

INTIMATE PARTNER VIOLENCE IN THE CONTEMPORARY RWANDA: PSYCHOLOGICAL OUTCOMES AND INTERVENTION

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of the requirements for the award of the Degree of
DOCTOR OF PHILOSOPHY IN PSYCHOLOGY

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DECLARATION

I, **Claire BAHATI**, hereby declare that the thesis is the result of my own work and has been neither been submitted to the University of Rwanda or to any other institution for evaluation nor previously published in its entirety or in parts. Any parts, words or ideas of the thesis, however limited, which are quoted from or based on other sources, have been acknowledged as such without exception.

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LIST OF PUBLICATIONS

- [1] **Claire Bahati**^{1*}, Josias Izabayo², Japhet Niyonsenga³, Vincent Sezibera² and Léon Mutesa⁴ : Intimate partner violence as a predictor of antenatal care services utilization in Rwanda (2021). *BMC Pregnancy and Childbirth* 21:754
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- [3] **Claire Bahati**^{1*}, Josias Izabayo², Pascaline Munezero², Japhet Niyonsenga³, Léon Mutesa⁴. Trends and correlates of Intimate Partner Violence (IPV) victimization in Rwanda: Results from the 2015 and 2020 Rwanda Demographic Health Survey (RDHS 2015 and 2020), 2022. *BMC Women's Health* (2022) 22: 368.
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LIST OF ABBREVIATIONS AND ACRONYMS

ACEs	:	Adverse Childhood Experiences
ANC	:	Antenatal Care
ANOVA	:	Analysis of Variance
AOR	:	Adjusted Odd Ratios
BIPs	:	Batterer’s Intervention Programs
BP	:	Birth Preparedness
CBA	:	Community-Based Approach
CDC	:	Centers for Disease Control and Prevention
CES-DC	:	Center for Epidemiological Studies-Depression Scale for Children
CI	:	Confidence Interval
CMHS	:	College of Medicine and Health Sciences
CONSORT	:	Consolidated Standards of Reporting Trials
DSM – IV	:	Diagnostic and Statistical Manual of Mental Disorders
DV	:	Domestic Violence
EAs	:	Enumeration Areas
ESI	:	Emotional Symptoms Index
GBV	:	Gender-Based Violence
HIC	:	High-Income Countries
HITS	:	Hurt, Insult, Threaten and Screaming

HIV	:	Human immune-deficiency virus
HSCL-4	:	Hopkins Symptoms Check-List
IBM	:	International Business Machines
IPV	:	Intimate Partner Violence
IRB	:	Institutional Review Board
IRQ	:	Irritability Questionnaire
LIWOHA	:	Life Wounds Healing Association
LMICs	:	Low and Middle-Income Countries
MDs	:	Mental Disorders
MIGEPROF	:	Ministère du Genre et de la Promotion de la Famille
MINI	:	Mini-International Neuropsychiatric Interview
NISR	:	National Institute of Statistics of Rwanda
OR	:	Odd Ratio
PARQ	:	Parenting Acceptance and Rejection Questionnaire
PCL-5	:	PTSD Checklist for DSM-5
PTSD	:	Post-Traumatic Stress Disorders
RBC	:	Rwanda Biomedical Center
RDHS	:	Rwanda Demographic Health Survey
RMHS	:	Rwanda Mental Health Survey
RNEC	:	Rwanda National Ethics Committee
RPHC	:	Rwanda population and Housing Census

RWAMREC	:	Rwanda Men's Resource Centre
SD	:	Standard Deviation
SDQ	:	Strengths and Difficulties Questionnaire
SPSS	:	Statistical Package for the Social Sciences
STD	:	Sexually Transmitted Diseases
STEM	:	Strong Through Every Mile
TVET	:	Technical and Vocational Education and Training
UN	:	United Nations
UNFPA	:	United Nations Population Fund
UNICEF	:	United Nations Children's Fund
UR	:	University of Rwanda
USAID	:	United States Agency for International Development.
WHO	:	World Health Organization
YCPS_R	:	Youth Conduct Problems Scale –Rwanda
YCR	:	Youth Self-Report

ABSTRACT

Background: Intimate Partner Violence (IPV) is the worst form of domestic violence that involves physical, sexual, psychological/emotional violence, and controlling behaviors from the intimate partner. Handful research findings have evidenced the negative effect from prolonged exposure to IPV, which include poor physical and mental health for both parents and children. Although interesting research efforts are made to understand the magnitude and long-lasting effect of IPV within heterosexual partners, it is considered that most of those efforts are mainly concentrated on women and in developed countries, and very few are seen in the developing Sub-Saharan Africa countries. This thesis overall objective was to analyze the magnitude of IPV in the contemporary Rwanda and assess its impact on mental health in adults/parents and more especially in children/offspring. Also, the other study aim was to assess the effectiveness of a community-based approach in IPV reduction and outcomes improvement.

Methods: A quantitative research design was used for data collection and data analysis. Data analysis included descriptive and correlational statistics. Binary logistic and linear regression was chosen to analyze association and effect between variables. Furthermore, mixed ANOVAs were utilized to evaluate the effect of community-based approach (CBA) over IPV occurrence and mental health outcomes (depression, anxiety, PTSD).

Results: Results showed that there was an increase in the prevalence of IPV in the last five years (2015 and 2020), from 40 % (2015) of women reporting current IPV experience to 46% in 2020. Our findings also confirm the association between IPV and poor outcome in physical and mental health.

Women victims of IPV report less utilization of antenatal care services, i.e., were less likely to receive more than four ANC visits (O.R = 0.61, CI = 0.417–0.908) and were less likely to attend the first ANC visits within the first 3 months (O.R = 0.656, CI = 0.445–0.967). Results yielded higher prevalence rate of common mental disorders in participants exposed to IPV as compared to non-exposed group, 32.4.% and 11.7% respectively, which is a higher prevalence rate compared to the general population (20.49%). Also, the IPV experience negatively affects the parenting style. A significant positive correlation is established between IPV experience and harsh-negative parenting ($r=0.40$, $p<0.01$), an association that is mediated by the parental psychological distress ($B=0.254$, $Z=5.59$, $p<0.05$). Hence, parental psychopathology and associated negative parenting was found to put at higher risk children who scored high to anxiety, depression, and behavioral problems. Assessing the effectiveness of community-based approach, results yielded a significant effect on IPV experience and mental health outcomes in adults.

Conclusion: Results for our research confirm the increase in IPV incidence and its association with poor physical and mental health outcomes. The findings underscored also negative parenting resulting from parental IPV to put at risk offspring who are found to be vulnerable to several mental and behavioral problems. Moreover, our findings highlight the substantial efficacy of CBA for victims in reducing IPV, anxiety, and depression symptoms in Rwanda, a post-genocide country. However, the study didn't yield significant improvement in PTSD symptoms. Findings could not prove whether PTSD symptoms are outcomes of the IPV exposure or preexisting to the IPV experience. Further studies are recommended to explore the impact of pre-existing mental health difficulties on IPV occurrence and persistence.

GENERAL INTRODUCTION

Intimate partner violence (IPV) is a major public health issue, which is defined as an abusive/violent behavior in an intimate relationship that can cause physical, sexual, or psychological harm/distress (WHO, 2012).

❖ Problem statement

According to global estimates of IPV perpetrated by men against women, 30% of all partnered-women have experienced physical and/or sexual violence by an intimate partner at some point in their lives (Owaka et al., 2017). The evidence showed that the prevalence of sexual and/or physical IPV was found to be high in South-East Asia (38%) and Africa (37%) than other regions like America (30%) and Europe (25%) respectively (WHO, 2021). Similarly, the Rwanda Demographic Health Survey (RDHS) in 2015 and 2020 showed that the prevalence of any spousal violence among ever-married women increased from 40% in 2015 to 46% in 2020. However, violence against men was reported to have declined slightly from 20% to 18% respectively over the same period (National Institute of Statistics of Rwanda (NISR), 2021). Between 2005 and 2010, there was a similar rise in IPV among women, with their experiences of either physical or sexual IPV nearly doubling, from 34% to 56%, respectively (Thomson et al., 2015). These figures keep placing Rwanda among the countries with high prevalence of IPV against women in the world.

There are numerous theories regarding associated factors or predictors of IPV against women particularly in Africa, which include level of education, occupation, types of marriage (polygamous versus monogamous), alcohol consumption, witness of violence, etc. (Onigbogi et al., 2015).

Furthermore, given the magnitude of the physical and psychological violence imposed on the victim, IPV is reported to cause severe physical and mental health problems. Several authors have noted that, in addition to physical injuries and death, individuals exposed to IPV are more likely to report a variety of negative physical and mental health outcomes, both acute and chronic. (Breiding et al., 2008). IPV is associated with substance abuse, post-traumatic stress disorder (PTSD), panic disorders, depression, and suicidality (Devries, Mak, Bacchus, et al., 2013; Hall et al., 2014; Tsai et al., 2016; Yu et al., 2019) and endorse other unhealthy behaviors. Other studies have found that women who have experienced physical or sexual IPV are more likely to use antenatal care services, endangering both the child's and the mother's health and well-being (Sebert Kuhlmann et al., 2017). Existing evidence on the relationship between women exposure to IPV and mental problems among their children has been mostly generated in high income countries, while a few studies conducted in poor resource settings also found evidence of association between the exposure to IPV and increased risk of developing mental disorders among children (Chander et al., 2017; Devries et al., 2017).

In Rwanda, however, little to nothing is known about the impact of parental IPV on children's mental health status.

Equally, male victims of IPV have been severely neglected in public policy, yet they can also be victims, but less likely to report it (Safariolyaei & Amiri, 2017). Although most of the prior studies focused mostly on women as victims, a review of 91 studies have also showed that one in five men was a victim of IPV (Bonomi et al., 2009; Costa et al., 2015; Garcia-Moreno C, Jansen HA, Ellsberg M, Heise L, 2006; Kolbe & Büttner, 2020) and men who experienced IPV were likely to develop poor health outcomes.

Several non-governmental organizations (NGOs) have developed, adapted, and evaluated various interventions in Sub-Saharan Africa countries (SSA) over the last decade in an effort to address IPV and its associated physical and mental health problems as a public health concern (Chatterji et al., 2020; Dunkle et al., 2020). Though, these programs aimed at empowering women and changing social norms that support male power and dominance, and proven effective strategies for IPV reduction and associated mental disorders (Angelucci & Heath, 2020), fewer interventions have attempted to work directly with couples in community settings (Pronyk et al., 2006, Dunkle et al., 2020).

Furthermore, among the local organizations working in the field of domestic violence (DV) in Rwanda, the Life Wounds Healing Association (LIWOHA) is one of those NGOs with nearly two decades of intensive work in communities, managing DV, and initiating the community-based Approach (CBA). The organization shows that these violent behaviors are induced by life wounds rooted in the past.

The life wounds here are understood as past traumatic experiences faced and harsh education received from families and social environment. The organization hypothesized that unless IPV perpetrators identify and address the root causes of their violent behavior, legal punishment will not deter them from negatively impacting the lives of their wives and children. Despite the fact that CBA is widely used in Rwanda, no research has been conducted to examine its effectiveness in reducing IPV exposure and improving mental health outcomes (anxiety, depression and PTSD symptoms).

❖ **Objectives**

The overall goal of this study was to understand the scope of IPV in Rwanda and evaluate the efficacy of existing intervention models that can influence both IPV exposure and associated common mental health outcomes.

❖ **Thesis outline**

In addition to the conceptual framework and Literature review, this thesis comprises six (6) studies that include three (3) publications in peer-reviewed journals.

Based on existing literature, the conceptual framework describes in depth IPV, its types, magnitude, causing factors and consequences to both adults/parents and children/offspring. As one of the forms of domestic violence, extensive research findings have evidenced that IPV is the worst and the most complex, since it occurs between two people involved in an intimate relationship.

Study 1: Trends and correlates of Intimate partner violence (IPV) victimization in Rwanda Results from the 2015 and 2020 Rwanda Demographic Health Survey (RDHS) ([published](#)). This study explored trends and correlates of IPV against women and men in Rwanda using two demographic health surveys (DHS 2015 and DHS 2020). Rise in IPV perpetration and victimization is stated, and sociodemographic correlated of IPV discussed.

Study 2: Prevalence of mental disorders among IPV exposed and non-exposed Rwandans ([published](#)).

This study compared common mental disorders (CMDs) prevalence in individuals exposed to IPV and non-exposed in a cross-sectional national based study. It was postulated that the prevalence of CMDs would be higher in group exposed to IPV when compared to non-exposed group.

Study 3: IPV as Predictor of Maternal and Child Health ([published](#))

The paper discusses the impact of IPV exposure on maternal and child health, with a particular emphasis on ANC service utilization. ANC service utilization indicators considered include initiation of care within the first three months of pregnancy, receipt of at least four ANC visits, and care from skilled providers among Rwandan women of reproductive age.

Study 4: Impact of IPV experience on parenting style

The chapter analyses the relationship between IPV exposure and parenting style, particularly the harsh-negative parenting. It is assumed that IPV experience will affect the parenting style as mediated by the parental distress, which is a poor outcome from the IPV exposure.

Study 5: Parental IPV and associated mental health outcomes in offspring.

The overall objective of this study was to assess the impact of parental IPV on children mental health in Rwanda through negative parenting

Compared to the extensive literature assessing the relationship between IPV exposure and mental health outcomes, less is known about the impact of negative parenting on offspring mental health, particularly in developing countries including the Sub-Saharan Africa countries (SSA) and Rwanda included.

Study 6: Effectiveness of community-based approach in IPV reduction.

The study assessed the effectiveness of a community-based approach (CBA) in reducing the IPV experience (victimization and perpetration) and improvement in outcomes (depression, anxiety and PTSD). Significant effect from the approach is described, with less improvement in post-traumatic stress disorder (PTSD) symptoms.

CONCEPTUAL FRAMEWORK AND LITERATURE REVIEW

Violence is a human deviant behavior and intentional use of physical force or power against oneself, other individuals or a group (Haan, 2008). Whether self-directed, interpersonal or against a group, violence intend to abuse, to harm, and maintain control over the victim. Domestic violence (DV), one of the forms of violence, is an interpersonal abusive behavior that occurs in home between family members (child abuse/neglect, elderly abuse, IPV, etc). Besides, Gender-based violence (GBV), is also one of the forms of violence and an interpersonal abusive behavior, that can occur in home or outside the home (street, work or other public places), and directed at individuals based on their gender (Kapiga et al., 2017). However, this section aimed to summarize the literature on violence in general, and Domestic violence (DV) in particular with a deep attention on IPV, what is it in comparison to the other forms of violence that occur in home/domestic environment.

As conceptual framework, and as IPV refers to violent/abusive behavior between two people involved in an intimate relationship, we will focus on its psychological impact not only on the primary protagonists (parents), but also and especially on their offspring. This framework will allow us to reveal the untold stories about IPV as a burden that is eroding and destroying our society from the deepest of its roots.

Existing literature uses a wide range of terms to describe violence that occurs due to a person's gender identity, sex preference, or domestic circumstances (for example, gender-based violence).

IPV is a term that has lately been used to distinguish domestic violence from other forms of violence (community violence) which is committed by two people who are involved in a romantic relationship (Ellsberg & Emmelin, 2014).

The description/ clarification of the three key concepts (Violence, Intimate partner violence, and the Contemporary Rwanda) will disclose and facilitate a common understanding of the concept, and evolving its meaning, importance, trends, impact and the interconnection between our studies (6) alongside our research on IPV.

1. Violence/Abuse

The complex concept of "violence" is a multifaceted and unclear phenomenon with multidimensional synonyms such as aggressiveness, great force, powerfulness, lack of control, and lack of restraint. It can be defined as intentional use of physical force or power against oneself, other individual or against a group (Haan, 2008). Whether self-directed, interpersonal or collective, violence is a deviant human behavior intended to abuse, to damage, to destroy, and, establish and maintain control over the victim. It can be exhibited in a wide range of contexts like teen violence, street violence, dating violence, intimate violence, domestic violence, workplace violence, interpersonal violence, media violence, etc. (Rutherford et al., 2007).

1.1 Determinants of Violence

Researchers have found that human behavior is a product or combination of biological and environmental factors that both interplay and shape individuals (Laura A. Baker, 2016).

These scientists and sociologists have emphasized on aggressive/violent behavior in its multiple facets and evidenced a complex interactions between the two predominant factors and aggressive/violent behavior:

(1) *Biological determinants* (nature) that are human essential characteristics. The biological basis of aggressive and violent behavior is mainly connected to three biological functions:

(a) Heart rate (the low resting heart rate has been reported significantly associated with aggressive and violent behavior in males than females (Jennings & Pardini, 2017)),

(b) Biochemicals (sex hormones in interaction with other biochemicals like enzymes and other neurotransmitters (Godar et al., 2016)), (c) Brain (failure or reduced ability to regulate negative emotions and aggressive impulses, seizure disorders, dysfunction of cerebral cortex (Bear, 2003)).

(2) *Environmental influences* (nurture) that are human properties acquired. Individuals from birth are initiated to the local rituals and traditions, and progressively, they learn and acquire social rules, cultural norms, traditional beliefs and practices, gender roles, code of conduct as male or female, etc. (Breines et al., 2000; Pan et al., 2006). However, gender is almost untold mixed factor yet significantly influences aggressive behavior. Gender is a range of biological (biological sex) and environmental (gender identity) characteristics pertaining to, and differentiating masculinity and femininity (Denson et al., 2018; Staniloiu & Markowitsch, 2012). There are a deep and pervasive structural root, lying in our beliefs and practices about gender and violence (Sinha et al., 2017).

1.2 Typology, Forms and Nature of violence

According to who it has been committed, violence can be categorized in three types :

- (1) Self-directed violence that includes suicidal thoughts, attempts or acts, self harm, self-mutilation, where some of them can be fatal and resulting in death (Rutherford et al., 2007).
- (2) Interpersonal violence that can occur between individuals in the home (family members) such as intimate partners, child abuse, elderly abuse; or between individuals outside the home (unrelated) such as youth violence, acts of violence in institutions like schools, workplace, correctional centers and other public spaces (Waters et al., 2004).
- (3) Collective violence that can be defined as an organized crime within groups or set of individuals with political, social or economic purposes. It can include war, terrorism, genocide, etc. (Krug et al., 2002).

Among many other forms of violence, the literature has mainly emphasized on:

- (i) Domestic violence, a pattern of abusive behavior toward an intimate partner, a child, a relative or any other household member. It can include child abuse and neglect, intimate partner violence, elderly abuse, gender-based violence, etc.
- (ii) Community violence, an abusive behavior between individuals or groups (whether they know each other or not, like teen violence, street violence), or states (war, terrorism, racism, etc.). At an extended level, community violence is always an organized plan to achieve social, economic or political objectives (Waters et al., 2004).

According to the nature of violence, violent acts or abusive behaviors are not mutually exclusive, they may occur simultaneously and are mainly circumscribed in:

(a) Physical violence that refers to an intentional use of physical force or power to harm (hitting, punching, burning, slapping, beating, kicking, choking, use of weapons, etc).

(b) Sexual violence that consists to forcing the partner to perform sexual acts against her/his will, i.e., unwanted sexual intercourse, uninvited touching, coercing a partner to have sex without protection against pregnancy or sexually transmitted diseases, forced prostitution.

(c) Psychological/Emotional abuse that refers to any act intended to degrade and humiliate. It includes verbal and non-verbal communication (e.g., verbal threats, harassment, yelling, intimidation, criticism, etc.).

(d) Abusive controlling behaviors that refers to excessive deprivation of autonomy and rights of individuals to gain and maintain power or control over them. Abusive controlling behavior embraces mostly spiritual, cultural and financial violence (Krug et al., 2002).

2. Intimate Partner Violence (IPV)

For a better understanding of this concept that encompasses three words, let describe separately (Intimate and Partner) as violence has already been described.

***Intimate:** The word “Intimate” means a person with whom one has a particular close relationship and indicates a detailed knowledge of a thing or a person, or a relation marked by a close acquaintance. An intimate relationship is an interpersonal relationship that denotes an effective connection between each other and positive relational feelings and behaviors, whereas intimacy is a process in which an individual feels truly seen, known by,

and connected to his/her partner, and this process necessitates a high level of dialogue, openness and transparency, reciprocity, and so on (Muniruzzaman, 2017). Intimacy is not limited to sexual relationship, it is extended to other forms such as physical intimacy (sensual proximity or touching), emotional intimacy (empathize with the feelings of the trusted other person), cognitive or intellectual intimacy (exchange of thoughts, ideas in intellectual area and enjoy similarities and differences of opinions), experiential intimacy (being actively involved in mutual activities with one another), spiritual intimacy (worshipping as a couple, sharing feelings of awe or admiration) (David B. Simpson et al., 2008; Greeff & Malherbe, 2001; Holland et al., 2017). It is important to notice that any kind of stagnation in a relationship kills intimacy and can contribute to an unsuccessful or unexpected result in an intimate relationship (Muniruzzaman, 2017). Amongst factors that sustain well-being and increase longevity of an intimate relationship, is ensuring its maintenance through strategic behaviors and routine interactions (Chonody & Gabb, 2019).

***Partner:** Partner can be used talking about a business or a relationship. On the business side, a partner is a person who takes part in an activity or a business with others, where parties (partners) agree to cooperate to advance their mutual interests in sharing benefits and losses. While talking about an intimate relationship, a partner is a person with who you have common interests, respect one another, particular attachment, can connect with easily.

"Partner" can be used when discussing a business or a personal relationship. A business partner is a person who participates in an activity or business with others in which parties (partners) agree to cooperate to advance their mutual interests by sharing benefits and disadvantages. In the context of an intimate relationship, a partner is a person with whom

you share common interests, mutual respect, a strong emotional connection, etc. To designate partners in an intimate relationship, some specific terms are used like better half, consort, spouse, boy/girlfriend, companion, soul mate, etc. (Dillow et al., 2014).

Therefore, Intimate Partner Violence (IPV) is an abusive behavior that occurs between two people involved in a romantic relationship. Many years ago, the debate over whether men are primarily perpetrators and women are victims, as well as what may be the root causes or causing factors of violence in an intimate relationship, piqued the interest of researchers. Also, over time, research findings indicated that number of victims is considerably increasing, and consequently loss of lives and other damages (Ellsberg & Emmelin, 2014).

2.1 Typology of IPV

Violence, a deviant human behavior with the intention to harm, destroy, torture, etc., manifests itself in a variety of contexts and manifestations. Violence occurs within individuals with or without a permanent connection, and its nature reflects its occurrence and severity (i.e., physical, psychological and sexual violence). It can be self-directed, interpersonal or collective, and encompasses domestic violence and community violence among other forms of violence. Among other many types, IPV includes:

(1) Coercive controlling violence or intimate terrorism: a persistent pattern of power and control even when couples separate. Men are predominantly perpetrators, mostly by intimidating and controlling their partners. Women are deprived of their autonomy, self-esteem and emotional independency within a relationship. Controlling behaviors, which are characteristic of coercive controlling violence or abuse, include acts to constrain free

mobility or access to friends and relatives, and are characterized by one partner's efforts to systematically control the other partner's actions, relationships, and activities. For example, limits contact with family, no trust with money, no permission to meet friends, accuses of infidelity, jealousy, checking phone calls or messages (Aizpurua et al., 2017; Antai, 2011). This type of IPV embrace spiritual, cultural and financial violence, those intending to inflict his/her wills to the partner, manipulate and attempting to exert general control over the partner (Jennifer & Chitra, 2017).

(2) Situational couple violence: aggression like pushing, grabbing, blaming, hostility, verbal abuse, etc., perpetrated by both men and women in an intimate relationship, where one or both partners do not have efficient ability to manage and control their conflicts and anger. This type of violence was initially called “common couple violence” because it is the most common in general population (intimate partners), and its frequency and severity usually involve minor violence given that the intention behind is not power and control (Johnson et al., 2014).

(3) Violent resistance: an immediate and violent reaction or response to an assault that intend to protect oneself (self-defense) or others (firstly children) from harm. This resistance reflects a men/women’s active capacity to fight back against their abusive partners (Crann & Barata, 2016).

(4) Separation-Instigated violence: an atypical loss of self-control at separation or divorce process characterized by an acute reaction to traumatic separation, intense feelings of puzzlement, serious loss of psychological control and shame, low parenting capacity (Kelly & Johnson, 2008).

2.2 Prevalence of IPV

Although accurate statistics on IPV prevalence are difficult to obtain, and despite significant cultural differences, IPV is a widespread burden across countries, and both men and women are potentially perpetrators and victims, but women are the most affected than men (Devries, Mak, Petzold, et al., 2013).

IPV seems to be a systematic form of male dominance and social control over women. It is commonly referred to as "gender-based violence (GBV)" due to its high prevalence towards women, and statistics show that its consequences, including death, are generally more severe in women, as confirmed by related research findings. In this regard, statistics show that women who killed their abusers were more likely to have experienced frequent attacks, severe injuries, sexual abuse, and so on, and they were caught in an abusive situation that appeared to be out of control over time (Stöckl et al., 2013).

The prevalence of IPV appeared to be high in low-income countries as well. The global and regional estimates of IPV range from 20% in Western Pacific, 22% in Europe and high-income countries, 25% in the regions of America, 31% in Eastern –Mediterranean, 33% in the African and South-East Asian regions (WHO, 2021).

In Rwanda, results from national surveys on domestic violence (DHS, 2010 & 2015) evidenced that IPV is the most common form of violence against women, with impact to the individual, and the entire society in general, ranging from functional disorders to suicide and death from sustained injuries (Umubyeyi et al., 2014a). This study shows that physical or sexual violence in woman lifetime has doubled from 34% in 2010 to 56% in 2015, and that

this alarming rate placed Rwanda among countries with high rate of IPV against women in the world. According to Rurangirwa et al. (2017) in their study about IPV among pregnant women in Rwanda, its associated risk factors and relationship to antenatal services attendance, conducted in the Northern Province and in Kigali city, they found that physical violence was reported by 10.2% of all women during pregnancy, psychological abuse by 17%, sexual violence by 9.7% and controlling behavior by 20%. They found that all of these forms of violence increased during pregnancy when compared to the other periods of their lifetime. According to the 2020 Rwanda Demographic Health Survey (RDHS), IPV in women has increased from 40% in 2015 to 46% in 2020, while it has decreased in men from 20% in 2015 to 18% in 2020 (National Institute of Statistics of Rwanda, 2021).

2.3 Causing factors of IPV

A better understanding of factors predicting IPV is the best way to prevent it and manage conflicts when they occur. As previously stated, biological determinants and environmental influences are associated with predicting factors of IPV; however, it is important to emphasize the lack of longitudinal data on the complex interactions between biology - environment and violent behavior. Furthermore, “gender” has been pointed out as a mixed factor, (a range of biological and environmental factors) and a very active ingredient in violence, although less explored regardless its impact in IPV increase (Tim, 2021). Definitely and according to the above description of violence, it seems that race, income, education level, family size, community connection, personality traits or mental health

problems, alcohol consumption, even COVID-19 pandemic, are not the causing factors of violence, they rather exacerbate and catalyze it.

***Gender and biology:** As biological sex, gender (nature) refers to the fundamental biological traits of people and other creatures, such as physiology, anatomy, hormones, and other related biochemicals. Gender differences in violence are associated with genetic and hormonal variables, and these biological characteristics (anatomy, hormones, and other genetic features) constitute natural and inherent differences between boys/men and girls/women (Honk et al., 2014).

***Gender and environment:** As social structure, gender (nurture) is human properties acquired or a complex set of characteristics of girls/women and boys/men, socially constructed, including traditional gender norms, gender roles, gender stereotypes, cultural norms, etc. (Ainsworth, 2017). Even if both biology and environment play a significant role in aggressive behavior, research has demonstrated that violent behavior is learned (environment), i.e., the fundamental meaning of man and woman is shaped by society and passed down through the generations. Power and control are frequently defined for men within the context of the construction of masculinity, e.g., "being a true man" may entail the ability to assert power and control over his partner (woman), and a man's worth may be correlated with the amount of power and control he holds (Beyer et al., 2015). This long-standing lay perception of aggression associated with being male, hastened by environmental factors (considering male violence as "normative") has obviously contribute to persistent abusive behavior towards girls/women (Schiappa, 2021; Staniloiu & Markowitsch, 2012).

***Understanding gender differences:** Human essential characteristics (anatomy, hormones, physiological features, biochemicals, etc.) constitute itself a differentiation between boy and girl, and gender variations in violence are not linked to that innate differentiation, they are rather associated with the meaning assigned to a boy/man and a girl/woman through a construed social structure including gender beliefs, social norms, and practices within each society. A "man" is defined as an adult boy, a male human; and a "woman" as an adult girl, a female human; while "gender" is defined as the state of being male or female. Gender social perceptions and cultural norms (male dominance and control in a relationship, female subordination) shape people and influence how they understand their identities (Abramsky et al., 2011; Garcia-Moreno C, Jansen HA, Ellsberg M, Heise L, 2006). Strict beliefs in gender roles and traditional gender norms (e.g: man is the only decision maker, has the “right” to physically discipline woman for “incorrect” or maladaptive behavior, sexual intercourse is a man’s right, sexual activity is a marker of masculinity, etc.) reinforce and perpetrate conflicts and aggression in heterosexual couples, where women stay the victims (Katz et al., 2002) . In Nigeria, research findings have shown that cultural and traditional beliefs reinforce IPV and dictate to woman a full regard for in-laws, submission to them, a woman must call her husband’s six years old brother or sister “uncle” or “aunt” respectively (Balogun et al., 2012).

