survey(Table 14).

A few women used terms that could be interpreted as mutual physical violence such as "we fought", or "we wrestled". However, these terms are ambiguous and women could have been describing their means of self-defense. The topic of self-defense or mutual violence was not explored with respondents during male or female interviews. Only one woman stated that she hit her husband back when he was hitting her. Another respondent described locking her husband in the house while she went to get help; she interpreted this event as a measure to protect herself from abuse, and her husband interpreted it as abuse to himself.

Types of Intimate Partner Violence

Table 15 presents a summary by couple dyad of the male to female IPV reported during IDIs with Kamonyi District respondents. Full agreement between members of the dyads occurred in only three couples. In general, females reported more types of IPV than did males. However, this is based on voluntary reports by respondents, not an exhaustive checklist of all

incidents of IPV; discrepancies do not necessarily indicate male unwillingness to acknowledge perpetration.

Table 15. **Types of Male to Female Violence Reported in Kamonyi District IDIs**

Males: IPV perpetrated				Females: IPV victimization					Reports match
	Physical	Emotional	Financial		Physical	Emotional	Financial	Sexual	
OIKM1	✓	✓	✓	OIKF1	✓	✓	✓		yes
OIKM2		✓		OIKF2	✓	✓	✓		no
OIKM3	✓		✓	OIKF3	✓	✓	✓		no
SIJM1	✓	✓		SIJF1		✓			no
SIJM2	✓			SIJF2	✓	✓			no
SIJM3		✓		SIJF3	✓	✓	✓		no
UCOM1	✓	✓	✓	UCOF1		✓	✓		no
UCOM2	✓	✓	✓	N/A					N/A
UCOM3	✓		✓	UCOF3	✓		✓		yes
UCAM1				N/A					N/A
UCAM2		✓	✓	UCAF2	✓	✓	✓		no
UCAM3	✓		✓	N/A					N/A
VOIM1	✓		✓	VOIF1	✓		✓		yes
VOIM2	✓		✓	VOIF2	✓	✓	✓		no
VOIM3	✓		✓	VOIF3	✓	✓	✓		no
ZCSM1	✓		✓	ZCSF1	✓	✓	✓		no
ZCSM2				N/A					N/A
ZCVM1		✓		ZCVF1	✓	✓	✓	✓	no
ZCVM2	✓			ZCVF2	✓	✓	✓		no
ZCVM3				ZCVF3	✓	✓	✓		no

Physical IPV

Descriptions of physical violence were common in both male and female stories. Thirteen men described perpetrating physical violence in their narrative of IPV. Twelve respondents used the word "beating" (in the English translation of narratives) to describe their physical violence, and one man described his actions as "slapping". Two men reported using a stick to beat their partner, and one man kicked his pregnant partner, which caused her to have a miscarriage. These three men gave examples of their physically violent behavior:

> Yes, there is a time... I remember, when it started... I remember that I drank beer and got very angry at her and actually came home with a stick. I beat her. *(OIKM1)*

> I went home and found she cooked cassava and beans. She gave me that food and I threw it down. That is how the fight started. I threw it and spit on her, I was very angry. I slapped her 3 times, those very good splats. *(SIJM1)*

> Before I went to the trainings, I felt that, after I had told her many times [to do something], when she refused [correction], to discipline her I would come [home] angry and... [accuse her]. And I would make it worse and I would go and drink, and then come [home] full to the point I would just hit [her]. That is how it happens. *(SIJM2)*

Fourteen women described physical violence in their narrative of IPV. The most common type of physical violence described (in the English translation of narratives) was beating or hitting—this was how 13 of the respondents described their physical violence. The remaining woman described her experience as physical fighting. A few women specified that "beating" meant that their husband hit them with his hand; others did not specify. Two women reported being beaten with an object, such as a stick or a stone, and three women mentioned that physical violence had resulted in injuries warranting a trip to the hospital. Only one woman mentioned hitting back during a conflict. These two women shared their experiences of physical IPV:

> One day he came and found that our cow ran away from its rope. He asked me why I didn't bring it back on its rope. I told him that it kicks me. He told me to bring it back. I said again that I couldn't get close to it because it would kick me. Then he took the stick and hit me. *(SIJF3)*

> I remember we were at the end of April, we quarreled at a level that we were about to kill each other, he beat me hard. I was sleeping late at night, and he started beating me and it made people come to help. *(ZCVF2)*

Sexual IPV

None of the male respondents openly discussed the perpetration of sexual violence in their interview; one man referred euphemistically to "the problem of the bed" but reported that he responded by "looking for someone outside to wipe your tears", i.e. infidelity. (*ZCVM1*). Women's reports of sexual IPV were rare; only one respondent explicitly reported that her husband had forced sex:

> I just felt I didn't want to have sex; I was also feeling like I was angry, he never helped me with anything at home. He would shout at me when he come home ignoring that I was tired too because I was at the hospital working. Normally when you are having sex, you may know when your partner is not happy, or I couldn't make him happy because I wasn't ready for it and [it was] forced too, he would think that I am doing it willingly. *(ZCVF1)*

Another woman alluded to sexual violence without stating it clearly:

> Or when we are coming from a very hard work, you know that women, we are weak; he may ask you the bed affairs and you say no, it would create problems. That was our problem...He is a strong man and when he has something in his mind he wants to finish it. Because I am weak and I was pregnant for a few months, it became a problem between us. It became our conflict...we never hit each other with sticks and we never fought to the

point that we damaged our clothes. We just wrestled in bed and shouted.

(SIJF2)

Emotional IPV

Twelve male respondents described IPV that I characterized as emotional violence. The types of behaviors described by men varied widely; there were few consistent themes. The most commonly reported type of emotional IPV (five respondents) was men's prioritizing their own rights over their wives. This occasionally took the form of men issuing commands and expecting their wives to obey without discussion. Three men reporting insulting their wives, and there were one or two reports each of giving a wife "no peace", accusing her, limiting her activities, chasing her from home, cheating on her with other women, or ignoring her. This man describes the emotional violence he perpetrated when chasing his wife out of the house in addition to physically beating her:

> ...because like that time you would see us fighting when I beat her. You would find that I have chased her from home *(OIKM3)*

This respondent explains that he abused his wife by limiting and controlling her movements:

> But before [training], I wouldn't let my wife go anywhere, she was like a domestic animal at home. She wouldn't go anywhere like other women—the only places that I would let her go were the market and the church...
>
> *(UCAM2)*

All but two of the female respondents reported some type of emotional or psychological abuse. Twelve of these respondents described the abuse as insults or accusations. Insults were against

the respondent's abilities, family, or competency in household chores. This woman describes how her husband insulted her by accusing her of laziness:

> ...he says the words that come from his head like: 'you are always sitting doing nothing'; or he may say: 'you are supposed to stop doing this and give grass to the cow'. *(SIJF2)*

Women reported being accused of infidelity, negligence in childcare or animal care, and drunkenness by their spouses. These three women gave examples:

> ...when I came from cultivating land we rent which is a bit far away; I would come tired with red eyes because of the sun and I would go to sleep. Then he would say that I am drunk. *(SIJF1)*
>
> It was late when I came back, he thought I hadn't gone where I was supposed to go; and he started to shout at me. He started to disturb me saying that I spend my days with other men. *(ZCVF3)*
>
> He would meet anyone and talk about me and my story in details...he told them that I am crazy, that I would spend a whole day walking because I go to pray, that I am good at nothing and that I never do anything at home. *(OIKF2)*

Nearly half of the women reported that their activities had been monitored or limited by their husband in some way. The wife of the husband who reported his controlling behavior in the example above shared additional details from her perspective:

> It was like if he went somewhere he had to find me at home when he came back! If I had washed myself and changed my clothes and put on body cream, when he came home he'd ask me where I had been. When I tried to

> explain to him that I hadn't gone anywhere, he would not believe me and this became a dispute, we'd fight, and we continued like that... He could not allow me to go anywhere...Because of that I was traumatized to the point I used to only do what he asked me to do, I would only go wherever he wanted me to go, I would only cook what he likes. I was really very careful...Can you imagine that if he came home and found me listening to the radio and it was not him who turned it on for me, it could be a problem for me? *(UCAF2)*

Other descriptions of emotional abuse included threats of finding another wife, speaking badly about the respondent to damage her reputation, or threatening her. This woman explains how her husband who was a different ethnicity accused her of extramarital affairs with men of her own ethnicity and threatened that he too could find a woman of his own ethnic group:

> One day he came and said 'I can marry another woman, the one of my ethnic group, the one who will give children of my kind.' He said again, 'I am aware that you raise kids from other men.' *(OIKF1)*

This respondent reports the ways her husband humiliates her by insulting her in public, and she notes that this is especially difficult for her:

> For example you may pass by him and he would say 'look at her, she is stupid and crazy'—you see that we don't have value in front of our husband...Whenever I say something when I'm among other people, he would say 'look at her, that's how she is, she is crazy.' That's what makes us feel sad, when your husband can't respect you among other people... It doesn't happen every day but sometimes when we sit somewhere as

> women, and then your husband passes by and says ‘look at her’ and he spits in your face; you know when someone spits on you in public, you really feel something. *(VOIF2)*

This woman notes that her husband tried to ruin her reputation by accusing her:

> There’s something else I didn’t tell and that made me sad always is that he used to tell everyone [I did] things I never did [in order] to slander my reputation. *(ZCVF1)*

Financial IPV

Half of the male respondents reported IPV characterized as financial in their narratives. The most common example of financial IPV reported by six men was a failure to contribute to the household, such as not paying for food or school fees for children. Five respondents described their behavior as coming from a belief that they owned everything, which resulted in their spending all of the money or hiding money from their wives. The spending or wasting of money on alcohol consumption was also mentioned by five men as something they considered to have been an offense against their wives. Men described taking money or property from home to sell, usually without discussion with their wives. Two men noted that they spent household money on other women or children from other relationships.

This man described how he believed he had the right to control all the spending, and how he used money to get drunk which led to his physically abusing his wife:

> R: The first conflict was to withhold the property from the other. The second conflict was to do violence to her.
>
> *I: Okay I'd like to ask you to talk a little bit more about both of those.*

R: It means that I would think that she should not say any word in my household. I would think that if I have got money then it is mine, she cannot have a part on it. Then when I would go to the street, I would drink then I would come back drunk. When I got home I would hit her. I would beat her or we would fight. *(VOIM2)*

This respondent reported similar behavior. In addition to spending money on alcohol, he also spent it on another woman with whom he had an affair:

I married my wife and I loved her, but one year after, there was no love between us, the life changed and became very bad, we had so many problems. I started taking all the property, the money we had to the first woman, the one I had the child with—we were not married but I used to take everything to her. I was not working for my family. This created conflict between us, there was no peace in my family, I even sold a plot of land without informing my wife and I drank all the money. *(UCOM3)*

Fourteen women described financial violence in their IPV narratives, and their descriptions were similar to men's. The most frequently reported experience was a husband's unwillingness or refusal to contribute money to necessary household expenses. These expenses included food, clothing, children's education, or children's medical expenses. In poor rural Rwandan households women often hold the primary responsibility for domestic duties such as childcare (typically for multiple children), food cultivation, animal care, and food preparation, and men are the primary earners of any wages. Women rely on the husband's wages to provide basic necessities and pay for children's education. This woman explained her situation:

> I would tell him that we don't have food for dinner, saying 'I know that you work but we never see your money. Now the kids are hungry, what are we going to do?' He would say: 'you have two arms, you have to work for feeding them because you gave birth to them.' I would tell him: 'I am not able to do it, some of them stopped going to school, others don't have school materials.' He'd say, 'you have to give them that.' So when I talked like that he would beat me and say 'go to your parents, you are useless, I will marry other women.' *(OIKF3)*

Three of the women expressed the need, desire, and capability of working to earn income but reported that their husband had prevented them from doing so. More than half of the women reported that they were not involved in financial decisions or were not able to spend household money. Most of these women stated that their husbands kept the money secret or away from them, as this woman explains:

> If he worked for money he'd disappear, when he came back home if I asked him where he put all the money, he would get angry, he'd quarrel and say that that's not my business, that I'm not the one who worked for that money. *(UCAF2)*

This woman reports her frustration at not being able to work when the children had needs:

> Children would get sick, and I would get problems...but I couldn't solve them because I had no means and no one to tell. And when I asked him, he would say that he has his problems also. I would tell him that I want to get something I could work on, but his answer was 'if you dare look for money, go and find yourself another place to live.' *(ZCVF2)*

Women reported feeling troubled when their husband would sell property, animals, or things from the house, particularly when the money was spent on alcohol or on other women or children from outside the marriage. These two women felt abused when their husbands spent money or property that belonged to them:

> For example I have a cow, he sells it and put the money in his pocket. But it was the cow that you share together and [the money] would help in something. So when you ask about the money from the cow he tells you that it is not your business but here's 2,000 Rwandan francs—take the money and go to the market. You wonder that he sold the animal, he didn't ask you to sit down so that you can think about what you can do with the money together. But he considers you as the house worker. *(UCOF1)*

> The conflicts were about concubines and property. For example, I would go to the women's tontine [savings group]; I got money there and if I brought home any domestic animal—he would take it to another woman. *(VOIF1)*

Intimate Partner Violence Over the Course of a Relationship

As respondents shared their stories of IPV, several common themes regarding the chronological progression of IPV over the course of the relationship emerged. Relationships usually started well but conflict ensued after the first few years of marriage. Respondents distinguished between expected or normal conflict and conflict that became problematic or violent, and most of the sample experienced both kinds. When the relationship became violent, women who were able left home and returned to their parents' house for a period of time. In the

RWAMREC-supported sample, nearly all stories concluded with a description of the training and counseling they received and the process of reconciliation.

Many of the stories mentioned intimate relationships prior to the marriage; men and women most frequently mentioned men's prior relationships, often in the context of talking about children that had been born. Many couples started with a "traditional marriage" (i.e. deciding to live together) and then got legally married later. The majority of the couples began bearing children within the first year or two after marriage and had multiple children.

Nearly all couples noted that their marriage had started well, particularly the first year of marriage. Couples reported that change eventually happened, although the amount of time before IPV occurred varied. One male respondent shared his explanation for why this happened:

> You know when you have just got married, things are nice. At that time one of you is still hiding their true nature and bad habits, but as time goes by year after year, change becomes evident in the home: the two start showing their true habits *(UCAM2)*

His wife, and many of the women, attributed the changes to their husbands:

> We got married in 2000, we loved each other when we got married, and we really had a wedding! But after that he changed a lot... (UCAF2)
>
> When people are married they are in love and nothing can come between them because they love one another. But as long as days pass things change. The person you married and who you loved starts to change, his love decreases. He stops giving you your rights at home. (ZCVF2)

The stories contained descriptions of the violence, fighting, and conflict that ensued after problems started in the relationship. Many couples distinguished between "normal" conflict and

conflict that led to violence of some type, and a Rwandan proverb was quoted frequently: "*Ntazibana zidakomanya amahembe"*, which is literally translated as "no cows live together without rubbing horns". The meaning of the proverb is that it is impossible for people to live together without any conflict.

For some couples arguing and quarrelling were frequent, but severe violence, such as physical violence, was presented as rare. Other couples reported that multiple types of violence became a normal part of their routine. This woman described her life:

> *I: Why were people talking with you?*
>
> R: Because in the village, when something happens today and it happens tomorrow, yesterday, next day it happens again, you ask yourself "What did I do to offend? What did I do to be the one who is always in conflict and quarrels?"
>
> *I: Was that kind of thing happening every day, conflict and quarrels?*
>
> R: In a week, it would happen like twice. *(VOIF3)*

One or the other partner often left the household for a period of time. In Rwanda culture, women may return to their parents' home if marital problems or abuse occurs, known as *kwahukana*, which also involves a process by which the husband goes to her family home with gifts and requests her to return *(gucyura uwahukanye)*. Many respondents reported that this had happened at some point in their relationship. For several couples this had been an extended period of separation, such as this man reports:

> ...my wife immediately went away to her parents, and she spent a year there... When she had spent a year, she found me at that job and told me "I want to come home." I told her 'Come home if you think that you have

> changed. I have also changed, they have been coming to teach me when you were not here. I will tell them to come again and teach us when you are there.' *(OIKM2)*

Several of the stories contained details of some negative consequences of punishment that the respondents incurred as a result of violent behavior. Two male respondents reported that their wives had called the police to report violence at least once. One of these noted that he'd been beaten after being taken into custody:

> I came back around 4 am that is when she got in the house then we fought. Then when we fought they brought, the leaders immediately came and they brought me here at the police. I was beaten to the point I almost died. *(OIKM2)*

More common were reports of local leaders or family members assisting the couple after episodes of violence. A few respondents shared that they had resisted some of these forms of intervention perceived as unpleasant, such as this respondent who did not like being called out in a public meeting as one of the couples with marital problems: "they would take families that have conflicts, and you would find they would call us. When they called us I would refuse to go there..." *(OIKM3).*

Within this population of participants purposively sampled by RWAMREC volunteers, nearly every respondent's narrative included a story of reconciliation and reduction of conflict in the relationship. The intervention that led to improvement in the relationship took different forms such as trainings; government-sponsored programs (e.g. "family evening talks"); radio programs; community awareness meetings; and advice from family members, friends, the religious community, and local leaders. RWAMREC's strategy of training and encouraging

local volunteers to “stay close” to families in conflict was highly praised by many respondents. In this respondent’s story, he credited the improvement in his relationship with his wife to intervention by multiple different sources:

> In the Catholic community there’s a movement called *ubutabera n’amahoro* [translated: justice and peace]. We used to meet them and they advised us. I also told you that I was a local authority and there were different training sessions that I followed, also after the war I was a local defense agent. In those sessions they taught us about violence and human rights; we attended different meetings where they told us about conflicts in a family. Sometimes I attended alone...other meetings we attended together so that we can learn together. RWAMREC, they also gave us training where they took us as a family in conflict and they gave us examples of families in good relations. With the government programs like *akagoroba k’ababyeyi* [parents evening talks], they gave us some advice and talks, and today I see no problem, and we are improving our household economy. *(VOIM1)*

With a few exceptions, the majority of RWAMREC-affiliated respondents were pleased to report that things were currently going very well in their relationship. Some men and women noted that they had found their process of change so helpful that they were now involved in advising other couples how to reduce conflict, either in an informal capacity or in positions such as mediators or local leaders. This man reported being pleased that he was now able to share with others about the changes he had made:

> There are some who haven't properly understood the teachings...and these ones who [have violence] may learn so much from us. For example in my village, I am on the committee of parents because many people knew us before, and they joined us because they saw the changes in our home which came from [another participant's] teachings. Even though we were not trained like him, we have brought change in our village....I am now an example to them. (*UCAM2*)

Summary and Discussion

Intimate partner violence continues to be common between Rwandan couples, although reports from Kamonyi District highlight the improvement that is possible with awareness-raising, training, and intervention. Descriptions of IPV match the government of Rwanda's characterization of violence into four types (MIGEPROF, 2011). Understanding the behavior associated with each type of violence is important for developing policies and programs to reduce violence. At least one key informant in Rwanda noted that violent behavior may have changed after passage of the Rwandan GBV law; for example, perpetrators may avoid easily detectable violence, such as physical violence, but may increase the use of emotional violence. Measures of IPV should reflect the full range of possible behaviors to enable victims to accurately report, and some measures may need modification to do so more accurately. In particular, financial violence was not frequently reported in the Huye survey although reports from Kamonyi IDIs indicated that nearly all women had regularly experienced financial violence.

Findings indicate that most IPV in Rwanda continues to be male perpetrated, although the frequency of male reports of victimization warrants further investigation. RWAMREC staff

explain men's reports of victimization as response to a loss of power and control. This may be part of what women's advocates describe as part of an ongoing resistance by men to the government programs promoting women (Omaar & Ibreck, 2007). One Rwandan professional explained that because of the focus on women's promotion in Rwanda for the last 20 years, many men feel that the Rwandan government now "dislikes men". This may explain the frequency of victimization reported by men in both types of data. Regardless of whether men's victimization is actual, it is important to understand men's perceptions. Globally, researchers, policy makers and service providers are recognizing the importance of engaging men, not only as the perpetrating targets of intervention nor only as "helpers" but as important, fully active partners in all strategic efforts to end violence at multiple levels (Carlson & Randell, 2013; Jewkes, Flood, & Lang, 2014). An effective strategy to engage men will acknowledge a climate in which men may fear to report violent behavior because of legislation and its enforcement.

Chapter 7 Risk and Protective Factors for Intimate Partner Violence in Rwanda

This chapter examines risk and protective factors for intimate partner violence in the unique context of Rwanda. Specifically, I use both survey and IDI data to develop a unique profile of risk and protective factors for Rwanda, a country where poverty and patriarchal beliefs are prevalent and where people continue to experience the effects of genocide after 19 years. Participants in IDIs shared factors they felt had contributed to their own conflicts and suggested explanations for conflict they observed in other relationships in the community. I also asked men and women to name factors they believed had helped them or others to avoid violence in their relationship. I analyzed participant stories of IPV for additional factors. I discuss each factor that emerged as relevant for IPV in Rwanda and give examples of ways the factor may affect a couple's risk for IPV. Several of these factors are similar to those identified in prior studies, but a number of factors emerged as unique for the context of Rwanda.

I also use survey data to test the relationship between IPV perpetration and the risk and protective factors identified as important in multiple contexts per prior meta-analyses and multi-country studies (see Table 1 and Table 16). I present the results of bivariate tests of association between these risk and protective factors included in the survey and five dependent variables: past year perpetration of 1) any type of violence, 2) physical violence, 3) sexual violence, 4) emotional violence, and 5) financial violence. Table 17 presents the results of bivariate tests between past year IPV perpetration of any type and the risk and protective factors measured in the Huye District survey. The results of bivariate tests for the other four dependent variables (past year perpetration of physical, sexual violence, emotional, and financial violence) are presented in Appendix D. The results of these bivariate analyses are used to identify risk and protective factors included as covariates for multivariate regression models testing the role of

trauma exposure and mental health in Chapter 8. I discuss these results in conjunction with the results of the IDIs to present a profile of risk and protective factors unique to the Rwandan context. The discussion of factors is organized into three levels of the ecological model: 1) Exosystem, 2) Microsystem, and 3) Intrapersonal factors.

Table 16. Risk and Protective Factors Examined in the Study Organized by Socioecological Level

Socioecological level	Factor	Risk/protective
Exosystem/ Societal	Patriarchal beliefs and attitudes (Accepting attitude toward spousal abuse)*	Risk
	Belief in/ positive attitude toward gender equality and women's rights	Protective
	Respondent age*	Protective
	Legislation against IPV	Protective
	Poverty*	Risk
	Poverty reduction efforts	Protective
Microsystem/ Interpersonal	Marital discord	Risk
	Marital satisfaction**	Protective
	Social support*	Protective
	Negative social "interference"	Risk
Intrapersonal/ Internal	Alcohol consumption*	Risk
	Anger*	Risk
	Trauma exposure*	Risk
	PTSD*	Risk
	Depression*	Risk

*Included as a variable in the Huye District survey
**Measure included in the Huye District survey but variable not used in analyses

Table 17. Bivariate Tests of Past Year IPV Perpetration, Any Type (DV1) and Covariates

Variable	No IPV	Any IPV	χ^2	*t*	*p*	*N*
Accepting attitude toward spousal abuse			9.275		0.002	137
No *n %*	48 (80.0)	12 (20.0)				
Yes *n %*	46 (59.74)	31 (40.26)				
Age *M (SD)*	52.60 (11.11)	49.09 (9.59)		-2.76	0.016	137
Alcohol[a] *M (SD)*	0.65 (0.52)	0.91 (0.61)		3.93	0.002	136
Anger *M (SD)*	70.14 (12.85)	77.44 (13.95)		3.50	0.004	137
Poverty			0.008		0.928	137
Moderately or severely poor *n %*	62 (68.89)	28 (31.11)				
Not poor *n %*	32 (68.09)	15 (31.91)				
Social support *M (SD)*	26.74 (15.76)	31.91 (15.84)		1.63	0.128	136

Note: [a]Alcohol is log transformed estimated liters/month consumed.

Exosystem Factors

Patriarchal Beliefs and Attitudes

Patriarchal beliefs were measured in the survey with the variable used in the international Demographic and Health Surveys; it indicates whether or not male respondents agree with scenarios in which wife beating is justified or acceptable. Holding an accepting attitude toward spousal abuse was significantly associated with past year perpetration of at least one type of IPV; $\chi^2(1, N=137) = 9.28$, $p= .002$. (See Table 17). Accepting attitudes were associated with perpetration of physical IPV, $\chi^2(1, N=137) = 17.27$, $p < .001$, and with perpetration of emotional IPV, $\chi^2(1, N=148) = 8.79$, $p = .003$. An accepting attitude toward spousal abuse was not associated with sexual or financial IPV perpetration in the past year. (See Appendix D). Nearly 93% of respondents reported that they had not perpetrated sexual IPV in the past 12 months, and almost 95% of respondents reported that they had not perpetrated financial IPV in the past 12 months; there was little variance in either of these variables. The insignificant relationships between sexual and financial violence and patriarchal attitudes are likely due to low power when group or sample sizes are low (Campbell, 2007; DeWinter, 2013).

Rwanda has been characterized as a country in which male dominance and women's subordination are the norm (Carlson & Randell, 2013; Slegh & Kimonyo, 2010). The national

strategy against GBV reflects this, noting “certain cultural beliefs and traditions” as one of the primary factors associated with GBV (MIGEPROF, 2011). Data from in-depth interviews (IDIs) in Kamonyi District highlighted patriarchal beliefs as a risk factor and confirmed that Rwandans themselves consider patriarchal beliefs to be connected to perpetration of IPV. This includes beliefs about gender roles that reflected higher status for men and lower status for women. For example, these were described by men in terms such as “I believed my rights were primary” or “I thought only I had a say” or “I believed a man has to give orders”. This respondent noted that he believed he was doing the right thing when he made unilateral decisions without consulting his wife:

> R: ...they used to say that a woman has no rights to say a word. I was thinking that oppressing her was the only right thing for her.
>
> *I: Who says woman don’t have a say?*
>
> R: Even ourselves [we] used to say it.
>
> *I: And when you say it was valuable [right] to oppress her, what does that mean?*
>
> R: When you don’t give her rights on her properties we share. For example, taking an animal to the market, selling it without discussing about it. That is one of the ways of oppressing her.
>
> *I: Why would it be good [right] to oppress her?*
>
> R: Because I thought I owned everything in my house. *(UCOM1)*

This respondent shared his prior belief that giving orders without being questioned was an essential part of masculinity and how women who attempted to disagree with a man’s decisions would suffer the consequences, i.e. abuse:

> ...because a man, actually many people before they went to trainings, the man used to think that he has to make his own decision, on his heart. He would feel that "I am a man", he would make himself big, and would feel then that what he says at home, he is the man...what he says cannot be pushed back … it has to be an order. Then, when that man gets home and feels that whatever he says must be an order, if the woman says 'But this is not good, you should do it this way and this way' then you will hear that they have fought. *(VOIM2)*

Women's responses reflected the frequency with which their husbands held patriarchal beliefs. They reported that "he didn't see me as an equal" or "men think wives have no value". This woman shared how her husband was influenced by other men to believe that women should not work and how these ideas prevented her from access to the family finances:

> ...because of his understanding and what he used to hear outside, men used to say that no woman can work for money and make much money, it brings the woman to disobey and disrespect the man. He would hear them and take those ideas as his model, he would be guided by those ideas. And when I'd talk about that, he would tell me that I eat and drink, it is enough for me. *(ZCVF2)*

Kamonyi District IDI respondents described situations in which a man's insistence that his wife behave according to patriarchal norms acted as a situational precursor to violence. Men reported that they asserted their authority through violence as a response to feeling disrespected, being told what to do by their wives, or feeling that she diminished his worth. Several men admitted that they became violent as a way of covering what they acknowledged was a mistake,

such as coming home late or spending too much money on alcohol. Women also noted that a man could come home and begin to do "what he wants, without discussion" which could lead to conflict. This man shared how he became violent with his wife after she dared to suggest that visitors had stayed too long:

> *I: Do you remember what you were thinking when you found a stick and grabbed it to beat her?*
>
> R: What I was thinking, I was thinking that she had disrespected me, she had chased away people that I invited. I was saying that, it is me who invited them, they should go home at the time when I want, and she was telling me that they have to go [now], and we fought over that. *(SIJM3)*

Respondents suggested several explanations for why they or their spouses held patriarchal beliefs. Respondents attributed IPV in several cases to a lack of training or a misunderstanding of teaching about gender balance. This man attributed his violent behavior to ignorance and a lack of advice:

> What I was thinking: it was things of ignorance I was in, and not having someone to advise us at home, sitting [and talking] like this, that is what caused [the violent episode]. *(VOIM3)*

Belief in/Positive Attitude Toward Gender Equality and Women's Rights

In contrast, several participants discussed the role of beliefs around gender equality and women's rights as a protective factor for IPV. Male and female respondents in Kamonyi District attributed some of the recent reduction of violence in their own relationship and others in the community to changes in beliefs about male dominance and traditional gender roles. A number of respondents reported that they had witnessed changes in beliefs about gender roles and a

greater awareness of and appreciation for gender equality. Some of the specific new beliefs noted by men included beliefs that women have value, that women should have a say in the family, that a household belongs to two people, and that violence is wrong. Female respondents noted that women now know their rights, they can work and their work is respected, and women are becoming leaders. This man described his prior beliefs and behavior and refers to the process of changing his beliefs as having "understood":

> *I: Do you think it's possible to have conflict without physical fighting?*
>
> R: It is possible now that I've understood. Because I used to think that I was the only one who had a say, that she didn't have the right to say a word... [Before] if I talked and she replied she was beaten. But now that I [have] opened my mind it happens no more. *(UCOM1)*

The majority of respondents attributed these changes in attitudes and beliefs to training provided by RWAMREC, the Rwandan government (via "parents' evening talks" or community meetings), religious groups, or other community leaders.

Attitudes and beliefs around spousal abuse, women's rights, gender equality, and gender roles are an important risk factor that is associated with perpetration of IPV in Rwanda. In a WHO multi-country study of IPV perpetration in Asia, gender attitudes were consistently found to be one of the strongest associated factors (Fulu et al., 2013). The examples of behavior change shared by Rwandan respondents indicate that the Rwandan government's efforts to reduce IPV (and other forms of GBV) by changing attitudes and beliefs and promoting women's rights may be an appropriate strategy in this setting. These stories largely reflected changes in men's attitudes toward women, but several of the responses from women indicated that some Rwandan

women also continue to hold patriarchal beliefs and are not fully aware of their legal or human rights.

Respondent Age

In the Huye District survey, age was positively significantly associated with the perpetration of at least one type of IPV in the prior year, $t(13) = -2.76$, $p = .016$ (See Table 17). In tests of specific types of IPV, men who had perpetrated physical IPV in the prior year were significantly younger ($M = 46.52$, $SD = 7.46$) than men who had not perpetrated physical IPV ($M = 52.5$, $SD = 11.05$), $t(13) = -3.48$, $p = .004$ (See Appendix D). These findings are as expected based on the literature review of multiple other studies in which older age is associated with a lower risk for perpetrating IPV (Capaldi et al., 2012; Jewkes, 2002).

Responses from IDIs with couples in Kamonyi District give additional insight into why older age may be protective against IPV in Rwanda. Several men discussed ways that getting older helped to reduce perpetration of IPV. This man explains how other people advised him that it was not socially acceptable for an older man to be violent:

I: You say you no longer have a bad temper?

R: I no longer have a bad temper.

I: Do you know how that changed?

R: Yes, because I could see my behavior... Now I always tell her when I go somewhere when I never did that before.

I: and how did that help you reduce your bad temper?

R: I was given much advice telling me that at my age it is not fair to always fight my wife. And you would find that no man would ever enter

my house to wed my young daughters if I keep fighting with my wife.

(UCOM1)

Another man explained that older people simply do not have the strength to fight anymore:

R: ... there some who...always fight, they destroy their family...

I: What are the things people are doing to destroy their families?

R: Those who are young, they still have strength, they quarrel and fight. For us who are old why should we quarrel if we are old?

Age is not a modifiable factor; however, this finding may provide useful information for intervention. Respondents describe the social pressure that accompanies older age—these social norms for non-violent behavior may be useful building blocks for designing age-appropriate interventions. Similarly, older men in the community who have come to the conclusion that marital violence is not good may be able to serve as positive role models. Possible interventions might use strategies for behavior change such as models of “positive deviance”.

Legislation Against IPV

A number of respondents in Kamonyi District interviews discussed the important role that Rwanda’s legislation against gender based violence has played in reducing violence between couples. Reports from the village level demonstrate that people are aware of the law and GBV-related programming (although to varying degrees). Village residents and leaders also report that the law is being promoted and enforced and community leaders are implementing government-sponsored programs and reporting progress “upwards” to the central government. Local leaders hold community meetings to educate people on the GBV law and to share definitions of gender equality and IPV. In some of these meetings couples with conflict are called out publicly, and community members are encouraged to be aware of and report any conflicts in their village. A

number of radio broadcasts have aired with education regarding the law and IPV, including entertaining “sketches” to promote GBV awareness. Certain local leaders at multiple levels of local administration (e.g. village, sector, district) are designated in charge of social affairs, and they visit couples with conflict. In many communities, local committees are designated for dealing with GBV. Perpetrators are occasionally put into prison, although this is often temporary as victims frequently drop the charges quickly. All efforts are tightly monitored via the hierarchical monitoring system whereby the names of any couples considered to be “disturbing the peace” are reported “up” to the next administrative level. When conflicts or problems are not able to be solved at village level, for example, authority figures and community leaders from the next level up will go “to the field” to intervene.

Several male respondents noted that fear of punishment under the law acted as a deterrent for IPV in their community. Men reported that leaders will put men in prison if they commit violence; this man explained how their example encouraged others to avoid violence:

> *I: What do you think are things that can prevent conflict?*
>
> R: For example... [the local government] provides people who are in charge of security, they walk around in the village, and if there is a resident who fights with another, they take them to the police or the police come to them, and they punish them...
>
> *I: Can you say more about that?*
>
> R: For example... in this village, there is a man who killed his wife...they brought him into [a community] meeting in front of all people, and people said that he was guilty, and he got punished and everyone who was

thinking of committing the same crime has left it [decided not to do it] *(UCOM3).*

Women also noted that the laws against violence had had a protective effect, largely by giving women the ability to seek help and justice if they had been victimized. This woman explains the dramatic difference she has observed between women's vulnerability before and after the passage of the law:

> R: I think that it is a good [law] because it brings justice. Because long ago a woman would be beaten and no one would rescue you... Before [men] used to say this: 'I must talk and you keep silence', you had no word to say...
>
> *I: What else did men do before the law?*
>
> R: A woman didn't have rights at home, you had to know that everything belonged to the husband, you couldn't touch it. And when he enters [the house] you would think that you were about to die. But now you can think about how your husband abuses you and you can report him; he can be judged. Before you would always be afraid and there was nothing you could do about that... when you were about to do something you would think that he might kill you and you would forget [the idea of reporting]. No one would come to rescue you *(SIJF3).*

Part of the Rwandan government's strategy to enforce the law against gender-based violence is to increase awareness within communities of the violence that exists and to put pressure on couples to eliminate violence. A number of respondents in Kamonyi District shared examples of how the stigma of committing violence created social pressure to avoid IPV. This

man described the way that couples with IPV are called out in a public community meeting and encouraged to change their behavior and noted the shame he felt when it happened to him:

> *I: Are there still people in the community that commit violence?*
>
> R: When something like that happens in the community, the leaders call the people for a meeting and those in charge of security give their reports about the household that has conflict: they ask the couple to stand up in public, they call their names, and then other people say that what they are doing is not good... I'm telling you: when they ask you to stand up in front of the public you feel ashamed, and you don't do it again if you are a person who wants to change. It happened to me! *(UCOM3).*

Privacy is not a consideration in the government strategy; neighbors are encouraged to report any violence they observe and local leaders maintain lists of couples found to be "disturbing the peace". Families in conflict are considered to be a threat to the "security" of the village, and this information is reported "upwards" to the next administrative level of government.

Legislation around IPV was not one of the commonly studied variables from prior research included in the survey instrument, but reports from IDIs indicate that it is an important factor to consider in Rwanda's current landscape around IPV. Respondent descriptions of the protective effects of legislation include pressure from the legal and justice system (e.g. enforcement through detainment and prison sentences) and social pressure from community members; these mechanisms through which legislation has an effect may be important when considering measures for future research or the development of additional interventions.

Poverty

Findings from survey data from Huye District indicate that poverty status was not significantly associated with perpetration of IPV in the prior year, $\chi^2(1, N= 137) = 0.01, p= 0.93$. There were not significant relationships between poverty and any of the four types of IPV perpetration. Results of the bivariate tests using survey data are not consistent with reports from couples in Kamonyi District. Kamonyi respondents reported that living in poverty, having limited resources, or the circumstances of "a hard life" contributed to conflict between men and women. Several respondents named this as one of the most important contributors. A frequent theme from men was that living in poverty meant that a man was unable to fulfill requests from his wife, which created ongoing conflict between them, as this man explains:

> *I: We're interested to understand the reasons that men and women begin fighting physically.*
>
> R: Mostly it's because of poverty. Because if you ever had a good life, owned things and [then] lost everything, conflict starts. And that poverty would cause constant conflicts. She would ask you for things you don't have. She...would want to eat beans you didn't buy. *(UCOM1)*

Women reported that IPV could happen when a man did not work or provide money, particularly when there were many children to care for. Two women noted that the poverty of the wife could be particularly important, and that being from a poor family could make a woman additionally vulnerable to IPV. This female respondent articulated clearly the way that a Rwandan woman's financial situation influences the way she responds to abuse:

> There's a difference between these [two situations]: when a man abuses a woman who has money and when a man abuses a woman who does not

> have money. Many times when a woman has money, a man is afraid to start a conflict because he knows that even if he goes away, his wife can survive the situation. But when the woman does not have money, the man oppresses his wife because he knows that if he decides to abandon her, she will beg him to stay; she will run after him and agree to do as he likes. *(ZCVF2)*

Many couples mentioned disputes over property as a specific aspect of poverty that caused conflict in intimate relationships. Property in respondent stories refers to land (essential to the livelihood of people who grow their own food for survival or income), houses, livestock, and other material possessions. Both men and women frequently noted that disagreement over the way property should be managed or money spent was a source of conflict. This woman stated that disagreements over property was the main source of conflict in her marriage—her husband believed that her job was to take care of the house and the animals without having any say in the decision-making about finances or property. She noted that his expectation was for her to be satisfied when she had enough to eat:

> I told you that issue of property in family is the main cause of conflict between husband and wife, because your husband doesn't let you feel free to the property. He may beat you even when he is not drunk...This starts slowly, you find that he doesn't want you getting any rights to the property in the house, for him it's like "work and work only, and don't miss any hour or day without working": you have to work from early morning, with a baby on your back, you look after animals, you go get grass for animals, you pound stuff, everything! If he is a husband who has a shop, he will

> know that he has to pay a worker...Yeah, he will pay a worker, but what about you? He gave money to the worker, but for you, your value is to eat, can you imagine? To eat! You are there, your role is to eat and sleep. That's what men in rural areas kill their wives with! *(ZCSF1)*

RWAMREC's training for couples includes a discussion of ways that marital conflict (particularly non-cooperation in the area of wealth or property management) can contribute to household poverty. Consequently, a number of RWAMREC-trained men and women in Kamonyi District mentioned that they were motivated to reduce conflict and violence out of a desire to also reduce their level of poverty. Respondents used a term translated as "develop the family" to indicate efforts to work together for economic development: to grow their assets, improve sources of revenue, and save money. Couples who reported working together to reduce their poverty described it as a protective factor against IPV. This respondent described the way he and his wife learned over time to work together on livestock management and how their cooperation has improved the family's economic situation:

> Now we first discuss about it [property management] and plan it well, and if she tells me this [idea] is bad then we leave it; if she tells me it is good then we do it. Because before, I did not have livestock at home... if I took a goat [to sell] then she would also get angry and take another one. But now we have livestock at home; we have cows we have goats, and all that was because we discussed about it—we say: 'let us look for something [to do] that will help us the day after tomorrow'. Now... I have developed myself. *(OIKM3)*

Another man explained that community members would be motivated to stop IPV when they compared their lack of economic progress with a neighbor's: "It [physical violence] will reduce because you cannot see your neighbor farming so that he can have more crops and [then still] spend the night beating your wife." *(SIJM1)* This woman explained what she and her husband had learned from RWAMREC about working together and how she had observed changes in her own relationship:

> So RWAMREC taught us that a wife and husband have to understand each other because when a wife and husband don't understand each other they don't improve in their life... So, they teach us, slowly we are changing. If a husband didn't used to show you the money, this time he will do it. [For example, previously], he might ask for a loan from the bank and I didn't know anything about it... But today, he can ask me to go to get money from the bank, because now he understands that a woman can do something, that we can work together, that she is important, but before, he felt a woman had no value; he could go to the bank to get a loan without my knowing. *(ZCSF1)*

Although bivariate results from survey data did not show a significant relationship between poverty and IPV perpetration, IDI data suggests that poverty may still play an important role. One possible explanation is that the survey measure did not capture specific elements of poverty that may be more likely to contribute to marital violence, for example, many respondents mentioned scarcity of property as one particular strain on their relationship. It is also possible that the relationship between poverty and IPV is mediated by other factors, such as marital

conflict. Respondent reports of arguments resulting from difficulties meeting their material needs suggest that this may be the case.