2.4 Consequences of IPV

To preserve intimacy for any length of time, emotional and interpersonal awareness must be highly developed. When two people decide to get married, it is because they love each

other, trust, and feel safe and secured in their relationship. Violence in general is not only a matter of physical force, but also the violation of a person, i.e., the violation of fundamental human rights that are inextricably linked to being a person: the right to one's body and the right to autonomy. Indeed, in light of the preceding narrative on what constitutes an intimate relationship, it is perplexing and inconceivable to comprehend how violence can emerge and destroy that harmonious consent (Richardson et al., 2020).

IPV occurs in all settings and standings of life (social, financial, etc.), and varies in frequency and severity over a period of a long time (Ellsberg & Emmelin, 2014). IPV victim suffers from constant terror and stress, and lives in fear of next episode (Gunnur et al., 2014).

Addressing the consequences of IPV, researchers have primarily focused on acts of physical aggression, such as broken bones, burns, or other physical injuries, and sometimes, test of sexually transmitted diseases (STD) when it's about sexual abuse, because dimensions are measurable; however, emotional abuse remains unreported because it leaves no physical scar (Chisholm et al., 2017).

Having mentioned that IPV shakes globally the socio-economic settings (poverty) and underlined its impact on women's health in particular (physical, psychological, sexual and reproductive), it is very important to reveal and emphasize on the severe consequences of IPV on offspring, i.e. alcohol and drugs abuse and related psychological and behavioral problems (e.g., anxiety, depression, aggression, low self-esteem, antisocial personality disorders, hostility, IPV perpetrators, suicidal attempts, irritability, conduct problems, etc.).

IPV has long-term negative health consequences on the victims, sometimes after a long period the abuse has ended (Shortt et al., 2018).

Furthermore, even if the survivor has successfully escaped from a violent relationship, the scars of the past abuse can influence the future intimate relationships, because individuals who have endured IPV may not believe that a healthy relationship may exist (Breiding et al., 2015). In the post-conflicts settings, more particularly the post-genocide Rwanda, the relationship between IPV and mental health is likely more complex given the high rate of violence and atrocities that Rwandan population have experienced during the genocide against tutsi in 1994 (Verduin et al., 2013).

2.5 Prevention and management of IPV

IPV is a deep and pervasive structural root that lies in our beliefs and practices about gender and violence, and men are far more likely than women to reinforce myths and stereotypes about violence, as well as minimize or deny its impact on their female partners. Meanwhile, some decades ago, realizing the complexity and consequences of IPV and its burden on society, particularly women victims, an empirical approach to remedying the situation and preventing future abuse was proposed, which consisted of adjudicating men perpetrators through the court system with a mandate to attend batterers' intervention programs (BIPs), which were designed to challenge men's use of power or violence over their intimate partners (Tjaden & Thoennes, 2000).

Even though, recent reviews reported a low effect of BIPs attendance, and suggested young researchers on IPV to support the empirical approach (BIPs) and work as a multidisciplinary

team (psychologist, criminologists, social workers, etc.) to provide substantive answers to many IPV associated mental problems (Eckhardt et al., 2006).

Another program called “Strong Through Every Mile” (STEM) has been initiated in Uganda for IPV survivors. It is a 10 week running program, designed to improve the quality of life of IPV victims by physical activity aiming to improve physical fitness (Maniccia & Leone, 2019). Equally in Rwanda, a non-governmental organization (NGO), the Life Wounds Healing Association (LIWOHA), initiated a community-based approach (CBA) that addresses IPV from community psychoeducation, awareness raising, conflicts management, healing the wounds from the genocide, emotions management, societal healing, and community resources mobilization. The CBA is developed from the socio-constructivist paradigm, “We Heal Together”, from which participants engage in community healing sessions as “a moment of invitation and construction; members of the conversation draw upon their histories, their relations, their familiar ways of acting and gently introduce them into the therapeutic dialogue” (McNamee, 2004). The approach is reported to be helpful in preventing IPV escalation, and to alleviate depression, grief and traumas related difficulties. To date, no study have assessed the effectiveness of this approach, except narrative reports from the organization. Although strategies have been established to prevent it and manage when it occurs (e.g. safe houses, One Stop Centres, Policies for woman and child protection, Gender equality, Laws related to gender promotion, prosecution of IPV perpetrators and violence against women in general, promotion of positive masculinity, etc.), still IPV

remains a global challenge, and particularly in Rwanda with highest rates of IPV estimated to 46% in women and 18% in men respectively (NISR, 2021).

It has been found that existing IPV prevention programs are "women-centered", which unfortunately have left men behind. According to scholars, effective models for preventing IPV should involve and engage both men and women for a shared understanding of the burden, in order to stand together for a "social change" that includes a disregard for gender and associated beliefs and practices (e.g. traditional beliefs, gender stereotypes, social norms and myths, gender roles, etc...) (Perez-Martinez et al., 2021). The social change is not a-two day- program, but a process that can span an entire generation. Social change refers to any modification in established life patterns of people in ways of thinking and doing (Alwin & Mccammon, 2003). This process requires a "smooth transition" from abusive traditional gender beliefs and practices to integrating positive and inclusive social settings including gender equality and gender equity".

On the psychological side, the better preventive way would be to organize trainings, workshops and sensitization on coping with stress and anger; and when violence occurs, the effective and safe intervention is the "conjoint couple therapy" which is designed to conjointly monitoring couples experiencing violence, in order to reconnect them and rebuild the safe relationships (Bradley et al., 2011).

3. Contemporary Rwanda

For several years preceding the genocide perpetrated against Tutsi in 1994, women, in the Rwandan cultural context, have, throughout history, endured limited rights, opportunities and dignity i.e. people were treated differently and disadvantageously under similar circumstances depends on whether they are born male or female (Jessee E., 2020). Longtime ago, in Rwanda, man has ever been considered as an “idol”, and whatever he says is true and women must obey; otherwise, she is a bossy (locally “*igishegabo/ingare*”), and will be treated accordingly for transgression of social and cultural norms. Social settings in the contemporary Rwanda have been reviewed, and the government recognized, reset, updated, and redefines some traditional structures such as gender perceptions and roles, social norms, and initiated/integrated the policy of gender equality. In this regard, modest efforts have been made, men and women are equal in terms of rights, opportunities, responsibilities and dignity.

Meanwhile, this "cultural or social shift" from the structured (rigid) social and cultural norms, to the harmonization or gender equality has commonly been considered as "undermining traditional values". On one hand, most men oppose the proposed process of social change (gender equality) out of fear of losing their "reverence," while on the other hand, some women resist in order to protect and maintain their family's reputation. This period of cultural transition increased IPV prevalence in Rwanda, and the process will be lengthy due to inefficient and ineffective approaches used to address the problem and achieve an adequate and smooth social change (Paul, 2019; Robinson, 2003).

Conclusion

IPV remains a global and complex challenge. Gender differences in violence are associated with genetic and hormonal variables, and these human essential characteristics (anatomy, physiological features, hormones, biochemicals) constitute itself a differentiation between boy/man and girl/woman (gender as biological sex).

Through social attributes and gendered toxic stories (gender beliefs, gender roles, cultural norms and practices, etc.), environmental factors play a significant role in gender inequalities across the life-span and contribute to persistent abusive behavior towards girls/women (Dicke et al., 2019). This toxic masculinity predisposed men to violence against women, and worse, this unconscious bias toward women settled them the everlasting victims (Madsen & Andrade, 2018). This issue will be addressed if and only if both men and women stand together for a common understanding of gender as a spectrum rather than two sets of opposing ideals, and thus, work together for an inclusive social change (i.e., a disregard for gender and associated beliefs and practices) to decrease Domestic violence/ gender-based violence in general and IPV in particular with deep focus on its magnitude, psychological outcomes, and effective interventions that mitigate both IPV occurrence and associated mental health difficulties.

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STUDY

1

**TRENDS AND CORRELATES
OF
IPV VICTIMIZATION
IN
RWANDA**

Corresponding published paper:

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. Trends and correlates of Intimate Partner Violence (IPV) victimization in Rwanda: Results from the 2015 and 2020 Rwanda Demographic Health Survey (RDHS 2015 and 2020), 2022. *BMC Women's Health* (2022) 22: 368. <https://doi.org/10.1186/s12905-022-01951-3>

Key words: IPV victimization, DHS, Rwanda



“In situations of captivity, the perpetrator becomes the most powerful person in the life of the victim, and the psychology of the victim is shaped by the actions and beliefs of the perpetrator”.

Judith Lewis Herman

Key words: IPV victimization, DHS, Rwanda

Abstract

IPV is reported to be a public health issue given its magnitude and long-lasting consequences. Men are generally thought to be perpetrators of IPV, but they can sometimes also be victims. In Rwanda, the experience of men as victims of IPV has not yet been described and characterized. The aim of this study was to examine the trends and correlates of IPV victimization in Rwanda.

The data for this study were extracted from the Rwanda Demographic and Health Survey (RDHS) in 2014/15 (female: n = 8292, male: n = 3470) and 2019/2020 (female = 8574, male: n = 3590). Multiple logistic regression was applied to examine the association between demographic characteristics and IPV in both women and men.

The results showed that, the prevalence of IPV among women increased from 40% in 2015 to 46% in 2020, while it decreased from 20% to 18% in men during the same period. Some of the risk factors associated with IPV victimization in 2015 were: uneducated husband (AOR = 5.570, CI = 1.292–24.020), woman from the poorest household (AOR = 2.834, CI = 1.637–4.908), husbands consuming alcohol (AOR = 3.021, CI = 2.20–4.148), woman consuming alcohol often (AOR = 13.354, CI = 1.915–93.109), husbands aged from 30 to 39 years (AOR = 2.797, CI = 1.517–5.1158), while women involved in decisions about their own earnings (AOR = 0.576, CI = 0.376-0.882) and purchases (AOR = 0.472, CI = 0.270–0.827) were protective factors.

Key words: Violence, Victimization, IPV, DHS, Rwanda

The factors associated with the increase of IPV in 2020 were: uneducated husbands (AOR = 3.032, CI = 1.117-8.235); husbands consuming alcohol (AOR = 1.712, CI = 1.126-2.606). A woman's involvement in decisions on her personal health (AOR = 0.443, CI = 0.304–0.644) or visits from her family or relatives (AOR = 0.405, CI = 0.21-0.748) was also a protective factor against IPV in 2020.

This study revealed a significant increase in IPV against women in Rwanda from 2015 to 2020. This increase needs further investigation to assess its relationship with related government programs on the social changes including social norms and social roles as assigned to men and women. Furthermore, IPV needs more assessment to know why it is continuously increasing so that it can be well managed. Since, there is a relationship between increase in IPV and education, the existing laws on domestic violence need to be known by the citizens, and more training are needed in quality and quantity.

Key words: Violence, Victimization, IPV, DHS, Rwanda

1.1 Background

IPV refers to violence between two individuals involved in an intimate relationship, and can occur across countries and cultures (Ellsberg et al., 2014). IPV is considered as a public health and human right issue. Prior researches have shown that women who experienced physical or sexual IPV have a risk of developing physical problems (Iman'Ishimwe Mukamana et al., 2020; Kapiga et al., 2017), including accessing and using antenatal care services for pregnant women as well as mental health problems including depression, anxiety, PTSD, suicide, alcohol abuse, etc. (Bahati et al., 2022; Kapiga et al., 2017).

Male victims of IPV have been severely neglected in public policy, yet they can also be victims, but less likely to report it (Safariolyaei & Amiri, 2017). Although, most of the prior studies focused mostly on women as victim, a review of 91 studies have also showed that one in five men was also a victim of IPV (Bonomi et al., 2009; Costa et al., 2015; Garcia-Moreno C, Jansen HA, Ellsberg M, Heise L, 2006; Kolbe & Büttner, 2020) and men experiencing IPV were likely to develop poor health outcomes. According to World Health Organization's estimates, 1 in 3 women have experienced physical or sexual violence or both, at least once in their lifetime globally (Kapiga et al., 2017; Rayhan & Akter, 2021). Regionally, the prevalence of sexual or physical IPV was found to be high in South East Asia (38%) and Africa (37%) than other regions like America (30%) and Europe (25%) (WHO, 2021).

A similar study by WHO combining data from 161 countries ranked 19 countries with the highest prevalence of physical or sexual IPV among women aged 15-49 years.

Key words: IPV victimization, DHS, Rwanda

The prevalence of sexual or physical IPV range from 53% in Kiribati and 52% in Fiji to 40% in Burundi, Lesotho and Samoa. Rwanda is among the sixteen countries with the second highest prevalence range, with 35-39% of ever-married/partner aged 15-49 years experiencing physical or sexual violence (WHO, 2021). According to data from two recent Rwanda Demographic and Health Surveys (RDHS) conducted in 2015 and 2020; the prevalence of IPV among ever-married women have increased from 40% in 2015 to 46% in 2020, but declined slightly from 20% to 18% among men over the same period (National Institute of Statistics of Rwanda, 2021). This increase of IPV among women also happened between 2005 and 2010 where women's experience of physical or sexual IPV had almost doubled from 34% to 56% (Thomson et al., 2015). These figures keep placing Rwanda among the countries with high prevalence of IPV against women around the world.

Compared to other countries in the region, Rwanda has laws and legislations with aim of protecting women against violence. For example, in 2008, the Rwandan government implemented the Prevention and Punishment of gender-based violence Law, which covers all forms of violence and includes a minimum prison sentence of six months (Dunkle et al., 2019). The Rwandan government has supported the establishment of various initiatives to combat gender-based violence (GBV) and IPV, such as prevention clubs in high schools and universities, village-level prevention committees, parents' evening forums to raise awareness, identify and assist victims of violence, and GBV desks at the Ministry of Defense and National Police.

Key words: IPV victimization, DHS, Rwanda

In 2009, the Rwanda National Police and the Ministry of Health also established One Stop Centres, which provide free medical care, psychosocial support, and legal services to victims of IPV and child abuse, as well as short-term emergency shelter (Dunkle et al., 2019). The National Policy against gender-based violence shows that, despite the government's efforts in GBV prevention and response, there are still issues that need to be addressed, such as the persistence of some negative cultural beliefs and the victim's economic or livelihood reliance which were found as contributing factors of the rise in IPV (MIGEPROF, 2011). Many people also believe gains in women's representation and protections reflect women's empowerment, which makes the dramatic increase in self-reported IPV against women (Thomson et al., 2015). Some other people assume that COVID-19 pandemic which impacted most of the sectors in the world, also played a role in the rise of IPV (Twahirwa & Ajiambo, 2020; WHO, 2020). The main goal of this study is to explore trends and correlates of IPV against women and men in Rwanda using two demographic health surveys (DHS 2015 and DHS 2020).

1.2 Methods

1.2.1 Data source and sampling

The data used in the study was extracted from the Rwanda Demographic and Health Surveys (RDHS) in 2014/2015 and 2019/2020.

The data was based on nationally representative surveys of women of reproductive age conducted by the National Institute of Statistics of Rwanda (NISR) in collaboration with

Key words: IPV victimization, DHS, Rwanda

other international organizations (USAID, UN, CDC, UNICEF, UNFPA, and UNWOMEN) and government institutions such as the Ministry of Health (MoH), Rwanda Biomedical Center (RBC). The RDHS employed a two-stage sample design and was intended to provide estimates of key indicators at the national, urban, and rural levels, as well as for five provinces and each of Rwanda's 30 districts. The first stage involved selecting sample points (clusters) made up of delineated EAs (Enumeration Areas). The second stage involved systematic sampling of households. A household listing operation was carried out in each of the selected EAs, and households to be included in the survey were drawn at random from these lists. For this study, we restricted our sample to women (aged between 15 and 49 years) and men (aged between 15 and 59 years) who have been married or cohabiting in the past or are currently married or cohabiting. After the exclusion, the final samples used in the analysis were : for women: DHS2014/2015 = 8292, DHS2019/2022 = 8574, and for men: DHS2014/2015 = 3470, DHS2019/2022 = 3590.

1.2.2 Outcome variable

In this study, the outcome variable was IPV. This variable was a woman's experience with at least one form of IPV (physical, sexual, or emotional). To derive physical violence, different questions were asked to women, including "Did your husband or partner ever: push you, shake you or throw you something, slap you, kick you or drag you, strangle or burn you, threaten you with a knife/gun or other weapon?"

Key words: IPV victimization, DHS, Rwanda

Sexual violence was assessed by posing the questions: "Did your husband or partner ever physically force you into unwanted sex or to perform sexual acts you didn't want to?" Further, emotional violence was assessed by asking women if their partner "humiliated," "threatened to hurt or harm them," or "insulted or made them feel bad about themselves." Responses were then categorized as having ever experienced physical, sexual, or emotional violence and coded "1," while those who had never experienced any form of IPV were coded "0."

1.2.3 Independent variables

The study included sociodemographic variables that are considered to be related to spousal violence. The ages of women were included as a categorical variable with the following ranges: 15-24, 25-34, and 35-49 for women and 15-24, 25-34, 35-49, and 50 and above for men. The wealth index was divided into five categories: poorest, poorer, middle, rich, and richest. The education level of women and their husband/partner was classified according to the highest level of education completed (no education level completed, primary education level, secondary education level, and higher education level), and women's literacy (illiterate and literate). The variable of the province, which specified where women were located, was divided into five regions (south, west, north, east, and Kigali city). The type of residence was in two categories: urban and rural. Some other variables used in this study were categorized as: household size (1-3, 4-5, and 6 and above), number of children aged five and below (none, 1 or 2, and 3 or 4), working status (working and not working), and man's age (15-24, 25-34, and 35-49).

Key words: IPV victimization, DHS, Rwanda

Additionally, alcohol usage and respondents' perceptions of people who make decisions about their own health care, earnings, purchases, and relatives' visits were also used.

1.2.4 Ethics

The Rwanda National Institute of Statistics (NISR), Macro International, Internal Review Board, and Rwanda National Ethics Committee all reviewed and approved the DHSs. The NISR granted us permission to use this identified data for this analysis.

1.2.5 Statistical analysis

We used a Statistical Package for Social Sciences (SPSS version 25) in performing all analysis. Data were analyzed using frequencies and percentage to describe the demographic characteristics of respondents. The chi-square test was used to test the association between respondents' socio-demographic variables and IPV. Furthermore, binary logistic regression model was then performed to assess whether respondents' social demographic characteristics influence their likelihood of experiencing IPV.

Key words: IPV victimization, DHS, Rwanda

1.3 Results

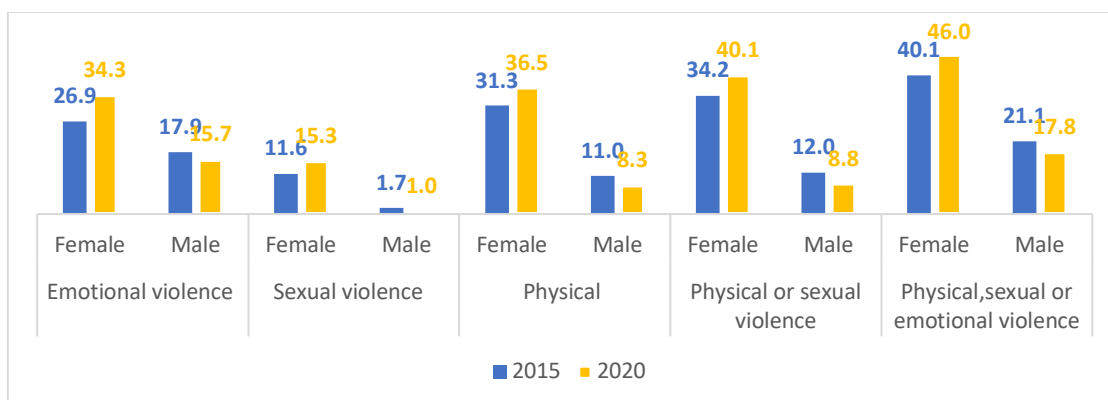


Figure 1 Trends in prevalence of IPV victimization

The results show that the prevalence of IPV against women by their partners increased from 40.1% in 2015 to 46% in 2020, but declined from 21% to 17% respectively for men in the same period. IPV was also found to have increased in all forms. Besides, the study found that physical violence was the most prevalent for women, while the most prevalent form for men was emotional IPV (Figure 1).

Of the total sample in 2015 and 2020, the majority of women and men were from rural areas, in the Southern and Eastern provinces, and aged 30 years and above. In terms of education, the majority of them had only a primary level. On the other hand, more than two-thirds of the women in the two samples were currently working. (Table 1).

Key words: *IPV victimization, DHS, Rwanda*

Table 1: Selected sociodemographic characteristics of women used in study

	DHS2015		DHS2020	
	Women	Men	Women	men
Respondent's age				
15-19	1.2	0.1	0.9	0.1
20-29	32.6	20.9	26.1	14.1
30-39	40.7	37.3	43.2	39.7
40-49	25.4	23.7	29.8	27.6
50 and above		17.9		18.5
Total	100.0(8292)	100.0(3470)	100.0(8574)	100.0(3590)
Partner's age				
15-19	0.1	0.9	0.1	0.9
20-29	21.8	33.2	15.7	24.2
30-39	40.8	39.2	42.2	42.7
40-49	24.4	18.8	28.2	24.0
50 and above	12.9	7.8	13.7	8.2
Total	100.0(6857)	100.0(3329)	100.0(7290)	100.0(3440)
Respondent's education				
no education	17.3	16.3	13.8	14.3
Primary	69.1	70.7	65.4	69.0
Secondary	10.5	9.1	15.9	11.6
Higher	3.1	3.9	4.8	5.0
Total	100.0(8292)	100.0(3470)	100.0(8574)	100.0(3590)
Partner's education				
no education	18.3		13.8	
Primary	67.3		66.7	
Secondary	10.4		13.5	
Higher	4.0		5.9	
Total	100.0(8248)		100.0(7266)	

Key words: IPV victimization, DHS, Rwanda

Table 1 (continued)

	DHS2015		DHS2020	
	Women	Men	Women	men
Respondent's literacy				
cannot read at all	24.1	21.1	19.9	19.9
able to read only parts of sentence	8.5	8.2	10.2	9.8
able to read whole sentence	67.4	70.7	69.9	70.3
Total	100.0(8274)	100.0(3462)	100.0(8559)	100(3586)
Respondent 's province				
Kigali city	12.3	12.3	11.8	11.3
South	25.2	25.0	23.8	24.3
West	22.6	23.1	22.8	23.2
North	15.8	16.3	16.3	16.6
East	24.2	23.3	25.3	24.6
Total	100.0(8292)	100(3470)	100.0(8574)	100(3590)
Respondent's residence				
Urban	22.7	21.9	21.6	20.3
Rural	77.3	78.1	78.4	79.7
Total	100(8292)	100(3470)	100.0(8574)	100(3590)
Respondent's wealth index				
Poorest	21.4	17.1	22.4	19.5
Poorer	20.2	20.1	19.2	19.4
Middle	19.1	20.5	19.0	21.2
Richer	18.1	20.7	19.7	20.6
Richest	21.2	21.5	19.7	19.3
Total	100.0(8292)	100(3470)	100.0(8574)	(3590)100
Number of household members				
1-3	23.6	24.4	22.5	22.4
4-5	40.9	38.7	43.3	41.8
6 and above	35.5	36.9	34.2	35.7
Total	100.0(8292)	100.0(3470)	100.0(8574)	100.0(3590)
Number of children 5 and under in household				
None	29.1		28.7	
1 or 2	66.4		67.6	
3 or 4	4.4		3.7	
5 and above	0.1		0.1	
Total	100.0(8292)		100.0 (8574)	

Key words: IPV victimization, DHS, Rwanda

Table 2: Bivariate associations of IPV and socio-demographic characteristics

		DH2015				DH2020			
		Ever experienced IPV							
		Women		Men		Women		Men	
		No	Yes	No	Yes	No	Yes	No	Yes
Respondent's age	Pvalue	0.002		0.054		0.035			0.363
15-19		0.9	1.7	0.1	0.0	1.7	0.6	0	0
20-29		39.0	30.9	22.9	18.1	29.3	26	16.4	11.8
30-39		40.0	44.1	39.9	43.7	45.0	48.2	43.0	45.7
40-49		20.0	23.3	23.1	19.1	24.4	25.3	26.0	27.3
50 and above		0.0	0	14.0	19.1	0	0	14.6	15.1
Total % (N)		100(1139)	100(764)	100(1094)	100(293)	100(1052)	100(895)	100(1129)	100(245)
Partner's age	Pvalue		0.40		0.523		0.302		0.419
15-19		0.1	0.2	1.2	0.4	0.2	0	0.8	0.9
20-29		27.9	21.2	35.9	32.3	18.9	15.6	28.2	26.9
30-39		41.4	43.4	41.4	44.9	45.5	47.2	47.0	44.7
40-49		20.6	23.2	16.0	15.7	23.6	25.5	18.0	17.8
50 and above		10	12.1	5.5	6.7	11.8	11.7	6.0	9.6
Total % (N)		100(1020)	100(604)	100(1080)	100(254)	100(967)	100(699)	100(1101)	100(219)
Respondent's education	Pvalue		0.000		0.008		0.000		0.058
no education		15.8	18.2	16.8	24.6	11	16.4	12.8	16.3
primary		69.5	74.5	71.3	67.6	62.5	69.2	69.3	71.8
secondary		11.5	6.8	7.9	5.8	20	13.1	12.9	9.8
higher		3.2	0.5	4.0	2.0	6.5	1.3	5.0	2.0
Total % (N)		100(1139)	100(764)	100(1094)	100(293)	100(1052)	100(895)	100(1129)	100(245)
Residence of respondent	Pvalue		0.264		0.425		0.005		0.658
Urban		22.8	17.5	22.3	20.1	19.9	17.9	20.0	18.8
Rural		77.2	82.5	77.7	79.9	80.1	82.1	80.0	81.2
Total % (N)		100(1139)	100(764)	100(1094)	100(293)	100(1052)	100(895)	100(1129)	100(245)

Key words: IPV victimization, DHS, Rwanda

Table 2 (continued)

DH2015				DH2020					
Ever experienced IPV									
		Women		Men		Women		Men	
		No	Yes	No	Yes	No	Yes	No	Yes
Partner's education	Pvalue	0.000				0.000			
no education		14.4	22.5			10.4	17.1		
primary		70	69			68	72.5		
secondary		11.4	7.2			14.3	8.7		
higher		4.3	1.2			7.3	1.7		
Total % (N)		100(1135)	100(759)			100(962)	100(691)		
Respondent's Literacy	Pvalue	0.000		0.001		0.018		0.053	
cannot read at all		22.9	28.3	20.9	30.8	17	25	18.5	25.3
able to read only parts of sentence		8.7	9.4	9	6.2	10.7	10.2	10	9.8
able to read whole sentence		68.3	62.3	70.2	63	72.2	64.8	71.4	64.9
Total % (N)		100(1134)	100(763)	100(1093)	100(292)	100(1052)	100(893)	100(1127)	100(245)
Respondent's Wealth index	Pvalue	0.000		0.001		0.000		0.111	
poorest		17	28.9	17.367	26.6	19.4	28.3	19.5	24.5
poorer		21	20.8	21.389	21.5	19.2	22.8	20.1	20.4
middle		20.5	19	20.75	22.9	18.5	18.2	23	26.1
richer		18.6	17.9	21.115	16	22.2	17.7	20.3	14.7
richest		22.9	13.4	19.378	13	20.6	13.1	17.1	14.3
Total % (N)		100(1139)	100(764)	100(1094)	100(293)	100(1052)	100(895)	100(1129)	100(245)
Partner's drink alcohol	Pvalue	0.000		0.000		0.000		0.000	
No		14.2	10.7	67.1	44.7	23.2	20.6	71.8	49
Yes		85.8	89.3	32.9	55.3	76.8	79.4	28.2	51
Total % (N)		100(1139)	100(764)	100(1094)	100(293)	100(1052)	100(895)	100(1126)	100(245)

Key words: *IPV victimization, DHS, Rwanda*

Table 2 (continued)