Microsystem Factors

Marital Satisfaction

Results from the Huye District survey data showed so little variance in the marital satisfaction variable that it did not respond to transformation, and I did not use it in bivariate tests. Nearly all respondents (92.56%) reported that being “overall very satisfied with their marriage” was mostly or completely descriptive of them; the mean satisfaction rating for all items was a 4.39 out of 5 ($SD = 0.67$).

Rwandan respondents described elements of a satisfactory marriage that they believed helped them to avoid violence. Learning to talk to each other and hold discussions about decision-making was one of the most frequently mentioned elements of marital interaction that male and female respondents reported had reduced the violence in their relationship. Several women noted that this was important because it meant the wife’s ideas and input were respected. This woman explained how she felt in “harmony” with her husband when they planned together how to use money:

> *I: What are things that reduce conflict?*
>
> R: My point of view is that the first thing is understanding. He and I, we might sit down and say: ‘all the money we saved will be used this way. We will not sell our land but cultivate it to get to this.’ About our kid: ‘we will send the kid to school, school fees will come from this and this.’ We would be in such harmony, and that would reduce conflict. *(UCOF3)*

Her husband reported the same thing:

> I just tried to put more effort so that I can change. I tried to listen to my wife, I cannot do anything without telling her, she cannot do anything without informing me. There was time I used to come home without talking to her, even when I was not drunk, but now I have learned to talk to her before I sleep, we take 30 minutes before we sleep and we plan for the next day, everything is in order. *(UCOM3)*

One of the simplest factors to which couples attributed reduced IPV was to change interpersonal interaction through the elimination of "provoking" behaviors, i.e. behaviors that led to conflict or violence. Men reported that fighting had reduced when they stopped wasting family property and focused on the needs of the family. Women echoed this as they noted the changes their husbands had made that had contributed to reduced IPV such as not seeing other women, not spending money on alcohol, discussing the use of money, or not insulting his wife.

When some women described behavior they considered to lead to a satisfactory, non-violent cohabitation, it seemed to reflect a submissive role for women. Women in Kamonyi District reported that being respectful to one's husband, doing what he likes, talking nicely to him, ignoring certain behaviors, and never replying badly to him were ways that women could avoid IPV. This woman explained that being patient with a husband's infidelity and waiting for others to correct him might avoid violence and lead to his eventual changed behavior:

> *I: What is your advice for other couples to prevent conflict from turning into fighting?*
>
> R: For example, a man who has gone outside [extramarital affair], when the woman learns about it, try not to be jealous but get into prayer... avoid

going out and telling other women that your husband is like this, but you believe that by praying, God will rescue you...also you can keep quiet and don't humiliate him. Other people...can teach him, leaders can talk to him, [and if] he sees that his wife and children don't harass him, he may change. You keep working for your children and for your family without being discouraged. When you bear with it as a woman and you change, he may change too. (*VOIF1*)

This man's description of what he considered an acceptable response from his wife to "correction" also seemed to reinforce the perception that women's submissive behavior could reduce violence:

> *I: What is the difference between a conflict that leads to violence and a conflict that does not lead to violence?*
>
> R: If you come home and find a mistake happened, you approach your wife and say: 'these [are the] things you have done wrong, don't ever let it happen again'... and when you see that it continues then it gets to the point you might even fight... [But if] -you give her examples and she accepts them and she corrects herself, then it stops there without any problem. *(SIJM2)*

Although these submissive responses seem to demonstrate that male dominance remains the norm in spite of reductions in violence, some researchers suggest that Rwandan women exert as much agency as possible in response to IPV (Mannell & Jackson, 2014); responding to violent partners in a submissive way may be the best possible "safety plan" for women who feel they have few other options.

Marital Discord

In contrast to descriptions of marital satisfaction, many male and female respondents described living in a state of marital discord as a circumstance that contributed to IPV. A few respondents mentioned specific areas of discord in their relationship, such as sexual problems, that led to violence. For example, this woman reports that she didn't enjoy sex—she implies that her husband became violent when sex was not as frequent as he wanted it to be—and she notes that she often complied with his demands in order to avoid physical violence:

> But the real reason [for violence] is that we had sexual problems. I didn't love to have sex with him. That made him angry and become violent. I didn't stop having sex completely, but I had to let him have sex with me so that I could have peace. But I didn't love it. *(ZCVF1)*

Many respondents noted that extramarital affairs were a source of IPV, and several respondents who used the term "unfaithfulness", such as this female, considered it to be the main cause of fighting:

> *I: Do you know families that have conflict and fighting?*
>
> R: Yes.
>
> *I: And what do you think causes the fighting between them?*
>
> R: Unfaithfulness is the main cause. *(ZCVF3)*

Women explained that their husbands' affairs with other women caused many problems and led to marital violence; some respondents reported that extramarital affairs distracted the man from focusing on his family. Wives in Kamonyi District noted that the other woman could influence the husband by speaking negatively to him about his wife. This man believed that being with other women had "distorted his mind" which led to violence against his wife:

I: Why do you think you were behaving this way? [violent toward your wife]

R: If you look, it came from (pause)... there is a time you make a small mistake and you go into those women outside [extramarital affairs], and it is as if they distorted your mind. *(OIKM3)*

Respondents also referred frequently to proximal factors for violence, or "hot button topics" of discussion that act as immediate precipitators of violence (Flynn & Graham, 2010). Example topics of "hot button issues" reported by men include: a wife not caring for animals, arguments about sex, arguments over wasting property, other women, or a wife responding "badly" to her husband. Women reported that men's spending money without discussion and a husband's complaints about a wife's appearance or hygiene could lead to arguments. This respondent shared how poverty could become a "hot button" issue that leads to an argument:

I: Just clarifying, those [issues previously mentioned] *are the causes of a lack of peace in the house?*

R: Yes...but there is also poverty. I'll give you a personal example: [my wife and I] spend together the whole day working in the field, but when we get home you hear one person asking: 'Why don't you cook sweet potatoes?' [The other replies:] 'But you didn't buy them.' Or: 'Give me money so that I can buy salt.' See, you forget that you spent the day together. That is what causes lack of peace. *(SIJM1)*

Marital satisfaction and marital discord have not been previously studied as correlates of IPV in Rwanda, and there are no standardized measures for either that have been adapted for a Rwandan population. However, stories from Rwandan participants indicate that several elements

of their interaction, such as communication style and power dynamics, are important factors for marital conflict. Interactional patterns between intimate partners are an important risk factor in many other settings, and as a proximal risk factor may be highly modifiable (Capaldi et al., 2012). Several of the participants attributed positive changes in their relationship to an improvement in communication skills that resulted from training by RWAMREC, suggesting that this may be a fruitful area for intervention. However, further development of contextually-relevant measures for marital satisfaction/dissatisfaction and marital discord are needed for any additional empirical research.

Social Support

The Kinyarwanda version of the Inventory of Socially Supportive Behaviors (ISSB) asked respondents to report how often they received different types of financial, material, emotional, or moral support from others when they needed it (Barrera, 1981). Bivariate tests of the relationship between this variable and IPV perpetration using survey data from Huye District did not show a significant relationship for any type of IPV; respondents who had perpetrated IPV in the prior year did not have significantly different levels of social support compared to men who had not perpetrated IPV, $t(13) = 1.63$, $p = .128$.

However, responses from IDIs suggest that certain types of social support may be instrumental in the lives of couples who had reduced fighting and violence. For example, male respondents reported that neighbors, parents, and other community members could be helpful in a number of different ways such as visiting with the couple to give advice, encouraging a man to walk away from his wife when angry, or verbally discouraging violence they observed. This man explained the way community members could talk to a man who was treating his wife badly, and he refers to his own experience:

When someone is cruel and you go to him and talk to him, it [the cruelty] leaves him and you change him; you can talk to him and it causes him to change. Like [my wife and I], I told you that we were not talking to each other, we did not discuss, but because of a talk [from someone] we changed; we are now discussing and working together. *(ZCSM1)*

This woman described how couples in her community benefited from the support of neighbors and their parents to avoid violence during a marital conflict:

I: How do they calm down?

R: They quarrel and the neighbors go to them and tell them that what they are doing is wrong, [they remind them:] 'you got married in order to start a family and develop yourself', and the parents also stay close to them and finally things fall off [conflict reduces]. *(VOIF2)*

Many respondents reported that having the RWAMREC volunteers visit, do training, and spend time with the couple had been extremely invaluable in helping the couple to resolve ongoing conflicts, learn to work together in their marriage, and reduce IPV. This woman reported that things started to improve in her marriage after the RWAMREC volunteer started visiting them:

What I can tell you about RWAMREC training, a time came when [RWAMREC volunteer] and her mates came to talk to us and things started to change. We attended training, from that time I see changes. (SIJF3)

Some respondents reported feeling pressure from their social network to behave in nonviolent ways. For example, one respondent noted his fear that being seen as violent would

result in losing the trust of his neighbors. This man noted that he felt pressure from his roles as a leader and his reputation as a religious person when he stated: “I am a Catholic, I am a leader, and I have to be an example. If you are a local leader and people hear that you separated [from your wife], it would be a shame on me.” When I asked about the difference between couples who fight and those who do not he reported:

> Because of your society: I told you that when you are a Christian you always pay attention, thinking that fighting brings shame on you; [it’s] the same when you are an authority figure. It all depends on your society. *(VOIM1)*

Not having a supportive social network was considered a risk for IPV victimization. Several women noted that not having people in their life to support or visit them, such as relatives, contributed to conflict in a relationship. This woman explained the way her husband took advantage of her lack of family to continue abusing her because he knew she was unable to leave him:

> R: One day he came and found that our cow had run away from its rope... He told me to bring it back. I said that I couldn’t get close to it because it would kick me. Then he took the stick and hit me.
>
> *I: Did he say anything before that?*
>
> R: He said that I am good for nothing, asking me: ‘What are you good at?’
>
> *I: Would you willing to tell us how you were feeling when that happened?*
>
> R: I would feel so much sorrow. Because even if I would think about leaving, there was nowhere to run because I don’t have parents. The circumstances made me stay because I had no parents, no family.

I: Why do you think your husband was behaving that way?

R: Maybe it was because of drinks or maybe because he said 'She has nowhere to go'. Because there was a time when we would discuss like that and he would say to me: 'You are behaving that way, but where would you go?' (*SIJF3)*

Negative Social "Interference"

One possible explanation for insignificant bivariate relationships between IPV perpetration and the social support variable may be that the ISSB measure fails to capture the complexity of social relationships in Rwanda. Couples in Kamonyi District made multiple references to the negative interference of people in their social network when offering possible explanations for IPV. Respondents referred to *udutiku,* when a person intentionally slanders someone or spreads gossip or rumors, and it creates anger and conflict between the couple. A high score on the ISSB measure may indicate that an individual receives material or emotional resources from others; however, it may be possible that a person with a wide social network is also more likely to have people who act as a negative influence and encourage marital conflict.

Men referred to "people deceiving us"; women were more likely to name specific individuals they perceived as instigating problems in their marriage. Women described in-laws and neighbors who told the husband "lies" about the wife's behavior, for example that she was having an extramarital affair when she was not. This woman gave an example of how her neighbors provoked her husband to violent behavior (she calls violence the "things that had never happened before") by telling him she was committing infidelity:

R: They would incite him to do things that had never happened before or existed. They would get involved and try to make things more complicated than they were before instead of advising us to stop.

I: Can you help me understand what that means: "They would incite him to do things that cannot exist."

R: For example, our neighbors used to tell him that every time I went to gather grass for cows, I go to see other men. Or because we live close to his mother, she would tell him so many wrong words about me. *(ZCVF3)*

The role of social support in Rwanda is unclear. As measured by the ISSB, social support was not significantly associated with IPV perpetration. Yet, multiple respondents attributed the reduction of violence in their relationship to support and counsel received from others (particularly RWAMREC volunteers and community leaders). Couples also noted that their relationships improved when they were able to move away from the people who intentionally instigated conflict or when they learned to ignore the gossip and rumors that others spread. These findings suggest that helping respondents to develop a social network that includes people who help to promote relationship harmony may be protective against IPV and an area for additional intervention. Additional research is needed to further explore the relationship between social support and IPV perpetration, and in Rwanda, additional modification may be needed to adapt the ISSB for use in IPV research.

Intrapersonal Factors

Alcohol Consumption

The amount of alcohol consumed each month by male respondents in the Huye survey was significantly associated with perpetration of at least one type of IPV in the previous year,

$t(13) = 3.93$, $p = .002$. In bivariate tests with specific types of IPV perpetration, alcohol consumption was significantly associated only with perpetration of physical IPV: respondents who had perpetrated physical IPV in the previous year reported greater estimated monthly alcohol intake (log transformed) ($M = 0.97$, $SD = 0.61$) compared to those who had not perpetrated physical IPV ($M = 0.68$, $SD = 0.54$), $t(13) = 2.96$, $p = .011$. Alcohol consumption was not significantly associated with sexual, emotional, or financial IPV perpetration in the prior year. For sexual and financial IPV, this may be due to low power from small group sizes (Campbell, 2007; DeWinter, 2013).

Respondent reports in IDIs confirmed the important role of alcohol as a risk factor for physical IPV perpetration. Intoxication or drunkenness was the most frequently reported situational precursor to violence reported by men and women; respondents also discussed the role of ongoing alcohol use as a life circumstance they considered a contributor to IPV. Many respondents noted that physical violence had only happened in their relationship when the man was under the influence of alcohol or drugs. Some men and women noted that a man's disposition or temper could change when he was drunk; men referred to feeling that they were "strong" and could do whatever they pleased after drinking.

> No, we never quarrel when he is not drunk. When he is not drunk he comes home, we would talk, he plays with the kids, he would say I'm going to do this and I tell him I'm also going to do that. So you can see that everything comes from beer. *(VOIF2)*
>
> When you are sober for sure you can say, "Actually even if I beat her it does not help me...beating her does not bring her anything apart from

rather increasing her anger"...and you go away. But when you have drunk beer, you immediately hit. *(SIJM2)*

Conversely, male and female respondents reported that reducing one's alcohol consumption acted protectively against IPV. Participants noted this several times as a way that they had reduced conflict in their own relationship. One woman stated: "Praying and stopping drinking, that is what brought peace home" *(ZCVF1).* This man shared how his alcohol consumption was related to his anger and violence:

> When I was a bartender I used to be very angry. Today you can't see me drinking. Something made me change my mind about beer. Every time I took it I was feeling very strong but I knew that I wasn't strong. What made my anger decrease is that I decreased drinking. I can't confirm that everyone who drinks gets angry because of that, I don't know their reasons, [but] that is what I did and it gives me peace. *(SIJM1)*

The study's results indicate that alcohol use and IPV perpetration are associated in the Rwandan population, in line with other studies[11] demonstrating that alcohol is consistently an important contributor to IPV perpetration (Boden et al., 2012; Foran & O'Leary, 2008; Fulu et al., 2013; Stith et al., 2004). Alcohol use is temporally associated with both IPV perpetration and victimization, such that perpetration and victimization are both more likely on days when a person has been drinking compared to days without alcohol intake (Stuart et al., 2014). Individuals with symptoms of alcohol abuse/dependence have been found to be significantly more likely to commit IPV and other violence in longitudinal studies (Boden et al., 2012).

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[11] Klostermann & Fals-Stewart (2008) cite Martin, 1993 and Pihl & Ross, 1987 to say that the "relationship between alcohol use and violent behavior in general is perhaps the most investigated biobehavioral link in the extant empirical literature." It is also somewhat controversial. As only one of multiple risk and protective factors examined here, the literature reviewed is out of necessity abbreviated.

Alcohol is hypothesized to lead to violence either through an indirect effect on other factors, such as marital conflict, or to have a direct effect by lowering inhibitions or altering cognitive functioning (Foran & O'Leary, 2008).

Although the role of alcohol in IPV perpetration remains under investigation globally, the study findings are an important confirmation that alcohol use should be assessed and considered for any IPV intervention in Rwanda. Services for alcohol or substance abuse are rare in Rwanda, but alcohol is a potentially modifiable factor: a number of respondents attributed some reduction in violence to reductions in alcohol intake.

Anger

Results from survey data in Huye District indicate that anger is significantly associated with perpetration of IPV of any type in the prior year, $t(13) = 3.5$, $p = .004$. Specifically, men who had perpetrated physical IPV in the 12 months before the study had significantly higher scores ($M = 79.57$, $SD = 14.17$) on the Multidimensional Anger Inventory compared to men who had not perpetrated Physical IPV ($M = 70.99$, $SD = 13.06$), $t(13) = 3.4$, $p = .005$. Similarly, men who had perpetrated emotional IPV in the 12 months before the study had significantly higher scores on the Multidimensional Anger Inventory ($M = 80.33$, $SD = 14.65$) compared to men who had not perpetrated Emotional IPV ($M = 70.65$, $SD = 12.57$), $t(13) = 3.14$, $p = .007$. Anger was not significantly associated with sexual or financial IPV perpetration.

The anger measure used in the survey questionnaire measured multidimensional anger, taking into account the frequency, duration, and magnitude of anger for each respondent. In addition, the measure accounted for differences in the range of situations that elicited anger, such that men who reported anger in a greater number of hypothetical situations would have a higher score. Reports from IDI respondents support the finding from survey data that trait anger is

associated with IPV perpetration. Several women noted that men have a "bad temper" which leads to violence:

> It is men who are violent for nothing, and it has always been like that: men have temper. They come home in the evening *bisitaza ku kintu* [literal translation: stepping on something willingly; meaning: looking for a reason to quarrel]. It is not a new behavior, they have always been like that. If he sees a plate in his way he says, 'I always tell you not to put plates down in my way.' And when he sees a dirty kid before the mother gets time to wash the kid, he shouts asking why the kids are not clean yet. It gives him a reason for the woman to be beaten. *(OIKF2)*

Both men and women in Kamonyi District discussed the role of anger as a precipitator to violence. Men noted things that made them angry and discussed that a feeling of anger was often all they could think of immediately before becoming violent. In some cases, such as the following example, the anger was related to intoxication:

> R: There is a time a man might have drunk at the street, used a lot of money for drinking, then he would be ashamed of not maybe having left anything home. Then you get home when you have become like a lion that can eat someone…
>
> *I: I am interested in that phrase: "When you come home like a lion who can eat someone"*
>
> R: Basically there are many men who have anger. When you talk to him a little bit he would get angry; he would have enough anger to hit you [or to find] something and hit you with it. *(VOIM2)*

This respondent shared the story of the first time he beat his wife and explained that when she said things that made him angry, he would often become physically violent:

> About that first time, she was saying that I was with other women, and it would make me angry and beat her. I also would come and ask her why the goats are still outside, and if she argued with me I would beat her. It was just little simple things like those. Sometimes I would get angry and leave, and other times I would beat her and she would leave saying that she couldn't [stay and] wait [around] for me to kill her. *(UCOM1)*

As respondents shared their stories of learning to avoid IPV, a number of men and women reported that it had been helpful for them to learn techniques to manage their own anger or the anger of their partner. Men reported that they could reduce violence by using techniques to calm down such as thinking about something that "makes you happy", going somewhere else alone, playing sports, sleeping off alcohol intoxication, and keeping busy by doing activities such as "visiting the cows". Women reported that they had learned to detect when their husband was angry; their strategies to avoid violence included leaving the husband alone when he was drunk or staying silent when he was in a bad mood, as this woman describes:

> *I: So what strategies would you suggest for a woman to reduce conflict?*
>
> R: Now what I can tell her is that the way she can stop conflict is when she hears her husband come with temper, she would keep quiet, silent, absolutely not to talk when he is talking. She would leave him alone.
>
> *(SIJF3)*

Anger was significantly associated with IPV perpetration in survey data and was frequently mentioned by respondents as an important risk factor in marital conflict. These results

are in line with findings from other regions indicating that anger is an important factor in IPV, particularly for populations that may have trauma-related mental health problems, such as PTSD (Norlander & Eckhardt, 2005; Taft et al., 2010). However, the direction and mechanisms in the relationship between IPV and anger remain unclear and areas for further study (Norlander & Eckhardt, 2005). The study's results indicate that trait anger should be considered when assessing risk for IPV perpetration, and respondent examples of ways anger management techniques helped them to reduce perpetration of IPV suggest that this is a potentially fruitful area for future intervention.

Exposure to traumatic events and mental health problems are considered intrapersonal risk factors. These risk factors are the primary focus of the study: bivariate, multivariate, and IDI results are presented and discussed in Chapter 8.

Summary and Discussion

Results from Huye District survey data and in-depth interviews in Kamonyi and Huye Districts provide a profile of the risk and protective factors for IPV perpetration that is unique to the post-genocide context of Rwanda. This profile contributes a useful summary of factors that may "impel" or "inhibit" violence; identifying modifiable factors via a risk and protective framework is an important step for developing or modifying culturally-relevant interventions in a post-conflict setting (Corvo & Johnson, 2013; Finkel & Eckhardt, 2013).

The bivariate tests of survey data also provided covariates to use in multiple regression; Table 18 presents the covariates to be included in the multivariate test for each dependent variable.

Table 18. Covariates for Multiple Regression

	Dependent variable	Covariates
DV1	Past year IPV perpetration, at least one type	• Patriarchal beliefs and attitudes (Accepting attitude toward spousal abuse) • Respondent age • Alcohol consumption • Anger
DV2	Past year physical IPV perpetration	• Patriarchal beliefs and attitudes (Accepting attitude toward spousal abuse) • Respondent age • Alcohol consumption • Anger
DV3	Past year sexual IPV perpetration	N/A
DV4	Past year emotional IPV perpetration	• Patriarchal beliefs and attitudes (Accepting attitude toward spousal abuse) • Anger
DV5	Past year financial IPV perpetration	N/A

Overall, the findings from the survey confirm that the globally important risk factors for IPV are also relevant risk factors in Rwanda, with the exception of social support and poverty. In-depth interview data provides additional insight into this and suggests that the measures used for social support and poverty in other settings may need to be tailored for the specific social and economic setting of Rwanda, or additional factors may need to be controlled for with analyses for mediating or moderating variables. Findings related to marital satisfaction and discord also indicate that Rwanda-specific measures of marital satisfaction and marital discord are needed for future empirical work. Couples discussed a number of important elements of marital satisfaction and discord, but the measure of marital satisfaction used in the survey failed to capture the variation in the quality of interpersonal interaction that IDIs indicate exists. Additional qualitative research may be needed to determine which aspects of interpersonal interaction are most important.

Findings from IDIs also provided a number of additional risk and protective factors, unique to the Rwandan context, to explore for future research or intervention. The risk from negative social interference, i.e. when certain individuals intentionally create conflict between spouses, may be particularly relevant for the context of Rwanda and part of the complex social relationships that exist after genocide. Rwandan research assistants for the study explained that jealousy and actively discouraging anyone who tries to "get ahead" are sometimes unfortunate aspects of Rwandan culture. The Rwandan government's strategy to promote reconciliation after genocide may also increase the risk of negative social "interference". The strategy forbids any public designation or discussion of ethnicity (i.e. "we are all Rwandans"), and encouraged genocide perpetrators to return to villages where they live literally "next door" to genocide survivors.

Rwanda's high population density and the shortage of land for cultivation means that tensions may already be high in villages where neighbors live in close proximity. The strategy to reduce IPV by encouraging close monitoring of all spousal conflict, public shaming, and reporting of neighbors may add to the tension. Reports from participants on the role of GBV legislation and its protective role were somewhat mixed; women reported feeling safer in the knowledge that they could report violence, but men also hinted at a backlash against the government's promotion of women. Several informants provided anecdotal reports that the fear of punishment has caused some men to change abusive tactics so that IPV is undetectable but still perpetrated in a different form.

A number of sub-groups in Rwanda may be at high risk for IPV. These groups were not the focus of the study, and data was limited, but couples in mixed ethnicity marriages and those that have reunited after one partner's genocide-related jail term may be at particular risk for IPV.

Women without parents or extended families and economically vulnerable women are also likely to be at greater risk of IPV. The finding that economically vulnerable women are at risk for IPV is not unique to Rwanda; however, loss of family members from genocide means that this problem may be particularly salient in Rwanda and should be considered for screening and intervention. Social services are limited in Rwanda, particularly for IPV; many women rely on the traditional practices of *kwahukana* and *gucyura uwahukanye* for support and protection from harm. Women without parents or extended family members lack this most basic social protection.

The status of women in Rwanda is changing rapidly, and findings reflect wide variety in the extent to which patriarchal beliefs and traditional gender norms are held by respondents. Those who hold patriarchal beliefs, such as the acceptability of spousal violence, are more likely to perpetrate IPV. Yet, the study highlighted changes in patriarchal beliefs in respondent reports: men and women both noted improvements in their relationship as women's rights were increasingly respected and women's economic and social contribution was increasingly valued. These changes were largely attributed to the work of organizations like RWAMREC and the programs initiated by the Rwandan government, and the gender norms and beliefs held by the RWAMREC-affiliated sample are not likely to be representative of the general population. However, the study highlights the important protective role of changed attitudes and beliefs in the unique post-genocide context of Rwanda. Additional research is needed to capture these changes over time and the ongoing impact of efforts to change patriarchal norms at multiple levels (e.g. systems and institutions).

Chapter 8 The Relationship Between Trauma, Mental Health, and IPV Perpetration in Rwanda

This chapter examines the relationship between traumatic experiences, mental health problems and perpetration of IPV in Rwanda. I statistically examine the relationship between traumatic experiences, mental health problems, and perpetration of IPV using data from the Huye survey. I present the results of bivariate tests of the association of traumatic experiences, PTSD, and depression with the five dependent variables: past year perpetration of DV1) any type of violence, DV2) physical violence, DV3) sexual violence, DV4) emotional violence, and DV5) financial violence. I develop six multivariate logistic regression models with mental health variables (PTSD and depression) as the main independent factors, controlling for the covariates identified in Chapter 7 that met statistical significance with IPV perpetration in bivariate analyses. Using IDI data I analyze the way that participants discuss their traumatic experiences and mental health problems in their stories of IPV to further explore the relationship between trauma, mental health and IPV.

Trauma Exposure and Intimate Partner Violence Perpetration

Survey respondents reported exposure to 1) lifetime, 2) genocide-related, and 3) past year traumatic events. Table 19 presents the results of bivariate tests of the relationship between these three measures of traumatic exposure and past year perpetration of at least one type of violence (DV1). Results of bivariate analyses of the relationship between the three types of trauma exposure and individual types of violence (DV2 – DV5) are reported in Appendix E. Because the trauma variables did not meet the assumptions for multivariate logistic regression (no significant relationships with IPV perpetration in bivariate analyses), I did not develop multivariate models for the trauma variables. I present key themes from the Kamonyi and Huye District IDIs in the discussion of the findings from the survey data.

Table 19. Bivariate Tests of Past Year IPV Perpetration, Any Type (DV1) and Trauma Exposure

Variable	No IPV	Any IPV	χ^2	*t*	*p*	*N*
Traumatic events ever *M SD*	10.51 (4.81)	12.14 (4.61)		1.71	0.111	137
Traumatic events during genocide *M SD*	6.29 (4.36)	6.33 (3.52)		0.05	0.962	137
Traumatic events past year *M SD*			1.93		0.395	132
None *n %*	49 (73.13)	18 (26.87)				
One *n %*	17 (62.96)	10 (37.04)				
Two or more *n %*	23 (60.53)	15 (39.47)				

Traumatic exposure is not associated with IPV perpetration in any of the bivariate analyses. There are no significant relationships at bivariate level between past year IPV perpetration and any of the three traumatic event count variables; however, the direction of the relationship between lifetime traumatic events and IPV perpetration is potentially of interest: men who had perpetrated at least one type of IPV in the past year experienced on average more traumatic events (M = 12.14, SD = 4.61) compared to men who had not reported any perpetration (M = 10.51, SD = 4.81).

The results of bivariate analyses for the other dependent variables (physical, sexual, emotional, and financial IPV perpetration) produced similar results (See Appendix E for tables). There were no significant relationships between any of the traumatic event variables and any of the types of IPV perpetration. As with DV1, the direction of the relationship between lifetime traumatic events and all types of IPV perpetration was in the expected direction such that respondents who reported perpetration experienced a greater mean number of lifetime traumatic events compared to those who did not perpetrate. There was little variance in the sexual and financial IPV perpetration variables, and, as noted previously, non-significant results may be due to low power resulting from low group or sample sizes (Campbell, 2007; DeWinter, 2013).

These findings are in contrast to findings from earlier studies in Palestine and South Africa which found that respondents exposed to political conflict or conflict-related human rights abuses are more likely to perpetrate IPV (Clark et al., 2010; Gupta et al., 2012). Stories shared by male and female respondents in IDIs may provide additional insight as to why this study's results were different. Although IDI respondents did not complete a traumatic event checklist, I asked if any sad, difficult, or stressful events had occurred during their lives, and many respondents shared stories of traumatic exposure as part of the discussion on IPV. In my analysis I considered events mentioned by respondents, regardless of whether or not these events were considered a Criterion A traumatic event per the DSM-IV.

The likelihood of IPV perpetration may depend on how the respondent has dealt with traumatic events. Respondent stories suggest that in some cases respondents are no longer affected by those traumatic events, and therefore, there is no impact on IPV perpetration. The relationship between trauma exposure and IPV perpetration may be different in Rwanda compared to other settings where prior research took place because nearly 20 years have passed since genocide, and respondents may have participated in a number of interventions such as healing and reconciliation programs. In other cases, respondents may continue to experience practical and emotional consequences of traumatic events, and these consequences may play a role in IPV perpetration. The relationship between trauma exposure and IPV perpetration may be different depending on the extent to which ongoing consequences of traumatic events continue to affect the respondent.

Past Traumatic Experiences Have Limited Impact on Current Life

Several respondent stories suggest that traumatic events which occurred many years in the past do not continue to affect the daily lives of many of the respondents. If traumatic events

from the past are not creating any disturbance in the daily life of these men, there is no reason that those who experienced trauma would be more likely to have recently perpetrated IPV. Several of the stories provide support for this, such as this man who explained that the trauma he experienced during genocide had only bothered him for a few years afterward:

> *I: Did you experience any changes in your behavior or thinking [after genocide]?*
>
> R: This happened to me just short time after the war, but afterward I started a normal life, I got fine, I got married, and I was only focusing on my family.
>
> *I: How long did it take you to feel better?*
>
> R: Let's say 2 years because [by] 1997 I was feeling that I don't have any problem in my heart. (*UCOM2*)

He credited his recovery to his re-integration into society and normal life; several respondents reported participation in government-organized and religious programs for healing and reconciliation, which may have contributed. As described in greater detail in Chapter 5, other respondents described their strategies to focus on the present and avoid thinking about negative events in the past. It is possible that this strategy for "moving on" after traumatic events has been effective enough for some Rwandans that past events no longer contribute to their present marital conflict. Alternatively, respondents who have not dealt well with traumatic events from the past may continue to experience practical or emotional consequences of these events, and these consequences may contribute to marital conflict or IPV.

Ongoing Consequences of Traumatic Experiences Impact Marital Relationship

Respondents in IDIs discussed a number of practical consequences of traumatic experiences, particularly during genocide, that continued to affect them today. Several of the stories linked these negative consequences to IPV; for example, respondents noted ways that habits learned during war, genocide-related poverty, or prison terms could cause or exacerbate conflict in the marriage.

Several respondents reported that they continued to suffer from practical consequences directly related to the genocide that affected their marriage relationship. This former soldier was the only respondent who directly attributed his abusive behavior to habits he had learned during military service and the war:

> I spent many years in the army and there was lots of shooting! That's why, because of all those things, I requested to get out, and I started to treat my wife in that way [abusively], although later I changed my behavior. *(UCOM2)*

Other respondents referred to ways that consequences of genocide indirectly affected their marriage relationship. One woman described how the problems her husband encountered with accusations during *gacaca* (the post-genocide community legal proceedings) resulted in missed economic opportunities. Living in poverty as a result of these missed opportunities made life harder and may have exacerbated IPV.

Another woman refrained from reporting her husband's violence out of fear that it would stir up accusations of genocide ideology against him[12]; if he went to prison it would create

[12] It is common in Rwanda for people to believe they may be under suspicion of "genocide ideology" and to fear that an accusation might lead to imprisonment. These fears are not always unfounded; see Jansen, Y. (2014). Denying genocide or denying free speech? A case study of the application of Rwanda's genocide denial laws. *Northwestern Journal of International Human Rights, 12*(2), 191 - 213.

substantial economic hardship for the family. A man in a mixed ethnicity marriage reported that refusing to testify against the killers of his wife's relatives had made her family hate the couple and take land from them. He noted that the issue of the deceased relatives became a point of conflict when they were fighting: "We would quarrel... she would say that I am bringing back her past about her relatives, those who died from her family" *(ZCSM1).*

Four of the male respondents had served prison terms, and the experiences in prison were noted as a factor in marital conflict. For example, one woman reported that her husband's mother had used his prison term to cause conflict by accusing the wife of adultery while he was away. The stories of three of the formerly imprisoned men were different from the others; they reported only victimization and their wives were not interviewed. In their stories each had served time in prison for genocide crimes and were convinced that either their genocide crimes or the time in prison had caused their wives to abuse them when they returned home. Two men explained that their wives behaved abusively because they believed their husbands to be guilty of murder during genocide. This respondent described his situation:

> ...we came out of prison when the President of the Republic gave us forgiveness so that we may have relationship with those we hurt and build the country, but then, they [my family] accuse me of ideology: I am a murderer, and if they kill me, it will not harm anything because I also killed [others]... *(ZCSM2)*

The third man attributed marital conflict to his wife's anger at the reduction in her freedom and financial independence that his release from prison had caused.

I: You said when you had that conversation [about IPV] that her explanation was that she was angry. Can you say anything more about that?

R: She is upset. The only thing I can add is that women who, for people like us who lived in prison, you find that the women are independent. Then when you get there [home from prison] she realizes that the liberty she had is maybe going to be limited. Because what I think happened is that that liberty of hers, she realized that it starts reducing... *(UCAM1)*

Respondents with ongoing consequences of past trauma may be more likely to perpetrate IPV. The practical consequences of traumatic events, such as poverty, land issues, or prison terms) may act as moderators in the relationship between traumatic experiences and perpetration of IPV; those who continue to be affected by the consequences of events may be more likely to perpetrate IPV compared to those who are no longer disturbed by traumatic events. This may explain the lack of a statistically significant relationship between the traumatic event variables and IPV perpetration in the Huye survey data. This was not tested in this study and is an area for future research.

Mental Health Problems and Intimate Partner Violence Perpetration

Survey and IDI respondents also discussed emotional consequences of traumatic exposure, i.e., mental health problems. I use Huye District survey data for bivariate and multivariate tests and data from IDIs to examine the relationship between PTSD, depression, and IPV. Table 20 presents the results of bivariate tests of the relationship between mental health variables and perpetration of at least one type of IPV in the prior year (DV1).

Table 20. Bivariate Tests of Past Year IPV Perpetration, Any Type (DV1) and Mental Health

Variable	No IPV	Any IPV	χ^2	*t*	*p*	*N*
Meets diagnostic criteria for PTSD			23.82		<0.001	135
No *n %*	82 (88.17)	24 (57.14)				
Yes *n %*	11 (11.83)	18 (42.86)				
Meets diagnostic cut off (16) for Depression (%)			6.95		0.008	137
No *n %*	72 (76.60)	26 (60.47)				
Yes *n %*	22 (23.40)	17 (39.53)				

Posttraumatic Stress Disorder

Meeting diagnostic criteria for PTSD was significantly associated with perpetration of at least one type of IPV in the prior year in both bivariate and multivariate analyses (see Table 20 and Table 21). Men who met diagnostic criteria for PTSD were 4 times more likely to report perpetrating at least one type of IPV in the previous year compared to men without PTSD, controlling for age, alcohol consumption, anger, and attitudes toward VAW**,** OR = 4.12 [1.629, 10.42]. Meeting diagnostic criteria for PTSD was also significantly associated with perpetration of physical IPV and emotional IPV in multivariate analyses. Men who met diagnostic criteria for PTSD were 3 times more likely to report perpetrating physical IPV compared to men without PTSD, controlling for covariates, OR = 3.13 [1.10, 8.86], and 1.4 times more likely to report emotional IPV perpetration, OR = 1.39, [0.57, 3.35]. Results of bivariate and multivariate analyses of the relationship between PTSD and individual types of violence (DV2 – DV5) are reported in Appendix F and Appendix G. PTSD was not significantly associated with either sexual or financial IPV, but, as noted previously, this could be due to low power from small group sizes.

Age was the only covariate significantly associated with IPV perpetration in multivariate models; age was negatively associated with any IPV (DV1) and physical IPV. For every

additional year of age, men were 3% less likely to report at least one type of IPV, OR = 0.97 [0.94, 0.99], and 6% less likely to report perpetration of physical IPV, OR = 0.94 [0.90, 0.98].