DH2015				DH2020					
Ever experienced IPV									
		Women		Men		Women		Men	
		No	Yes	No	Yes	No	Yes	No	Yes
Partner's education	Pvalue	0.000				0.000			
no education		14.4	22.5			10.4	17.1		
primary		70	69			68	72.5		
secondary		11.4	7.2			14.3	8.7		
higher		4.3	1.2			7.3	1.7		
Total % (N)		100(1135)	100(759)			100(962)	100(691)		
Respondent's Literacy	Pvalue	0.000		0.001		0.018		0.053	
cannot read at all		22.9	28.3	20.9	30.8	17	25	18.5	25.3
able to read only parts of sentence		8.7	9.4	9	6.2	10.7	10.2	10	9.8
able to read whole sentence		68.3	62.3	70.2	63	72.2	64.8	71.4	64.9
Total % (N)		100(1134)	100(763)	100(1093)	100(292)	100(1052)	100(893)	100(1127)	100(245)
Respondent's Wealth index	Pvalue	0.000		0.001		0.000		0.111	
poorest		17	28.9	17.367	26.6	19.4	28.3	19.5	24.5
poorer		21	20.8	21.389	21.5	19.2	22.8	20.1	20.4
middle		20.5	19	20.75	22.9	18.5	18.2	23	26.1
richer		18.6	17.9	21.115	16	22.2	17.7	20.3	14.7
richest		22.9	13.4	19.378	13	20.6	13.1	17.1	14.3
Total % (N)		100(1139)	100(764)	100(1094)	100(293)	100(1052)	100(895)	100(1129)	100(245)
Partner's drink alcohol	Pvalue	0.000		0.000		0.000		0.000	
No		14.2	10.7	67.1	44.7	23.2	20.6	71.8	49
Yes		85.8	89.3	32.9	55.3	76.8	79.4	28.2	51
Total % (N)		100(1139)	100(764)	100(1094)	100(293)	100(1052)	100(895)	100(1126)	100(245)

Key words: *IPV victimization, DHS, Rwanda*

Table 2 (continued)

		DH2015				DH2020			
		Ever experienced IPV							
		Women		Men		Women		Men	
		No	Yes	No	Yes	No	Yes	No	Yes
Respondent currently working	Pvalue		0.162		0.657		0.026		0.916
No		43.6	21.5	0.5	0.3	50.6	20.7	1	1
yes		56.4	78.5	99.5	99.7	49.4	79.3	99	99
Total % (N)		100(1139)	100(764)	100(1094)	100(293)	100(1052)	100(895)	100(1129)	100(245)
Respondent's province	Pvalue		0.565		0.392		0.519		0.223
Kigali city		11.6	10.9	12.1	9.9	11	10.7	11.5	9.0
South		24.4	23.7	24.4	27.6	23.9	25.3	23.5	27.3
West		23.4	22.5	23.4	24.2	22.4	24.6	22.9	24.5
North		15.4	18.3	18.0	14.3	16.3	16.2	17.9	13.1
East		25.3	24.6	22.1	23.9	26.3	23.2	24.2	26.1
Total % (N)		100(1139)	100(764)	100(1094)	100(293)	100(1052)	100(895)	100(1129)	100(245)
Respondent involved with decisions about her earnings	Pvalue		0.000		0.025		0.000		0.000
respondent alone		12.4	24.8	18.5	25.6	17.5	29.1	13.0	22.5
respondent and partner		76.9	57.5	79.6	71.2	75.1	58.3	84.6	70.5
partner alone		10.6	17.7	2.0	3.3	7.5	12.6	2.3	7.0
Total % (N)		100(620)	100(395)	100(920)	100(215)	100.1(550)	100(398)	100(937)	100(200)
Respondent involved with decisions about her health	Pvalue		0.000		0.061		0.000		0.036
respondent alone		16.9	27.2	42.4	51.6	21.9	36.4	46.0	52.5
respondent and partner		67.4	54.5	53.8	45.7	61.3	42.6	51.0	42.5
partner alone		15.7	18.4	3.7	2.8	16.8	20.9	3.0	5.0
Total % (N)		100(1021)	100(604)	100(1079)	100(254)	100(966)	100(697)	100(1101)	100(219)

Key words: IPV victimization, DHS, Rwanda

Table 2 (continued)

		DH2015				DH2020			
		Ever experienced IPV							
		Women		Men		Women		Men	
		No	Yes	No	Yes	No	Yes	No	Yes
Respondent involved in decisions about household purchase	Pvalue	0.000		0.000		0.000		0.000	
respondent alone		7.4	14.8	27.1	37	4.8	10.9	23.5	39.3
respondent and partner		69.3	50.6	69.7	56.7	76.9	59.1	70.1	53.4
partner alone		23.2	34.7	3.2	6.3	18.3	30	6.4	6.8
Total % (N)		100(1021)	100(603)	100(1079)	100(254)	100(966)	100(697)	100(1101)	100(219)
Respondent involved with decisions about her visits of friends or relatives.	Pvalue	0				0			
respondent alone		12.1	22.6			16.3	22.5		
respondent and husband/partner		75.9	60.5			74.2	59.1		
husband/partner alone		11.9	16.9			9.5	18.5		
Total % (N)		100(1021)	100(603)			100(963)	100(699)		
Household members	Pvalue	0.129		0.169		0		0.161	
1-3		30.5	25.1	25.6	28	28.6	26.8	24.4	30.2
4-5		39.3	42.7	41.7	45.1	42.4	46.9	46.1	42
6 and above		30.2	32.2	32.7	27	29	26.3	29.6	27.8
Total % (N)		100(1139)	100(764)	100(1094)	100(293)	100(1052)	100(895)	100(1129)	100(245)
Frequency of being hit in last 12 months by other than partner	Pvalue			0.005				0.597	
not at all				90.4	81.2			90.8	87.8
Often				0.1	2			0.4	1.1
sometimes				9.3	16.8			8.8	11.1
Total % (N)				100(386)	100(149)			100(251)	100(90)

Key words: IPV victimization, DHS, Rwanda

Table 2 (continued)

		DH2015				DH2020			
		Ever experienced IPV							
		Women		Men		Women		Men	
		No	Yes	No	Yes	No	Yes	No	Yes
Number of wives or partners	Pvalue				0.002				0.15
one wife				97.315	93.3			96.9	95
More than one wife				2.685	6.7			3.1	5
Total % (N)				100(1080)	100(254)			100(1101)	100(219)
Owns a house alone or jointly	Pvalue				0.079				0.11
does not own				16.2	21.8			18.6	24.5
alone only				34.6	33.8			28	28.6
jointly only				48.6	44.4			48.7	44.1
both alone and jointly				0.5	0			4.7	2.9
Total % (N)				100(1094)	100(293)			100(1129)	100(245)
Owns land alone or jointly	Pvalue				0.031				0.022
does not own				22.7	29.7			34.4	43.3
alone only				28.6	28.7			25.4	25.7
jointly only				48.3	40.6			36.1	29
both alone and jointly				0.5	1			4.1	2
Total % (N)				100(1094)	100(293)			100(1129)	100(245)
frequency of wife/partner being drunk	Pvalue				0.000				0.000
Never				81.9	41.9			61.8	26.4
Often	P			1.1	10			0.3	9.6
Sometimes				17	48.1			37.9	64
Total % (N)				100(359)	100(160)			100(317)	100(125)

Key words: IPV victimization, DHS, Rwanda

In bivariate analysis in 2015, most of the covariates were statistically associated with IPV for both women and men, for example, consumption of alcohol, level of education, literacy, wealth index, decision on personal health, decision on earnings, decision on household purchase, decision on visits to family or relatives. Other covariates associated with IPV in women included the woman's age and the level of education of her partner; in men, the number of wives or partners, the frequency of wife/partner being drunk, and owning land alone or jointly were significantly associated with IPV (P value 0.05) (Table 2).

In 2020, many of the same covariates were also significantly associated with IPV against women, including age, level of education, literacy, wealth index, type of place of residence, and husband's consumption of alcohol, as well as involvement in decision-making about household purchase, earning, their health, and visits from friends and relatives. Furthermore, the frequency of the wife/partner being drunk, the husband being involved in household purchase, earnings, and health decisions, and the husband owning land alone or jointly were all associated with IPV against men (Table 2).

Key words: IPV victimization, DHS, Rwanda

Table 3: Multivariate analysis of association between IPV and socio-demographic characteristics.

	DHS 2015		DHS 2020	
	AOR (95% CI)		AOR (95% CI)	
	Women	Men	Women	Men
Respondent's age				
15-19	1.26(0.27-5.84)	0.33(0.08-1.38)	0.33(0.06-1.83)	
20-29	0.60(0.323-1.11)	1.46(0.51-4.17)	1.05(0.65-1.66)	
30-39	0.669(0.40-1.11)	0.66(0.21-2.12)	1.09(0.75-1.59)	
40-49	1	1	1	
Partner's age				
20-29	2.381(1.168-4.856) *		NA	
30-39	2.797(1.517-5.158) *		NA	
40-49	1.770(1.014-3.089) *		NA	
50 and above	1		NA	
Respondent's education				
No education	2.38(0.429-13.850)	0.37(0.01-10.72)	1.16(0.39-3.47)	2.57(0.12-54.41)
Primary	2.91(0.559-15.109)	0.15(0.01-3.28)	0.94(0.36-2.41)	3.3(0.24-45.66)
Secondary	3.11(0.608-15.894)	0.05(0.01-2.00)	0.97(0.39-2.41)	5.12(0.33-78.66)
Higher	1	1	1	1
Partner's education				
no education	5.57(1.29-24.02) *		3.03(1.117-8.24) *	
Primary	3.21(0.77-13.24)		2.459(0.987-6.124)	
Secondary	2.56(0.624-10.49)		1.124(0.444-2.843)	
Higher	1		1	

Key words: IPV victimization, DHS, Rwanda

Table 3 (continued)

	DHS 2015		DHS 2020	
	AOR (95% CI)		AOR (95% CI)	
	Women	Men	Women	Men
Respondent's residence				
Urban	1		NA	
Rural	0.84(0.55-1.29)		NA	
Respondent's literacy				
cannot read at all	1.00(0.62-1.62)	1.28(0.39-4.19)	1.02(0.61-1.71)	1.19(0.23-5.87)
able to read only parts of sentence	0.98(0.59-1.62)	0.15(0.01-1.76)	0.86(0.52-1.43)	0.45(0.07-2.74)
able to read whole sentence	1.00	1.00	1.00	1.00
Respondent's wealth index				
Poorest	2.83(1.637-4.90) *	0.58(0.11-3.13)	1.51(0.87-2.63)	0.93(0.18-4.78)
Poorer	1.89(1.10-3.25) *	0.22(0.04-1.19)	1.38(0.79-2.41)	0.594(0.11-3.21)
Middle	1.85(1.08-3.17) *	0.47(0.09-2.36)	1.07(0.61-1.87)	1.522(0.31-7.46)
Richer	1.66(0.98-2.81)	0.21(0.04-1.04) *	0.98(0.57-1.66)	0.613(0.11-3.49)
Richest	1		1	1
Partner's drink alcohol				
No	1		1	
Yes	3.02(2.20-4.14) *		3.286(2.408-4.486) *	
Woman currently working				
No	0.89(0.49-1.60)		0.864(0.525-1.422)	
Yes	1		1	
Respondent involved with decisions about her earnings				
respondent alone	1		1	
respondent and husband/partner	0.57(0.37-0.88) *		0.70(0.46-1.09)	
husband/partner alone	0.90(0.51-1.57)		1.02(0.56-1.86)	
Respondent involved with decisions about her health				
respondent alone	1		1	
respondent and husband/partner	0.77(0.50-1.18)		0.43(0.30-0.63) *	
husband/partner alone	0.49(0.29-0.84) *		0.56(0.34-0.91)	
Respondent involved with decisions about household purchase				
respondent alone	1		1	
respondent and husband/partner	0.47(0.27-0.82) *		0.68(0.36-1.30)	
husband/partner alone	1.07(0.59-1.93)		0.94(0.48-1.85)	

Key words: IPV victimization, DHS, Rwanda

Table 3 (continued)

	DHS 2015		DHS 2020	
	AOR (95% CI)		AOR (95% CI)	
	Women	Men	Women	Men
Respondent involved with decisions about her visits				
Respondent alone	1		1	
Respondent and husband/partner	1.03(0.64-1.65)		0.41(0.41-0.22) *	
Husband/partner alone	0.93(0.53-1.64)		0.66(0.38-1.12)	
Number of children <5 in household				
None	1		NA	
1 or 2	0.82(0.57-1.17)		NA	
3 or 4	1.04(0.47-2.24)		NA	
Number of household members				
1-3	1		NA	
4-5	1.185(0.81-1.74)		NA	
6 and above	1.680(1.04-2.71) *		NA	
Frequency of being hit in last 12 months by other than wife/partner				
not at all		1		1
sometimes	NA	5.49(1.65-18.25) *	NA	0.942(0.236-3.756)

Key words: IPV victimization, DHS, Rwanda

Table 3 (continued)

	DHS 2015		DHS 2020	
	AOR (95% CI)		AOR (95% CI)	
	Women	Men	Women	Men
Number of wives or partners				
One		1		1
More than one wife		0.83(1.17-0.25)		1.558(0.303-8.003)
Frequency of wife/partner being drunk				
never		1		1
often		13.30(1.9-93.12) *		10.27(0.76-13.59)
sometimes		3.84(1.61-9.17) *		3.91(1.55-9.87) *

Key words: *IPV victimization, DHS, Rwanda*

Multivariate logistic regression results are shown in Table 3. In 2015, the results revealed that women with an uneducated husband had a higher odd ratio of IPV (AOR = 5.570, CI = 1.292–24.020), and women from the poorest households were more likely to experience IPV than women from rich households (AOR = 2.834, CI = 1.637–4.908). Multivariate logistic regression results are shown in Table 3. In 2015, the results revealed that women with an uneducated husband had a higher odd ratio of IPV (AOR = 5.570, CI = 1.292–24.020), and women from the poorest households were more likely to experience IPV than women from rich households (AOR = 2.834, CI = 1.637–4.908)

Women whose husbands/partners drank alcohol were 3.021 times more likely to have IPV than women whose husbands did not drink alcohol (AOR = 3.021, CI = 2.20–4.148), and women whose husbands were 30 to 39 years old were also associated with higher IPV (AOR = 2.797, CI = 1.517–5.1158). Besides, women from families with 6 members or above were 1.68 times more likely to experience IPV compared to women from families with 1 to 3 members (AOR = 1.680, CI = 1.043–2.706). Women involved in decisions about their own earnings (AOR = 0.576, CI = 0.376–0.882), purchases (AOR = 0.472, CI = 0.270–0.827) and versus their partner alone were protective factors. On the contrary, men's findings showed that husbands of women who consume alcohol often (AOR = 13.354, CI = 1.915–93.109) and sometimes (AOR = 3.842, CI = 1.610–9.172) and those who have been hit sometimes in the last 12 months by someone other than their wife or partner (AOR = 5.498, CI = 1.656–18.252) were more likely to experience IPV.

Key words: IPV victimization, DHS, Rwanda

Coming from a rich family was a protective factor against IPV against men (AOR = 0.21, CI=0.043-1.040).

In multivariate analysis in 2020, women with uneducated husbands (AOR = 3.032, CI = 1.117–8.235) and women whose husbands drank alcohol (AOR = 1.712, CI = 1.126–2.606) were also associated with greater odds of IPV. Furthermore, women involved in decisions about their own health (AOR = 0.443, CI = 0.304-0.644) or visiting their friends or relatives (AOR = 0.405, CI = 0.21-0.748) were less likely to experience IPV. According to the men's findings, men whose wives drank sometimes were likely to experience IPV (AOR: 3.914, CI = 1.552–9.872). However, most of the socio-demographic characteristics were not statistically significant (Table 3).

1.4 Discussion

To the best of our knowledge, this is the first study to examine the trends and correlates of IPV victimization in Rwanda using data from RDHS 2015 and 2020. Overall, the study found that the prevalence of IPV against women increased from 40 % in 2015 to 46% in 2020 and declined from 21% to 18% for men in the same period respectively. With respect to the nature of IPV, physical violence was the most prevalent form of IPV among women, similar to other Sub-Saharan Africa countries (SSA) (Ahinkorah et al., 2018), while the most popular form among men was emotional violence (Umubyeyi et al., 2014b).

Key words: IPV victimization, DHS, Rwanda

The increase of IPV among women could have been due to the greater empowerment and government policies toward gender equality that made women feel confident to report IPV (Thomson et al., 2015).

Others argue that empowerment increases a woman's risk of IPV because she is perceived to be challenging gender norms and threatening her male partner's dominant status or exercise of power (Atkinson et al., 2005; Choi & Ting, 2008; Schuler et al., 2017). We can't also forget covid-19 pandemic, which was taken as a factor that played a big role in the rise of IPV by a number of researchers (Joseph et al., 2020; Organization, 2020; Twahirwa & Ajiambo, 2020).

The prevalence rate of IPV in the current study is high when compared to the study conducted just before the pandemic (National Institute of Statistics of Rwanda, 2021). The increase in prevalence in IPV was also reported in other countries in similar recent studies, for example, 42% in Malawi (Chikhungu et al., 2021), 40% in Gambia (Jabbi et al., 2020), and 32.5% in Haiti (Occean et al., 2021), 42.7 percent in Zimbabwe (Lasong et al., 2020).

Similar to other researches (Carmo et al., 2011; Kolbe & Büttner, 2020), our study found that women were more likely to report intimate partner violence than men. There are numerous theories as to why men, in particular, may be hesitant to report domestic violence. In addition to their own feelings of shame, one reason could be a fear of not being believed and of being barred from contact with their children. There are also the reasons known from female victims of IPV : the desire for an intact family and the hope that their partner will change (Kolbe & Büttner, 2020).

Key words: IPV victimization, DHS, Rwanda

According to the study, the associated factors of IPV were women's wealth index, husband/partner's age and level of education, partners' alcohol usage, and women's participation in the decision making about their health, earnings, purchases and visits to relatives or friends.

The study revealed that women in low wealth were associated with a higher prevalence of IPV when compared to women in higher wealth. This could be due to wealth-driven empowerment, which eventually reduces their reliance on their partners (Ahinkorah et al., 2018; Iman'Ishimwe Mukamana et al., 2020). Previous research has also found that a woman's financial situation may be a protective factor against IPV (Abramsky et al., 2019; Ahinkorah et al., 2018; Ahmadabadi, Najman, Williams, & Clavarino, 2020a; Iman'Ishimwe Mukamana et al., 2020). Poverty, on the other hand, has a high risk of exposing women to IPV because poor women rely heavily on their partners and may not be able to bargain (Gustafssona & Cox, 2017).

The study discovered that uneducated women's partner or husband were more likely to commit violence to their intimate partners than higher educated husbands. These findings are similar to previous studies that reported that a partner's lower educational level increases the likelihood of IPV (Akani, 2020; Makayoto et al., 2013; Prasad & Periyas, 2019). One possible explanation is that highly educated partners are more exposed to training and information, causing them to believe and value the importance of respecting their partners' rights and freedom.

Key words: IPV victimization, DHS, Rwanda

Education promotes compromising and caring behaviors, as well as raises awareness of the negative consequences of violent behavior. As a result, the frequency of IPV decreases with the level of education of the husband (Jabbi et al., 2020). The study also found that, women whose husbands use alcohol, are at high risk of experiencing intimate partner violence, which is consistent with findings from other studies (Akani, 2020; Occean et al., 2021; Onigbogi et al., 2015; Thomson et al., 2015). Other studies discovered that both men's and women's alcohol consumption was a risk factor for IPV (Vieira et al., 2011). Alcohol consumption has a direct impact on cognitive and physical function, reducing self-control and making people less capable of negotiating a nonviolent resolution to conflicts in relationships (Thomson et al., 2015).

Our findings indicated that women that are involved in decision making about their own earning, visiting relatives or friends, purchases and health were less likely to experience IPV, this also is in agreement with the results obtained earlier (Ebrahim & Atteraya, 2019). This can be explained in the context of women's empowerment. Women's involvement in household decision-making is one of the indicators of women's empowerment (National Institute of Statistics of Rwanda, 2021), and when a woman is empowered, it can be an effective method of preventing her from IPV (Schuler et al., 2017). This is also supported by the initiative of promoting gender equality and empowerment, which is one of the United Nations' 17 Sustainable Development Goals (Ebrahim & Atteraya, 2019).

Key words: IPV victimization, DHS, Rwanda

1.5 Conclusion

To the best of our knowledge, this is the first study to examine the trends and correlates of IPV victimization in Rwanda using data from Rwanda Demographic and Health Surveys 2015 and 2020.

Rwanda has one of the highest self-reported rates of IPV against women in the world. The results indicated that women' self-reported rate of IPV increased from 40% in 2015 to 46% in 2020 respectively. IPV needs more assessment to know why it is continuously increasing so that it can be well managed. Since there is relationship between increase of IPV and education , the existing laws on domestic violence need to be known by citizens, and impact the traditional social beliefs and norms (masculinity vs femininity) to assure the decrease of IPV and consequently, its mental outcomes among Rwandans.

Key words: IPV victimization, DHS, Rwanda

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STUDY

2

**PREVALENCE OF MENTAL DISORDERS
AMONG
IPV EXPOSED AND NON-EXPOSED
RWANDANS**

Corresponding published paper:

Claire Bahati ^{a*}, Gilbert Rukundo ^{a,c}, Naome Nyirahabimana ^b, Josias Izabayo ^d, Japhet Niyonsenga ^{a,e}, Vincent Sezibera ^{a,d} : The prevalence of mental disorders among intimate partner violence exposed and non-exposed Rwandans: Findings from a national cross-sectional survey (2022). *Psychiatry Research* 310, 114465
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Key words: IPV, Prevalence, Mental disorders, Rwanda

Abstract

Despite the growing evidence suggesting an elevated risk for lasting mental disorders in the general population in Rwanda, a little is still known about national prevalence of mental disorders among victims of IPV in post-conflict setting.

The aim of this study was to compare the prevalence of mental disorders among IPV exposed and non-exposed individuals in Rwanda. This was a cross-sectional study based on secondary data of the 2018 Rwanda Mental Health Survey.

The sample consisted of 20381 participants selected countrywide, from 7,124 households (age range: 14-65 years), of which 3759 Rwandans exposed to IPV (18.4%) and 16622 non-exposed to IPV (81.6%). Participants were screened on IPV exposure and common mental disorders, and data were analyzed using the SPSS version 25 software. The results showed that the rate of any mental disorder was substantially higher in the group exposed to IPV than the non-exposed, 32.4 % and 11.7%, respectively. These results highlight that among Rwandans diagnosed with severe mental disorders, participants with a history of IPV exposure present with increased odds of mental disorders prevalence and severity. Therefore, people seeking mental health care should also be screened for their IPV exposure and offered the appropriate interventions.

Key words: IPV, Prevalence, Mental disorders, Rwanda

2.1 Background

The Centers for Disease Control and Prevention (CDC) defines IPV as physical, emotional, or sexual violence that occurs between two people in an intimate relationship (Breiding et al., 2008). Compared to physical and sexual violence, psychological violence is reported to be the most common and damaging subtype of the IPV (Dokkedahl et al., 2019). IPV is reported to cause severe physical and mental health problems given the magnitude of the physical and psychological violence imposed to the victim. Several authors have highlighted that beyond physical injuries and death, individuals exposed to IPV are more likely to report a range of negative mental health outcomes that are both acute and chronic in nature (Breiding et al., 2008). IPV is associated with substance abuse, PTSD, panic disorders, depression, suicidality, and other unhealthy behaviors (Devries, Mak, Bacchus, et al., 2013; Hall et al., 2014; Tsai et al., 2016; Yu et al., 2019).

Despite the substantial studies indicating that IPV is associated with significant mental disorders in victims, the direction and magnitude of the association remain uncertain. It is possible that exposure to IPV results in subsequent poor mental and physical health outcomes, that different mental and physical health conditions increase the risk of subsequent IPV, or that a bidirectional relationship is present. In a systematic review, Bacchus et al. (2018) revealed a bidirectional association between ‘ever’ exposure to IPV and depressive symptoms and alcohol use.

Key words: IPV, Prevalence, Mental disorders, Rwanda

As such, IPV was associated with incident depressive symptoms (OR=1.97, 95% CI 1.56 to 2.48), as well as an association in the reverse direction between depressive symptoms and incident IPV (OR=1.93, 95% CI 1.51 to 2.48), (Devries, Mak, Bacchus, et al., 2013). In another systematic review the authors found increased odds of alcohol use following IPV (OR=1.25, 95% CI 1.02 to 1.52) and increased odds of IPV following alcohol use (OR=1.27, 95% CI 1.07 to 1.52), (Devries, Child, et al., 2013). Based on the dilemma existing in the literature, significant efforts are still needed to explore the association of IPV and mental illness. Therefore, the current study was intended to examine the prevalence of mental disorders (MDs) among IPV exposed as compared to non-exposed individuals in post-genocide Rwanda, where there would be a likelihood of increased MDs and IPV associated with the post-conflict contexts.

While national data on prevalence are crucial to establishing or strengthening of policies and action plans for addressing mental disorders especially in victims of IPV, studies assessing the prevalence and association between MDs and IPV in sub-Saharan African countries are scarce, particularly Rwanda. Worryingly, authors have found that the lifetime prevalence of reported IPV and/or non-partner sexual violence is highest in the Africa region (Abrahams et al., 2014; WHO, 2013). Similarly, the Rwanda Demographic Health Survey in 2015 and 2020 (National Institute of Statistics of Rwanda, 2021) showed that the prevalence of any spousal violence among ever-married women increased from 40% in 2014-15 to 46% in 2019-20 respectively.

Key words: IPV, Prevalence, Mental disorders, Rwanda

Inversely, violence in men was reported to have declined slightly from 20% to 18% over the same period. The same results evidenced that among women aged 15-49, 37% reported to have experienced lifetime physical violence since age 15 and 23% have ever experienced sexual violence. Equally, men reported experience of physical and sexual violence, 30% and 6% respectively (National Institute of Statistics of Rwanda, 2021).

To the best of our knowledge, no attempt has been made so far to investigate the prevalence of mental disorders (MDs) in individuals exposed to IPV compared to non-exposed individuals in post-genocide Rwanda. Studies conducted in Rwanda on IPV and mental disorders are limited by their small sample size, which limits the generalizability of their findings (Ntaganira et al., 2009; Rurangirwa et al., 2018a; Umubyeyi et al., 2014a; Verduin et al., 2013). The authors have explored the prevalence and determinants of IPV against pregnant women (Ntaganira et al., 2009; Rurangirwa et al., 2018b), association of IPV with MDs and suicidal ideations (Verduin et al., 2013); but none specifically for MDs prevalence among victims and non-victims of IPV. Therefore, the aim of the current study was to compare the prevalence of mental disorders between individuals exposed to IPV and non-exposed in a cross-sectional national based study. We postulated that the prevalence of MDs would be higher in group exposed to IPV when compared to non-exposed group.

Key words: IPV, Prevalence, Mental disorders, Rwanda

2.2 Methods

2.2.1 Study design

The current study comprises a cross-sectional design comparing a prevalence of mental disorders between a group of Rwandans exposed and non-exposed to IPV.

2.2.1.1 Study setting and population

The 2018 Rwanda Mental Health Survey (RMHS 2018), a parent study of the current analysis was conducted countrywide. Geographically, Rwanda is divided into five provinces, 30 districts, 416 sectors, 2,148 cellules, and 14,837 villages; with a total population of 12.5 million at the time of survey.

The sample of the study was computed at the district level and utilized the sampling frame for 2012 Rwanda Population and Housing Census (RPHC) whose primary sampling unit is enumeration area (EA).

2.2.1.2 Sampling and procedures

Secondary data from the 2018 Rwanda Mental Health Survey (2018 RMHS) was used in this sample. The RMHS was conducted by the Rwanda Biomedical Centre (RBC) - Rwanda Ministry of Health and its partners from 1st to 31st August, 2018. The survey involved a representative sample of the population aged between 14 and 65 years residing in Rwanda at the time of the study. That age category was chosen because almost a half of all lifetime mental disorders was found to start by the mid-teens (Kessler et al., 2007 &

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WHO, 2018). The RMHS calculated the sample size using a 95% confidence interval together with a 5% margin of error. Thus, a total of 20381 individuals from 7,124 households participated in this survey. Ethical approval of the survey was obtained from the Rwanda National Ethics Committee (RNEC) before commencement (Ref: 0061/RNEC/2018 dated February 15, 2018). Additionally, all participants signed a consent form prior to their participation.

2.2.1.3 Survey's data collection tools

2.2.1.3.1 Sociodemographic characteristics

Sociodemographic characteristics were collected and included sex, age, marital status, education, residence, religion and employment status (Table 1).

2.2.1.3.2 Common mental disorders screening

The Mini-International Neuropsychiatric Interview (MINI), version 7.0.2 (Sheehan D.V. et al., 1998), was used to assess common mental disorders prevalence. The MINI is a widely used psychiatric structured diagnostic interview instrument, with a “yes” or “no” answer format. The locally translated version in Kinyarwanda (participants native language) was utilized in previous studies in Rwanda and demonstrated acceptable psychometric indices (Eytan et al., 2015).

2.2.1.3.3 History of IPV exposure assessment

The history of IPV exposure was assessed using a one binary question: “In the last 6 months, did you experience any type of domestic violence/IPV? Yes, No Answers.

Key words: IPV, Prevalence, Mental disorders, Rwanda

2.2.1.4 Statistical Analysis

For the current study, all analyses were conducted on primary data using the Statistical Package for Social Sciences (SPSS version 25 software). We performed descriptive statistics with cross tabulation to estimate the prevalence of mental disorders among IPV exposed individuals and non-exposed. The same were done to estimate the prevalence of common mental disorders among male and female exposed to IPV. Moreover, Pearson Chi-square was performed to examine the associations between variables. All statistical tests were reported at 5% level of significance ($p < 0.05$).

2.3 Results

2.3.1 Sociodemographic characteristics

As presented in table 4, a total of 20,381 individuals from 7,124 households completed the survey questionnaire and were included in the analysis. Survey participants were predominantly female (59.8%) and most of survey participants were from rural areas (85.9%). The mean age of participants was 34.1 years ($SD=0.2$) and most of them were aged from 26-35 (23.7%), followed by 36-45 years (18.2%) and 19-25 years (16.5%), the least were aged 56-65 years (10.0%). More than a half (56.3%) of the participants attained primary education while more than a quarter (25.8%) had no formal education or did not finish primary school. On employment, self-employed was the highest with 47.9%, and the least were salaried employee (3.5%). Almost all respondents were Christian (95.6), followed by Muslim (2.1%), others (1.3%) while 0.9% of the participants did not belong to any religion.

Key words: IPV, Prevalence, Mental disorders, Rwanda

Table 4: Sociodemographic characteristics and lifetime exposure to IPV

	Frequency N (%)	Lifetime prevalence of IPV exposure N (%)
Age category		
14-18	2825(13.9)	16.3%
19-25	3358 (16.5)	17.4%
26-35	4830(23.7)	25.5%
36-45	3711(18.2)	32.1%
46-55	2354 (11.5)	35.0%
56-65	2032 (10.0)	38.4%
Gender		
Male	8199 (40.2)	14.7%
Female	12182 (59.8)	20.9%
Residence		
Urban	2669 (14.1)	17.6%
Rural	16311 (85.9)	15.6%
Education		
Primary school	11466 (56.3)	18.9%
Secondary/TVET	3158 (15.5)	15.6%
University	489 (2.4)	17.0%
Marital Status		
Never married	6282 (30.8)	13.3%
Married	8375 (41.1)	19.0%
Cohabiting	3447 (16.9)	18.4%
Divorced/Separated	776 (3.8)	40.1%
Widowed	1501 (7.4)	25.5%
Employment status		
Salaried employee	710 (3.5)	24.5%
Self-employed	9769 (47.9)	20.8%
Unemployed	4749 (23.3)	22.7%
Under age of labor force	5153 (25.3)	9.3%
Religion		
Christian	19494 (95.6)	18.0%
Muslim	436 (2.1)	22.7%
Other	273 (1.3)	37.0%
None	178 (.9)	25.8%

2.3.2 IPV exposure

Of all participants, 18.4% reported to have been exposed to at least one type of IPV in their lifetime. Based on the marital status, lifetime prevalence of IPV exposure was elevated in those who were divorced (40.1%), followed by widowed (25.5%), married (19%),

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cohabitating (18.4%), and the least exposed to IPV were those never married (13.3%), (Table 1). It was observed that as participant moves from lower to higher age category (from 16.3% for 14-16 years to 38.4% for 56-65 years age category), the violence increases (Table 4). Female might have higher risk of experiencing IPV than male (20.9% versus 14.7%). The prevalence of IPV exposure in those who attained no education or not completed primary was (19.2%), primary (18.9%), secondary/TVET (15.6%), and university was (17.0%). Almost the same was found in those who live in urban and rural (17.6% versus 15.6%). Moreover, Pearson Chi-square indicated significant associations of age category ($p < 0.001$), gender ($p < 0.001$), residence ($p = 0.009$), education ($p < 0.001$), marital status ($p < 0.001$), employment status ($p < 0.001$) and religion ($p < 0.001$) with IPV experience (Table 4).

2.3.3 Prevalence of mental health disorders by violence status

The results in Table 5 showed that the prevalence of all types of mental disorders was significantly higher in participants exposed to IPV than non-exposed ($p \leq 0.001$).

Compared to IPV non-exposed group, group exposed to IPV reported high rate of any mental disorder, i.e., major depression, PTSD, panic disorder, psychotic disorder, obsessive compulsive disorder, social anxiety disorder, and suicide behavior disorder. Also, the rate of alcohol use disorder, substance use disorder, anti-social personality and bipolar disorder was also elevated in individuals exposed to IPV than non-exposed ($p \leq 0.001$), (Table 5)

Key words: IPV, Prevalence, Mental disorders, Rwanda

Table 5: Prevalence of mental disorders by violence status

		Experience of Violence		Total	P value
		No [n (%)]	Yes [n (%)]		
1. Major Depressive Episode	No	15067 (90.6)	2661 (70.8)	17728 (87.0)	p≤ 0.001
	Yes	1555 (9.4)	1098 (29.2)	2653 (13.0)	
2. Suicidal Behavior Disorder	No	16563 (99.6)	3696 (98.3)	20259 (99.4)	p≤ 0.001
	Yes	59 (0.4)	63 (1.7)	122 (0.6)	
3. Panic Disorder	No	15623 (94.0)	2974 (79.1)	18597 (91.2)	p≤ 0.001
	Yes	999 (6.0)	785 (20.9)	1784 (8.8)	
4. Social Phobia	No	16445 (98.9)	3626 (96.5)	20071 (98.5)	p≤ 0.001
	Yes	177 (1.1)	133 (3.5)	310 (1.5)	
5. Obsessive Compulsive Disorder	No	16218 (97.6)	3478 (92.5)	19696 (96.6)	p≤ 0.001
	Yes	404 (2.4)	281 (7.5)	685 (3.4)	
6. Post-traumatic Stress Disorder	No	16227 (97.6)	3049 (81.1)	19276	p≤ 0.001
	Yes	395 (2.4)	710 (18.9)	1105 (5.4)	
7. Alcohol Use Disorder	No	16377 (98.5)	3652 (97.2)	20029 (98.3)	p≤ 0.001
	Yes	245 (1.5)	107 (2.8)	352 (1.7)	
8. Substance Use Disorder	No	16576 (99.7)	3727 (99.1)	20303 (99.6)	p≤ 0.001
	Yes	46 (0.3)	32 (0.9)	78 (0.4)	
9. Bipolar Disorder	No	16598 (99.9)	3740 (99.5)	20338 (99.8)	p≤ 0.001
	Yes	24 (0.1)	19 (0.5)	43 (0.2)	
10. Anti-Social Personality	No	16512 (99.3)	3699 (98.4)	20211 (99.2)	p≤ 0.001
	Yes	110 (0.7)	60 (1.6)	170 (0.8)	
11. Psychotic Disorder	No	16473 (99.1)	3604 (95.9)	20077 (98.5)	p≤ 0.001
	Yes	149 (0.9)	155 (4.1)	304 (1.5)	
12. Any Mental Disorder	No	13872 (83.5)	2065 (54.9)	15937 (78.2)	p≤ 0.001
	Yes	2750 (16.5)	1694 (45.1)	4444 (21.8)	
Total applied to each group	N (%)	16622 (100)	3759 (100)	20381 (100)	

Key words: IPV, Prevalence, Mental disorders, Rwanda

2.3.4 Comparison of mental disorders' prevalence between female and male exposed to IPV

Compared to males, the results indicated that females had high rate of any mental disorder, i.e., major depression, PTSD, panic disorder, psychotic disorder, obsessive compulsive disorder, social anxiety disorders, suicide behavior disorder, substance use disorder and anti-social personality (Table 6). However, prevalence of alcohol use disorder and bipolar disorder was elevated in male than female. These results indicated significant difference between males and females who were exposed to IPV in development of several mental disorders.

Key words: IPV, Prevalence, Mental disorders, Rwanda

Table 6: Comparison of mental disorders between female and Male exposed to IPV

		Gender		Total	P value
		Male [n (%)]	Female [n (%)]		
1. Major Depressive Episode	No	941 (35.4)	1720 (64.6)	2661 (100)	p≤ 0.001
	Yes	266 (24.2)	832 (75.8)	1098 (100)	
2. Suicidal Behavior Disorder	No	1194 (32.3)	2502(67.7)	3696 (100)	p=0.04
	Yes	13 (20.6)	50 (79.4)	63 (100)	
3. Panic Disorder	No	1042 (35)	1932 (65)	2974 (100)	p=0.001
	Yes	165 (21)	620 (79)	785 (100)	
4. Social Phobia	No	1182(32.6)	2444 (67.4)	3626(100)	p=0.001
	Yes	25 (18.8)	108 (81.2)	133 (100)	
5. Obsessive Compulsive Disorder	No	1116 (32.1)	2362 (67.9)	3478 (100)	p= 0.91
	Yes	91 (32.4)	190 (67.6)	281 (100)	
6. Posttraumatic Stress Disorder	No	1024 (33.6)	2025 (66.4)	3049 (100)	p≤0.001
	Yes	183 (25.8)	527 (74.2)	710 (100)	
7. Alcohol Use Disorder	No	1124 (30.8)	2528(69.2)	3652 (100)	p≤ 0.001
	Yes	83 (77.6)	24 (22.4)	107 (100)	
8. Substance Use Disorder	No	1194 (32)	2533 (68)	3727 (100)	p= 0.30
	Yes	13 (40.6)	19 (59.4)	32 (100)	
9. Bipolar Disorder	No	1198 (32)	2542 (68)	3740 (100)	p=0.153
	Yes	9 (47.4)	10 (52.6)	19 (100)	
10. Anti-Social Personality	No	1162 (31.4)	2537 (68.6)	3699 (100)	p≤ 0.001
	Yes	45 (75)	15 (25)	60 (100)	
11.Psychotic Disorder	No	1158 (32.1)	2446 (67.9)	3604 (100)	p=0.89
	Yes	49 (31.6)	106 (68.4)	155 (100)	
12. Any Mental Disorder	No	745 (36.1)	1320 (63.9)	2065 (100)	p≤ 0.001
	Yes	462 (27.3)	1232 (72.7)	1694 (100)	p≤ 0.001
Total applied to each group	N (%)	1207 (32.1)	2552 (67.9)	3759(100)	

Key words: IPV, Prevalence, Mental disorders, Rwanda

2.4 Discussion

The primary goal of this study was to estimate and compare the prevalence of mental disorders between Rwandans exposed and non-exposed to IPV. As predicted, the results indicate that the prevalence of any mental disorder, major depression, PTSD, panic disorder, and suicide attempt was elevated in those who were exposed to IPV than those who had never. The same was found for the rate of delusion symptoms, substance use and alcohol use and social anxiety disorders. The prevalence of mental disorders reported in this study was significantly higher in those exposed to IPV and lower in non-exposed individuals than those reported in prior studies in Rwanda. Though explored few mental disorders, a study done in 2012 showed that the prevalence of PTSD, depression and drug abuse were 26.1%, 54.0% and 10.0% respectively, in adults (Munyandamutsa et al., 2012). Also in general population, authors have found that the prevalence rate of PTSD, depression, suicidality, and generalized anxiety disorder are 14%, 20%, 16% and 37% respectively (Rugema et al., 2015).

In congruence with our findings, different studies have found that exposure to IPV increases the risks of developing mental disorders such as major depression (Ahmadabadi, Najman, Williams, & Clavarino, 2020a; Devries, Mak, Bacchus, et al., 2013; Tsai et al., 2016), PTSD (Ahmadabadi, Najman, Williams, & Clavarino, 2020b; Sparrow et al., 2017), panic disorder (Sparrow et al., 2017), and suicide attempt (Sparrow et al., 2017; Stöckl et al., 2013).

It also increases the risks of developing substance use and alcohol use (Sparrow et al., 2017; Stöckl et al., 2013), and social anxiety disorders (Ahmadabadi, Najman, Williams, Clavarino, et al., 2020).

Key words: IPV, Prevalence, Mental disorders, Rwanda

However, in the existing literature, most of the authors overemphasized on analyses of the association of IPV exposure and the risk of developing mental illness in addition to being conducted in developed countries (Sonego et al., 2018; Sparrow et al., 2017). Furthermore, a pool of literature yielded consistent evidence that interpersonal trauma and PTSD affect 31–84.4% of women exposed to IPV but a little was still unknown about other comorbid symptoms such as depression, anxiety, suicidality, substance abuse and sleep disturbances (Devries, Mak, Bacchus, et al., 2013) particularly in Low and Middle-Income Countries (LMICs), including Rwanda.

The current study bridged this gap in literature by examining the prevalence of a range of mental disorders among IPV exposed Rwandans and non-exposed.

The findings of this study also have shown that female participants were more likely to developing mental disorders when they are exposed to IPV than male participants. This may be explained by elevated exposures to trauma by women in SSA and the post-conflict context of this study (Schaal et al., 2012a). In 2019, the World Bank reported that 20 countries in SSA were classified as hosting fragile and conflict-affected situations, which represents more than half of the fragile and conflict-affected countries globally.

The legacy of violence, loss, and historical trauma inflicted on the people in SSA through colonization may contribute to high rates of mental disorders and women are more affected (Ng L.C. et al., 2020).

Key words: IPV, Prevalence, Mental disorders, Rwanda

In Rwanda, the genocide perpetrated against Tutsi in 1994, and the post-genocide fragile social fabric, may constitute a risk factor to elevated prevalence of both IPV and mental disorders. Thus, females do not have an elevated vulnerability to mental disorders in general, but more frequently experience sexual abuse or other traumatic events that have been found to be associated with high rates of mental disorders. Consistently, studies carried out in Rwanda post-genocide, revealed that individuals reporting numerous traumatic events experienced were found to develop higher level of mental disorders' symptoms than those who reported fewer trauma experiences (Schaal et al., 2012a).

As the primary goal of the genocide was the complete extermination of men, the majority of survivors in Rwanda are women; and as more men have committed serious offenses during the genocide, there are more men than women imprisoned (Schaal et al., 2012a). As such, women form particular risk groups in Rwanda since most of them are victims of genocidal, physical and sexual violence whereas others are struggling to care for their families alone and their husbands incarcerated.

Similarly, prior studies with samples of trauma survivors have indicated that women are more vulnerable to developing mental disorders compared to males (Winter S. C. et al., 2020; Kinyanda et al., 2016; Schaal et al., 2011, 2012a; Umubyeyi et al., 2014a).

2.5 Limitations

The strengths of this study include being conducted in a post-conflict country, Rwanda, where mental disorders and IPV are highly prevalent and intertwined.

Key words: IPV, Prevalence, Mental disorders, Rwanda

This study is unique considering its design and sample size. Given that this study is a population based with a nationally representative sample, the findings presented here should be generalizable across other similar samples. However, this study had some limitations. First, this study was limited to its cross-sectional study design. Secondly, the authors were not able to collect data on IPV exposure and mental health of children under 14 years old. It is established that parental IPV will affect directly or indirectly offspring. Lastly, this study did not address types of IPV experienced by the participants and how they affect mental health.

2.6 Conclusion

The present study provides further evidence for the heightened prevalence rate of mental disorders among victims of IPV compared to non-victims. These results highlight that among Rwandans diagnosed with severe mental disorders, there is a high risk of IPV exposure. Therefore, people seeking mental health care should also be screened for IPV for an appropriate and efficiency assistance. More importantly, effective assistance should start at pregnancy period (pre-natal consultations) to prevent health problems for both mother and foetus (pre-term delivery, death), and deserve particular attention to pregnant women screened for IPV.

Key words: IPV, Prevalence, Mental disorders, Rwanda

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Key words: IPV, Prevalence, Mental disorders, Rwanda

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Key words: IPV, Prevalence, Mental disorders, Rwanda

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Key words: IPV, Prevalence, Mental disorders, Rwanda

STUDY

3

**IPV AS A PREDICTOR
OF
MATERNAL AND CHILD
HEALTH**

Corresponding published paper:

Claire Bahati^{1*}, Josias Izabayo², Japhet Niyonsenga³, Vincent Sezibera² and Léon Mutesa⁴: Intimate partner violence as predictor of antenatal care services utilization in Rwanda (2021). *BMC Pregnancy and Childbirth* 21:754.

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Key words: IPV, Antenatal care, Pregnant women, Reproductive health, Rwanda

Abstract

Although compelling evidence shows that exposure to IPV during pregnancy is detrimental to both physical and mental health of pregnant women and fetuses. The aim of this study was to determine the impact of IPV exposure on ANC services utilization indicators such as initiation of care within the first 3 months of pregnancy, receipt of at least four ANC visits, and receipt of care from skilled providers among reproductive age women in Rwanda. This study used the data from the 2014-15 RDHS. Multiple logistic regression was used to estimate the effects of physical and sexual IPV on the ANC services utilization indicators. The results showed that, among married women living with their partners with at least one child aged 5 years or under (N = 5116), 17% of them reported physical violence, 22.8% reported psychological violence and 9.2% reported sexual violence. We found that there was a significant negative relationship between physical IPV and both early ANC and sufficient ANC. Women who had experienced physical violence by their intimate partners during the preceding 12 months were less likely to receive more than four ANC visits, (O.R = 0.61, CI = 0.417-0.908) and they were less likely to attend the first ANC visits within the first 3 months (O.R = 0.656, CI = 0.445-0.967). In this study, the prevalence of IPV still remains high and there is evidence that it does have significant impact on ANC. Therefore, the results provide support for continued efforts to reduce IPV, through the improvement of IPV screening during ANC visits.

Key words: IPV, Antenatal care, Pregnant women, Reproductive health, Rwanda

3.1 Background

As a global public health issue that affects about one third of women globally (WHO, 2013), IPV refers to behavior within an intimate relationship that causes physical, psychological or sexual harm to those in the relationship (WHO, 2012). Global estimates of IPV perpetrated by men against women indicate that 30% of every partnered-women worldwide have experienced physical and/or sexual violence by an intimate partner at some point in their lifetime (Owaka et al., 2017). The evidence shows that the overall prevalence rate of IPV during pregnancy in developed countries ranges between 10 and 20% (Rurangirwa et al., 2017). African countries have some of the highest rates of IPV during pregnancy with Gambia leading at 61%; followed by Zimbabwe (34%); Kenya, where it is estimated that 38% of women suffer from IPV in their lifetime (Owaka et al., 2017); and Ethiopia (25%) (Rurangirwa et al., 2017). IPV prevalence and its effects were found to be worsened in post-conflict and resources limited setting like Rwanda due to low social support (Dougé et al., 2014), burdened mental health problems (Yu et al., 2019), gender inequality and cultural and economic barriers (Maria J. Smalla et al., 2014; Rurangirwa et al., 2017) that characterize these settings. Authors have revealed that IPV prevalence in Rwanda ranges from 16 to 50% and that it occurs in women and men even if women are more frequently and seriously affected (Mukashema, 2017; Slegh H & Kimonyo A, 2010). Rwanda is a patriarchal society, where IPV may be perceived as a confidential family matter and considered acceptable to keep the family together (Slegh H & Kimonyo A, 2010), despite GBV being widely recognized as a punishable offence in the Rwandan penal code. Violence

Key words: IPV, Antenatal care, Pregnant women, Reproductive health, Rwanda

against women was a central concern in this regard, and early studies on the relationship between violence against women and reproductive health in developing countries led to a greater understanding of the problem and its related adverse health outcomes (Sunita Kishor & Kiersten Johnson, 2004). Outcomes of IPV for pregnant women include pregnancy loss, HIV infection, depression, pre-term delivery, abortion, stillbirth; as well as to giving birth to babies susceptible to low birth weight, illness, malnutrition and mortality (Owaka et al., 2017; Umubyeyi et al., 2014a).

Women who experience IPV have myriad needs of services from different sectors, including ANC service which is one of the best approaches to preventing poor pregnancy outcomes (WHO, 2012). It was found that optimal ANC includes initiating care within the first 3 months of pregnancy, receiving at least four ANC visits and receiving care from skilled providers (Sebert Kuhlmann et al., 2017). ANC provides an opportunity to inform and educate pregnant women on important health issues including health promotion activities, screening and diagnosis (Rurangirwa et al., 2018b). It also offers an important platform to communicate with and support women, families and communities at a critical time in women's life (Rurangirwa et al., 2018b). Thus, ANC is an essential component of birth preparedness/complications readiness (BP/CR) matrix, a process of planning for normal and safe birth and actions to be done in case of emergency. BP/ CR matrix delineates “the roles of policy makers, facility managers, providers, communities, families, and women in ensuring that women and newborns receive appropriate, effective, and timely care” (Rurangirwa et al., 2017; Slegh H & Kimonyo A, 2010).

Key words: IPV, Antenatal care, Pregnant women, Reproductive health, Rwanda

Women and newborns need timely access to skilled care during pregnancy, childbirth and postpartum period (Rurangirwa et al., 2017; Slegh H & Kimonyo A, 2010).

There has been an increase in the use of ANC services among pregnant women in low- and middle-income countries (LMICs) since 2002, but the evidence suggests that there remains a need to improve the quality of care that is given in ANC clinics and delivery (Rurangirwa et al., 2018b). According to the Demographic and Health Survey (DHS, 2014– 2015) report, overall, four in ten women aged from 15 to 49 years reported exposure to “emotional, physical or sexual violence” from their intimate partners. Sexual violence committed by husband or partner was very common standing at 34 % and 20% of women aged 15–49 reported having exposed to sexual violence in their entire life. Evidence shows that women with at least five children are more likely to be exposed to physical violence (46%) than women with no children (23%) (NISR, 2014). Mothers normally receive ANC services from health centers and district hospitals. Although severe cases are referred to the national referral hospitals, district hospitals have equipment and capacity to provide services related to ANC (Rurangirwa et al., 2018b). Authors have indicated that 99 % of Rwandan women received ANC from skillful health care providers (doctors, nurses, medical assistants, and midwives) (NISR, 2014), but the frequency of visits was lower than the standard set by WHO, and the Rwandan Ministry of Health (MoH). In fact, only 44 % of mothers had at least four ANC visits. This proportion represents an increase from 13% in 2005 and 35% in 2010 respectively. Note that 56 % of women went to their first ANC visit during the 1st trimester of pregnancy, as recommended by WHO (NISR, 2014).

Key words: IPV, Antenatal care, Pregnant women, Reproductive health, Rwanda

Previous studies have documented the prevalence and correlates of IPV in large parts of the world based on different characteristics of a population, prevalence, and association of IPV with reproductive health issues (Solanke, 2014). IPV studies in developing countries mainly relied on data from their nationally representative Demographic and Health Surveys (DHS) (Gomez, 2011). Despite a pool of literature on the association of IPV exposure with low ANC services utilization in high income countries (e.g. USA (Saba W. Masho et al., 2019), India (P. Paul, 2021), Honduras (Sebert Kuhlmann et al., 2017), and few in developing countries (e.g. Nigeria (Solanke, 2014), Mozambique (Tura & Licoze, 2019), Ethiopia (Gashaw et al., 2019), Nepal (Singh & Evans-lacko, 2018) and etc.), there is a dearth of studies on the specific IPV exposure associated with reduced ANC services utilization especially in post-genocide countries. The primary goal of the current study is to analyze the effects of three specific IPV (i.e., physical IPV, emotional and sexual IPV) on ANC services utilization in Rwanda as post-genocide country. We hypothesized associations of exposure to emotional, physical and/or sexual IPV with ANC visits initiation within the first 3 months of pregnancy, having at least four ANC visits, and the receiving of care from skilled providers.

Key words: IPV, Antenatal care, Pregnant women, Reproductive health, Rwanda

3.2 Methods

3.2.1 Data source and sampling

Secondary data from the 2015 RDHS was used in this sample. The RDHS survey was conducted by NISR from November 9, 2014 to April 8, 2015, using a stratified two stage cluster design. The first stage involved selecting sample points (clusters) consisting of enumeration areas (EAs) delineated for the 2012 Rwanda Population and Housing Census (RPHC). A total of 492 clusters were selected, 113 and 379 in urban and rural areas respectively. At the second stage, a sample of households was drawn in each EA using a systematic sampling. Within each sample point, 26 households were selected for a total sample of 12,792 households. Approximately, 13,564 women aged 15–49 years were eligible to complete the questionnaire. Of 13,497 women aged 15–49 years who had completed the questionnaire during the survey, only 5116 met the inclusion criteria for this study giving a response rate of 37.71%. The participants were eligible if they were married, living together with their partners and had at least one child aged 0–5 years.

3.2.2 Measures

3.2.2.1 Antenatal care service utilization

Antenatal care services utilization was measured using three indicators: early ANC, sufficient ANC and skilled ANC providers. The early ANC is dichotomized into receiving early ANC services and delaying ANC services where ANC is considered to be early if the woman received ANC visits within the first 3 months of pregnancy.

Key words: IPV, Antenatal care, Pregnant women, Reproductive health, Rwanda

Sufficient ANC is also evaluated as a dichotomized variable: receiving a sufficient ANC and receiving insufficient ANC where ANC is considered to be sufficient if the woman attended at least four ANC visits. Moreover, ANC providers were dichotomized into unskilled ANC providers (e.g., community health workers) and skilled providers (i.e., doctor, nurse, medical assistant and midwife).

3.2.2.2 IPV experience screening

IPV was measured by items on physical (six items), sexual (four items) and emotional violence (two items) that were selected from the women's health and life experiences questionnaire, a validated questionnaire developed by the WHO for research on IPV experience (Ellsberg M & Heise L, 2005). This questionnaire was translated and back-translated into Kinyarwanda. This instrument has been shown to be cross-culturally valid (Nybergh et al., 2012) in both men and women. Sample items for physical violence subscale were: (1) Did your husband/partner ever kick you, beat you, drag you; (2) Did your husband/partner ever slap you and etc.”; and Sexual abuse subscale included: (1) Did your husband/partner ever physically forced you into unwanted sex, (2) Did your husband/partner ever force you into other unwanted sexual acts and etc. The emotional violence was assessed by the following two questions: (1) Have you ever been insulted or made to feel bad by your husband/partner; and (2) Have you ever been humiliated by your husband/partner or have you ever been threatened with harm by your partner/husband. Each item was scored on a dichotomous scale “yes” or “no”.

Key words: IPV, Antenatal care, Pregnant women, Reproductive health, Rwanda

3.2.2.3 Socio-demographic questionnaire

Women's Health and Life Experiences questionnaire assessed the ages of both women and men as well as collected information on education level, women's literacy (illiterate versus literate), types of residence, religion and women's occupation status. We also asked about mass media exposure, sterilization and wealth index.

3.2.3 Statistical analysis

Data was analyzed quantitatively using frequencies and percentages to describe the characteristics of ANC indicators, IPV and socio demographic factors (e.g., education level, residence, religion, occupation status, mass media exposure, province, age, parity and household size). For bivariate analysis, the Chi-Square test was utilized to examine the association in ANC services utilization indicators and forms of IPV via socio-demographic factors. In a multivariate analysis, after controlling for covariate factors, multiple logistic regression was used to examine whether emotional, physical or sexual IPV were associated with early ANC initiation, sufficient ANC and skilled ANC providers where IPV was dichotomous coded variable (i.e., no=0 and yes =1), No=0 was chosen as a reference category in our multiple logistic regression. The covariates were chosen based on a purposeful selection process begun by a univariate analysis of each variable. Covariates were included based on results from Wald tests; those with p-values below .25 were retained (Bursac et al., 2008).

Key words: IPV, Antenatal care, Pregnant women, Reproductive health, Rwanda

All measures were presented as odd ratios (ORs), whereby an odd ratio greater than 1 is a positive association and an odd ratio less than 1 is negative association, with their 95% confidence intervals.

The Evaluation of the patterns of missing data indicated that data were missing completely at random with overall missing values of 3%. This rate was within the acceptable range (less than 5%) and it was replaced by median substitution as recommended by several researchers (Raymond, 1986; Tabachnick BG & Fidell LS, 2007). However, the preliminary analysis illustrated no impact of missing data on the results of this study when they were replaced or not. All analyses were performed using the Statistical Package of Social Sciences (IBM SPSS Statistics 25).