Table 21. Logistic Regression Results Past Year IPV Perpetration[13], PTSD, and Covariates

	OR	CI (95%)	Est.	SE	p
Meets PTSD diagnostic criteria	4.12	1.63, 10.42	0.71	0.24	0.003
Age	0.97	0.94, 0.99	-0.03	0.02	0.045
Alcohol consumption[a]	1.73	0.90, 3.31	0.55	0.33	0.101
Anger	1.01	0.98, 1.04	0.01	0.02	0.637
Accepting attitude for spousal violence[b]	1.86	0.68, 5.09	0.31	0.26	0.225

Note: [a]Log transformed. [b]Reference category = does not accept spousal violence in any scenario

Depression

Meeting the diagnostic cut-off for depression was associated with perpetration of at least one type of IPV in the prior year, in bivariate but not multivariate analyses (See Table 20 and Table 22). Meeting the diagnostic cutoff for depression was significantly associated with past year perpetration of at least one type of IPV, $\chi^2 = 6.95$, $p = .008$. However, depression was not significantly associated with IPV perpetration, controlling for age, alcohol, anger, and an accepting attitude toward spousal violence. The results were similar for physical and emotional IPV perpetration: men who met the diagnostic cutoff for depression were more likely to have perpetrated physical IPV, $\chi^2 = 4.46$, $p = .035$, or emotional IPV, $\chi^2 = 7.34$, $p = .007$, but depression was not significantly associated with physical or emotional IPV perpetration in multivariate analyses. Depression was not significantly associated with sexual or financial IPV perpetration in bivariate analyses (See Appendix F).

[13] All regression models modeled the outcome of "Yes, perpetrated IPV in the prior year".

Table 22. **Logistic Regression Results for Any IPV Past Year (DV1), Depression, and Covariates**

	OR	CI (95%)	Est.	SE	p
Meets depression cutoff	1.82	0.77, 4.29	0.30	0.22	0.170
Age	0.97	0.94, 1.00	-0.03	0.01	0.020
Alcohol consumption[a]	1.67	0.99, 2.85	0.52	0.27	0.057
Anger	1.02	0.98, 1.06	0.02	0.02	0.265
Accepting attitude for spousal violence[b]	1.81	0.74, 4.43	0.30	0.23	0.196

Note: [a]Log transformed. [b]Reference category = does not accept spousal violence in any scenario

Moderation Analyses

I tested the possibility that emotional consequences of traumatic exposure, such as mental health problems, moderate the relationship between traumatic experiences and IPV perpetration. Nearly twenty years after genocide, it is possible that those Rwandans who developed a mental health problem as a result of their traumatic experiences are more likely to perpetrate IPV compared to those who endured traumatic events but did not develop mental health problems. However, neither PTSD nor depression moderates the relationship between lifetime trauma exposure and IPV perpetration in this Rwandan sample. Table 23 and Table 24 present the results of moderation analyses and show that the interaction of PTSD and trauma exposure was not significant, nor was the interaction of depression and trauma exposure. There were no significant interaction terms in moderation analyses for mental health variables and physical IPV perpetration or emotional IPV perpetration. (See Appendix H).

Table 23. **Logistic Regression Results Past Year IPV Perpetration and Interaction of Lifetime Trauma and PTSD**

	Est.	SE	p
Meets PTSD diagnostic criteria	0.88	0.90	0.325
Lifetime trauma exposure	0.01	0.08	0.872
PTSD*Trauma exposure	0.00	0.07	0.945

Table 24. **Logistic Regression Results Past Year IPV Perpetration and Interaction of Lifetime Trauma and Depression**

	Est.	SE	p
Meets depression cutoff	0.66	0.49	0.173
Lifetime trauma exposure	0.04	0.05	0.406
Depression*Trauma exposure	-0.03	0.03	0.380

As noted, I asked respondents in IDIs to discuss sad, difficult, or stressful events as part of the in-depth interview, and some were more willing to share these stories than others. I neither asked respondents to complete any mental health screening tests nor did I ask them to report specific symptoms; subsequently the mental health status of IDI respondents is unknown. However, several respondent stories included reports of incidents that may indicate mental health problems, and I use these reports to deepen understanding of the findings from Huye District survey data.

Possible Mechanisms in the Relationship Between Mental Health and IPV

Stories shared by respondents during in-depth interviews in both Kamonyi and Huye Districts provide support for a relationship between mental health problems and perpetration of IPV and suggest three possible mechanisms for this relationship. Reports from male and female respondents suggest that 1) mental health problems may lead to IPV when a perpetrator's symptoms exacerbate conflict, 2), mental health problems may lead to IPV when a victim's symptoms exacerbate conflict and 3) the relationship may be bi-directional (i.e. marital conflict or IPV can lead to or worsen symptoms of PTSD or depression).

Symptoms of mental health problems exacerbate perpetration. As noted, without measures of mental health, it is not possible to draw conclusions about the mental health status of IDI respondents. However, a limited number of reports provide some support that mental health problems may lead to perpetration of IPV.

A member of the research team experienced victimization from IPV for many years of her marriage and agreed to be interviewed as a key informant. She described a highly abusive husband who subjected her to severe physical and emotional abusive over many years. She attributed his behavior to mental health problems that resulted from the trauma he experienced during genocide in this excerpt from her interview:

> I heard from people that he was beaten during genocide; he had the scars on his head. And after genocide, he was with his young brother and his brother died suddenly [in a car accident] in 1996. It was too much for him... He had that problem from genocide and he had an accident and... he got to the point that he took drugs for mental health[14]... I didn't know that before, but afterward I heard the stories from people [explaining] that he has this kind of problem. Not only did he used to fight [with me], but he even used to have nightmares and wake up in the night, if you were not careful to lock the doors he would go out... I found out later, but I had suspected. That's somehow why I didn't leave him sooner because I was thought that all the things he does it's because of his genocide wounds. I was like 'he had trauma and I will have mine later, so I have to stay.' In general, everything it's because of genocide impact.

Here she describes symptoms of both PTSD (re-experiencing during the memorial period) and depression (wanting to die). She also notes that he abused alcohol during periods of particular difficulty:

[14] Pharmacological treatment for mental health problems is rare in Rwanda and very likely indicates significant mental health problems.

> During the mourning period he would get drunk, and one could not ask him why he drank all the money. He used to say that all money is for drinking beer because people died and he wants to die too. He always said that he wants to die. Many times he used to say that he would kill himself, that he will shoot himself. Whenever he said that he would shoot himself I could not handle it by myself; I called the police and they would take him away. He got the gun from soldiers because he used to be a soldier. He would crash the car and commit an accident because he wanted to kill himself. He always said that he might die soon.

Her description presents a man whose extreme volatility and propensity for violence may have been caused by his symptoms of PTSD; his ability to process information and stimuli may have been altered by extreme trauma, changing his brain and leaving him in a “hyperaroused, vigilant, sleep-deprived and potentially explosive state that worsens over time” (Beckham, Moore, & Reynolds, 200, p. 458).

A report from one respondent in the Huye District follow-up IDIs provided support for the theory that a person with PTSD may be more likely to perpetrate because of increased irritability (Beckham, Moore, & Reynolds, 2000). He described times when he would be thinking “bad thoughts” about traumatic events that happened to him. The conversation below presents his explanation of how being disturbed by his wife or child when he was having those thoughts might lead to violence:

> *I: What if a child comes and disturbs you when you are having those thoughts?*

R: If the kid comes, I would ask him to take care of that [request], maybe I'm in bed and I'm having those thoughts, and if the kid doesn't do it I would get angry and hit him with a stick.

I: What about your wife?

R: It depends on how she asks it.

I: Can you give us an example of two different ways she might ask?

R: She might come and she is humble. Then you may show her that there is no problem that she was just asking... But she may come, and she is angry. I might answer her badly, maybe I can get angry too and this can rise something.

I: Like what?

R: Like slapping her; if I slap her I may after regret for having done that. *(SQCM1)*

A number of the women's reports from Kamonyi District also described male partners who were irritable or bad-tempered; they may have been describing irritability from trauma-related mental health symptoms, but it was not possible to confirm this.

As noted previously, a number of men described themselves as victims of IPV from their wives. In many of these cases, the stories also included a description of trauma the wives had endured because of the husband (e.g. being abused by him, learning he had killed during genocide, or sexual assault from soldiers while caring for husband in prison). It is possible that the behavior the men describe as abusive is related to the traumatic stress of the wife. For example, this man reported that his wife slandered his name in the community and he occasionally feared she would injure him during an argument, but he admits that her behavior

may be a result of the trauma she endured during his prison sentence and the physical abuse he perpetrated before genocide. He explains here that he can no longer walk alone with her in the dark because of an episode when she became very afraid he would kill her:

> *I: ...you said that out of nowhere she started being "difficult". I'd like to hear your opinion on why this happened.*
>
> R: What I think might have changed it... I think that it might have come from the consequences of what I did to her during the other life I told you about, when I was doing her bad...
>
> *I: I see. Has she ever explained her behavior?*
>
> R: I don't really ask—but let me give you a tangible example... [It happened about] three times... I would call her [to say] let us meet at this place …but when we get on the way or on the way home it turns into problems, and she feels that I can immediately kill her on the way. Now I have decided not to go anywhere again with her, or if I want to go with her I take a child from home and we go together so that she will not have problems on the way there. I think that maybe it is the trauma that she got, maybe from my problems, there is nothing else for sure *(UCAM3)*

Another respondent whose wife also endured trauma during his prison sentence reported that he felt victimized when his wife refused to feed him, insulted and ridiculed him, and sold family property without discussing it. He admitted to having beaten her in the past. He describes how her expression of fear sometimes led to an argument and an episode of violence:

> R: You will find her accusing me of saying that I will kill her... when those things have not even happened. She would bring up things like

those, and there is even a time we quarreled and we even fought because of things like those.

I: What kind of fighting?

R: I beat her. *(ZCSM1)*

These women may have symptoms of re-experiencing the trauma they endured and their husband's presence may be a trigger. These women may represent a unique population of women who for economic and social reasons[15] have allowed their husbands to return home after a prison sentence even though they have been traumatized by his violence and fear its reoccurrence. The "abuse" they perpetrate may be a response to this fear or to the ongoing abuse they experience. Future research is needed for this unique population, as data is limited, and I did not interview the women whose husbands accused them of IPV (these male respondents were reluctant for their wives to participate in the study).

Several stories demonstrated that in some Rwandan communities genocide-related experiences are anecdotally considered to be the cause of serious IPV perpetration. One respondent in Kamonyi District reported the behavior of a neighbor couple he had observed. He explained that the neighbor frequently threatened to kill his wife and was highly controlling of her behavior:

There is a neighbor we have... he lives like this, [and I feel bad for] the wife; he is always saying he will kill her... The wife does not eat bananas, the husband stopped her from eating them. She stopped drinking milk when she used to drink it; the husband stopped her from drinking it...

[15] There is tremendous economic and social pressure in Rwanda to remain married, even when abuse occurs. The government and RWAMREC strategies to address IPV reflects this: they largely encourage reconciliation rather than separation or divorce.

He goes on to explain that the man does not have problems in any of his other relationships, only his relationship at home, and he notes that community members attribute the abusive behavior to an "inner turmoil" which resulted from the man's experiences during genocide:

> ... the problem is at home, only home. Except that man got involved in these things of genocide, he was in them... [and] there are neighbors who say that the *umwiryane* [translated as cruelty and bad behavior, also means inner turmoil] he has might be from what he got involved in in ninety-four *(ZCSM1).*

Symptoms of mental health problems exacerbate victimization. A number of stories from respondents indicate that a woman's mental health symptoms may play a role in marital conflict and IPV. Men and women described women's ongoing trauma-related emotional distress and indicated that in some cases it may have increased the likelihood that the distressed woman would be victimized by IPV.

This woman had been raped by soldiers during war, and she describes the problems in her sexual relationship with her husband after that experience. She may have been re-experiencing the trauma, which prevented her from wanting to engage sexually with her husband. She uses ambiguous language but is likely explaining that her husband was forcing sex because of her reluctance:

> *I: I wonder if you can describe for me the consequences of going through those difficult times?*
>
> R: For example, those armed people force you to have sex with them... When I think about that, if someone does things to you without even

talking about it, and in that very difficult time, you feel that it becomes a problem for you.

I: So was there some impact on your behavior or your feelings afterward[16]?

R: When I came back, it wasn't real joyful when I had sex with my husband.

Several stories included references to ongoing emotional distress that women experienced as a result of prior trauma and the role that this distress played in relationship conflict. One man described the way that his traumatized wife did not respond well to his desire to assert his authority at home. He notes that:

> Then there would be a time when I want to do what I want because I am a man in the house. Then because of the sadness she has about the loved ones she lost (up till now she is alone), she would think about what happened to her, and hear what I say to her and feel that it does not connect in any way, and we would dispute. We would dispute many times. She would want to make me understand that she lost people, and I would tell her that I am not the one who killed them, and I would tell her that if you lost them, I too lost them, but you have to do what I order you [to do]. Then the understanding [between us] would not be there; that's how we would argue every time. *(SIJM3)*

Later in his narrative he uses the term "noise" to explain that normal conflicts could escalate more drastically during fights with a traumatized person:

[16] The interviewer did not catch the ambiguous reference to the woman's husband (translated as someone).

> ...at home you can fight over it, you can argue over something that is normal but, because she is thinking about the other things (pause) what one may fight over when one did not suffer traumatism...and what [one] might fight over another when they... [do] have it, you find that the noise that happens there is not the same... *(SIJM3)*

Another man reported how his wife's trauma symptoms and resulting behaviors made life difficult for him in their community:

> She is a person who never feels happy, she doesn't have good relationships with people; you see what she does, and you cannot get angry with her for everything. When she sees people she says that they are the ones who did that [genocide violence] to her. She tells them, "You Hutus, you exterminated my people." You find that I'm the one always takes the blame.

When he would confront her regarding problems with the neighbors, it led to an argument:

> Sometimes I would go to work, when I came back I find that she quarreled with people. If I try to ask her why...she would say "You might be also the part of them, they have been your neighbors, you like them, you are on their side." I would keep quiet, but she would shout and the leaders would get involved... *(ZCVM3)*

His wife confirmed that she re-experienced genocide trauma and stated that her husband did not respond well to her during these episodes. She noted that "he is not a person who knows what to do in that situation, who can reassure you" *(ZCVF3)*.

These stories of women's mental health symptoms leading to conflict and victimization provide some support for theories on ways that trauma-related mental health might increase the risk of revictimization (Foa, Cascardi, Zoellner, & Feeny, 2000; Perez & Johnson, 2008). Women who have developed PTSD or depression from genocide trauma or earlier IPV trauma may have a limited ability to detect cues about new threats from violence (Cougle et al., 2009). Those who are highly stimulated by trauma reminders may not be able to pay attention to threat stimuli (Pineles, Shipherd, Welch, & Yovel, 2007). The symptoms of mental health problems may also contribute to behavior by victims that heighten conflict (Kuijpers, Van der Knaap, & Winkel, 2012); some Rwandan respondents described examples of traumatized women engaging in behavior their husbands found "provoking".

Marital conflict leads to or exacerbates mental health problems. In addition to indicating that mental health problems may lead to marital violence, stories from IDIs demonstrate that marital violence may also contribute to trauma and mental health problems. Chapter 5 presents the stories of women who reported that victimization from IPV made them feel traumatized or depressed. Women and men also frequently reported that marital conflict or IPV reminded them of genocide trauma and that IPV brought back the symptoms of depression or PTSD. Respondents named quarreling, conflict, financial IPV, and marital problems as "triggers" that led to sadness, reliving traumatic events, and remembering altered future plans. This woman reported that when she fights with her husband she is reminded of the trauma she endured during genocide: "Most of the time I get sad when we have conflict. That is when I think about what I saw. Mostly that reminds me of the past." *(SIJF3)*

This man explained that having an argument with his wife could bring up sad memories of relatives she lost during genocide and reminded her that she was unable to leave him because of that loss:

> *I: You said that your wife was a [genocide] survivor and that sometimes even something small would disturb her. Can you give me an example of this?*
>
> R: I would say that I did not want to cause her a problem. We would discuss some things, and she would say that I have brought the past for her—even when we would talk she would say that I have brought the past for her, or maybe even when we would argue she would say that it is because she does not have anywhere to go *(ZCSM1).*

This respondent from the Huye District IDIs shared how a girl he loved before he met his wife had been killed during genocide. He explains that arguing with his wife reminds him of the life he planned to live with the other woman and brings sadness for the loss:

> There are times when I think about that [sad events from the past] when my wife talks to me like that. I feel bad every time she talks to me like that, and it makes me remember my beloved girlfriend. I think about how we were happy together, and I think that I was supposed to marry that first one. *(UIZM3)*

Another man from Huye District explained that his wife was an alcoholic and their son had been the only one who could calm her down when she was drunk. He blamed his wife for the intrusion of unwanted thoughts about the death of his son whenever they would argue:

> She is the reason why I have those thoughts. When we don't quarrel everything is fine. But when she upsets me badly, it reminds me of my son [because] if my son were still alive, he would calm her down. I finally decided to go away from her... *(ZCAM1)*

These respondent stories suggest that marital conflict or violence may serve as a trigger or cue for remembering prior traumatic events.

Summary and Discussion

The study finds that exposure to traumatic events in the past is not associated with recent perpetration of intimate partner violence among Rwandan men. There was no significant relationship between any type of IPV perpetration and traumatic exposure in the past year, during genocide, or during the respondents' lifetime. However, IDI respondents described practical and emotional consequences of traumatic exposure in their stories of IPV during in-depth interviews. It is possible that over time and with interventions for healing, the traumatic events were no longer salient enough to have a direct effect on respondent IPV perpetration. Alternatively, respondents who experience lasting practical consequences of traumatic events, such as prison terms or economic difficulty, may be more likely to perpetrate IPV, but this was not tested with survey data. To examine the possible moderating role of mental health in the relationship between trauma exposure and IPV perpetration, both PTSD and depression were tested as moderators, but the interaction terms were not significant in either model.

Although the insignificant relationship between trauma exposure and IPV is not consistent with other studies of IPV and exposure to political or war violence (Clark et al., 2010; Gupta et al., 2012), this study's findings are more similar to findings from a study in Northern Uganda which found that male perpetrator's exposure to traumatic violence was not associated

with IPV perpetration (Saile et al., 2013). Studies with U.S. military veterans may provide some explanation. One study of U.S. combat veterans found that once the psychological consequences of combat exposure (i.e. PTSD) were controlled for, the relationship between trauma exposure and IPV was negative, rather than positive (Orcutt, King, & King, 2003). A narrative review of military PTSD and intimate relationships posits that "it is not combat exposure per se that directly leads to intimate relationship problems, but rather the post-traumatic psychopathology that can ensue following combat exposure that is the primary determinant of post-combat relationship difficulties" (Monson et al., 2009, p. 709).

Indeed, this study found that meeting diagnostic criteria for PTSD was significantly associated with perpetration of physical and emotional IPV in the prior year in both bivariate and multivariate analyses, consistent with previous meta-analyses (Taft et al., 2011). Meeting the diagnostic cutoff for depression was significantly associated with IPV perpetration in bivariate analyses but not after controlling for age, alcohol consumption, anger, and attitudes toward spousal violence. This finding was consistent with one systematic review which concluded that the relationship between depression and IPV was not robust in multivariate analyses (Capaldi et al., 2012) but inconsistent with other reviews finding depression to be a risk marker for aggression (D. G. Dutton & Karakanta, 2013; Stith et al., 2004). One possible explanation is that the relationship may be affected by other factors that mediate or moderate this relationship, such as marital discord (D. G. Dutton & Karakanta, 2013; Stith et al., 2004).

The risk of perpetrating IPV decreased with older age in both multivariate logistic regression models, and was the only covariate significantly associated with IPV perpetration in the multivariate models. This finding is consistent with prior research from multiple settings (Capaldi et al., 2012; Jewkes, 2002). In Rwanda, age may be a proxy that measures societal

pressure: pressure for older men to set a good example as leaders in their community or as fathers and grandfathers.

Although they were not significantly associated with IPV in the multivariate models, data from IDIs suggests that the role of other covariates should not be ignored. In research with US military populations, anger, alcohol, and social support have been found to be of particular importance in the relationship with IPV for individuals with PTSD, and the possible mediation or moderation role of these factors is an area for future study (Monson et al., 2009; Norlander & Eckhardt, 2005; Taft et al., 2010).

Reports from Rwandan respondents suggest three possible mechanisms by which mental health problems (namely PTSD) might be related to IPV, in line with theory and evidence. First, mental health problems may lead to IPV perpetration: Rwandan respondents with PTSD symptoms may have a more difficult time regulating emotion and may be more likely to respond to interpersonal interactions with aggression and hostility (Beckham et al., 2000). Men who have PTSD symptoms from past experiences they found threatening may be more likely to attribute “malevolent intent” to their partners and respond with violence (Orcutt et al., 2003, p. 387). Descriptions of IPV in relationships in which the male partner was affected by PTSD symptoms provide support for information-processing theories. Some male participants explained that they might react with anger or violence if interrupted by a spouse when troubled by negative thoughts about their past; this reaction is in line with an “arousal regulation deficit” in the information-processing of perceived threats, such that someone with PTSD is unable to inhibit an angry reaction when aroused or threatened (Beckham et al., 2000, p. 456).

Secondly, mental health problems may exacerbate victimization. Perpetrator symptoms and characteristics are important, but reports from Rwandan participants support other research

suggesting that victim characteristics may also play a role in violent behavior (Foa et al., 2000; Iverson et al., 2011; Kuijpers, van der Knaap, & Lodewijks, 2011; Perez & Johnson, 2008). The Northern Uganda study concluded that female victim's traumatic war experience and mental health problems were significantly associated with revictimization from IPV (Saile et al., 2013). Although many victims exert agency and display remarkable resilience when faced with IPV, the psychological consequences or environmental impact (e.g. changes in interpersonal and institutional resources) of victimization from war violence or from IPV may hinder the ability to avoid future violence (Foa et al., 2000). Descriptions of IPV by couples in which the female partner experienced symptoms of mental health problems provide support for theories related to depression and social support. Women described feeling deep sadness in response to traumatic experiences, and this was often accompanied by a perception that little social support was available. The reduced social support may have been real or perceived and may reduce the woman's access to IPV-prevention resources (Capaldi et al., 2012; D. G. Dutton & Karakanta, 2013). In Uganda, researchers theorized that women experienced stigma related to PTSD re-experiencing symptoms which contributed to isolation and IPV (Saile et al., 2013); this is also consistent with women's descriptions of mental health problems and IPV experiences in Rwanda.

In populations in which both partners have been affected by trauma and IPV the relationship becomes more complex: there may be both "actor" and "partner" effects within the dyad (Wolf et al., 2013). When one or both members of the dyad have PTSD symptoms, one partner's behavior may exacerbate the trauma-related symptoms in the other partner (Monson et al., 2009). Descriptions of IPV during IDIs provided some indication of this. In some couples the wife's symptoms of depression or PTSD elicited irritation or anger from the husband; for

example, the man who reported that arguments with his wife often resulted when her mental health problems led to problems with the neighbors while he was away at work. In cases when this anger led to violence it is possible that the male partner may have had difficulty regulating his response because of his own symptoms of trauma-related mental health problems. However, this study did not include partner data in the survey; future research should include measures of both victim and perpetrator characteristics for additional information about the relationship.

Finally, marital conflict may exacerbate mental health problems. Researchers note that a causal relationship between IPV and mental health problems is well-established (M. A. Dutton, 2009). The negative mental health consequences of IPV, particularly for women, have been recorded in numerous countries, across widely varying populations (Ellsberg et al., 2008; Howard, Trevillion, & Agnew-Davies, 2010; Ishida, Stupp, Melian, Serbanescu, & Goodwin, 2010; Meekers, Pallin, & Hutchinson, 2013). In a post-conflict setting, where both victims and perpetrators may have been exposed to multiple types of violence, the relationship between IPV and mental health is additionally complex. Both conflict related violence and IPV are associated with poor mental health (Johnson et al., 2010; Ribeiro et al., 2009; Vinck & Pham, 2013). And the relationship between IPV and mental health problems is likely bi-directional; exposure to IPV leads to mental health problems, and mental health problems exacerbate interpersonal violence.

Other cross-sectional studies have examined this complex relationship between trauma, mental health, and IPV in post-conflict settings, including Rwanda (Umubyeyi et al., 2014; Verduin et al., 2013; Vinck & Pham, 2013). The current study adds to this literature with several unique contributions. This study examines the specific trauma and mental health risk factors for perpetration and includes mental health variables in statistical models for perpetration. The study

concludes that mental health, not trauma exposure, is likely the important risk factor in perpetration for a setting in which the most serious traumatic events took place nearly twenty years ago. The mixed-methods design provides support for a bi-directional relationship influenced by traumatic exposure and mental health of both members of the marital dyad.

Exemplar Rwandan Couple

In previous chapters I used excerpts from multiple stories and interviews to describe the phenomenon of IPV in Rwanda and explore the role of trauma and mental health in the perpetration of IPV in this post-conflict setting. Here I present a descriptive portrait of one married Rwandan couple to illustrate the way traumatic experiences and resulting mental health problems may be implicated in the experience of IPV.

Philippe is 43 years old and has been married to Marcelline, his wife, for 15 years. They have six children. Philippe is a mechanic, but before getting married he was a soldier in the Rwandan army[17] for more than ten years. After fighting during the genocide, Philippe was considering getting engaged to another girl when his aunt told him about Marcelline and encouraged him to pursue her instead, which he did. Marcelline lost her parents in the genocide and was living with a cousin when they met. Marcelline survived the genocide with physical and emotional wounds. Philippe remembers that she still had the scars from her physical wounds when he met her.

Philippe also suffered loss in his early life and during genocide. His mother died during his childhood, and when his father remarried, Philippe and his sister went to live with relatives. At the time of genocide, Philippe’s sister asked for help to flee the country. Philippe did not respond to her request, and she subsequently was killed. Philippe knows that she died “badly”,

[17] In the Rwanda Patriotic Front.

but he does not know where she is buried (which is very important in Rwandan culture), and he continues to be plagued with sadness about her death.

Philippe and Marcelline's marriage started out well for the first year. According to Marcelline, conflict started between them when life changed after having a baby and it continued with each new child. It became harder for her to keep herself and the house clean or to have strength to "do what you used to do" (possibly a euphemism for sexual activity), and she notes that this makes a man begin to "look differently at his wife". During that period of time, when Marcelline questioned his authority as "man of the house", he felt disrespected and would physically abuse her. Philippe also frequently got drunk and was more prone to quarrelling when he came home after drinking. When Philippe came home drunk, if Marcelline did not meet his expectations for how he expected her to behave (e.g. preparing food, caring for animals), they would argue, and their arguments often resulted in his beating her. One time he came home and found that several of their rabbits had died. He refused to accept Marcelline's explanation that they had gotten sick, and he beat her with a stick.

Another time Philippe got drunk celebrating the baptism of one of their children. He had invited people to celebrate at their house, and after some time Marcelline let Philippe know she was ready for them to leave. He interpreted this as a sign of disrespect, felt that he should decide when it was time for visitors to leave his own house, and they argued. Philippe and Marcelline disagree about what happened during that fight; according to Philippe, he chased her with a stick to beat her, but before he could touch her, she hit him so hard in the arm that it took months to heal. Marcelline's version of the story is that he hurt his arm riding a motorcycle but told everyone she hit him in order to damage her reputation.

Although neither Philippe nor Marcelline spoke openly about it, Philippe hinted that there may have been sexual violence in their relationship at one point. When Philippe heard about the law against gender-based violence on the radio he learned for the first time that sexual violence in marriage was possible (i.e. sex without consent or marital rape). Without admitting it directly, in his interview he noted that he might have violated his wife in this way without knowing that it was considered violence.

Marcelline's status as a genocide orphan gave her few options during the period of time when they were having marital conflict. Without parents, she was unable to resort to *kwahukana*, or returning to her parents' home. These difficult circumstances not only made her very sad, but during arguments, Philippe also taunted her with the fact that she had nowhere to go. She always felt afraid and felt that there was nothing she could do about it. She feared to do certain things, believing her husband could kill her if she displeased him, and no one would rescue her.

Up to today, both Marcelline and Philippe continue to think about the difficult times they experienced in their childhoods, during genocide, or in their marriage. Philippe still gets emotional when he talks about the death of his sister. He reported that thinking about it makes him "get a problem", and he wanted to change the subject when it came up during his interview. Marcelline confirmed that this continues to haunt him, and noted that when he remembers he either expresses regret or refuses to talk about it. In her opinion, Philippe's sadness over his sister does not worsen conflict between them; instead he gets quiet or ignores the children if they disturb him when he's feeling upset.

Marcelline also became emotional when sharing the story of her difficult past, which began when she lost her father during childhood, and worsened when her mother and other relatives died during genocide. During the time of marital conflict she got a "problem in her

belly”. Marcelline continues to feel isolated because of the loss of her relatives and believes that she would feel much better if she only had someone to share her story with. She reported that even the limited sharing during her interview had helped her to feel “free”. According to Marcelline, when she is sad Philippe leaves her alone and does not speak to her.

Philippe attributes many of the problems in their relationship to Marcelline’s traumatic past and the emotional distress she continues to experience. He explained that sometimes when he comes home, if she is “in her sadness”, and if he is also remembering sad thoughts, then they could quarrel. In the past when he found her ruminating on her tragic past, he would argue and defend himself, saying that he wasn’t the one who had killed her relatives. He would try to make her behave in the way he expected a “good wife” to behave.

Today Philippe takes some of the responsibility for their marital conflict. He admits that in the past was focused on other things; he prioritized his own “rights” and held onto his expectations for how he should be able to behave in his home and his relationship. He acknowledges that he denied her rights. In retrospect he realizes that when they got married he agreed to become her family and help her to “forget those she lost”, and he believes that for a period of time he had forgotten that responsibility to her.

Philippe and Marcelline credit the advice, support, and training they received from RWAMREC for helping them improve their relationship and reduce violence. Philippe notes that having more open sharing and discussion with Marcelline has helped them. In addition, he explains that learning about the law on the radio made him aware of what was considered violence and helped him decide to change. Both indirectly referred to the Rwandan government’s promotion of women and the awareness campaign around women’s rights during their interviews. Marcelline explained that the changes in women’s rights have been very helpful; now

that women can handle money and do projects, things have improved for women. Similarly, women are safer now because they can get justice; they can be rescued if they are being physically abused, and there are now people available in the community who will intervene rather than telling them to keep their mouths shut (in contrast to her mother's era). Philippe called these changes "equality", and his opinion of these changes is not wholly positive. He explained that some women in their community had misunderstood this and were refusing to do certain household chores which, in his opinion, should only be done by women "no matter what".

Philippe asserts his intent to follow the advice from RWAMREC and to respect Marcelline's rights. In his words: "I have decided not to go back. I feel that the advice we were given I have to follow it. Slowly by slowly, and God will help us." Marcelline agreed that things are different now after the training with RWAMREC. She feels safer, and she can talk to her husband without him insulting her. She and Philippe now talk about how they will spend their money. Yet Marcelline's sadness remains close to the surface; if she and Philippe have any conflict it reminds her of her sad past, and she still feels very isolated. She is grateful that her marriage brought her children, and she sometimes comforts herself with the thought that when they grow up she will be able to share her story with them.

Trauma, mental health, and IPV in an exemplar couple. The experiences shared by Philippe and Marcelline provide a portrait of a couple that has experienced trauma, continues to be affected by mental health problems, and struggles to resist violence in their relationship. Presented in full, their mutual story provides a rare look at the experience of IPV from both partners and the emergence and trajectory of violent behavior (Capaldi et al., 2012). The story highlights the different factors that "impel" or "instigate" partner violence, such as Philippe's

early beliefs about gender roles and the way Marcelline's mental health symptoms contribute to his anger with her. The story also highlights the "inhibiting" factors that have helped them to reduce violence, including the support they've received from RWAMREC and the improvement in communication between them. Although neither Philippe nor Marcelline completed a mental health screening, their descriptions of the trauma they experienced and the symptoms they describe strongly indicate that both partners likely continue to suffer from mental health problems. The descriptions they shared of their own reactions to their partners' symptoms provide support for the study's quantitative finding that mental health problems are associated with perpetration of IPV. Their story also provides detail to indicate that the mental health of both partners is important and a necessary area for further study.

Chapter 9 Implications and Conclusions

Summary of Findings

This study found that Rwandans have been exposed to multiple traumatic experiences over their lifetime, many of them severe. For many Rwandans the resulting economic or emotional impact of these events continues to affect them and their intimate relationships. Mental health problems are one way that traumatic events continue to affect Rwandans, and more than one-fifth have symptoms at a level that they meet diagnostic criteria for PTSD and more than one-quarter have symptoms indicating clinical levels of depression. A number of Rwandan women have been traumatized over their lifetime from hardships in childhood, life-threatening experiences in genocide, and multiples types of IPV.

The majority of Rwandan men have experienced physical, sexual, emotional, or financial intimate partner violence in their lifetime; 56.93% report perpetrating violence against a female partner at least once. Although not the focus of the current study, more than half of male survey respondents reported being a victim of at least one type of IPV in the previous year. Stories of IPV shared by male and female partners confirmed a number of similarities in the onset and course of IPV; common hallmarks of IPV in Rwanda include early marital harmony, an escalation of conflict after the arrival of children, male-perpetrated physical or sexual violence, emotional or financial abuse (occasionally mutual), use of the traditional practices of *kwahukana* and *gucyura uwahukanye*, and eventual reconciliation (for those involved with the local partner, RWAMREC).

The study presents a profile of the unique and contextually relevant risk factors for IPV in Rwanda. It documents respondent descriptions of ways that patriarchal beliefs, alcohol use, anger, “unsupportive others”, poverty, trauma exposure, and mental health may increase the risk

of perpetration of IPV. The study also examined contextually important protective factors including older age, supportive others, public shaming, anti-violence legislation (and enforcement), the desire for economic development, and good marital communication. Patriarchal attitudes, alcohol use, and anger emerged as statistically significant in bivariate analyses, and older age and mental health problems remained statistically significant factors for recent IPV perpetration for Rwandan men in multivariate analyses. The role of "unsupportive others", public shaming, enforcement of anti-violence legislation, and the desire for economic development may be unique in the context of Rwanda.

A comparison of Rwanda's unique profile of risk and protective factors against one from another region (e.g. South Asia) shows that IPV does indeed look different in each place and context matters (Fulu et al., 2013). The findings also highlight the importance of mixed methods to identify factors that may not have been included in other studies and which may be unique for each particular setting.

Rwandan men meeting diagnostic criteria for posttraumatic stress disorder were more likely to have perpetrated at least one incident of physical, sexual, emotional, or financial violence against a female intimate partner in the year prior to the study, controlling for covariates. Trauma exposure and depression were not significantly associated with IPV perpetration after controlling for other covariates. It is possible that trauma exposure was not associated with IPV perpetration because, for many respondents, there were no remaining "consequences" or symptoms to affect behavior. According to respondent reports, the relationship between mental health problems and IPV perpetration may take one of three possible forms: 1) a perpetrator's mental health symptoms exacerbate marital conflict, 2) a

victim's mental health symptoms exacerbate marital conflict, or 3) marital conflict exacerbates mental health symptoms.

Limitations of the Study

The study's findings should be interpreted in light of several methodological limitations. The sample size was constrained; therefore, there may not have been adequate power to detect differences between groups for some analyses. Particularly for those events which were rarely reported (such as sexual violence perpetration), there was little variance, and a larger sample may have been needed to detect an effect. Studies of post-conflict IPV and mental health are necessarily cross-sectional and observational, and it is not possible to draw conclusions about causal relationships. Several of these relationships, e.g. between mental health and violence perpetration, have been noted as complex and possibly bi-directional. The study also relied on retrospective recall for many variables, including trauma exposure. Respondents are vulnerable to recall bias in any self-report, particularly for reports of highly emotional events (Burke, Heuer, & Reisberg, 1992).

The difficulties of conducting research in Rwanda, particularly on sensitive topics such as genocide trauma or violence perpetration, have been recorded elsewhere (Burnet, 2011; King, 2009; Thomson, 2010). Respondent tendency to give socially desirable answers is particularly salient in Rwanda, where respondents frequently give responses according to a "public transcript"; i.e. answers that conform to the discourse generated and promoted by the state about a given topic, rather than sharing their personal opinions or beliefs (Scott, 1990, p. 2 cited in Burnet, 2011; Thomson, 2010). Some study respondents expressed concern or anxiety during questions related to genocide, indicating that they may have censored their responses. The

ethnicity of data collectors may have influenced responses, and it was not possible to test this because of prohibitions against any discussion of ethnicity in Rwanda.

In any IPV study, it is possible that IPV, particularly perpetration of IPV, is under-reported (Ellsberg, Heise, Pena, Agurto, & Winkvist, 2001) . In Rwanda the government strategy to reduce gender-based violence includes enforcement by imprisonment or public shaming, which may have reduced reporting. The selection of only respondents currently co-habiting (i.e. not divorced or separated) may also have contributed to under-reporting. Respondent reports of reconciliation after IPV during IDIs may have been exaggerated because respondents felt compelled to give a "good report" on the work of the local partner, RWAMREC.

Strength of the Study

Despite its limitations, the study makes an important and timely contribution to the state of knowledge for intimate partner violence in Rwanda and other post-conflict settings. The study is the first to use mixed methods to describe and analyze the role of trauma exposure and mental health problems in IPV for Rwandan couples. The use of mixed methods allowed the description of phenomenon, the examination of factors associated with IPV, and a preliminary discussion of possible mechanisms. The methodology helped to address one limitation of a risk and protective factor framework, as they do not typically attempt to explain the pathways through which the factors may cause (or reduce risk for) IPV perpetration (Finkel & Eckhardt, 2013).

Research on IPV in Rwanda is very limited, and earlier studies on trauma, mental health, and IPV in Rwanda used only survey data and had either a narrow focus on victimization (Umubyeyi et al., 2014) or were limited to a sample from a therapeutic intervention (Verduin et al., 2013). The study also makes a new contribution to the limited body of knowledge on IPV in post-conflict environments globally; it examines the role of both trauma exposure and mental

health on IPV perpetration instead of only trauma exposure (Catani, 2010; Clark et al., 2010; Gupta et al., 2012; Vinck & Pham, 2013), and it tests the relationships in a representative community sample (Saile et al., 2013).

The research partnership with RWAMREC, and RWAMREC's highly supportive model of "accompaniment" for couples with conflict, made it possible to interview both male and female partners. Research on IPV involving couples is rare, and knowledge on the emergence and trajectory of violent behavior between partners has been limited (Capaldi et al., 2012). This also allowed the comparison of reports of violence between partners, with the finding that (among the RWAMREC-trained sample) there was generally agreement across partner reports.

The study responds to recent calls from WHO researchers to determine unique risks and protective factors relevant for the country or local context (Fulu et al., 2013). This unique profile allows for an understanding of risk factors at multiple socioecological levels so that interventions can address change at every level (Jewkes et al., 2014; Temmerman, 2014). The study also highlighted protective factors, which have frequently been neglected in research on correlates of IPV perpetration (Capaldi et al., 2012).

Implications for Research, Practice, and Policy

The study's findings have important implications for research, practice, and policy in Rwanda and other settings where the population has been exposed to traumatic violence. Rwanda has been highly progressive in the area of IPV policy and intervention, particularly for a country still rebuilding after genocide, but the study's findings suggest areas for improvement. The Government of Rwanda, researchers, and practitioners have also recently made important efforts to promote mental health in spite of limited resources, yet gaps also remain in research, policy, and practice in this area. Although research has highlighted promising treatment options for

trauma-related mental health problems affecting large percentages of the population, implementation and dissemination has been slow. The study's findings indicate the need for additional research to develop, evaluate, and disseminate culturally relevant interventions for both IPV and mental health. In particular, the findings indicate a need for policy and programs that account for a relationship between trauma-related mental health problems and IPV.