Key words: IPV, Antenatal care, Pregnant women, Reproductive health, Rwanda

3.3 Results

Table 7: Distribution of variables considered in the analysis of relationship between IPV and ANC service utilization

Variables	N	Percent
women's education		
no education	785	15.4
Primary	3628	70.9
Secondary	542	10.6
Higher	161	3.1
men's education		
No education	830	16.3
primary	3597	70.4
Secondary	467	9.1
Higher	212	4.1
Women's literacy		
Not able to read at all	1168	22.9
Able to read a part/whole sentence	3938	77.1
Type of place of residence		
Urban	1105	21.6
Rural	4011	78.4
Women's religion		
no religion or other	24	0.5
Has a religion	5085	99.5
Women's occupation		
not working/ don't work	305	6
Working	4811	94
Exposure to mass media		
no type of mass media	698	13.6
one type of mass media	2179	42.6
two types of mass media	1432	28
three types of mass media	780	15.2
Province		
Kigali city	608	11.9
South	1218	23.8
West	1232	24.1
North	810	15.8
East	1248	24.4

Key words: IPV, Antenatal care, Pregnant women, Reproductive health, Rwanda

Table 7 (continued)

Variables	Mean
women's age	31.59
men's age	36
wealth index	2.96
Parity	4.45
Household's size	5.15
N=5116	

Most of sampled women were in rural areas (78.4%) and had a primary education level (70.9%) compared to men's primary education level (70.4%). The sample consisted largely of literate women (77.1%) and nearly all (99.5%) had a religion. Most of the sampled women were exposed to at least one type of mass media (86.4%) (Table 7). Regarding residential locations of the participants, 24.4% came from Eastern, 24.1% came from Western, and 23.8% came from Southern provinces, whereas, 15.8% come from Northern provinces with the remaining 11.9% coming from Kigali City. The mean parity was 4.46, with an average age of 31.59 years. The mean household size was 5.15 (Table 7). In the view of the IPV exposure, the majority experienced emotional (22.8%); 18.7% of all participants experienced physical violence; and only 8% of the sample reported experiencing sexual violence (Figure 3). Mean parity was 4.46, with an average age of 31.59 years. The mean household size was 5.15 (Table 7). In the view of the IPV exposure, the majority experienced emotional (22.8%); 18.7% of all participants experienced physical violence; and only 8% of the sample reported experiencing sexual violence (Figure 3).

Key words: *IPV, Antenatal care, Pregnant women, Reproductive health, Rwanda*

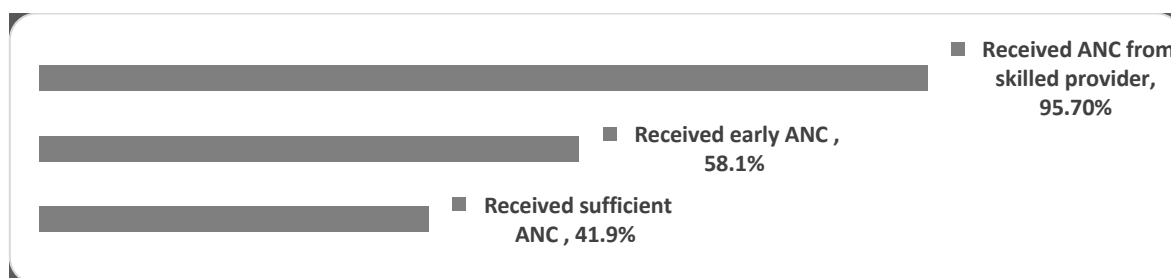


Figure 2 ANC service utilization indicators (%)

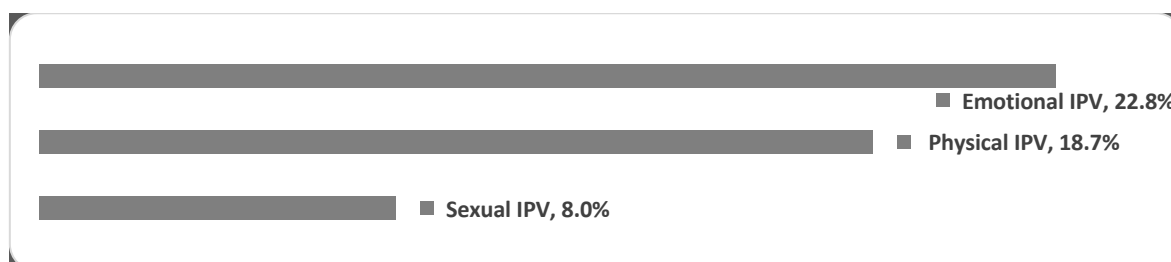


Figure 3 Forms of IPV (%)

In the current sample, the majority received ANC from skilled providers (97.01%), 58.7% received early ANC, and less than a half received at least four ANC visits during their most recent pregnancy (45.8%), (Fig. 2). In model adjusting, we found a significant relationship between physical IPV and early ANC utilization and a sufficient number of ANC visits. There was no significant relationship between skilled ANC providers and IPV. While sexual IPV were not significant in all the three models, women who had ever experienced physical violence by their partners during the preceding 12 months were less likely to receive more than four ANC visits, (O. R=0.6151, CI=0.417–0.908) and they were less likely to attend the initial ANC visits within the first 3 months (O. R=0.656, CI=0.445–0.967), (Table 10). Although, most of the covariates used are not statistically significant in our model (Table 10), according to our bivariate analysis (Table 8), covariates like: women's and

Key words: IPV, Antenatal care, Pregnant women, Reproductive health, Rwanda

men's education level, wealth index, mass media exposure and types of residence were significantly associated with IPV (Table 8).

Table 8: Socio-demographic characteristics and IPV by married women living with their partners and had at least one child aged 5 years or under, selected from RDHS 2014–15

Characteristics	Any physical IPV		Any sexual IPV		Any emotional IPV	
	Yes n (%)	No n (%)	Yes n (%)	No n (%)	Yes n (%)	No n (%)
women's education						
No education	31(13.7)	147(14.9)	17(17.3)	161(14.3)	42(15.1)	135(14.3)
primary	184(81.1)	714(72.2)	71(72.4)	833(74.1)	221(79.2)	685(72.5)
secondary	10(4.4)	108(10.9)	8(8.2)	110(9.8)	14(5.0)	105(11.1)
higher	2(0.9)	20(2.0)	2(2.0)	20(1.8)	2(0.7)	20(2.1)
P value	0.009*		0.83		0.007*	
men's education						
No education	47(20.8)	147(14.9)	15(15.3)	180(16.1)	65(23.4)	130(13.8)
primary	167(73.9)	716(72.6)	75(76.5)	813(72.6)	195(70.1)	694(73.7)
secondary	10(4.4)	88(8.9)	7(7.1)	92(8.2)	18(6.5)	81(8.6)
higher	2(0.9)	35(3.5)	1(1.0)	35(3.1)	0(0.0)	37(3.9)
P value	0.005*		0.741		0.00*	
Women's literacy						
Not able to read at all	54(23.9)	225(22.8)	23(23.5)	256(22.9)	65(23.3)	214(22.7)
Able to read	172(76.1)	761(77.2)	75(76.5)	864(77.1)	214(76.7)	727(77.3)
P value	0.729		0.89		0.846	
Type of place of residence						
urban	30(13.2)	201(20.3)	18(18.4)	215(19.1)	45(16.1)	189(20.0)
rural	197(86.8)	788(79.7)	80(81.6)	909(80.9)	234(83.9)	756(80.0)
P value	0.014*		0.854		0.149	
Religion						
no religion	0(0.0)	2(0.2)	0(0)	2(0.2)	1(0.4)	1(0.1)
Has religion	227(100.0)	986(99.8)	98(100)	1121(99.8)	278(99.6)	943(99.9)
P value	0.708		0.877		0.566	
Women's occupation						
not working/don't work	7(3.4)	68(6.7)	6(6.1)	68(6.0)	14(5.0)	61(6.5)
Working	200(96.6)	946(93.6)	92(93.9)	1056(92.0)	265(95.0)	884(93.5)
P value	0.24		0.977		0.397	

Key words: IPV, Antenatal care, Pregnant women, Reproductive health, Rwanda

Table 8 (continued)

Characteristics	Any physical IPV		Any sexual IPV		Any emotional IPV	
	Yes n (%)	No n (%)	Yes n (%)	No n (%)	Yes n (%)	No n (%)
Exposure to mass media						
no type	45(19.9)	131(13.3)	19(19.6)	158(14.1)	49(17.7)	27(13.5)
one type	100(44.2)	442(45.0)	41(42.3)	502(44.9)	120(43.3)	425(45.2)
two types	53(23.5)	266(27.1)	26(26.8)	295(26.4)	75(27.1)	247(26.3)
three types	28(12.4)	144(14.6)	11(11.3)	163(14.6)	33(11.9)	41(15.0)
P value		0.07*		0.454		0.237
women's age (Mean)		1.07	31.46	30.77	31.75	30.54
P value		0.961		0.709		0.004*
men's age (Mean)	35.01	35.04	35.57	34.99	36.66	34.56
P value		0.356		0.575		0.007*
wealth index (mean)	2.55	3.01	2.76	2.94	2.68	2.99
P value		0.00*		0.465		0.022*
Parity(Mean)	4.5	4.22	5	4.88	4.38	4.2
P value		0.786		0.103		0.146
Household's size (Mean)	4.83	4.91	5.02	5.15	5.05	4.84
P value		0.802		0.819		0.712
Source: Table prepared by the author based on the analyses. * Pvalue < 0.05						

Key words: IPV, Antenatal care, Pregnant women, Reproductive health, Rwanda

Table 9: Socio demographic characteristics and ANC service utilization by married women living with their partners and had at least one child aged 5 years or under, selected from RDHS 2014–15

	Early ANC		Sufficient ANC		Skilled ANC providers	
Characteristics	Yes n (%)	No n (%)	Yes n (%)	No n (%)	Yes n(%)	No n(%)
women's education						
No education	324(12.2)	329(17.2)	256(12.10	406(16.3)	644(14.4)	8(7.8)
Primary	1875(70.5)	1411(73.6)	1500(71.1)	1803(72.2)	3196(71.5)	83(81.4)
Secondary	346(13)	152(7.9)	246(11.7)	254(10.2)	488(10.9)	10(9.8)
Higher	116(4.4)	26(1.4)	109(5.2)	34(1.4)	140(3.1)	1(1.0)
P value	0.00*		0.00*		0.113	
men's education						
No education	362(13.6)	350(18.3)	293(13.9)	423(17)	13(12.7)	699(15.7)
primary	1874(70.6)	1378(72.0)	1489(70.7)	1786(71.6)	76(74.5)	3168(71.1)
secondary	267(10.1)	147(7.7)	201(9.5)	214(8.6)	10(9.8)	403(9.0)
Higher	152(5.7)	39(2.0)	122(5.8)	70(2.8)	3(2.9)	188(4.2)
P value	0.00*		0.00*		0.848	
Women's literacy						
Not able to read at all	548(20.6)	454(23.8)	435(20.7)	579(23.2)	983(21)	16(15.7)
Able to read	2110(79.4)	1457(76.2)	1671(79.3)	1913(76.8)	86(84.3)	86(84.3)
P value	0.011*		0.036*		0.124	
Type of place of residence						
Urban	596(22.4)	382(19.9)	468(22.2)	518(20.7)	955(21.4)	21(20.6)
Rural	2065(77.6)	1536(80.1)	1643(77.8)	1979(79.3)	3513(78.6)	81(79.4)
P value	0.043*		0.24		0.848	
Women's religion						
no religion	8(0.3)	8(0.4)	13(0.5)	5(0.2)	16(0.4)	0(0.0)
Has religion	2651(99.7)	1907(99.5)	2481(99.5)	2104(99.8)	4447(99.6)	102(100)
P value	0.782		0.304		0.813	
Women's occupation						
not working/ don't work	126(6.6)	161(6.1)	120(5.7)	168(6.7)	5(4.9)	282(6.3)
working	1792(93.4)	2500(93.9)	1991(94.3)	2329(93.3)	97(95.1)	4186(93.7)
P value	0.475		0.145		0.562	
Province						
Kigali city	279(10.5)	257(13.4)	223(10.6)	317(12.7)	526(11.8)	8(7.8)
South	677(25.4)	403(21)	572(27.1)	515(20.6)	1070(23.9)	9(8.8)
West	624(23.4)	495(25.8)	526(24.9)	604(24.2)	1049(23.5)	68(66.7)
North	445(16.7)	274(14.3)	351(16.6)	370(14.8)	711(15.9)	5(4.9)
East	636(23.9)	489(25.5)	439(20.8)	691(27.7)	1112(24.9)	12(11.8)
P value	0.00*		0.00*		0.00*	

Key words: IPV, Antenatal care, Pregnant women, Reproductive health, Rwanda

Table 9 (continued)

Characteristics	Early ANC		Sufficient ANC		Skilled ANC providers	
	Yes n (%)	No n (%)	Yes n (%)	No n (%)	Yes n(%)	No n(%)
Exposed to mass media						
no type	350(13.2)	279(14.6)	271(12.9)	365(14.7)	616(13.9)	12(11.9)
one type	1139(43)	825(43.3)	899(42.7)	1078(43.5)	1911(43.0)	51(50.5)
two types	745(28.1)	524(27.5)	582(27.7)	690(27.8)	1237(27.8)	27(26.7)
three types	414(15.6)	279(14.6)	351(16.7)	348(14.0)	681(15.3)	11(10.9)
P value	0.471		0.043*		0.41	
women's age (Mean)	30.29	31.79	30.59	31.2	30.92	30.8
P value	0.00*		0.199		0.885	
men's age (Mean)	34.48	36.32	34.78	35.67	35.27	34.17
P value	0.00*		0.063		0.971	
wealth index (Mean)	2.99	2.88	2.99	2.91	2.95	2.89
P value	0.04*		0.437		0.183	
Parity (Mean)	4.24	4.65	4.32	4.52	4.41	5
P value	0.375		0.133		0.862	
Household's size (Mean)	4.86	5.35	4.91	5.2	5.06	5.07
P value	0.00*		0.00*		0.904	
Source: Table prepared by the author based on the analyses. * P-value < 0.05						

Key words: IPV, Antenatal care, Pregnant women, Reproductive health, Rwanda

Table 10: Adjusted odds ratios (aOR) and 95% confidence intervals (CIs) for associations between IPV and ANC among married women living together with their partners with at least one child aged 5 years or younger, selected from RDHS 2014-15

	Early ANC	Sufficient ANC	Skilled ANC providers
	Adjusted OR(95% CI) n=4583	Adjusted OR(95% CI) n=4612	Adjusted OR(95% CI) n=4574
Ever experienced emotional IPV			
No	1	1	1
Yes	0.945(0.656-1.360)	0.967(0.674-1.389)	1.073(0.348-3.306)
Ever experienced sexual IPV			
No	1	1	1
Yes	1.068(0.653-1.746)	0.931(0.568-1.527)	0.500(0.162-1.550)
Ever experienced physical IPV			
No	1	1	1
Yes	0.638(0.433-0.940)*	0.611(0.414-0.901)*	3.924(0.470-32.756)
Women's education level			
No education	0.428(0.100-1.8410)	0.327(0.089-1.196)	4.507(0.424-47.868)
Primary	0.456(0.116-1.791)	0.343(0.103-1.142)	3.080(0.236-40.174)
Secondary	0.653(0.173-2.464)	0.367(0.115-1.165)	na
Higher	1	1	
men's education level			Na
No education	0.576(0.196-1.709)	0.767(0.290-2.030)	
Primary	0.669(0.237-1.894)	0.890(0.354-2.238)	
Secondary	1.039(0.357-3.025)	0.837(0.327-2.146)	
Higher	1	1	
Woman's literacy			
Illiterate	1.097(0.712-1.689)	1.031(0.676-1.572)	0.175(0.017-1.836)
Literate	1	1	1
Area of residence			Na
Urban	0.828(0.546-1.256)	0.942(0.662-1.343)	
Rural	1	1	
Province			
Kigali city	0.469(0.284-0.775)*	1.271(0.775-2.086)	1.480(0.263-8.338)
South	1.174(0.815-1.690)	2.331(1.626-3.342)*	1.101(0.285-4.259)
West	0.909(0.639-1.293)	1.450(1.027-2.049)*	0.211(0.075-0.593)*
North	1.109(0.744-1.653)	1.607(1.091-2.368)*	2.998(0.343-26.174)
East	1	1	1
Exposed to mass media	na		Na
No type		1.119(0.684-1.833)	
One types		1.097(0.733-1.643)	
Two types		1.123(0.741-1.702)	
Three types		1	
Women's current age	1.000(0.968-1.032)	1.002(0.971-1.035)	Na
men/partner's age	0.984(0.965-1.004)	0.983(0.964-1.004)	Na

Key words: IPV, Antenatal care, Pregnant women, Reproductive health, Rwanda

Table 10 (continued)

	Early ANC	Sufficient ANC	Skilled ANC providers
	Adjusted OR(95% CI) n=4583	Adjusted OR(95% CI) n=4612	Adjusted OR(95% CI) n=4574
Poorest	0.667(0.383-1.161)		3.488(0.824-14.764)
Poorer	0.631(0.368-1.080)		1.918(0.548-6.719)
Middle	0.662(0.388-1.127)		3.577(0.793-16.128)
Richer	0.606(0.364-1.009)		0.815(0.267-2.487)
Richest	1		1
Household's size	0.865(0.784-0.954)*		1.270(0.987-1.635)
Source: Table prepared by the author based on the analyses. Models were adjusted for woman's age, husband's age, woman's education, husband's education, woman's literacy, area of residence, religion, women's occupation, wealth index, household size, women's mass media exposure and province. * Pvalue < 0.05 na: not applicable			

3.4 Discussion

As predicted, in the present study we found that there was a significant negative association of physical IPV with both early ANC and sufficient ANC. Regarding the ANC services utilization, this study found that 95.7% of the current sample had received ANC services from skilled providers. Further, 41.9 % received at least four ANC visits during pregnancy time and 58.1% received early ANC. The prevalence of attending at least four or more ANC visits appears to be lower in Rwanda than those reported in some other East African countries like Zimbabwe (75.7%), Uganda (60%), Kenya (57.6%) and Zambia (56%). The difference observed could be due to post-genocide situation of Rwanda in terms of low social support (Rurangirwa et al., 2017) and elevated mental health problems (Bitew et al., 2016; Kim et al., 2021).

Key words: IPV, Antenatal care, Pregnant women, Reproductive health, Rwanda

This undeniably life-altering event left many women without parents, siblings, external relatives and friends (i.e., their supportive network) for they have perished. Resultantly, expecting mothers may not have someone who physically lives at home with them when they have to go to seek ANC services. With the role of support from significant others or family members embodying, understanding, sympathy and communication, which may positively affect ANC services attendance. Furthermore, throughout the region, high rates of PTSD, depression, and other psychological disorders have been observed following the 1994 genocide perpetrated against Tutsi (Schaal et al., 2012b) which in turn lead to high risks of violence committed against women (Shorey et al., 2018; Yu et al., 2019) and poor ANC utilization (Bitew et al., 2016).

Similar to other studies using large samples, we found a greater prevalence of emotional victimization (22.8%) than physical (18.7%) and sexual (8%) victimizations among our sample of pregnant women. A study conducted in Uganda found that the rate of emotional violence (40%) was higher than sexual violence (23%) in married women (Gubi et al., 2020). A greater prevalence of emotional violence (29%) than physical victimization (6%) was also found in a sample of American pregnant women (McMahon et al., 2011). Despite observing higher percentages, the prevalence of different types of IPV reported in this study were still smaller than those found in many community-based samples. It was found that the rate of physical IPV in women was 37% in Kenya, 41% in Uganda (Gubi et al., 2020), 38% in Egypt (Sebert Kuhlmann et al., 2017), 48% in Bangladesh and 48.8% in Zambia (Sebert Kuhlmann et al., 2017).

Key words: IPV, Antenatal care, Pregnant women, Reproductive health, Rwanda

They further indicated that in sub-Saharan Africa countries the prevalence of emotional IPV in women ranged from 7% in Comoros to 40.1% in Cameroon, while sexual IPV ranged from 3% in Moldova to 26% in Bangladesh (Sebert Kuhlmann et al., 2017).

Despite these differences, our results indicate an alarming amount of emotional victimization experienced by pregnant women, which may be explained by spousal age difference. The tradition of male dominance in marriage remains prevalent in Rwanda (may be attributed to men having a strong preference to marry women younger than themselves), and marriages with substantial age gap may lead to emotional violence due to differences in maturity and differences in opinions (Adebawale, 2018). Worryingly, different authors found that emotional victimization was significantly associated with poorer maternal health and depression, and child's health and temperament (McMahon et al., 2011).

As predicted and similar to prior studies, the bivariate analysis revealed that socio-demographic characteristics such as age of women, rural residence (Geta & Yallew, 2017; Zegeye et al., 2013), women and men's education level (Ahinkorah et al., 2021) were significantly associated with early ANC or sufficient ANC. The current study demonstrates that the education and economic level of most women and their husbands were very low although husbands seemed to have a better status than wives in these aspects. In contrast, authors have found that there is no significant association between early ANC and women's education (Geta & Yallew, 2017; Zegeye et al., 2013). Another study assessing the factors related to utilization of ANC services in Vietnam demonstrated that age did not affect its utilization (Swenson IE et al., 1993).

Key words: IPV, Antenatal care, Pregnant women, Reproductive health, Rwanda

Our results could be explained by a greater self-efficacy gained from the experience of prior pregnancies among upper aged women; therefore, the ones who give birth to their first child without any complication are more likely to make insufficient ANC visits during subsequent pregnancies (Srivastava et al., 2014).

Moreover, Saad-Haddad et al. has found an association between women's education level and having a higher frequency (> 4) of ANC visits (Haddad et al., 2016). Different authors have highlighted that women in the higher age group who are either single, divorced, separated or widowed were at a higher risk of making two or less visits to ANC services (Rurangirwa et al., 2017). Furthermore, women with poor social networks (e.g. not significant to others, or close friends to assist when in need) were found to be at risk of poor utilization of ANC services. However, school attendance or household assets, as a proxy for socioeconomic status, were not found to be associated with poor utilization of ANC services (Rurangirwa et al., 2017). Further investigations should consider other additional sociodemographic factors including awareness of ANC services, distance between home and health facility, planned pregnancy and age at first visit.

The bivariate analysis also revealed that women's and husband's low education level, rural residence, low exposure to mass media and poor wealth index were associated with physical IPV. Similar to our findings, substantial body of literature has indicated that woman's and man's low education levels, poor wealth index (Rahman et al., 2012), rural residence and low exposure to mass media were and live in a rural residential setting are contributing factors associated with physical IPV (Sebert Kuhlmann et al., 2017).

Key words: IPV, Antenatal care, Pregnant women, Reproductive health, Rwanda

Frequent exposure to mass media seemed to increase women's exposure to IPV in the current sample. In support of this contention, a study conducted in Bangladesh showed that frequent exposure to newspaper, magazine or television was negatively connected with justifying IPV; while exposure to radio was positively connected (Krause et al., 2017).

Unexpectedly, our findings demonstrated that all sociodemographic characteristics of women and their partners were not associated with sexual IPV. However, our findings highlighted that only low education levels of wives and their husbands were significantly linked to emotional IPV when all socio-demographic characteristics were considered. Inconsistently, prior studies indicated that older age and poor wealth index were associated with emotional IPV (Adebawale, 2018; Ghimire et al., 2016; Sunita Kishor & Kiersten Johnson, 2004). Although physical abuse is suggested to diminish with age, prevalence of emotional abuse appears to be constant over the lifetime (Adebawale, 2018).

Even though several studies have found a significant relationship between physical IPV and receiving services from skilled ANC providers (Hindin et al., 2008; Rahman et al., 2012), our model which was adjusted for covariates failed to find a significant association between the two (physical IPV and receiving skilled ANC providers). Different scholars found that physical IPV was significantly related to sufficient ANC and early ANC (Hindin et al., 2008; Leight & Wilson, 2021), which is in congruence with our findings.

Key words: IPV, Antenatal care, Pregnant women, Reproductive health, Rwanda

However, our present study is best supported with investigation conducted by Koski et al., which indicated that women who experienced physical IPV were less likely to initiate early ANC and less likely to receive four or more than four ANC visits consistent to our present study (Koski et al., 2011; Rahman et al., 2012).

3.5 Limitations

Although, RDHS dataset is well documented, well known and tested by researchers, during our analysis, we found that some of the attributes were not available i.e., the employment status of respondents which would've been an important covariate in the sample. There were also limitations in accessing similar studies on IPV and ANC services utilization that are based in Rwanda which only further revealed the gap that exists in the literature review. Furthermore, some attributes had missing values which can have a significant effect on drawing conclusion; however, the overall missing values of 3% reported in the current study was in the acceptable range (less than 5%) and was replaced by median substitution (Raymond, 1986; Tabachnick BG & Fidell LS, 2007). The last limitation of this study was measurement, i.e. variables of interest were dichotomized which prevented an evaluation of graded effects of IPV on ANC.

Key words: IPV, Antenatal care, Pregnant women, Reproductive health, Rwanda

3.6 Conclusion

The findings of the present study indicate a significant association between physical IPV and ANC services utilization indicators of early ANC service and sufficient ANC. Emotional and sexual IPV were not significant after controlling for several socio-demographic characteristics (i.e. women's education level, men's education level, women's literacy, residence, mass media exposure, religion, age, household size, wealth index and province); though most of them were not statistically significant as well. Therefore, this analysis provides support for continued efforts to reduce IPV, through the improvement of IPV screening. These results also call attention to the need for greater access to ANC services, especially for women with the characteristics of this sample (primarily rural, East-African, and residing in a post-genocide country) to prevent further worst effects of IPV on mothers and children's health.

Key words: IPV, Antenatal care, Pregnant women, Reproductive health, Rwanda

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Key words: IPV, Antenatal care, Pregnant women, Reproductive health, Rwanda

STUDY

4

IMPACT OF IPV EXPERIENCE

ON

PARENTING STYLE



“At the end of the day, the most overwhelming key to a child’s success is the positive involvement of the parents”

Jane D. Hull

Key words: IPV experience, Parental distress, Parenting style

Abstract

Scholars demonstrated sufficiently that IPV can cause several mental health problems affecting both mothers and fathers. At the same time handful literature highlighted the negative outcomes from IPV exposure that affect offspring exposed to parental IPV either as witnesses or victims (child neglect and abuse). However such findings rarely explained the mechanisms through which the children are affected by parental IPV. It is assumed that chronic IPV victimization affect poorly the parenting style, which later endanger mental health and behaviors of offspring.

The present study examined the mediating effects of parental distress on the relationship between IPV experience and negative parenting. A sample of 304 parents was utilized, whose mean age was 44.1 years (SD=9.7). Hypothesized direct and indirect pathways between IPV, parental distress and negative parenting were examined using mediation model. The results indicating that IPV is directly associated with negative parenting and the indirect pathways suggest that parental psychological distress mediated the relationship between IPV and negative parenting. The results have implications for both policy and practice in regard to IPV prevention and management.

Key words: IPV experience, Parental distress, Parenting style

4.1 Background

IPV is a complex and significant public health problem as demonstrated in the previous publications and literature. It profoundly affects multiple life domains for the people who experienced it (Pels et al., 2015). IPV influences mental health problems not only for adults but also for children (Shortt et al., 2018). Mental health problems have been related with IPV for both victimization and perpetration in some studies, and can include anxiety, hostility, depressive symptomatology, personality disorders, antisocial personality disorder, suicidality, psychotic experiences, and PTSD among others. Men disclosing to both perpetration and victimization are likely to have the highest frequency and severity of adverse mental health symptoms (Verduin et al., 2013), which may have an impact on parenting practices. Though, low rate of supportive positive parenting behaviors and high rate of supportive negative parenting behaviors, are associated with high rates of children's mental health difficulties (Dallaire et al., 2011).

When it comes to parenting, and as a dynamic process, it is important to highlight some factors that may influence parenting practices including cultural backgrounds, socioeconomic status, family interactions status and individual self-regulation ability. Despite the socio-cultural differences, the effects of parenting style remain similar across cultures, and therefore, parents may fall into negative parenting with characteristics of permissive, authoritarian and uninvolved parents, or positive parenting marked by the authoritative parents (Masud et al., 2019)

Key words: IPV experience, Parental distress, Parenting style

Permissive parenting is marked by a laissez faire attitude with few demands and rules. Hence, children with permissive parents are usually encouraged to regulate and control their own activities. Parenting with limited rules can lead children to poorer social skills, egocentrism, impulsive behaviors and problematic relationships (Leeman et al., 2014).

Contrary to authoritarian parenting, parents exert high levels of control in shaping behavior and respect by establishing strict rules (parents do not negotiate rules with their children and they are controlling). Regardless, children with authoritarian parents can develop mental illness, delinquency, lower self-esteem, lower academic performance, drug/alcohol abuse and poorer social skills (Martínez & García, 2007).

Uninvolved parents offer some of basic needs (meals and clothes) and remain detached from their children's life. Children with uninvolved parents can develop lower ability in emotions' management and/or coping strategies, mood disorders, borderline personality disorder, yet they can be self-sufficient and resilient (Kuppens & Ceulemans, 2019).

The authoritative parenting seems to be the midpoint between permissive and authoritarian and uninvolved parenting. Thus, authoritative parents have a high level of communication with their children, clear rules and guidelines, and always have reasons behind disciplinary actions taken when necessary. This supportive positive parenting lead children to higher self-esteem, confidence, cooperative, achievement-oriented. Also scientists shown that positive parenting has long-term benefits including better functioning of the brain regions of associated with emotions and cognition, and fewer behavioral problems during adulthood (Morris et al., 2007; Whittle et al., 2014).

Key words: *IPV experience, Parental distress, Parenting style*

However, the relationship between parents and their children, either or bad plays a vital role in affecting children's mental health (Smokowski et al., 2014).

Evidence has shown that intimate relationship aggression like father's and mother's hostile and controlling behavior toward each other, verbal aggression, physical aggression, or both is associated with parenting distress, which is defined as general feelings of difficulty in the parenting role and more practices that are not effective like less engagement with children, harshness toward children and lax control (Nomaguchi et al., 2017). Mothers who experienced interpersonal conflicts and family violence were more likely to report dissatisfaction with their partners, psychological distress, and parenting difficulties such as low efficiency, high irritability, low consistency, or low warmth. Children that come from those families are more likely to have poor physical health, socio-emotional adjustment, and academic achievement (Kaspiew et al., 2017). A negatively affected mother by a conflictual relationship with her husband may have direct effect on children too, according to many studies conducted, it has been shown that school age children heightened risks for parenting, and less optimal parenting in maternal victims of IPV, like more verbal and physical aggression create conflicts with their children. Among indicators of less parenting, we can say less maternal warmth/ support, inconsistent parenting and ineffective parenting practices in maternal victims. IPV and harsh parenting were significantly associated with maternal reports of child disruptive behavior, and harsh parenting found as partially mediator of the association between psychological IPV and preschool children's disruptive behavior (Verduin et al., 2013).

Key words: IPV experience, Parental distress, Parenting style

Parenting support might have a large contribution in promoting better relationship between parents and their children, reduce the transmission of violence, and help both children and mothers to overcome their suffering.

Previous empirical studies have identified negative relationship between IPV and psychological wellbeing of mothers, where IPV can be seen as a contextual source of stress, which might happen due to the absence of partner support. According spillover theory, mother who are faced to heavy criticism or who are humiliated with regard to their parenting skills, are especially the one to lose confidence as parents and might negatively affect their children (Pels et al., 2015).

Results from another study shown that, parents' expression of negative emotions may cause the children at risk of depression (Eisenberg et al., 2001). In the same pace, parental depression was associated with the use of more harsh-negative parenting practices but not to constructive supportive positive parenting; the study revealed that supportive positive parenting behaviors did not moderate the association between harsh negative behaviors and children's depressive symptoms (Dallaire et al., 2011; Simons et al., 1990).

The main purpose of the present study was to examine the relationship between IPV exposure and parenting style and testing whether parental distress mediates the relationship between IPV and parenting style (negative and positive parenting).

Key words: IPV experience, Parental distress, Parenting style

Drawing upon this study, the following hypotheses were formulated : (1) IPV experience would be positively associated with parental distress toward negative parenting, (2) Both IPV experience and parental distress would be positively associated with negative parenting, (3) Parental distress would mediate the relationship between IPV exposure and negative parenting.

Regardless, studies assessing the mediating role of parenting style between IPV and children's mental health problems are still limited. Our study supports the spillover mechanism which explains the overlap between IPV experience and parenting style, conflictual behaviors between parents spill over into their behavior toward their children with an increase in parenting strain and harsh parenting practices (Grasso, et al., 2016). Graham-Bermann (1998) has supported the argument by providing very meaningful examples of spillover effect of IPV experience such as, a mother generalizing the negative effect she encountered in her conflictual relationship with, her husband to her relationship with her child, and reacting to her child in similar harsh ways; a mother becoming too emotionally drained by her conflictual relationship with her husband, leaving her with insufficient personal resources to react sensitively to her child, or a mother developing psychological health issues that then threaten parenting. Therefore, to extend our understanding of the effect of parenting styles on IPV exposure and children's mental health problems.

Key words: IPV experience, Parental distress, Parenting style

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4.2 Methods

4.2.1 Data source and sample

This study was conducted using data collected from three sectors, including Mageragere in the City of Kigali, Mbazi and Ruhashya sectors in Huye District. A purposive sample of 304 parents, majority female or mothers (68.1%), were involved in the study.

Key words: IPV experience, Parental distress, Parenting style

4.2.2 Sampling procedures

A purposive sampling procedure was followed during the recruitment of the participants to the study. Parents were recruited if: (1) were legally married, (2) had at least one child, 7-17 years old, (3) had been identified by the local leaders as couples that had had disputes, (4) were willing to participate in the study without a compensation.

4.2.3 Measures

All measures were developed and adapted for the Rwandan context (Betancourt et al., 2014). The use of some instruments required translation from English to Kinyarwanda, the native language spoken by the research participants and researchers.

4.2.3.1 The HITS (Hurt, Insult, Threaten, Screaming)

The HITS instrument was used to measure IPV experience (Rabin et al., 2009). The HITS is a 7- item with a 4-point scale in the form: never (0 point), sometimes (1 point), fairly often (2 points) and frequently (3 points). The questionnaire was translated from English to Kinyarwanda and the translated version demonstrated very good internal consistency and validity indices (Cronbach's $\alpha = .83$). The strengths of the HITS instrument lie on its brevity as well as its capacity to capture both physical and non-physical (verbal, psychological, over control behavior) form of IPV.

4.2.3.2 PARQ (Parenting Acceptance and Rejection Questionnaire)

PARQ was used in this study to measure the negative parenting (24 items), with a 4-point scale in the form: never (0 point), once per month (1 point), once per week (2 points) and

Key words: IPV experience, Parental distress, Parenting style

every day (3 points). PARQ is a self-report questionnaire used to evaluate current perceptions of children and retrospective remembrances of adults of the degree to which they encountered parental acceptance or rejection in childhood. PARQ was used in meta-analysis based on 220 studies from 23 countries across five continents and found that parental acceptance and rejection were related to psychological adjustment of children across cultures (Ali et al., 2015).

4.2.3.3 HSCL (Hopkins Symptom Checklist)

Hopkins Symptom Checklist was used in this study to measure parental distress. HSCL commonly uses method for depression and anxiety screening due to its brevity, simplicity and well-established reliability and validity (Nabbe et al., 2019).

HSCL is a -25-item scale symptoms related to anxiety (1-10 items) and depression (11-25 items); with a 4-point scale in the form: not at all (1 point), a little bit (2 point), Quite a bit (3 points) and extremely (4 points), and it has been previously used in Rwanda (Bolton, 2001).

4.2.4 Ethics

The study was approved by the Institutional Review Board (IRB) of the College of Medicine and Health Sciences (CMHS), University of Rwanda (UR), N°200/CMHS-IRB/2019. Data were collected through in- home, one-by-one interviews conducted with Rwandan research assistants who were trained in clinical psychology, supervised and monitored by the study Principal Investigator.

Key words: IPV experience, Parental distress, Parenting style

4.2.5 Statistical analysis

All analysis were carried out using R version 3.5.3. We conducted descriptive statistics to know the frequencies of participants in each sex, IPV exposures. Bivariate correlations for all variables were examined with their significant bivariate relation. A series of hierarchical multiple regression analysis were conducted to examine the extent to which parents' psychological distress mediated the relationship between IPV experience and parenting styles (negative and positive). Sobel test were utilized to determine if there is a significant reduction of parental distress in the effect of IPV experience on parenting style, and was used to test the indirect effect for each mediation model.

4.3 Results

4.3.1. Socio-demographic characteristics of the sample

Table 11 presents the characteristics of participants. Of the total participants (N=304) 68.1% are female and 31.1% are male (see also Figure 1). Their mean age is 44.1(SD=7). According to their level of education, only 13.8% are illiterate. The vast majority of participants are married (93.1%). The mean number of children is 4.1(SD=1.9).

Key words: IPV experience, Parental distress, Parenting style

Table 11: Characteristics of participants and means and standard deviation of measured variables

(N=304)	Frequency	%
Sex		
Female	207	68.1
Male	97	31.9
Level of education		
Illiterate	42	13.8
Primary	246	80.9
Secondary	12	3.9
University	1	0.3
Vocational	3	1.0
Ubudehe category		
Category 1	21	6.9
Category 2	68	22.4
Category 3	215	70.7
Marital status		
Married	283	93.1
Divorced	3	1.0
Separated	8	2.6
In-separation	7	2.3
Missing	1	0.3
Mean age (SD)	44.1(9.7)	
Mean number of children have (SD)	4.1(1.9)	

4.3.2. Correlation matrix of IPV experience, parental distress and negative parenting

Table 11 presents a correlation matrix of the variables. All variables were significantly correlated with one another ($r=0.25-0.55$).

In Table 11, IPV and parental distress were significantly associated with negative parenting ($p\text{-value}<0.05$), and Table 12, Mediation model was used to test whether parental distress statistically mediated the relationship between IPV and negative parenting. Mediation model showed a statistically significant indirect effect of IPV on negative parenting (Table 12).

Key words: *IPV experience, Parental distress, Parenting style*

The direct effect from IPV to parental distress was significant ($t=4.45$, $p\text{-value}<0.05$), and the direct effect from parental distress to negative parenting controlling for IPV ($t=4.88$, $p<0.05$). However, the direct effect from IPV to negative parenting was not significant when controlling for parental distress in the model ($t=1.14$, $P>0.05$).

The Sobel test (Table 12) was utilized to test the significance of the indirect effect and significant reduction in the effect of IPV experience on negative parenting. The test revealed the significant indirect effect of IPV on negative parenting (Z value= 5.59, $p\text{-value}=0.00$). Therefore, we can confirm that the relationship between IPV exposure and negative parenting are significantly mediated by parental distress.

Key words: *IPV experience, Parental distress, Parenting style*

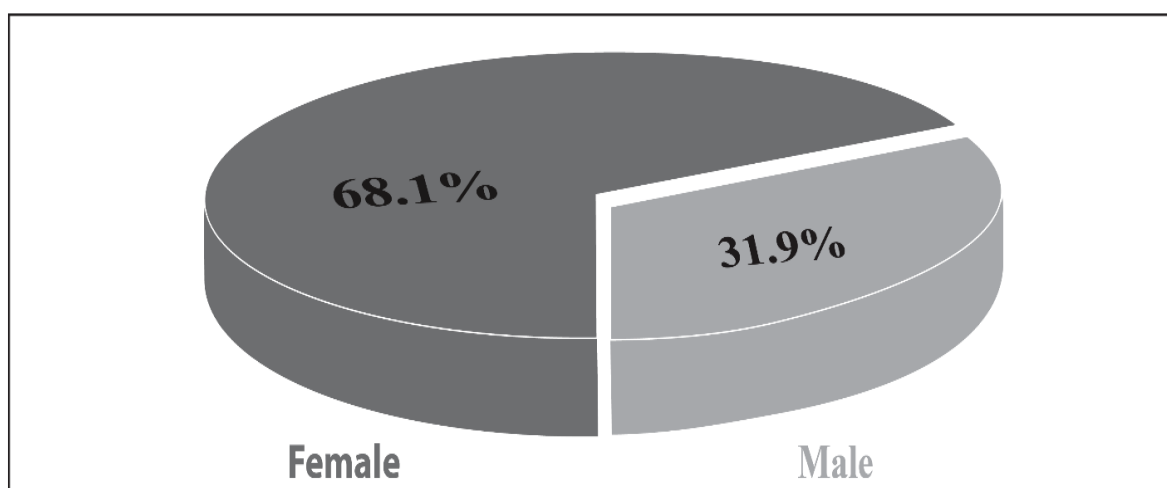


Figure 4 Percentage of participants by sex and IPV exposure

Table 11: Correlation matrix of IPV experience, parental distress and parenting style

	1	2	3
1. IPV	1		
2. Parental distress	0.55**	1	
3. Negative parenting	0.25**	0.36**	1
Note: All are pearson correlation, IPV= intimate partner violence , ** p< 0.01 (2- tailed)			

Key words: IPV experience, Parental distress, Parenting style

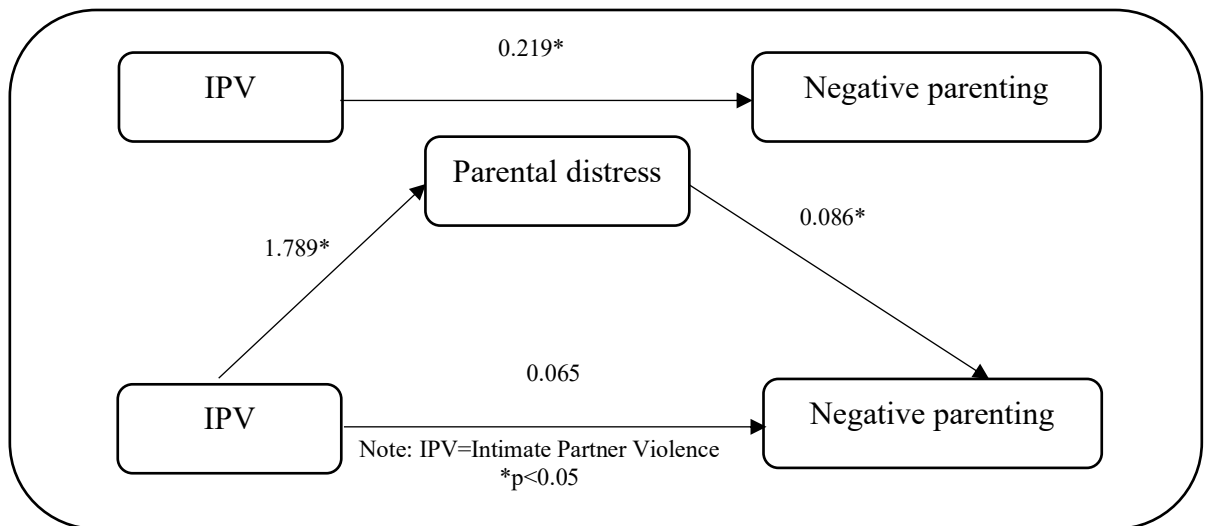


Figure 5 Total effect and basic mediation model

Table 12: Mediation analysis: examining whether parental distress variable mediates relationship between IPV experience and negative parenting

					95% CI	
	Coeff.	SE	t	R square	Lower	Upper
Path A				0.3071		
IPV	1.789	0.049	4.45*		1.485	2.093
Path B				0.1304		
Parental distress	0.086	0.0176	4.88*		0.0514	0.1207
IPV	0.065	0.0569	1.14		-0.0471	0.1769
Total effect of IPV to negative parenting not controlling for mediator(C)	0.219	0.155	11.57*			
Total effect of IPV to negative parenting controlling for mediator (C')	0.219	0.155	11.57*			
Indirect effect of IPV on negative parenting	0.154				0.079	0.24
Sobel test (z)	5.59*					
Note : IPV= intimate partner violence						
*p<0.05						

Key words: IPV experience, Parental distress, Parenting style

4.4 Discussion

The present study examines a mediation model of IPV exposure, parental distress and negative parenting in Rwanda. Our findings support the model, where it has been shown that parenting distress mediates the relationship between IPV and negative parenting. These findings suggest that IPV has an influence on parenting style through the parents' distress. In other words, the results showed that in parents with high level of IPV in their homes were at high risk for psychological problems than those parents with low IPV or no IPV in their homes (Huth-Bocks, A.C., 2008). This co-occurrence of both IPV severity and associated psychological distress was also confirmed by previous research findings in Rwanda on same population (Bahati, et al., 2022).

Regarding to the association between parental distress on parenting style, the evidence shows that parental distress has positive association with negative parenting. Parents' state of mental health influences the quality of their interaction with their children and the child rearing, whether supportive-positive parenting or harsh-negative parenting (Reupert et al., 2013).

Similarly to these findings, results from this study confirmed that parents with poorer mental health were likely to refer to harsher discipline as compared to those with better mental health. The same, parents with poor mental health would be less equipped to refer to positive parenting strategies, which include rewards for good behaviors, talking to children about problematic behaviors, being available to answer any question or concern that children may have, etc. (Knous-Westfall, H. M., 2012).

Key words: IPV experience, Parental distress, Parenting style

Indeed, mental health wellbeing is not the only determinant of the parenting practices. For example, parenting as a construct is predicted by number of factors that involve parents' values, beliefs about parenting (which merely from social learnings), social perceptions of child as a boy or a girl and associated attributes, marital satisfaction, education, and level of financial distress (Krishnakumar, A., & Buehler, C., 2000).

Equally, the association of IPV and negative parenting is also established in the literature and corroborate findings from our study. As such, mothers experiencing IPV and reporting a greater occurrence of psychologically aggressive IPV (e.g., yelling, name-calling) more often engage in psychological and physical aggression, physical assault in mild to more severe forms of physical punishment with potential harm to children (Grasso et al., 2016). Moreover, the mediation model in our study (Sobel test) yielded a partial mediation, which implies that parents' distress or poor mental health influences partially the relationship between IPV exposure and negative parenting. Partial mediation implies that there is not only a significant relationship between the parents' psychopathology and the negative parenting, but also some direct relationship between the IPV exposure and negative parenting.

Our findings are in line with the hypotheses and maintaining that exposing to IPV may negatively shape maternal parenting (Hall et al., 2014), and evidenced that IPV exposure has direct negative consequences to parenting, meaning that parents may be aggressive and violent towards their children as they behave between themselves (Pels et al., 2015).

Results from our study support the spillover model which suggest that the stress associated with IPV may inhibit parent's ability to parenting in a sensitive way, and stating that

Key words: IPV experience, Parental distress, Parenting style

parental IPV related distress is negatively related to positive parenting behaviors (Levendosky et al., 2006). Consequently, parental distress resulting from IPV experience would significantly challenge the ability of mothers to exhibit behaviours and characteristics that are very important to child adaptation, which is likely to affect poorly the child development and the child mental health (Davies & Cummings, 1994; Evans K & Sullivan M. J., 2001; Grych et al., 2000; Huth-bocks & Hughes, 2008; Owen et al., 2006). The model used in this study did not address the effect from many other factors that may affect the parenting style, including the level of education, sex, family size, poverty rates, wealth index, social beliefs and norms. Although, the evaluation is out of this current study, it is better to include them in the future studies to expand the model to better understand the moderating and mediating effect over IPV exposure, parental distress and parenting styles (i.e., supportive parenting versus harsh parenting).

This study has implications on both policy and practice in regards to IPV, child rearing and mental health. This study adds on existing findings and highlight the negative outcomes associated with IPV exposure affecting both exposed parents and offspring through parenting style. There is a strong need of engaging in effective, well-resourced prevention efforts that teach both mother and father to avoid exposing to violence and coercive control within relationships.

Finally, further assessment of the effect of other potential mediating variables on IPV exposure and negative parenting is needed, including socio- economic factors.

Key words: IPV experience, Parental distress, Parenting style

It is also important to explore how the negative parenting mediate the parental distress and child mental health.

There is a growing literature that sustains the hypothesis that parents with mental problems are prone to have children with elevated risks of developing dysfunctional behaviors and mental disorders. Negative parenting is consequently hypothesized to have negative effect on child mental health, especially in families exposed to IPV.

4.5 Conclusion

There is a significant correlation between IPV experience, parental distress and parenting style. Importantly, there was a partial mediation of parental distress on the relationship between IPV and negative parenting, even if there was a mediation by parental distress, the evidence suggests that IPV may have a direct effect on negative parenting.

Our findings supported the spillover mechanisms which gives the explanation on the overlap between IPV and parenting, conflictual behaviors between parents spills over into their behavior toward their children with an increase in parenting strain and harsh parenting practices (Greeson, et al., 2014). This suggest that in the case of child mental health symptoms, parental IPV experiences may also affect children indirectly, through parenting style.

Key words: IPV experience, Parental distress, Parenting style

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STUDY

5

**PARENTAL IPV AND ASSOCIATED
MENTAL HEALTH OUTCOMES
IN OFFSPRING**

Jane Blaustone

***“The best security blanket a child can have
is parents who respect each other”***



***“As your kids grow, they may forget what you said
but won’t forget how you made them feel”***

Kevin Heath

Key words: Parental IPV, negative parenting, child mental health

Abstract

IPV experience has psychological negative effects not only on parents (partners) but also on child development outcomes, especially behavioral and mental health problems. However, compared to the extensive literature assessing the relationship between exposure to IPV and mental health outcomes, there is little evidence establishing the association and by which mechanism parental IPV affects children and mental health status. The overall objective of this study was to assess the impact of parental IPV on children mental health. Data of 548 participants whose 304 parents aged between 27 and 76 years, and 244 children aged between 7 to 17 years were used. These participants were recruited from 3 sectors namely Mageragere in Kigali City, Mbazi, and Ruhashya in Huye District, Southern Province. The effect of parental IPV on children mental health was examined using multiple linear regression. Hypothesized direct and indirect pathways between IPV, negative parenting and children mental health problems (depression, anxiety, irritability and conduct problems) were examined using mediation models. Results indicated that Parental IPV was strongly associated with poor child mental health outcomes (depression, irritability, anxiety and conduct problems). Consistent to our hypothesis, negative parenting partially mediated the association between IPV and child depression, anxiety, irritability and conduct problems. Direct effect of IPV on children's mental health problems remained significant even when the negative parenting is included in the models.

Key words: Parental IPV, negative parenting, child mental health

Furthermore, the results show that there was no significant difference in mean scores of mental health difficulties when compared children and parents' reports.

Service providers should consider family-oriented programs that may decrease the IPV between children and parents. Implication suggests early screening of negative parenting and IPV experience in preventing and managing poor outcomes in children with mental difficulties and dysfunctional behaviors.

Key words: Parental IPV, negative parenting, child mental health

5.1 Background

IPV is a global security and health problem given its incidence on people's safety and wellbeing, both on adults and children. IPV is reported as a major challenge for the development in general, and particularly known to disrupt cohesion of communities and families (Kusuma & Babu, 2017). In Rwanda, IPV referred to as "*Amakimbirane yo mu ngo*" or Domestic violence (DV), and is defined as behaviors of current or former intimate partner that causes physical, sexual or psychological harm and has been associated with adverse health outcomes to the victim, including poor physical and mental health (Bonomi et al., 2007), maxillofacial injuries (Chander et al., 2017; Devries et al., 2017; Ferrari et al., 2016; Moylan et al., 201; Sonogo et al., 2018; Campbell, 2002; Saddki et al., 2010), poor reproductive health (Laanpere et al., 2013; Rurangirwa et al., 2018a), and intimate partner homicide (Stöckl et al., 2013).

It was estimated that 15.5 million children are exposed to parental IPV each year (Juliana Carlson, Voith, & Brown, 2019; McDonald, Jouriles, Ramisetty-Mikler, Caetano, & Green, 2006). In addition, many more other children witnessing IPV are at high risk of developing behavioral and mental health problems (Harold & Sellers, 2018; Wathen & MacMillan, 2013; Bauer, Gilbert, Carroll, & Downs, 2013).

Therefore, exposure to parental IPV may negatively impacts children by increasing their fear, self-blame, threat and self-regulation, which in turn is associated with heightened risk of mental health and behavioral problems (Greeson, et al., 2014; Roberts, Gilman, & Koenen, 2010).

Key words: *Parental IPV, negative parenting, child mental health*

Studies indicate that children who witness parental IPV are at elevated risk for a host of negative developmental outcomes including anxiety, depression, aggression, antisocial behavior, poor academic attainment, criminality, substance abuse and suicidality (Harold & Sellers, 2018).

It is assumed that IPV affects children's health not only directly (as victim through harsh parenting) but also indirectly while witnessing parental violence and in some cases being abused through neglect. It is also evidenced that IPV may affect child mental health outcomes through parental distress via negative parenting (Visser, et al., 2015; Dallaire, et al., 2006). In Rwanda, however, little to nothing is known about the effects of exposure to IPV and children's mental health.

Existing evidence on the relationship between IPV experience and mental health problems among children has been mostly generated in high income countries (HIC), and few in poor resources settings, has suggested that there is an association between parental IPV and increased risk of developing mental disorders among children. In Uganda, for example, the odds of having mental difficulties increase significantly if the child was exposed to parental IPV. Assessed using the strengths and difficulties questionnaire, results were four times higher for students who had witnessed and experienced parental IPV compared to those who did not (Devries et al., 2017). Some studies have supported the positive relationship between IPV exposure and negative parenting (Levendosky, A. A., & Graham-Bermann, S. A., 2001; Grasso, et al (2016) and indicated that less optimal parenting in mothers who experienced

Key words: Parental IPV, negative parenting, child mental health

IPV, including more inconsistent parenting show less maternal warmth, support, and ineffective parenting practices in mothers victims (Grasso, et al., 2016).

Commonly, reported mental difficulties in children who are exposed to parental IPV include both externalizing behaviors (aggression, delinquency, etc.) and internalizing behaviors (anxiety, depression, withdrawal, etc.) (Chander et al., 2017; Moylan et al., 2010).

A handful of publications that have analyzed the relationship between IPV and mental health outcomes are available among adults in Rwanda (Rurangirwa et al., 2018b; Umubyeyi et al., 2014a; Verduin et al., 2013). Still, despite being a public health issue, there is a large knowledge gap when it comes to understanding the effect of IPV on mental health of the children exposed to parental IPV. The present study seeks to fill the existing gap by investigating the effects of parental IPV on children's mental health. We examined three major hypotheses: (1) Mean scores of parents who reported mental health difficulties differ from mean scores of children, who report mental health difficulties, (2) Parental IPV is positively correlated with child mental health problems (depression, anxiety, irritability and conduct problems) and (3) Negative parenting would mediate the relationship between IPV and children mental health problems.

5.2 Methods

5.2.1 Setting

Participants to the study were recruited from three sectors namely Mbazi and Ruhashya in Huye District, Southern Province, and Mageragere in Kigali City.

Key words: Parental IPV, negative parenting, child mental health

These three sectors were selected because they were reported to have associations of couples recognizing themselves as experiencing IPV.

All adults' participants in the study had been identified by the local leaders as couples that had ongoing disputes in their families and were therefore recruited by LIWOHA (Life Wounds Healing association), a local non-governmental organization which addresses mental difficulties using psychosocial community-based approach. Participants to LIWOHA workshops consented to participate to the study and gave their consent to interview their offspring.

5.2.2 Sampling procedures

A purposive sampling procedure was followed during the recruitment of the participants to the study. Parents were recruited if: (1) were legally married, (2) had at least one 7-17 years old child, (3) had been identified by the local government authorities as couples that had had disputes, (4) were willing to participate in the study without compensation. Children were recruited into the study if: (a) their parents were recruited into the study, (b) they were between 7-17 years old, and (c) obtained the parents' assent to participate in the study. A total of 548 participants were recruited in this study including 304 parents and 244 offspring.

Key words: Parental IPV, negative parenting, child mental health

5.2.3 Measures

All measures were developed and adapted for the Rwandan context (Betancourt et al., 2014). The use of some instruments required translation from English to Kinyarwanda, the native language spoken by the research participants and researchers.

5.2.3.1 The HITS (Hurt, Insult, Threaten, Screaming)

The HITS instrument was used to measure IPV victimization on a 4-point scale (never (0 point), sometimes (1 point), fairly often (2 points) and frequently (3 points) (Rabin et al., 2009). The questionnaire is a 7-item scale with a 4-point scale in the form: never (0 point), sometimes (1 point), fairly often (2 points) and frequently (3 points). The strengths of the HITS instrument lie on its brevity as well as its capacity to capture both physical and non-physical (verbal, psychological, over control behavior) form of violence. The tool assessed children perception and experience of the IPV in their family; the adjusted questionnaire demonstrated acceptable internal consistency validity indices ($\alpha=.83$) in the present study.

5.2.3.2 Youth Conduct Problems Scale-Rwanda (YCPS-R)

The YCPS-R is an 11-item assessment scale for conduct problems among youth developed for use in Rwanda (Betancourt et al., 2014). The scale was validated in previous study in Rwanda (Ng et al., 2014) and has demonstrated a good reliability ($\alpha=.87$) in the present study. Compared to other instruments (MINI for children, WHO-Disability Assessment Schedule Child Version), YCPS-R demonstrated the ability to discriminate between youth with and without conduct disorders (Betancourt et al., 2014). Most importantly, the YCPS-R was developed from locally derived measures on Rwandan youth with conduct problems.

Key words: Parental IPV, negative parenting, child mental health

Specific clinical cut off values were applied to different categories of participants; children (5), mother parents (14), and father parents (9) to determine the level of clinically diagnosable conduct problems.

5.2.3.3 The Adapted Youth Self-Report (YSR)-Internalizing Subscale

The adapted YSR is 23-item scale that measures anxiety, depression, and withdrawal symptoms and has demonstrated good reliability and validity among Rwandan youth (Betancourt T. , et al., 2014). The YSR used in this study has demonstrated good internal consistency and validity ($\alpha=.92$). A clinical cut-off value of 67 for T-scores was used to determine the diagnosable cases for emotional functioning.