Intimate Partner Violence in Post-Conflict Rwanda

Despite nearly 20 years of policies and programming to promote and protect Rwandan women, IPV persists and is largely perpetrated against women. Although there is evidence that the situation is changing for some, Rwandan women continue to be denied rights to money, property, freedom from physical violence, and decisions about their own sexual activity. The Rwandan government has been extremely proactive in passing and enforcing policies to protect women, including the national GBV law. A monitoring system exists to report infractions of the GBV law to higher levels of government administration. A number of government-sponsored programs, such as the family evening talks (*akagoroba k'ababyeyi*), are regularly being implemented.

Many of the "success stories" reported by participants in this study were attributed to the government program; for example, men whose behavior changed after they became aware that it was considered abusive. Women reported feeling more satisfied in their relationships once they felt their rights to money or property were enforced and safer now that they are able to report violence. However, high rates of reported IPV perpetration by men and the narratives provided by women in the study suggest there is room for improvement in the national GBV strategy and its enforcement. Earlier research in Rwanda noted the presence of a "backlash" by men against the government's promotion of women. A study by Women for Women International found that

many people believe the reforms are disruptive to family harmony, and resistance is particularly strong in rural areas (Omaar & Ibreck, 2007). Both urban and rural residents in this study and others reported the belief that government reforms had contributed to increased marital problems, in part due to a misunderstanding of gender equality and because some women had begun to “behave like men” (Burnet, 2011, p. 326). There are anecdotal reports that some abusive partners have merely switched tactics—using forms of violence that are not as easily detected as physical abuse, for example, silence or other forms of emotional abuse. Both men and women reported a dislike of the use of public shaming techniques.

Overall the government strategy relies on education (“sensitization”) and enforcement of laws via shame or punishment. The study’s findings on the important role of mental health problems in IPV perpetration suggest that a less punitive strategy may be advisable, and there is need for a therapeutic component. Study participants indicated that ongoing campaigns related to patriarchal beliefs and the importance of women’s rights are important and effective; however, adding a component of psychoeducation regarding the role of trauma and mental health may also be helpful. The GBV policy may need to acknowledge that much of the Rwandan population is still dealing with economic and emotional consequences of genocide. A number of Rwandans are also dealing with substance use, which could be related to traumatic stress or depression. Revising the manner in which the legislation is enforced so that counseling or mental health treatment are possible alternatives to punishment may be beneficial.

Study participant’s positive responses to the RWAMREC model of inviting men to be allies suggests another way that GBV policy could be improved. Again, the authoritarian and punitive enforcement of GBV legislation seems to encourage many Rwandan men to situate themselves as victims; although the language of the legislation does not assume men are

perpetrators and women victims, this is how it seems to be perceived by many at community level. Additional research that follows the course of this trend is important, as is research that investigates the anecdotal claim that perpetrators are changing the form of IPV perpetrated rather than reducing it. Policies and programs that account for the influence of violence and oppression against both men and women across the life course may enable Rwandan men to recognize IPV as part of an oppressive system and to be motivated to directly contribute to change (Jewkes et al., 2014).

The existing infrastructure of the government's programming for IPV/GBV presents an opportunity to add additional components that acknowledge the role of mental health and alcohol use. Building on the close involvement and monitoring by community leaders, a revised program could allow community leaders to screen for other factors highlighted in the study's risk and protective factor profile. For example, village leaders who identify couples with IPV could also be trained to screen for possible mental health problems or substance abuse and be prepared to refer couples to appropriate treatment or services in addition to providing education on IPV. The program might also build on the protective factors identified, such as social support and social pressure and limit the shame that couples who experience marital conflict report disliking. In community meetings "model couples" are presented as good examples, while couples with conflict are shamed. Perpetrators of IPV may be more receptive to a strategy that links the "model couples" with the couple in conflict for accompaniment and advice, without the aspect of public shaming. Respondents also named strategies that they had developed to reduce violence, such as anger management or economic development; community leaders could identify individuals who have adopted these strategies and proactively connect them with others who experience IPV; there is some evidence that this is already taking place in a few communities.

Other service providers working in the area of IPV in Rwanda can benefit from awareness of the risk and protective factor profile. For example, RWAMREC volunteers should be aware of possible negative influences on a couple, such as other community members. Understanding that multiple factors may play a role, service providers such as RWAMREC will likely want to form partnerships with providers of different types of services, for example substance abuse (or else train their own staff to know how to deal with it). Research in South Africa, for example, has demonstrated the effectiveness of interventions to simultaneously reduce IPV and improve economic development for couples affected by poverty (Kim et al., 2007). As recommended by WHO researchers, service providers cannot act alone; intervention is needed at multiple socioecological levels, and researchers, practitioners and policy makers need to coordinate efforts (García-Moreno et al., 2014; Jewkes et al., 2014).

Findings from in-depth interviews highlighted that certain subgroups may be at greater risk for IPV. Providers may also need to consider the unique risks for some of the special groups identified, such as women without extended families, couples in mixed ethnicity relationships, and men who have returned home after lengthy prison sentences. Future research on these subgroups may help to highlight their unique needs. The intensive accompaniment model used by RWAMREC may be especially helpful for these vulnerable subgroups, and other providers in Rwanda and globally may want to copy this strategy.

Mental Health Problems and IPV in Rwanda

Acknowledging the role of PTSD in IPV perpetration has particular implications for practice in Rwanda. Providers of services for gender-based violence (e.g. RWAMREC) will need to consider the mental health of program participants and may need to provide psychoeducation or provide referrals to mental health services as appropriate. Conversely providers of MH

services will also need to be aware of heightened risk for IPV that is associated with MH problems in Rwanda and respond by providing screening or referrals. Intervention and evaluation research for the Rwandan context is needed for IPV interventions that incorporate a therapeutic component, and practitioners will likely need to consider trauma and PTSD in both members of the couple. Research with victims in other settings has demonstrated that it is possible to treat PTSD in low-income, conflict affected countries (Bass et al., 2013), and treating victims' PTSD symptoms can reduce vulnerability to IPV (Iverson et al., 2011). Interventions with other conflict-affected populations showed promise in reducing aggression by treating PTSD with narrative exposure therapy (Hermenau, Hecker, Schaal, Maedl, & Elbert, 2013). Future research in Rwanda could investigate the effectiveness of other means of treating PTSD symptoms with interventions such as couple-based conjoint cognitive-behavioral therapy for PTSD, shown to be effective in a clinical trial with veteran couples in the USA (Monson et al., 2012). There is also a need for more research using dyadic analysis of the relationship between traumatic exposure, mental health problems, and IPV in couples, as this can highlight "actor and partner effects" and further inform intervention (Wolf et al., 2013, p. 329).

In spite of impressive efforts by the Rwandan government and its partners to improve mental health services, resources and knowledge remain limited. According to key informants, as of 2013, the entire country's population of close to 12 million Rwandans was served by five qualified psychiatrists. Mental health services are concentrated in urban areas or limited to district hospitals which serve a population of 200,000 – 400,000. A substantial proportion of the Rwandan population experience symptoms of mental health problems, indicating a need for additional research, services, and public policy. The survey sample for this study was limited to men, but women's mental health emerged as particularly salient based on reports from IDIs.

Therefore, to address mental health needs in Rwanda, more research may be needed to develop additional interventions, particularly those that build on Rwandan culture and its existing strengths.

Some early studies on community, family and individual resilience do this (Betancourt et al., 2011). Certain protective factors, such as positive social support, have been found to be particularly helpful for PTSD and interpersonal violence in a trauma-exposed population, and may not require extensive resources from external sources (Monson et al., 2009). Training lay people for therapeutic work may be a helpful complement for ongoing efforts to develop and strengthen the number and capacity of mental health professionals; this type of intervention has been found to be effective with other trauma-affected populations in Africa (Neuner et al., 2008). Interventions that rely on local resources may also be particularly important for the Rwandan context where mental health problems carry stigma and taking time or resources to treat them is considered a luxury. More research is also needed on women's mental health—in particular, the possibility that Rwandan women suffer from complex trauma over many years from multiple sources such as genocide and IPV.

Some mental health resources are available; the Rwandan government recently created a mental health desk within the ministry of health, a national mental health policy and strategy has been released, and the national university annually trains a cadre of psychiatric nurses to work in district hospitals. There has been some effort to provide psychoeducation and training for community health workers at village level. In addition, private mental health and counseling centers are available in several regions of the country. However, a lack of knowledge and stigma around mental health problems prevents many people from seeking help. Additional studies can

help identify knowledge, attitudes and existing practices around mental health and barriers to treatment seeking to inform education campaigns and behavior change strategies.

Conclusions

This study makes an important contribution to the study of interpersonal violence in post-conflict settings by describing and testing the relationship between trauma exposure, mental health and intimate partner violence perpetration in post-genocide Rwanda. The study's findings are relevant and have research, practice, and policy implications not only for Rwanda but for other populations exposed to traumatic experiences. In particular, the findings are useful for post-conflict countries working to address interpersonal violence as they continue to promote reconstruction. The findings may also be useful for domestic communities that have been affected by either short-term or chronic violence. For rebuilding or reconciliation efforts to be effective, it is important to understand the depth and extent to which violence and conflict negatively impacts those affected (Blattman & Miguel, 2010).

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Appendices

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Appendix A . In-Depth Interview Guides
Revised English Version for Male Respondents

Murakoze kuza. Nitwa Sarah. Nd umunyamerika kazi. Ndi umushakashatsi. Naje gukora ubushakashatsi ubyerekeye abashakanye. Sinzi ikinyarwanda cyinshi, Grace aranfasha.

So thank you for helping us to learn more about family relationships in Rwanda. As you know, you were invited to participate by _*(focal point)*___ because of your testimony/story of overcoming conflict with your wife/spouse. Thank you for being willing to do this.

I want to start by learning more about your life. To do this I am drawing a timeline here of your life: birth to the present. And I want to ask you when certain key events took place:

- Year of birth
- Completed school
- First cohabitation
- First marriage (if different)
- Birth of first and last child. Number of total children?
- Change of location/move house
- Any other marriages?

Are there any other events that you considered especially happy?

Let me now ask you about difficult events. Many people have experienced or witnessed traumatic or stressful events in their life. (Abantu benshi bahuye n'akaga cyangwa ibyago bikomeye, abandi barabibona; ibyo byarabahungabanije mu mibereho yabo). I know that many difficult things have happened in Rwanda—but I am interested in events that have affected YOU personally. What is an event in your life that you found especially stressful or traumatic? *(probe: examples of a time your life was threatened or you faced great danger or you lost someone close to you).*

Thank you so much for your courage in sharing that. I can see that you have a LOT of strength to survive that difficult event.

I would like to talk more about __________ event that you mentioned. I would like to know more about your life after this happened. Sometimes after experiencing a traumatic event, people have some problems such as continuing to think about it, changes in their feelings, changes in their body, changes in their relationships, or changes in their work.
What kind of changes did you experience, if any? (*probe for changes in thinking, changes in sleep, new pains, changes in relationships, changes in ability to do normal household tasks, changes in ability to do work, changes in interactions in community)*. How long did these changes last?

Is there any other way that you feel you are different after that experience versus how you were before the experience?

Again, I can see that you are very strong. Thank you for sharing this with me. I would like to know more about what helped you to survive that difficult time? What helped you to survive those other difficult times/

Is there anything else you want to share related to these topics?

Now let's go back to the timeline. I want to talk about your relationship with your spouse. You said that you got married in X year. Can you identify on the timeline the first time you remember having a serious conflict?
What about the first time you remember experiencing violence—either you were violent toward her or she was violent toward you?

Goal: to explore experience of IPV

I want to start by asking you to pick one example of a time you experienced conflict with your partner. Please pick a time in the past when the conflict resulted in violence. Will you please walk me through the story of what happened? I would like to know what happened before, what happened at the moment when you were violent, and what happened afterward. (*probes: chronological. Behavior of partner before, during, after, behavior of self before, during, after?)*

Now I would like to ask about what you were thinking. What thoughts do you remember having just before becoming violent? What thoughts do you remember having during violence? What about afterward?

Do you remember any of your emotions or feelings?

Can you think of a time when you felt like having conflict or being aggressive or violent but you did not act on it (same thoughts or feelings but different behavior)? Compare that to the previous situation: What was different? What was it like when you did inhibit versus when you did not? What is your explanation of this? (*control technique or mechanism. Similar situation, different response. What changed in him?)*

Goal: to learn respondent's attributions or explanations for IPV and have him name risk and protective factors. Explore possible role of mental health or trauma.

I'd like to know more about your opinion of why intimate partner violence happens. How would you explain your violent behavior in the past? Why do you think it happened? What are the

things that you think made you more likely to have violence or conflict? (*probe for trigger situations, behaviors, feelings, events*)
What about others who are still continuing? Why do you think they continue?

Goal: explore knowledge of anti-GBV campaigns, legislation, and its enforcement

Now I'd like to ask you about the topic of IPV in Rwanda. As you know, there have been laws passed, and there has been a lot of sensitization about the issue. What do you think about these laws? What do you think about these campaigns? What do other men say about these laws and campaigns? (*probe: what are the effects? Helpful? Harmful?*

In-Depth Interview Guide – Female Partners

Murakoze kuza. Nitwa Sarah. Nd umunyamerika kazi. Ndi umushakashatsi. Naje gukora ubushakashatsi ubyerekeye abashakanye. Sinzi ikinyarwanda cyinshi, Grace aranfasha.

Hello and thank you for agreeing to participate in this interview today. I am very glad to meet you and very much appreciate your talking to me. I want to tell you what will happen here: after we do introductions, I will ask you some questions, and I hope that you will do most of the talking while we listen. We are interested in hearing your story and your experience and learning from you. We expect to spend a little more than an hour with you, and we hope to learn more about family relationships in Rwanda. Thank you for your willingness to tell us more about your family.

Goal: to build comfort

So I will tell you a little bit about myself, and then I will ask you to introduce yourself to me. Etc.

Goal: to explore life history, the chronology of key events including childhood living situation, any childhood violence or , parental IPV, first cohabitation, first marriage, marital conflict, war, exile, loss of family members.

Thank you for that wonderful introduction. I am very pleased to learn more about you and about your experiences. I'd like to ask you a few more questions about some of those experiences and about some of the most important and memorable events that have happened to you.
Let's start with your childhood…
After school…
Young adulthood…
After marriage…
After your last child was born… (etc.)

Goal: to explore respondent's perception of consequences of traumatic events.

Again, thank you for sharing those. You have a lot of strength to survive many difficult things. Could you pick one of these that you consider to have been the most difficult? Will you tell me what it was like for you after that happened? (e.g how did things change? Did anything happen to you or your family as a result? Probe for changes in health, relationships, economics, and feelings).

Again, I can see that you are very strong. What helped you to survive that difficult time? What helped you to survive those other difficult times/

Goal: to explore history of relationship conflict.

You said that you met your current partner at XXX time. I know that your partner has talked to RWAMREC staff a about some of the challenges that you have had in your relationship. I would

like to ask you to tell me more about this. I will not share any of the information you tell me with anyone.
Will you please tell me about the first time you remember having these challenges/conflict. (What happened? What was it like? What events took place?)

Goal: to explore experience of IPV

What about now, do you still have these problems? What about the most recent time. Please tell me about the most recent episode. (How does it start? What happens next? How does it end?)

How does it end? What happens after IPV?
(Prompts: How does partner explain behavior? What does partner say? How does partner behave?)

Goal: to learn respondent's attributions or explanations for IPV and have her name risk and protective factors. Explore possible role of mental health or trauma.

How would you explain this behavior or conflict? Why do you think it happens?
(UNIFEM focus group reasons: polygamy, consequence of genocide and lack of fear of hurting others, alcohol, drugs, poverty, infidelity, lack of respect for women in culture, cohabitation, women earn more than men, viciousness, low self-esteem, sorcery)

What are the thoughts you have during a time of violence? What are the feelings you have? Do you know what your partner thinks? What does he feel?

What are the things that you think make you more likely to have violence or conflict? (probe for trigger situations, behaviors, feelings, events)

Can you think of a time when you or your partner felt like having conflict or being aggressive or violent but did not act on it? What happened in that situation? What is your explanation of this? Do you know other people who feel the violent urges but resist them? How do you think they do this?

Goal: to explore experience of trauma and mental health problems

We have been talking about violence you experienced in your house. Now, I'd like to ask you about other times in your life when you experienced violence, or you experienced something that you thought could hurt you or threaten your life.

I'd like to talk about some of the symptoms or changes you mentioned that happened after you experienced that trauma. Which of these symptoms are you having currently? When did you first notice these? How do you explain them (what do you think causes them?) Are there some things that increase them? Anything that makes them reduce? Do you notice them more at some times than others? What are your thoughts or feelings related to these symptoms?

Goal: to explore the contribution of trauma and mental health problems to marriage relationship and IPV
How do you think these symptoms affect your behavior toward your husband? Can you please give an example of a time when you were experiencing these symptoms in a strong way? Please walk me through that time. How did you behave toward your wife during that period? How did she behave toward you?

Goal: explore knowledge of anti-GBV campaigns, legislation, and its enforcement

Many couples in Rwanda have the same issues. What do the leaders in your community say about relationship conflict? (in addition to RWAMREC)? What do your friends say about relationship conflict?

Is there anything else you want to share related to these topics?

Appendix B . In-Depth Interview Guide for Follow-Up Interviews

Overall goal: Learn about the relationship between violence and mental health problems. What was the onset and course of violence? What was the onset and course of MH problems?

Murakoze kuza. Nitwa Sarah. Nd umunyamerika kazi. Ndi umushakashatsi. Naje gukora ubushakashatsi ubyerekeye abashakanye. Sinzi ikinyarwanda cyinshi, Grace aranfasha.

Thank you so much for participating in the survey that took place in _(month)____. Thank you also for participating today and helping us to learn more about family relationships in Rwanda.

We learned a lot from the responses you gave in your survey, and today we want to take some time to discuss to discuss in more detail some of the responses you provided. We hope that this will be a conversation where we talk together, different from when you just answered questions during the survey.

Goal: to build comfort and explore marital satisfaction.

To get started, I want to start by learning more about your life. Will you please briefly introduce yourself to me? (Follow up/probing questions:) You mentioned your profession is ____. How long have you been doing this? What do you cultivate here? How fertile is the land in this area? How many animals are you caring for? Is this a good year for rain?

You mentioned in the survey that you've been married for ____ years. How did you meet your wife? How old were you when you got married? What has been the biggest surprise about marriage? How would you describe the quality of your marriage? What is good about your marriage? What is challenging or difficult about your marriage?

I want to talk about your relationship with your spouse. You said that you have been married for X years. Can you identify the first time you remember having a serious conflict?
What caused this conflict?
What about the first time you remember experiencing violence—either you were violent toward her or she was violent toward you?
What caused this conflict?

Goal: to explore experience of IPV

I want to start by asking you to pick one example of a time you experienced conflict with your partner. Please pick a time in the past when the conflict resulted in violence. Will you please walk me through the story of what happened? I would like to know what happened before, what happened at the moment when you were violent, and what happened afterward. (*probes: chronological. Behavior of partner before, during, after, behavior of self before, during, after?)*

Now I would like to ask about what you were thinking. What thoughts do you remember having just before becoming violent? What thoughts do you remember having during violence? What about afterward?

Do you remember any of your emotions or feelings?

Can you think of a time when you felt like having conflict or being aggressive or violent but you did not act on it (same thoughts or feelings but different behavior)? Compare that to the previous situation: What was different? What was it like when you did inhibit versus when you did not? What is your explanation of this? (*control technique or mechanism. Similar situation, different response. What changed in him?)*

Goal: to learn respondent's attributions or explanations for IPV and have him name risk and protective factors. Explore possible role of mental health or trauma.

I'd like to know more about your opinion of why intimate partner violence happens. How would you explain your violent behavior in the past? Why do you think it happened? What are the things that you think made you more likely to have violence or conflict? (*probe for trigger situations, behaviors, feelings, events*)
What about others? Why do you think they commit violence?