5.2.3.4 The Center for Epidemiological Studies Depression Scale for Children (CES-DC)

The CES-DC, a 4-point Likert scale scoring from 0 (never) to 3 (often), was used to assess depression symptoms. The adapted version (Betancourt et al., 2014) included local wording to capture local depression like *agahinda gakabije* (persistent sorrow) and *kwiheba* (severe hopelessness). The Adapted CES-DC Kinyarwanda version (30 items) demonstrated excellent psychometric properties ($\alpha=.91$) and 30 cut-off point was used to determine clinical diagnosable depression (Betancourt et al., 2014, 2017).

5.2.3.5 The Adapted Irritability Questionnaire (IRQ)

The Adapted Irritability Questionnaire is a 27-item scale adapted version from the 21-item Irritability Questionnaire (Craig, Hietanen, Markova, & Berriosa, 2008), to fit Rwandan context new items generated from qualitative data were added (Betancourt T. , et al., 2014;

Key words: Parental IPV, negative parenting, child mental health

Craig, Hietanen, Markova, & Berriosa, 2008). The items were scored from 0 (never) to 3 (often). The Cronbach's alpha in this sample was 0.88.

5.2.3.6 Parental Acceptance and Rejection Questionnaire (PARQ)

Negative parenting was measured using Parental Acceptance and Rejection Questionnaire. PARQ is a 32-item adapted version used to measure negative and positive parenting; 16 items measured positive parenting and 16 others measured negative parenting (Ng, Kanyanganzi, Munyanah, Mushashi, & Betancourt, 2014). Items were scored on four-point Likert scale, from 0 (never) to 4 (everyday). The internal reliability of combined scale in this sample was excellent ($\alpha=.92$).

5.2.4 Statistical analysis

Sum scores were computed for different scales used for the present study including HITS, YCPS-R, YSR, IRQ and CES-DC and PARQ. After computing sum scores, dichotomous variables were created using the cut off values found in the literature to determine participants who met criteria for possible clinical cases. For YSR scale, transformation of raw values into T-scores was performed to be able to determine a cut off level for emotional impairment. Frequency tables were used to describe the social and demographic characteristics of the sample and as well as mental difficulties for the children. In addition, correlation analysis was conducted to identify the level of association existing between different mental difficulties among offspring. Also, some analyses were carried out using a Statistical Package for Social Sciences (SPSS) version 25 (IBM), and the Pearson's coefficient was utilized to identify the relationship between variables.

Key words: Parental IPV, negative parenting, child mental health

Moreover, T-test was conducted to understand whether the mean differences between parent's reports and offspring reports about mental difficulties among offspring were statistically significant. Multiple linear regression models were employed to analyze the effect of negative parenting on children mental health including depression, anxiety, irritability, and conduct problems.

5.2.5 Ethics

The study was approved by the Institutional Review Board (IRB) of the College of Medicine and Health Sciences (CMHS), University of Rwanda (UR), N°200/CMHS-IRB/2019. Data were collected through in-home, one-by-one interviews conducted with Rwandan research assistants who were trained in clinical psychology, supervised and monitored by the study Principal Investigator.

Key words: Parental IPV, negative parenting, child mental health

5.3 Results

5.3.1 Descriptive statistics

Table 13: Demographic and IPV characteristics of children and parents

		Children		Parents	
		Frequency	Percentage	Frequency	Percentage
Sex	Female	128	52.5	207	68.1
	Male	116	47.5	97	31.9
Age groups	7-10	72	29.5	-	-
	11-14	113	46.3	-	-
	15-17	59	24.2	-	-
	27-36	-	-	77	25.3
	37-46	-	-	108	35.5
	47-56	-	-	84	27.6
	57-66	-	-	29	9.5
	67-76	-	-	6	2
Level of education	Illiterate	4	1.6	42	13.8
	Primary	217	88.9	246	80.9
	Secondary	23	9.4	12	3.9
	University			1	0.3
	Vocational			3	1
Current IPV Exposure	Yes	212	88.3	260	86.4
	No	28	11.7	41	13.6
Effect of IPV on children	Yes	224	93.3	284	94.4
	No	16	6.7	17	5.6
Duration of IPV Exposure	1-5	157	69.8	119	40.5
	6-10	60	26.7	87	29.6
	11-40	8	3.6	88	29.9

Key words: Parental IPV, negative parenting, child mental health

Table 13 provides description about characteristics of the children and parents interviewed during LIWOHA study. Among children who were interviewed ranging between 7-17 years old the majority were girls (52.5%), their mean age was 12.2 years (SD= 2.6). Most of them were in primary school (88.9%), and only 1.6% were illiterate. Regarding the mental health, 28.5 % of children had conduct problems, 33.9 % reported irritability and 26.3% reported depression in their children when they experience IPV.

Among parents who were interviewed most of them were female (68.1%). They were aged between 27-76 years; their mean age was 44 years (SD=9.7). More than three quarters of them had primary school education (80.9%), while 13.8% were illiterate. As far as IPV is concerned, 86.4% of the parents were currently exposed to IPV and 94.4% believed that their children were affected by their parental IPV. About 40% of the sampled parents had experienced IPV for the period between 1 and 5 years while 30% of them had experienced violence for the period between 11 and 40 years.

Key words: Parental IPV, negative parenting, child mental health

5.3.2 The effect of IPV on children's mental health outcomes

Table 14: Mental and emotional difficulties among offspring exposed to parental IPV

		N	%	SE	95% CI
Anxiety (YSR)	Parent report	304	8.3	1.6	5.6-11.8
	Child report	244	4.18	1.30	2.17-7.29
Irritability (IRQ)	Parent report	304	40.1	2.8	34.6-45.7
	Child report	244	33.88	3.04	28.14-40
Depression (CES-DC)	Parent report	304	23.3	2.4	18.8-28.3
	Child report	244	26.25	2.84	20.99-32.1
Conduct problems (YCPS)	Mother report	207	19.8	2.3	15.6-24.6
	Father report	97	9.6	1.7	6.6-13.3
	Child report	244	28.51	2.90	23.1-34.43

Table 14 reports on the mental and emotional difficulties in the children exposed to IPV as reported by both parents and children themselves. Irritability was the most emotional difficulty that children had, and that is according to both parents and children. Parents perceived that 40% of the children were irritable while children believed that 33.9% of them were irritable. According to children account, 26.25% were depressed and 28.5% had developed conduct problems. Also, using the YSR scale children reported that 4.2% had developed internalizing and externalizing behaviors which tend towards anxiety, depression, and feeling over controlled. According to parents reports 23.3% of the children were depressed and that 8.3% of the children had developed emotional and behavioral problems. Female parents rated the development of conduct problems of the children higher (19.8%) compared with male parents (9.6%).

Key words: IPV, Negative parenting, Child mental health

Table 15: Summary of correlations, Means and Standard Deviations for Scores on the HITS, CES-DC, YSR, IRQ, YCPS (both parents' and children's reports)

CES-DC	.455**	--			
YSR	.512**	.812**	--		
IRQ	.469**	.774**	.774**	--	
YCPS	.298**	.469**	.490**	.493**	--
M	9	22.6	12.68	26.17	4.38
SD	5.33	15.17	10.51	13.63	5.75
Note: HITS= Hurt, Insult, Threaten, Screaming, YCPS-R=Youth Conduct Problems Scale-Rwanda; YSR=The Adapted Youth Self-Report; CES-DC =The Center for Epidemiological Studies Depression Scale for Children, IRQ= The Adapted Irritability Questionnaire. ** $p < 0.01$					

Table 16: Correlation matrix of IPV, negative parenting and mental health problems (children's report)

	HITS	PARQ	CES-DC	YSR	IRQ	YCPS-R
1. HITS	1					
2. PARQ	0.40**	1				
3. CES-DC	0.53**	0.66**	1			
4. YSR	0.61**	0.66**	0.88**	1		
5. IRQ	0.56**	0.55**	0.84**	0.82**	1	
6. YCPS-R	0.37**	0.48**	0.59**	0.60**	0.60**	1
Note: HITS (Hurt, Insult, Threaten, and Screaming); PARQ(Parental Acceptance and Rejection Questionnaire); CES-DC (The Center for Epidemiological Studies Depression Scale for Children); YSR (The Adapted Youth Self-Report); (IRQ)The Adapted Irritability Questionnaire ; YCPS-R (Youth Conduct Problems Scale-Rwanda) ** $p < 0.01$ (2- tailed)						

Key words: IPV, Negative parenting, Child mental health

Table 15 and 16 summarize information about the correlations between scores on HITS and internalizing and externalizing emotional and behavior problems among children, using both parents' and children's reports. It is observed that there are strong and positive correlations between scores on HITS and scores on all other scales, correlation coefficients range from 0.3 between HITS and YCPS to 0.5 between HITS and YSR. This means that the increase in HITS scores is associated with increase in the scores on CES-DC, YSR, IRQ and YCPS.

In other words, the increase in IPV exposure is likely to be associated with the development of child emotional and behavioral difficulties. And all correlations are statistically significant ($p < 0.01$). Furthermore, it is noted that there are even stronger positive correlations between the scores in addition to the relationship with HITS, suggesting that children exposed to IPV are more likely to develop multiple emotional and behavioral problems at the same time.

Table 17: Comparison of mean scores on CES-DC, YSR, IRQ, YCPS-R

Measures	Children's report		Parent's report			
	Mean	SD	Mean	SD	F	P
Depression	23.71	15.904	21.71	14.519	1.574	.127
Anxiety	13.40	10.687	12.11	10.341	0.014	.154
Irritability	26.11	13.430	26.23	13.807	0.648	.917
Conduct problems	3.75	4.773	4.88	6.395	14.329	.02

We tested the equality of mean scores for mental difficulties as perceived by parents against the perception of their children to understand the differences of opinions about mental health of the children. As the results show (Table 17), parents and children have similar perceptions about the mental health of the children except for conduct problems.

Key words: IPV, Negative parenting, Child mental health

For depression, anxiety and irritability the differences in the mean scores were not statistically significant ($p>0.05$) between the two groups. However, a statistically significant difference ($p<0.05$) was observed for the conduct problems where the children's report is lower compared to their parents' score.

Table 18: Models examining whether IPV influences child mental health outcomes (depression and irritability), controlling for socio-demographic factors.

	Model 1			Model 2		
Variables	β	S.E	t	B	S.E	t
IPV	0.44	0.112	11.19*	0.447	0.099	11.52*
Sex	-0.046	1.225	-1.166	-0.089	1.086	-2.29*
Age	-0.072	0.034	-1.85	-0.038	0.08	-1.00
Level of education	-0.013	1.302	-1.35	-0.032	1.16	-0.85
<i>R square</i>	0.214			0.23		
<i>F</i>	36.57*			40.14*		
<i>Note.</i> The dependent variable in model 1= child depression; the dependent variable in model 2= child irritability, IPV= intimate partner violence, *P <0.05						

Table 19: Models examining whether IPV influences child mental health outcomes (anxiety and conduct problems), controlling for socio-demographic factors.

Variables	Model 3			Model 4		
	β	S.E	t	B	S.E	t
IPV	0.489	0.074	13.02*	0.311	0.045	7.44*
Sex	-0.076	0.809	-2.04*	0.034	0.493	0.82
Age	-0.092	0.022	-2.46*	0.096	0.014	2.323*
Level of education	-0.044	0.861	-1.82	-0.065	0.527	-1.56
<i>R square</i>	0.276			0.101		
F	51.46*			15.80*		
<i>Note: The dependent variable in model 3=child anxiety; the dependent variable in model 4= child conduct problems, IPV= intimate partner violence, *P <0.05</i>						

Key words: IPV, Negative parenting, Child mental health

Tables 18 and 19 show the results from fixed models examining the effect of parental IPV on their children mental health outcomes. In all models (model 1-4), there is evidence that parental IPV significantly affects their children mental health outcomes including depression ($t=11.19$, $p<0.05$), irritability ($t=11.52$, $p<0.05$), anxiety ($t=13.2$, $p<0.05$), and conduct problems ($t=7.44$ $p<0.05$); included control variables (e.g., sex, age, level of education). This is suggesting that children whose parents experience IPV are at higher risks of having multiple emotional and behavioral problems at the same time including, depression, irritability, anxiety and conduct problems compared to families with no parental IPV.

Key words: IPV, Negative parenting, Child mental health

Table 20: Mediation analysis: Examining whether negative parenting mediates the relationship between IPV and child depression

Variables	B	SE	β	T	P
Path "c" IPV on child depression	1.602	0.167	0.527	9.611	0.000
Path "a" IPV to negative parenting	0.410	0.06	0.401	6.731*	0.000
Path "b" Negative parenting on child depression controlling for IPV	0.950	0.148	0.313	6.409*	0.000
Path "c'" IPV on child depression controlling for negative parenting (mediator)	1.628	0.147	0.539	11.045	0.000
Indirect effect through negative parenting (c-c')	0.652				
Sobel test (z-value)	5.75*				
Note : IPV= intimate partner violence *p<0.05					

Table 21: Mediation analysis: Examining whether negative parenting mediates the relationship between IPV and child anxiety

Variables	B	SE	β	T	P
Path "c" IPV to child anxiety	1.253	0.104	0.614	12.06*	0.000
Path "a" IPV to negative parenting	0.410	0.06	0.401	6.73*	0.000
Path "b" Negative parenting to child anxiety controlling for IPV	0.998	0.093	0.492	10.77*	0.000
Path "c'" IPV to child anxiety controlling negative parenting (mediator)	0.853	0.093	0.418	9.16*	0.000
Indirect effect through negative parenting (c-c')	0.399				
Sobel test (z-value)	5.71*				
Note : IPV= Intimate Partner Violence *p<0.05					

Key words: IPV, Negative parenting, Child mental health

Table 22: Mediation analysis: Examining whether negative parenting mediates the relationship between IPV and child irritability

Variables	B	SE	β	T	P
Path "c"					
IPV on child irritability	1.420	0.137	0.555	10.339	0.000
Path "a"					
IPV to negative parenting	0.410	0.06	0.401	6.73*	0.000
Path "b"					
Negative parenting on child irritability controlling for IPV	0.991	0.135	0.390	7.355	0.000
Path "c'"					
IPV on child irritability controlling for negative parenting (mediator)	1.023	0.135	0.400	7.548	0.000
Indirect effect through negative parenting (cc')	0.397				
Sobel test (z-value)	4.97*				
Note : IPV= intimate partner violence; *p<0.05					

Key words: IPV, Negative parenting, Child mental health

Table 23: Mediation analysis: Examining whether negative parenting mediates the relationship between IPV and conduct problems

Variables	B	SE	β	T	P
Path "c" IPV on child conduct problem	0.336	0.055	0.368	6.134	0.000
Path "a" IPV to negative parenting	0.410	0.06	0.401	6.73	0.000
Path "b" Negative parenting on child conduct problems controlling for IPV	0.355	0.055	0.391	6.470	0.000
Path "c'" IPV on child conduct problems controlling for negative parenting (mediator)	0.194	0.055	0.212	3.508	0.001
Indirect effect through negative parenting (c- c')	0.142				
Sobel test (z-value)	4.66*				
Note : IPV= intimate partner violence; *p<0.5					

5.3.3 Mediating role of negative parenting between IPV and children mental health problems

5.3.2.1 Direct pathways among IPV, negative parenting and children mental health problems

All three direct paths were significant in the four models: (1) from IPV to child mental health problems (depression, anxiety, irritability, and conduct problems), (2) IPV to negative parenting, (3) negative parenting to child mental health problems (Table 20 - 23).

5.3.2.2 Indirect pathways from IPV to mental health problems

All four models revealed a significant indirect effect of IPV on child mental health problems through negative parenting. (1) IPV on child depression, (2) IPV on child anxiety (3) IPV on child irritability and (4) IPV on child conduct problems.

Key words: IPV, Negative parenting, Child mental health

Table 20 - 23 however, show that the association between IPV and child mental health problems remains significant, even with negative parenting is included in the models: model 1 ($t=11.1$, $p=0.000$), model 2 ($t=9.16$, $p=0.000$), model 3 ($t=7.55$, $p<0.001$) and model 4 ($t=3.51$, $p=0.001$) and the effect was different from zero.

Moreover, the Sobel test was utilized to test the significance of indirect effect and reduction in the effect of IPV on child mental health problems. And importantly, it was significant in all the four models: model 1 ($Z=5.75$, $p=0.000$), model 2 ($Z=5.71$, $p=0.000$), model 3 ($Z=4.97$, $p=0.000$) and model 4 ($Z=4.66$, $p=0.000$).

These results show that negative parenting partially mediates the relationship between IPV and mental health problems in offspring who experience parental IPV.

Key words: *IPV, Negative parenting, Child mental health*

5.4 Discussion

It is considered that this is one of the rare studies investigating the relationship between parental IPV and child mental difficulties in Rwanda, and one of the handful studies assessing by which mechanisms the parental IPV affect offsprings mental health outcomes. Among mental difficulties studied, the study found that children were struggling most from irritability; 40.1% from parents' report and 33.9% from children' report. Considering the evidence that irritability is common in children and adolescents (Stringaris, 2011), being exposed to perpetual parental IPV must be hard on children who are more likely to be annoyed easily, develop emotion of anger, and temper outbursts. According to parents' account alcohol and drug abuse, poverty, and communication difficulties were the leading factors for IPV. In other words, in addition to parental IPV most of the children were exposed to hardship, and most likely abused and neglected by their parents, which constitute risk factors for addictive behaviours, e.g. drug and alcohol addictions. In fact, in a separate analysis IPV as measured by HITS was associated with negative parenting largely characterized by abuse and neglect.

The study also found considerable prevalence of depression among children. The rates were 26.25% and 23.3% according to children and parents report respectively. Recent studies on depression among young populations in Rwanda have found higher prevalence of depression, i.e 33.8% among orphans of the Genocide (Schaal et al., 2011) and 53% among youth-headed households (Boris et al., 2008).

Key words: IPV, Negative parenting, Child mental health

These studies were particularly interested in populations at higher risk, notably survivors of the genocide perpetrated against Tutsi who faced adverse events including losing their loved ones, marginalization, high level of grief, and poverty, which could explain higher levels of depression.

The risk for developing depression might be lower for children exposed to IPV compared with those surviving life-threatening events such as the genocide. However, evidence suggest that children exposed to IPV have higher risk of developing internalizing problems such as depression compared with non-exposed (Devries et al., 2017; Holt et al., 2008; Moylan et al., 2010). In the Rwandan context, further studies are needed to understand the mechanisms and pathways of the relationship between children exposure to parental IPV and mental difficulties. From this study, it is however demonstrated the mediating effect of the negative parenting in predicting the effect of parental IPV on offspring's mental health outcomes.

As such, strong and positive correlations between scores on the HITS scale and the scores on the different scales used for the measurement of mental difficulties suggest that the severity of the violence in the families is associated with severe mental difficulties for children living in those families. The scale used for measuring the exposure to IPV during the present study captures the complexity of the violence in its various aspects including physical, emotional and psychological; which provides good insights into the social environment to which children were exposed.

Key words: IPV, Negative parenting, Child mental health

It is worthwhile to note that in addition to children witnessing of parental IPV, children are also likely to experience direct violence such as abuse from their parents. The study in Uganda whose social make up is similar to Rwanda found that the overlap between witnessing IPV and experiencing violence for children was almost complete (Devries et al., 2017). The present study also found association between parental exposure to IPV and harsh parenting behaviors.

This study revealed that children from families with IPV are more likely to develop mental health problems. Research stipulated that exposure to IPV has an indirect effects on children's behavior through maternal parenting (Greene et al., 2018; Greeson et al., 2014). Their results indicated that children exposed to IPV are at higher risks of developing mental health difficulties including depression, social stress, their emotional symptoms index (ESI) was higher as well. Consistent to qualitative studies conducted (e.g. Bennett, 1991; Ericksen & Henderson, 1992), scholars have found that children from families with domestic violence their feelings are often replaced by anxiety. They are all suggesting that parental IPV has an impact on children mental health. Furthermore, there were also strong relationships between multiple mental difficulties among the children. For instance, the correlation coefficient of 0.774 was found between CES-DC scores and IRQ scores. CES-DC instrument was used to measure depression while IRQ instrument was used to measure irritability among the children. Such strong relationship found between depression and irritability is supported by the literature.

Key words: IPV, Negative parenting, Child mental health

Evidence suggests that irritability is one of the main moods human experience and it is one of the criteria for depression in the children in DSM-IV and one of the symptoms of mood dysregulation children depression episodes and more in DSM-V (Stringaris, 2011). Besides, irritability is one of the criteria for anxiety disorders or one of its characteristics. The present study also found strong correlation between irritability and anxiety disorder among children. In fact, a correlation coefficient of 0.774 was found between IRQ scores and YSR scores. YSR scale was used to measure anxiety among children. Furthermore, there were strong correlation between depression and anxiety among the children. Depression and anxiety are well known as comorbid conditions and the present study found a correlation coefficient of 0.81 between scores on CES-DC and YSR scales. This implies that most of children who showed depression symptoms had also met the criteria for anxiety. Finally, conduct problems among the children were also positively correlated to all mental conditions. Conduct problems are common among children exposed to IPV and could be explained by negative parenting which is also hypothesized to be associated with parental IPV. Handful literature of randomized clinical trials which trained parents on child management skills led to reductions in negative parenting behaviors which, in turn, had significant effects on child conduct problems.

The present study was able to capture the perception of both parents and children about children's mental health. The similarity in the opinions between these groups is quite remarkable.

Key words: IPV, Negative parenting, Child mental health

Except for conduct problems where a significant mean score difference ($p < .05$) was observed between children and parents, for other mental difficulties, notably depression, anxiety, and irritability; the mean score differences were not statistically significant ($p > .05$).

The tendency of agreement of opinions between parents and children suggest that the two groups not only are aware of the effect of the parental IPV on mental health of the children, but also the extent of the problem is broadly shared between these two groups. In fact, comparisons of the prevalence figures for mental difficulties reported during this study reinforce the shared perceptions between parents and children. The stark differences were observed about irritability where children version of the events reported more people compared to parents' stories.

Furthermore, this study sought to examine the relationship between IPV exposure and negative parenting, and test whether negative parenting mediates the relationship between IPV and child mental health problems (depression, anxiety, irritability and conduct problems). Our overall findings supported the hypotheses and revealed both an indirect effect of IPV on mental health outcomes as well as direct effect of IPV on parenting behaviors and children's mental health outcomes. Findings from this study support existing literature suggesting that experiencing IPV influences childhood mental health problems (Hazen, Connelly, Kelleher, Greene, Chan, Kimberly, Lauren, & Briggs-Gowan, 2018).

Key words: IPV, Negative parenting, Child mental health

A significant relation between negative parenting behaviors and children anxiety, depression, irritability and conduct problem symptoms support our hypothesis that negative parenting behaviors are associated with child mental health outcomes.

Our findings are consistent with prior research suggesting that children exposed to negative parenting were more likely also to develop mental health problems (Creswell, Cooper, Silverman, & Field, 2011; Lazarus, et al., 2016).

Moreover, our findings highlighted that negative parenting mediated the effect between IPV and children mental health problems, including anxiety, depression, irritability and conduct problems. Despite the significant effect of negative parenting on children's mental health, no study has examined its mediating role on the relationship between IPV and children's mental health problems. Our findings also supported the spillover mechanisms which gives the explanation on the overlap between IPV and parenting, conflictual behaviors between parents spills over into their behavior toward their children with an increase in parenting strain and harsh parenting practices (Greeson, et al., 2014).

5.5 Limitations

Despite the strengths in our findings including that parental IPV is associated with mental difficulties in offspring, and the mediating effect from negative parenting, this study was also able to provide perception of both parents and their offspring vis-à-vis mental health outcomes of the latter, there were also limitations to the study:

Key words: IPV, Negative parenting, Child mental health

(1) the participants to the study were selected among the beneficiaries of a non-governmental organization, thus the results could not be generalized to the whole population, (2) the study does not separate the effect of witnessing the parental IPV from that of experiencing violence directly.

5.6 Conclusion

This study revealed that the prevalence of parental IPV has adverse effects on mental health outcomes of their offspring through the kind of parenting, particularly the negative parenting. Also, not only there were associations between parental IPV and poor mental health outcomes in offsprings but also interconnections between different mental conditions. In countries where the prevalence of domestic violence is high, further studies are needed to understand the pathways through which exposure to parental IPV leads to poor mental health of their offspring, and thus, to be able to design effective interventions for addressing the distress of parents with IPV experience that can lead to harsh or unsupportive parenting. In this study the associations between IPV experience, negative parenting and poor mental health outcomes were evidenced. Our findings indicated that IPV exposure was associated with negative parenting, children depression, anxiety, irritability, and conduct problems. Also, results indicated that negative parenting partially mediated the relationship between IPV and children's mental health problems (depression, anxiety, irritability, and conduct problems).

Key words: IPV, Negative parenting, Child mental health

Therefore, there is a need to explore appropriate ways to reduce mental health problems in children and, service providers should consider family-oriented programs that may decrease the IPV experience and promote positive parenting.

Implications and contribution of the study include early screening of IPV and negative parenting for appropriate and effective interventions to reduce IPV and promote a wealthy and healthy family.

Key words: IPV, Negative parenting, Child mental health

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Key words: IPV, Negative parenting, Child mental health

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Key words: *IPV, Negative parenting, Child mental health*

STUDY

6

**EFFECTIVENESS
OF
COMMUNITY- BASED APPROACH
IN
IPV REDUCTION**



“Everyone needs a house to live in, but a supportive family is what builds a home”

Anthony Liccione

Key words: IPV, anxiety, depression, PTSD, community support, Rwanda

Abstract

There is a little known about the effectiveness of community-based approach (CBA) on reduction of IPV exposure, anxiety, depression and PTSD symptoms as outcomes in collectivist societies and a post-genocide country like Rwanda. This study therefore, aimed at assessing the effectiveness of CBA for IPV victimization and perpetration and associated mental health outcomes in Rwanda.

A Randomized controlled trial (RCT) was conducted on a sample of 31 couples (MA =36.9, SD=9.9) with 16 couples and 15 couples assigned in treatment/experimental and control groups respectively. Data were collected using the HITS-7 to assess IPV exposure, the HSCL-25 for anxiety and depression, and the PTSD checklist for DSM-5. Data analyses were computed using Pearson correlation and mixed ANOVAs to evaluate the effect of CBA over IPV occurrence and mental health outcomes.

The results revealed a significant and positive correlation between IPV, anxiety, depression, and PTSD. The results also showed a significant difference across the time points: IPV ($F_{(1,48)} = 12.38$; $p=0.001$), anxiety ($F_{(1,48)} = 4.58$; $p=0.037$), and depression ($F_{(1,48)} = 4.92$; $p=0.031$), but the difference was not significant for PTSD ($F_{(1,48)} = 0.55$; $p=0.461$). All variables showed a significant difference between groups: IPV ($F_{(1,48)} = 15.15$; $p = 0.000$), anxiety ($F_{(1,48)} = 5.69$; $p=0.021$), depression ($F_{(1,48)} = 5.40$; $p=0.024$), and PTSD ($F_{(1,48)} = 9.26$, $p = 0.004$).

Key words: *IPV, anxiety, depression, PTSD, community support, Rwanda*

Additionally, there was a significant interaction between time and group for IPV ($F_{(1,48)} = 12.37$; $p = 0.001$), anxiety ($F_{(1,48)} = 4.58$; $p = 0.037$) and depression ($F_{(1,48)} = 4.92$; $p = 0.031$). A significant interaction was also found between time and sex for both anxiety ($F_{(1,30)} = 6.25$; $p = 0.018$) and depression ($F_{(1,30)} = 7.02$; $p = 0.013$) variables. The interaction was not significant for IPV ($F_{(1,30)} = 0.55$; $p = 0.461$). Following these interactions, it was indicated that the experimental group had very low scores after the intervention as compared to the control group. On the other hand, both males' and females' IPV scores have been reduced to almost the same level, while both anxiety and depression scores decreased more in females than in males.

Our findings highlight substantial efficacy of CBA for victims and perpetrators of IPV in reducing IPV, anxiety and depression symptoms in Rwanda, a post-genocide country. However, the study was not able to prove an effect of CBA on PTSD symptoms over time, a result that poses the question whether reported PTSD symptoms are outcomes from IPV exposure or pre-existing post-traumatic experiences like the genocide. This study findings will raise awareness to service providers and researchers on the necessity of community based practices that are effective in mitigating IPV occurrence and improving mental health outcomes.

Key words: *IPV, anxiety, depression, PTSD, community support, Rwanda*

6.1 Background

Globally, IPV against woman is considered as an important social and public health issue. IPV refers to physical, sexual or emotional harm by a current or former intimate partner (Jabbi et al., 2020). It was estimated that almost 30% of women in the world have experienced IPV (Bulte, 2020). South- East Asia, the Mediterranean region and Africa were found to have the highest lifetime prevalence of physical and/or sexual IPV (Kapiga et al., 2017; Thomson et al., 2015). According to the analysis of data of 77 studies, 33% of women have ever experienced physical or sexual violence in African region, which was similar to South-East Asia and Mediterranean region (31%). Within the region, the national surveys demonstrated that the prevalence of lifetime physical and/or sexual violence among women age from 15 to 49 years ranges from 47% in DRC to 16 % in Cameroon. Similarly, national survey in Rwanda also found that 38% of Rwandan women experience physical and /or sexual violence in their lifetime which keeps placing Rwanda among countries with the highest prevalence of IPV in the world (WHO, 2021). Recently, data from the 2019/2020 RDHS has showed that the percentage of women who report IPV experience increased from 40.1% in 2015 to 46% in 2020 but declined from 21% to 17% for men in the same period (Bahati, Izabayo, et al., 2022).