Goal: to explore experience of trauma and mental health problems

You mentioned in the survey that you sometimes have the following symptoms: ________
I'd like to learn more about this. Which of these symptoms are you having currently? When did you first notice these? How do you explain them (what do you think causes them?) Are there some things that increase them? Anything that makes them reduce? Do you notice them more at some times than others? What are your thoughts or feelings related to these symptoms?

Goal: to explore the contribution of trauma and mental health problems to marriage relationship and IPV

How do you think these symptoms affect your behavior toward your wife? Can you please give an example of a time when you were experiencing these symptoms in a strong way? Please walk me through that time. How did you behave toward your wife during that period? How did she behave toward you?

Goal: explore knowledge of anti-GBV campaigns, legislation, and its enforcement

Now I'd like to ask you about the topic of IPV in Rwanda. As you know, there have been laws passed, and there has been a lot of sensitization about the issue. What do you think about these laws? What do you think about these campaigns? What do other men say about these laws and campaigns? (*probe: what are the effects? Helpful? Harmful?*

Appendix C . Creation of the Multidimensional Poverty Variable.

Selection of Dimensions of Well-Being/Multi-Dimensional Poverty

In selecting dimensions of well-being I considered the multi-dimensional poverty index (MPI) created for Rwanda by the Oxford Poverty and Human Development Initiative (OPHI) in the annual UNDP Human Development Report (Oxford Poverty & Human Development Initiative, 2013) as well as the MPI created by Sophie Mitra et al. (2011) based on the methods of Alkire & Foster (2011). The OPHI index has 10 indicators grouped into three dimensions (Education, Health, and Standard of Living) and is intended to be a highly flexible measure relevant across many different geographic contexts (Santos & Alkire, 2011). Mitra et al. conducted a thorough literature review to develop a list of eight theoretically important dimensions of well-being (Economic resources, Employment, Health care, Education, Housing, Parenting, Life, and Social integration) (2011). Combining elements of both of these indices, I selected seven dimensions of well-being that were measurable using data from the current study. These dimensions and the indicators/variables used to empirically measure them are presented in Table 2.

Ranking and Weighting of Dimensions

I used a participatory process to rank the seven dimensions in order of perceived importance and priority for well-being (Mitra et al., 2011). The list of dimensions and indicators was sent to a group of ten service providers and consultants in Rwanda, all with experience in community development or poverty alleviation programs or research. Each group member reported individual rankings of the seven dimensions which were combined into an average rank for each dimension. Indicators within each dimension were assigned equal weight. Using the method proposed by de Kruijk & Rutten (Equation 1), these rankings were converted into weights[18].

$$w_d = \frac{1+n_d-r_d}{\sum_{d=1}^{n_d}(1+n_d-r_d)} \qquad (1)$$

Deprivation Cut-Offs

To the extent possible, previously established deprivation cut-offs were used for each indicator, either those established by OPHI or by another Rwanda-specific governing body. When cut-offs were not available, I used development priorities as set out by the Rwandan Vision 2020 development document or the Economic Development and Poverty Strategy (EDPRS) (Republic of Rwanda, 2007). If these development priorities were already being measured in existing Rwandan surveys (e.g. the Rwandan national census (RPHC4), or the Integrated Household Living Conditions Survey of 2011 (EICV3)), then those measurements were used. Details are provided in Table 25.

[18] Weights were also calculated using the Alfares & Duffalo method (Alfares & Duffuaa, 2008); differences were minimal, and the deKruijk & Rutten weighting was used for the final calculation.

Table 25. Deprivation Cut-Offs for Poverty Index

Dimension Indicators/ variables	Existing cut-offs	Deprivation cut-off for current study
1. Economic resources/ productive assets		
Land ownership	EDPRS priority. FAO defines 9 Ha as necessary for sustainable agriculture: measured in EICV3	Total land is < .9 Ha
Bank/MF account	EDPRS priority: access to banking and credit, measured in EICV3 as existence of savings account	Neither husband nor wife has bank or microfinance account
2. Other assets		
Radio	Vision 2020 priority: measured in EICV3	No radio
Mobile phone	Vision 2020 priority: measured in EICV3	No mobile phone
3. Employment	Economic activity is a policy priority: EICV3 defines all work in past 12 mos as current economic activity.	No work in past 12 mos.
Work in past12 mos.		
4. Health care HH members with health insurance	EDPRS priority: all citizens with health insurance.	< 1/2 of HH members with health insurance*
5. Education	EDPRS priority: universal access to 9 years school. OPHI's cut-off: at least one HH member has completed 5 yrs schooling	Neither husband nor wife has 5 years school
Years of school		
6. Housing		
Own house	EDPRS priority: housing with basic services for all	No house owned
Flooring materials	OPHI: deprived if dirt, sand, or dung floor	Floor made of dirt, sand, dung
Electricity	OPHI: deprived if no electricity	No electricity
7. Social integration		
4 items from social support measure		No one to lend money, give essential items, help with activities, or help w/problems

Note: *Used cut-off of half of members b/c household employees were often included in the count of household members

To create an index, each individual *i* was assigned a weighted count of dimensions of deprivation, c_i. The weighted count of dimensions was calculated according to Equation 2, per Mitra et al. (2011) (See also Trani & Cannings, 2013).

$$c_i = \sum_{j=1}^{d} w_j c_{ij} \qquad (2)$$

In Equation 2, *d* represents the number of dimensions *j*, and w_j is the weight of dimension *j*. Respondent data was compared with the cut-off point for each indicator of deprivation to determine c_{ij}; if the respondent was considered deprived on that indicator, he received a "1",

otherwise $c_{ij} = 0$. Summing the weighted scores results in a continuous index of deprivation, such that higher scores on the index represent greater deprivation.

Intensity of Poverty

According to OPHI methodology, a person deprived in a greater percentage of indicators of deprivation is considered to have a greater intensity of poverty compared to a person deprived in fewer weighted indicators (Oxford Poverty and Human Development Initiative, 2013). I considered a respondent to be multi-dimensionally poor if he was deprived in at least one-third (33%) of the weighted indicators, similar to the cut off used by OPHI in Rwanda. This classification resulted in 62.16% of the sample classified as poor, comparable to the OPHI rate of 69% and the World Bank income poverty ($1.25/day) estimate of 63.2% (Oxford Poverty and Human Development Initiative, 2013).

Appendix D . Bivariate Tests of IPV Perpetration (DV2 – DV5) and Covariates

Table 26. Bivariate Tests of Past Year Physical IPV Perpetration (DV2) and Covariates

Variable	No IPV	IPV	χ^2	*t*	*p*	*N*
Accepting attitude toward spousal abuse			17.27		<0.001	137
No *n %*	57 (95.0)	3 (5.0)				
Yes *n %*	57 (74.03)	20 (25.97)				
Age *M (SD)*	52.5 (11.05)	46.52 (7.46)		-3.48	0.004	137
Alcohol[a] *M (SD)*	0.68 (0.54)	0.97 (0.61)		2.96	0.011	136
Anger *M (SD)*	70.99 (13/06)	79.57 (14.17)		3.40	0.005	137
Poverty			0.26		0.608	137
Moderately or severely poor *n %*	76 (84.44)	14 (15.56)				
Not poor *n %*	38 (80.85)	9 (19.15)				
Social support *M (SD)*	26.85 (15.97)	35.87 (13.56)		1.80	0.095	136

Note: [a]Alcohol is log transformed estimated liters/month consumed.

Table 27. Bivariate Tests of Past Year Sexual IPV Perpetration (DV3) and Covariates

Variable	No IPV	IPV	χ^2	*t*	*p*	*N*
Accepting attitude toward spousal abuse			0.07		0.791	146
No *n %*	61 (93.85)	4 (6.15)				
Yes *n %*	75 (92.59)	6 (7.41)				
Age *M (SD)*	51.45 (11.37)	50.27 (6.71)		-0.47	0.645	148
Alcohol[a] *M (SD)*	0.71 (0.56)	0.64 (0.71)		-0.55	0.592	147
Anger *M (SD)*	71.71 (13.37)	78.73 (12.05)		1.36	0.195	147
Poverty			1.25		0.265	146
Moderately or severely poor *n %*	87 (94.57)	5 (5.43)				
Not poor *n %*	50 (89.29)	6 (10.71)				
Social support *M (SD)*	28.21 (15.74)	31.73 (15.07)		0.61	0.550	146

Note: [a]Alcohol is log transformed estimated liters/month consumed.

Table 28. Bivariate Tests of Past Year Emotional IPV Perpetration (DV4) and Covariates

Variable	No IPV	IPV	χ^2	*t*	*p*	*N*
Accepting attitude toward spousal abuse			8.79		0.003	146
No *n %*	59 (90.77)	6 (9.23)				
Yes *n %*	63 (77.78)	18 (22.22)				
Age *M (SD)*	51.64 (11.51)	49.96 (8.62)		-1.02	0.325	148
Alcohol[a] *M (SD)*	0.66 (0.55)	0.93 (0.65)		1.66	0.119	147
Anger *M (SD)*	70.65 (12.57)	80.33 (14.65)		3.14	0.007	147
Poverty			0.24		0.626	148
Moderately or severely poor *n %*	76 (82.61)	16 (17.39)				
Not poor *n %*	48 (85.71)	8 (14.29)				

Social support *M (SD)*	28.06 (15.73)	30.63 (15.49)		0.79	0.443	146

Note: [a]Alcohol is log transformed estimated liters/month consumed.

Table 29. Bivariate Tests of Past Year Financial IPV Perpetration (DV5) and Covariates

Variable	No IPV	IPV	χ^2	*t*	*p*	*N*
Accepting attitude toward spousal abuse			0.13		0.715	146
No *n %*	62 (95.38)	3 (4.62)				
Yes *n %*	76 (93.83)	5 (6.17)				
Age *M (SD)*	51.49 (10.91)	49.25 (15.54)		-0.60	0.555	148
Alcohol[a] *M (SD)*	0.71 (0.57)	0.51 (0.70)		-0.89	0.389	147
Anger *M (SD)*	72.04 (13.14)	75.5 (17.61)		1.35	0.200	147
Poverty			0.00		0.980	148
Moderately or severely poor *n %*	87 (94.57)	5 (5.43)				
Not poor *n %*	53 (94.64)	3 (5.36)				
Social support *M (SD)*	28.52 (15.74)	27.75 (15.39)		-0.24	0.811	146

Note: [a]Alcohol is log transformed estimated liters/month consumed.

Appendix E . Bivariate Tests of IPV Perpetration (DV2 – DV5) and Trauma Exposure

Table 30. Bivariate Tests of Past Year Physical IPV Perpetration and Trauma Exposure

Variable	No IPV	IPV	χ^2	*t*	*p*	*N*
Traumatic events ever *M SD*	10.80 (4.71)	12.13 (5.12)		0.77	0.453	135
Traumatic events during genocide *M SD*	6.42 (4.27)	5.74 (3.09)		-1.08	0.301	132
Traumatic events past year			1.50		0.472	132
None *n %*	58 (86.57)	9 (13.43)				
One *n %*	21 (77.78)	6 (22.22)				
Two or more *n %*	30 (78.95)	8 (21.05)				

Table 31. Bivariate Tests of Past Year Sexual IPV Perpetration and Trauma Exposure

Variable	No IPV	IPV	χ^2	*t*	*p*	*N*
Traumatic events ever *M SD*	11.07 (4.77)	13.0 (4.45)		1.43	0.174	146
Traumatic events during genocide *M SD*	6.21 (4.16)	6.45 (4.23)		0.21	0.836	143
Traumatic events past year *M SD*			2.58		0.276	143
None *n %*	69 (92.0)	6 (8.0)				
One *n %*	25 (86.21)	4 (13.79)				
Two or more *n %*	38 (97.44)	1 (2.56)				

Table 32. Bivariate Tests of Past Year Emotional IPV Perpetration and Trauma Exposure

Variable	No IPV	IPV	χ^2	*t*	*p*	*N*
Traumatic events ever *M SD*	10.99 (4.77)	12.33 (4.62)		1.32	0.209	146
Traumatic events during genocide *M SD*	6.17 (4.25)	6.54 (3.64)		0.39	0.704	143
Traumatic events past year *M SD*			5.78		0.056	143
None *n %*	68 (90.67)	7 (9.33)				
One *n %*	23 (79.31)	6 (20.69)				
Two or more *n %*	28 (71.79)	11 (28.21)				

Table 33. Bivariate Tests of Past Year Financial IPV Perpetration and Trauma Exposure

Variable	No IPV	IPV	χ^2	*t*	*p*	*N*
Traumatic events ever *M SD*	11.18 (4.66)	11.75 (6.50)		0.26	0.797	146
Traumatic events during genocide *M SD*	6.28 (4.12)	5.38 (4.72)		-0.64	0.531	143
Traumatic events past year *M SD*			N/A			143
None *n %*	72 (96.0)	3 (4.0)				
One *n %*	29 (100.0)	0 (0.0)				
Two or more *n %*	34 (87.18)	5 (12.82)				

Note: N/A = Unable to calculate because of low cell frequencies.

Appendix F . Bivariate Tests of IPV Perpetration (DV2 – DV5) and Mental Health Problems

Table 34. Bivariate Tests of Past Year Physical IPV Perpetration and Mental Health

Variable	No IPV	IPV	χ^2	*t*	*p*	*N*
Meets diagnostic criteria for PTSD			14.47		0.000	135
No *n %*	94 (88.68)	12 (11.32)				
Yes *n %*	18 (62.07)	11 (37.93)				
Meets diagnostic cut off (16) for Depression (%)			4.46		0.035	137
No *n %*	85 (86.37)	13 (13.27)				
Yes *n %*	29 (74.36)	10 (25.64)				

Table 35. Bivariate Tests of Past Year Sexual IPV Perpetration and Mental Health

Variable	No IPV	IPV	χ^2	*t*	*p*	*N*
Meets diagnostic criteria for PTSD			1.616		0.204	145
No *n %*	108 (94.74)	6 (5.26)				
Yes *n %*	27 (87.1)	4 (12.9)				
Meets diagnostic cut off (16) for Depression (%)			0.004		0.953	147
No *n %*	100 (92.59)	8 (7.41)				
Yes *n %*	36 (92.31)	3 (7.69)				

Table 36. Bivariate Tests of Past Year Emotional IPV Perpetration and Mental Health

Variable	No IPV	IPV	χ^2	*t*	*p*	*N*
Meets diagnostic criteria for PTSD			6.19		0.013	145
No *n %*	99 (86.84)	15 (13.16)				
Yes *n %*	23 (74.19)	8 (25.81)				
Meets diagnostic cut off (16) for Depression (%)			7.34		0.007	147
No *n %*	95 (87.96)	13 (12.04)				
Yes *n %*	28 (71.79)	11 (28.21)				

Table 37. Bivariate Tests of Past Year Financial IPV Perpetration and Mental Health

Variable	No IPV	IPV	χ^2	*t*	*p*	*N*
Meets diagnostic criteria for PTSD			1.96		0.162	145
No *n %*	109 (95.61)	5 (4.39)				
Yes *n %*	28 (90.32)	3 (9.68)				
Meets diagnostic cut off (16) for Depression (%)			1.71		0.190	147
No *n %*	103 (95.37)	5 (4.63)				
Yes *n %*	36 (92.31)	3 (7.69)				

Appendix G . Multivariate Models for IPV Perpetration

Table 38. Models Meeting Assumptions for Logistic Regression

		Trauma during lifetime	Trauma during genocide	Trauma in past year	PTSD	Depression	Covariates associated with DV
DV1	Any IPV in past year	No	No	No	Yes	Yes	Patriarchal attitudes Age Alcohol Anger
DV2	Physical IPV in past year	No	No	No	Yes	Yes	Patriarchal attitudes Age Alcohol Anger
DV3	Sexual IPV in past year	No	No	No	No	No	None
DV4	Emotional IPV in past year	No	No	No	Yes	Yes	Patriarchal attitudes Anger
DV5	Financial IPV in past year	No	No	No	No	No	None

Table 39. Logistic Regression Results Past Year Physical IPV Perpetration[19], PTSD, and Covariates

	OR	CI (95%)	Est.	SE	p
Meets PTSD diagnostic criteria	3.13	1.11, 8.86	0.57	0.27	0.032
Age	0.94	0.90, 0.98	-0.07	0.02	0.003
Alcohol consumption[a]	1.31	0.68, 2.51	0.27	0.33	0.423
Anger	1.02	0.98, 1.05	0.02	0.02	0.328
Accepting attitude for spousal violence[b]	4.34	0.89, 21.07	0.73	0.40	0.069

Notes: [a]Log transformed; [b]Reference category = does not accept spousal violence in any scenario

[19] All regression models modeled the outcome of "Yes, perpetrated IPV in the prior year".

Table 40. Logistic Regression Results Past Year Physical IPV Perpetration, Depression, and Covariates

	OR	CI (95%)	Est.	SE	p
Meets depression cutoff	1.97	0.69, 5.58	0.34	0.27	0.203
Age	0.93	0.90, 0.97	-0.07	0.02	0.001
Alcohol consumption[a]	1.48	0.83, 2.63	0.39	0.29	0.181
Anger	1.02	0.99, 1.05	0.02	0.02	0.254
Accepting attitude for spousal violence[b]	4.67	1.01, 21.56	0.77	0.39	0.048

Note: [a]Log transformed. [b]Reference category = does not accept spousal violence in any scenario

Table 41. Logistic Regression Results Past Year Emotional IPV Perpetration, PTSD, and Covariates

	OR	CI (95%)	Est.	SE	p
Meets PTSD diagnostic criteria	1.39	0.57, 3.35	0.16	0.23	0.470
Anger	1.04	1.00, 1.09	0.04	0.02	0.067
Accepting attitude for spousal violence[b]	2.21	0.99, 4.92	0.40	0.20	0.052

Note: [a]Log transformed. [b]Reference category = does not accept spousal violence in any scenario

Table 42. Logistic Regression Results Past Year Emotional IPV Perpetration, Depression, and Covariates

	OR	CI (95%)	Est.	SE	p
Meets depression cutoff	1.91	0.70, 5.26	0.32	0.26	0.210
Anger	1.05	1.00, 1.09	0.05	0.02	0.031
Accepting attitude for spousal violence[b]	1.76	0.90, 3.44	0.28	0.17	0.097

Note: [a]Log transformed; [b]Reference category = does not accept spousal violence in any scenario

Appendix H . Moderation Analyses for Lifetime Trauma, Mental Health, and IPV Perpetration

Table 43. Logistic Regression Results Past Year Physical IPV Perpetration and Interaction of Lifetime Trauma and PTSD

	Est.	SE	p
Meets PTSD diagnostic criteria	0.14	0.94	0.886
Lifetime trauma exposure	0.03	0.10	0.739
PTSD*Trauma exposure	0.05	0.07	0.469

Table 44. Logistic Regression Results Past Year Emotional IPV Perpetration and Interaction of Lifetime Trauma and PTSD

	Est.	SE	p
Meets PTSD diagnostic criteria	0.91	0.89	0.306
Lifetime trauma exposure	0.00	0.07	0.994
PTSD*Trauma exposure	-0.04	0.07	0.544

Table 45. **Logistic Regression Results Past Year Physical IPV Perpetration and Interaction of Lifetime Trauma and Depression**

	Est.	SE	p
Meets depression cutoff	1.23	0.61	0.045
Lifetime trauma exposure	0.02	0.08	0.822
Depression*Trauma exposure	-0.07	0.04	0.105

Table 46. **Logistic Regression Results Past Year Physical IPV Perpetration and Interaction of Lifetime Trauma and Depression**

	Est.	SE	p
Meets depression cutoff	0.17	0.60	0.772
Lifetime trauma exposure	0.04	0.06	0.493
Depression*Trauma exposure	0.02	0.05	0.606