Exposure to IPV like any other experiences of violence (gender-based violence, sexual violence) is reported to have deleterious and long-lasting negative effect to the victims.

Key words: IPV, anxiety, depression, PTSD, community support, Rwanda

Research findings and clinic records have shown that women who are victims of IPV experiences are likely to report a wide range of negative health consequences (physical and mental) such as depression, anxiety, PTSD, suicide ideations and attempts, alcohol and drugs use disorders, physical injuries, and even death (Bahati, Rukundo, et al., 2022; Dunkle et al., 2020; Kapiga et al., 2017). The negative effect of the IPV exposure is reported to affect offspring, meaning that children from families experiencing IPV may also suffer from a range of behavioral and emotional problems (WHO, 2021). On the other hand, there is a well documented association between psychopathology and IPV victimization and perpetration. Such comorbidity implies that the association between IPV and mental disorders is bi-directional, to mean that IPV may cause mental sufferance and vice-versa; as such, mentally ill individuals are likely to experience or inflict frequent IPV than non-mentally affected (Chatterji & Heise, 2021; Rhodes et al., 2009).

The genocide committed against Tutsi in Rwanda has left behind the surviving victims with deep wounds and scares, both physical and mental which are seen particularly during the commemoration events (Kabakambira et al., 2018). As from the growing research interests assessing the long-lasting effects of the genocide on both the general population and survivors, results yield quite high prevalence of mental disorders in both samples, with highest scores in the sub-sample of survivors (Musababaganwa et al., 2020). Equally, scholars estimate the post-traumatic burden to affect not only the direct victims of the genocide but possibly their offspring too through different mechanisms of transmission (Celestin et al., 2022).

Key words: IPV, anxiety, depression, PTSD, community support, Rwanda

In the same vein, chronic mental disorders, particularly PTSD and depression, are considered to be predictors of the worsening of family's harmony and sometimes leading to disputes and IPV related violence (Rieder & Elbert, 2013).

In an effort to address IPV and its associated mental health problems being a public health concern in the post-genocide Rwanda, some NGOs have developed and implemented programs aimed at empowering women and changing community norms that support violence and male dominance over the last decade in sub-Saharan Africa. These programs are reported to have had a positive effect on IPV victimization and perpetration, and with additional intervention benefits like improvement in depression symptoms, conflict management, communication, trust, self-efficacy, household earnings, food security and actions to prevent IPV (Dunkle et al., 2019). Such programs have focused on the awareness raising on DV in general and IPV in particular, with a working hypothesis of the increase of knowledge of the IPV phenomenon will low its perpetration and victimization. Moreover, these studies were limited in their design and few interventions worked on past-mental burden which is likely to affect negatively couples' communication and intimacy. Equally, little attention was directed to the anxiety and PTSD disorders that estimated to be ubiquitous to IPV exposure and perpetration. However, amongst the local organizations intervening in the area of DV in Rwanda, LIWOHA has almost twenty years' experience of intensive work in communities managing IPV from a Community-Based Approach (CBA) that integrates psycho-education, psychosocial and emotions' management models.

Key words: IPV, anxiety, depression, PTSD, community support, Rwanda

The working paradigm of the organisation is that violent behaviors in couples are induced by life wounds rooted in the past. Therefore, unless perpetrators and victims discover the real cause of their violent behaviors and work on them, it is assumed that awareness raising and law enforcement themselves will not discourage IPV perpetrators from impacting negatively on their victims.

In a longitudinal study design examining the impact of the LIWOHA group-based intervention, (King, 2019) revealed that approach was effective in bringing together members of opposing groups (survivors and perpetrators of the genocide) for mutual healing and have restored trust, established new social identities, and regained a strong sense of belonging. This approach being utilized in managing IPV cases, none of the existing studies have assessed its effectiveness in lowering IPV perpetration and victimization occurrence, nor the improvement in outcomes like anxiety, depression, and PTSD symptoms.

Therefore, the aim of this study was to evaluate the effectiveness of CBA in managing anxiety, depression and PTSD among individuals reporting IPV. We hypothesized that there would be associations of IPV exposure with anxiety, depression and PTSD symptoms. Furthermore, we postulated that IPV victims in experimental group would show lower IPV, anxiety, Depression and PTSD symptoms compared to control group.

Key words: IPV, anxiety, depression, PTSD, community support, Rwanda

6.2 Methods

6.2.1 Participants

Participants were recruited from Ntungamo and Kankuba cells in Mageragere Sector, City of Kigali. From a list submitted by the Executive Secretary of Mageragere Sector, of 113 couples considered by the local government authorities as conflicting couples (*ingo zananiranye*), 58 couples from both cells were eligible for this study. Eligibility criteria included the consent, experience of IPV and availing time to attend all the workshop sessions as designed and delivered by the local organization (see workshops description in King, 2019). Couples accepting to participate in the research were randomly distributed in treatment and control groups. Given the big size of the 58 couples eligible, and the wish to reduce the number of couples to 15 for both groups, the “first come, first served” principle was used to select couples for the study. 31 couples, 16 from Kankuba Cell (treatment/experimental group) and 15 couples from Ntungamo Cell (control group), (male=50% and female=50%, with a mean age of 36.9, SD=9.9) granted their consent to participate in the research either as experimental or control. The following CONSORT diagram (Consolidated Standards of Reporting Trials) describes the randomized allocation of couples into treatment and control groups (Figure 6).

Key words: IPV, anxiety, depression, PTSD, community support, Rwanda

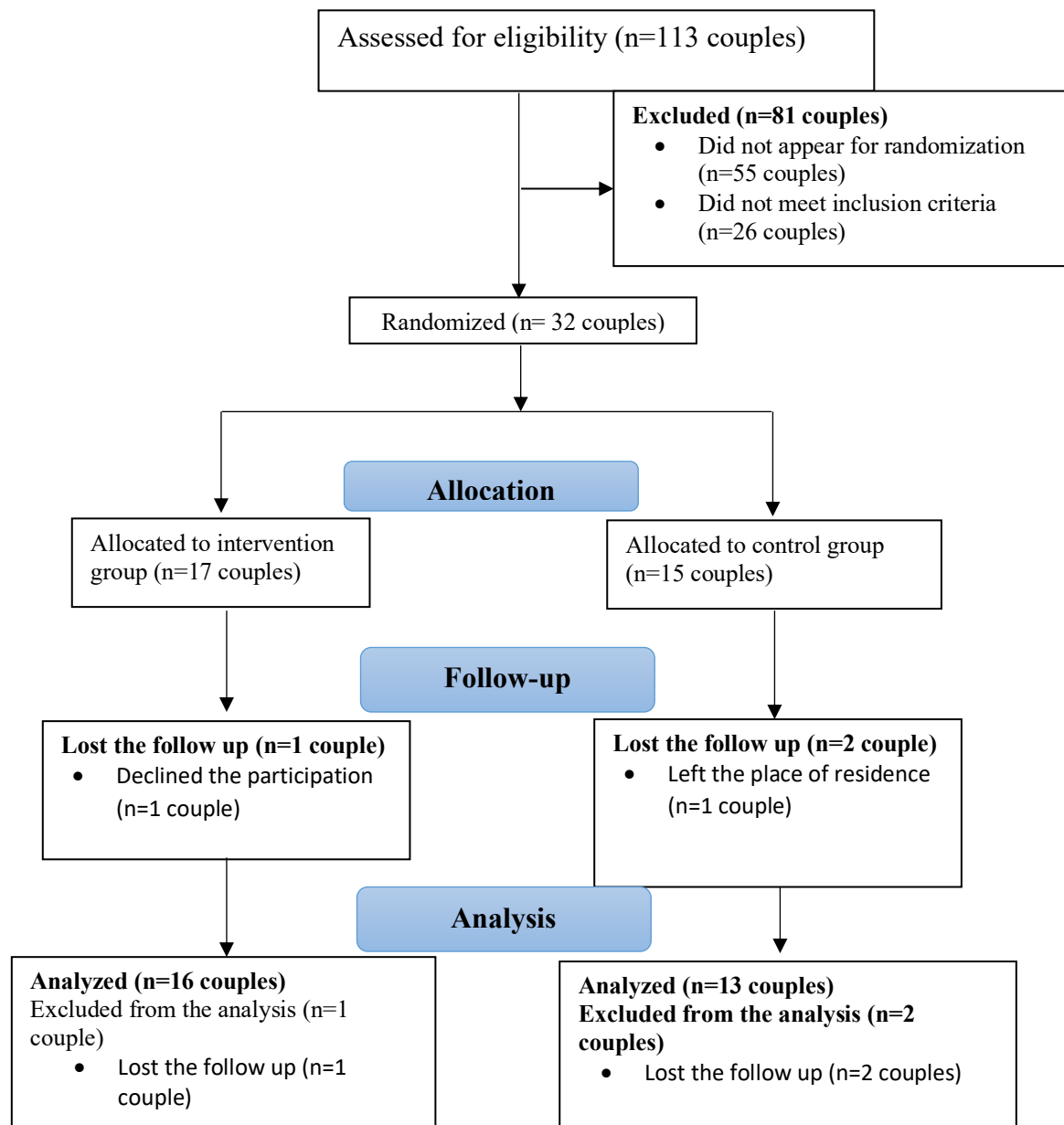


Figure 6 CONSORT diagram of cohort of community-based approach showing the flow of participants' enrollment over the time

Key words: IPV, anxiety, depression, PTSD, community support, Rwanda

6.2.2 Procedure

Data were collected from June to December 2020. Experimental group received the LIWOHA workshops package delivered by a clinical psychologist working with the organization. It was important that the sessions are facilitated by the same trained staff from the organization to ensure accuracy and fidelity.

Only the experimental group attend the workshops. The workshops structure was in total 13 days, i.e. 3 days for psychoeducation (sensitization and awareness) on IPV types and consequences, 5 days on mental health outcomes and coping mechanisms, and 5 days on emotions and conflicts management. The time interval between the first and second sessions was 3 weeks and 4 weeks for second and third session. The interval time was meant for participants to practice what they have learned from the preceding session. Structured interviews were conducted in each workshop for the experimental group. On the side of the control group, which in fact didn't receive LIWOHA package, participants were also assessed at the same time with the experimental group. The control group was only followed and supported by the cells personnel by educating participants on the existing laws and policies mitigating and punishing all IPV behaviors. An independent clinical psychologist, with a master's degree and extensive experience in data collection, was hired to serve as data collector in both experimental and control groups.

Key words: IPV, anxiety, depression, PTSD, community support, Rwanda

6.2.2.1 Treatment development

The official accreditation of LIWOHA was preceded by a very long experience of action on the field and research on the causes and effects of IPV on individual lives, family well-being and community life harmony. This experience started during the first years of the post-genocide era, starting 1997 as “Community Mental Health Programme”. At the time, trained university lecturers who had experience in psychology started caring for traumatized people, mainly using individualistic psychological approaches. They quickly realized that existing models centered on individuals needs had limited effect on the shared nature of trauma and related life wounds. Hence, they started think of a new model that could help to work on different levels of life wounds (mainly individual, relational and societal). Since life wounds rooted in early years of childhood and those caused by the genocide were recognised as the key causes of domestic and sexual violence in local communities, further developments of the new model were feed mainly by empirical studies on different form of violence observed in local communities. Further developments of the new model were feed mainly by empirical studies on different form of violence observed in local communities. These studies were conducted mainly from 2007 and 2009. Afterwards, LIWOHA initiated intensive interventions in the communities of Mbazi, Ruhashya (Huye District) and Mageragere (Nyarugenge District). Therefore, the current community based approach addressing IPV cases is a result from that long time accumulated experience and evidence.

Key words: IPV, anxiety, depression, PTSD, community support, Rwanda

6.2.2.2 Treatment manualisation

The community-based approach (CBA) on IPV is conceived as a dynamic process where community members willing to recover from life wounds induced by IPV agree to share their lived experiences, to work on them accordingly and to support each other in this healing journey. The main steps or sessions of the community healing program can be summarized as follow:

1. **Community awareness campaign and sensitization workshops** dedicated to victims of domestic, gender and sexual violence, perpetrators and their neighbors, on the destructive nature of life wounds rooted in our past as root causes of violent behaviors. The objective of these campaigns and workshops is to awaken the beneficiaries and their communities on the destructive potential of these types of violence as far as family harmony and the social fabric is concerned.
2. **Life wounds mourning session** dedicated to couples living in permanent conflicts, on how to deal adequately with their important past losses to prevent them and establishing pacified relationships in their families and care for their children (who consequently flee their home, live carelessly, and fall in vulnerability). The objective of this session is to start the healing “journey” that normally results in the re-establishment of harmonious relationships and adoption of positive parenting that prevent children from fleeing their home again. These healing sessions are also followed by alcohol abusers who commit violence at home and by teens who got pregnant, abandoned their schools, and fall in extreme vulnerability.

Key words: IPV, anxiety, depression, PTSD, community support, Rwanda

3. Sessions dedicated to the “**management of negative psychological feelings**” associated with life wounds. These sessions follow those dedicated to positive mourning and aim at helping beneficiaries to deal accordingly with negative emotions and sentiments induced by life wounds rooted in the past and actual violent behaviors in families.
4. Sessions dedicated to “**forgiveness and reconciliation with their own past**” and with others. Workshops related to this step help beneficiary to reconnect with others. During these sessions, perpetrators of domestic and gender violence ask for forgiveness and promise to no longer abuse their victims and submit themselves to community monitoring.
5. The last session is dedicated to the “**development of a new project for a new life**”. In this last step, healed people define a new lifestyle without violence and promise to resume assuming family responsibilities he/she had abandoned in the past.

6.2.3 Tools

All measures used in this study were translated into Kinyarwanda. Four clinical psychologists who speak both Kinyarwanda and English performed the translation. All tools have shown a good level of reliability ranged from 0.70 and 0.95 (Bland JM & Altman DG, 1997).

6.2.3.1 The HITS (Hurt, Insult, Threaten, Screaming)

HITS is a 7-item Likert scale which is used to evaluate IPV. All items were scored as follow: 0=never, 1=rarely, 2=sometimes, 3=fairly often, and 4=frequently.

The total scores ranged from 0 to 24, and the Cronbach’s alpha was 0.79.

Key words: IPV, anxiety, depression, PTSD, community support, Rwanda

6.2.3.2 The Hopkins Symptom Check List-25 (HSCL-25)

HSCL-25 is a 25-item instrument which is used to measure common psychiatric symptoms of depression and anxiety in both clinical and non-clinical samples (Vindbjerg et al., 2021). The first 10 items assessed anxiety symptoms, and the remaining 15 items were for depression (Bris, 2017). Our sample showed a good internal consistency for anxiety ($\alpha=0.89$) and depression ($\alpha=0.88$) subscales.

6.2.3.3 PTSD Checklist for DSM-5 (PCL-5)

The PCL-5 is a 20-item self-reported instrument that was used to evaluate the 20 DSM-5 symptoms of PTSD (Weathers et al., 2013). All items were scored on the Likert scale: 0=Not at all, 1=A little bit, 2=moderately, 3=Quite a bit, and 4=extremely. The total score ranged from 0 to 20. The Cronbach's Alpha was 0.87 in our sample.

6.2.4 Ethics

The study was submitted and approved by the University of Rwanda through College of Medicine and Health Sciences' Institutional Review Board (IRB); approval letter No 033/CMHS-IRB/2020 of 18th February 2020. Ethical principles were fully complied with and included free informed consent and privacy principles.

6.2.5 Statistical analysis

Data were analysed descriptively using mean, standard deviation, frequencies and percentages to describe the characteristics of participants, including age, marital status, sex, level of education, family size and medical conditions.

Key words: IPV, anxiety, depression, PTSD, community support, Rwanda

The Pearson correlation coefficient was performed to test the correlation between IPV and mental health disorders. Moreover, the effectiveness of community-based approach to victims of IPV and mental health disorders was evaluated using a mixed ANOVAs with a within-subjects' factors (the time in which the group was measured) and a between-subjects factor (groups). All analysis was performed using statistical package for social sciences (SPSS version 25).

6.3 Results

6.3.1 Sociodemographic characteristics

The sample was equally distributed in two groups (16 couples each). Participants' age ranged from 20 years to 72 years, with a mean age of 36.9 years (SD=9.9). The majority of respondents were cohabited (58.1%), only 41.9% were married. Above a half (50.8%) reported that they had spent more than ten years living with their partners, 29.5% had spent from six to ten years and 19.7% have spent one to five years. The results also showed that the majority of participants (55.3%) separated with their partners at least once. About education level, the majority had primary level (73.3%), followed by illiterate (15%) and the rest had secondary level (11.3%), (Table 24).

Key words: IPV, anxiety, depression, PTSD, community support, Rwanda

In terms of family structure, 98.4% of participants had at least one child. Of the participants reported having children, 35% also reported that they had other children born from other mothers and 29.8% reported that they were living with other family members. Regarding their ubudehe categories, 50.8% were in category 2, 40.7% in category 3, and 8.5% were in category 1. Additionally, 14.8% of participants reported that they had chronic medical conditions (Table 24).

Key words: IPV, anxiety, depression, PTSD, community support, Rwanda

Table 24: Participant characteristics

	Frequency	Percent
Sex		
Female	32	50
Male	32	50
Marital status		
Married	26	41.9
Cohabiting	36	58.1
Level of education		
No education level	9	15
Primary	44	73.3
Secondary	7	11.7
Ubudehe category		
Category 1	5	8.5
Category 2	30	50.8
Category 3	24	40.7
Time spent living with partner		
1-5 years	12	19.7
6-10 years	18	29.5
11-15 years	17	27.9
16-20 years	6	9.8
21 and above	8	13.1
Have a child		
Yes	60	98.4
No	1	1.6

Key words: IPV, anxiety, depression, PTSD, community support, Rwanda

Table 24 (continued)

	Frequency	Percent
Number of children		
1-3	42	71.2
4-6	14	23.7
7 and above	3	5.1
Have another child		
Yes	21	35
No	39	65
Living with other family members		
Yes	3	5.3
No	54	94.7
Have medical condition		
Yes	9	14.8
No	52	85.2
Have separated		
Yes	33	55
No	27	45
Number of separation (Mean)	2.9	
Age (Mean)	36.9	

6.3.2 Inter-correlation between variables

The results revealed that IPV was significantly and positively correlated with anxiety, depression, and PTSD. The correlation coefficients ranged from 0.595 between IPV and depression to 0.638 between IPV and anxiety.

Key words: IPV, anxiety, depression, PTSD, community support, Rwanda

Table 25: Inter-correlation between IPV and mental health disorders (Anxiety, depression and PTSD).

	1	2	3	4
IPV	1			
Anxiety	.638**	1		
depression	.595**	.744**	1	
PTSD	.598**	.612**	.732**	1
**. Correlation is significant at the 0.01 level (2-tailed).				

6.3.3 Effectiveness of CBA in IPV reduction and associated common mental disorders

A mixed ANOVAs with a within-subject factor (the time in which the group was measured) and a between-subjects factor (group: experimental and control, and sex: male and female) was conducted to measure the effectiveness of CBA to the victims of IPV and mental health disorders.

Key words: *IPV, anxiety, depression, PTSD, community support, Rwanda*

Table 26: Summary of the program's effectiveness for the analyzed variables

	PRE				POST				<u>Between- subjects</u>	<u>Within- subject</u>	Time*group	
	<u>Experimental group</u>		<u>Control group</u>		<u>Experimental group</u>		<u>Control group</u>				<u>Interactions</u>	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD			P-value	η ² semi-partial
IPV	11.31	6.4	13.55	8.22	0.84	1.79	10.11	7.65	15.15*	12.38*	0.001	0.205
Anxiety	7.75	6.76	9.05	6.43	1.37	2.26	6.38	5.34	5.69*	4.58*	0.037	0.087
Depression	12.25	7.3	12.88	6.8	3.75	2.77	8.88	3.81	5.40*	4.92*	0.031	0.093
PTSD	22.03	11.84	27.88	18.5	7.31	4.44	16.22	4.82	2.26*	0.55	0.461	0.011
IPV: Intimate Partner Violence; PTSD: Posttraumatic Stress * p<0.05												

Key words: IPV, anxiety, depression, PTSD, community support, Rwanda

Table 27: Summary of statistics comparing males and females in experimental group, before and after the intervention

	Pre				Post				<u>Between</u>	<u>Within-</u>	Time*sex	
	Females		Males		Females		Males		<u>-subjects</u>	<u>subjects</u>	<u>Interaction</u>	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	F(1,30)	F(1,30)	P-value	η ² semi-partial
IPV	13.73	6.23	9.18	5.85	1.33	2.41	0.41	0.87	2.97*	3.30	0.079	0.10
Anxiety	10.87	7.00	5.00	5.35	1.60	2.80	1.18	1.74	6.43*	6.25*	0.018	0.17
Depression	16.47	7.53	8.53	4.77	4.80	2.43	2.82	2.79	15.47*	7.02*	0.013	0.90
PTSD	19.6	16.87	15.58	14.48	11.32	7.08	10.53	6.69	0.99	0.73	0.512	0.011
IPV: Intimate Partner Violence; * p<0.05												

Key words: IPV, anxiety, depression, PTSD, community support, Rwanda

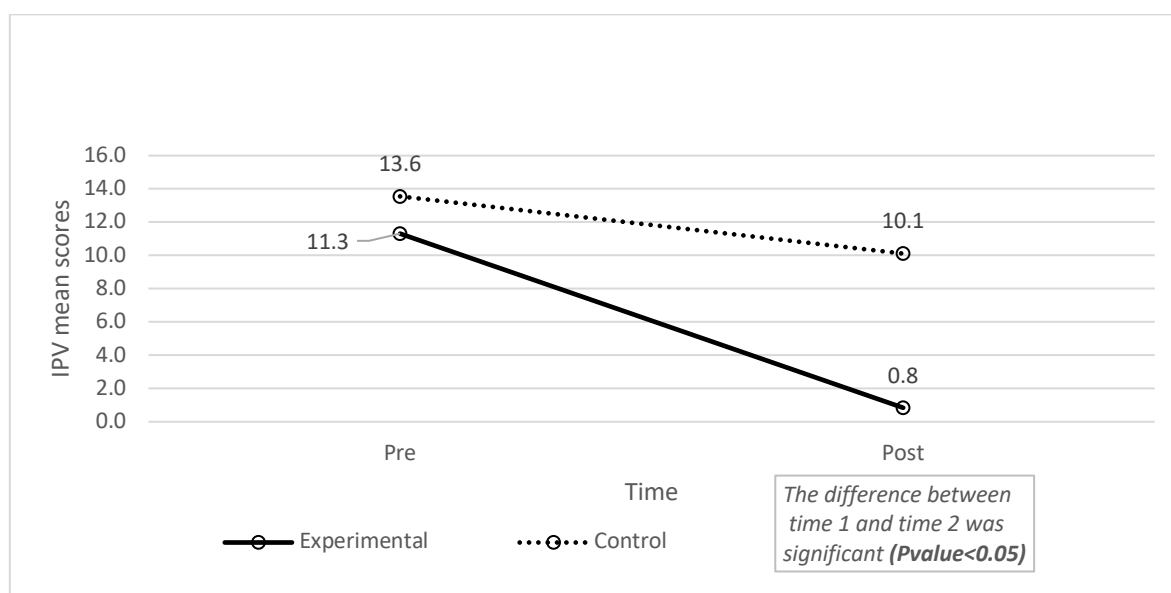


Figure 7 Average values for IPV from experimental and control groups before and after intervention

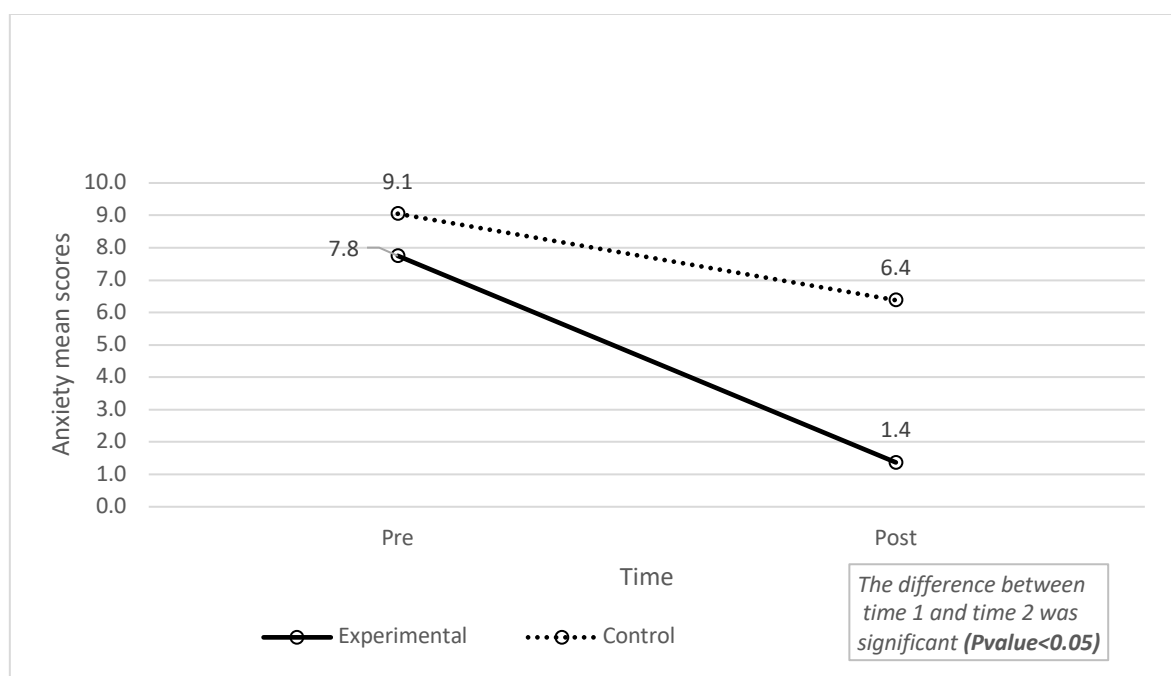


Figure 8 Average values for anxiety from experimental and control groups before and after intervention

Key words: IPV, anxiety, depression, PTSD, community support, Rwanda

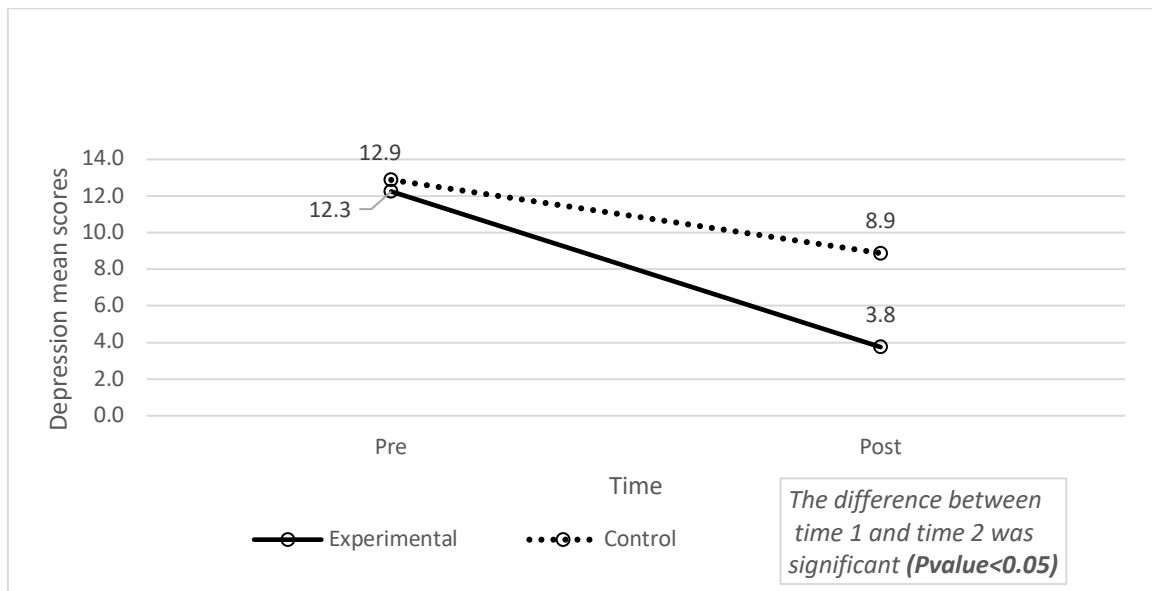


Figure 9 Average values for depression from experimental and control groups before and after intervention

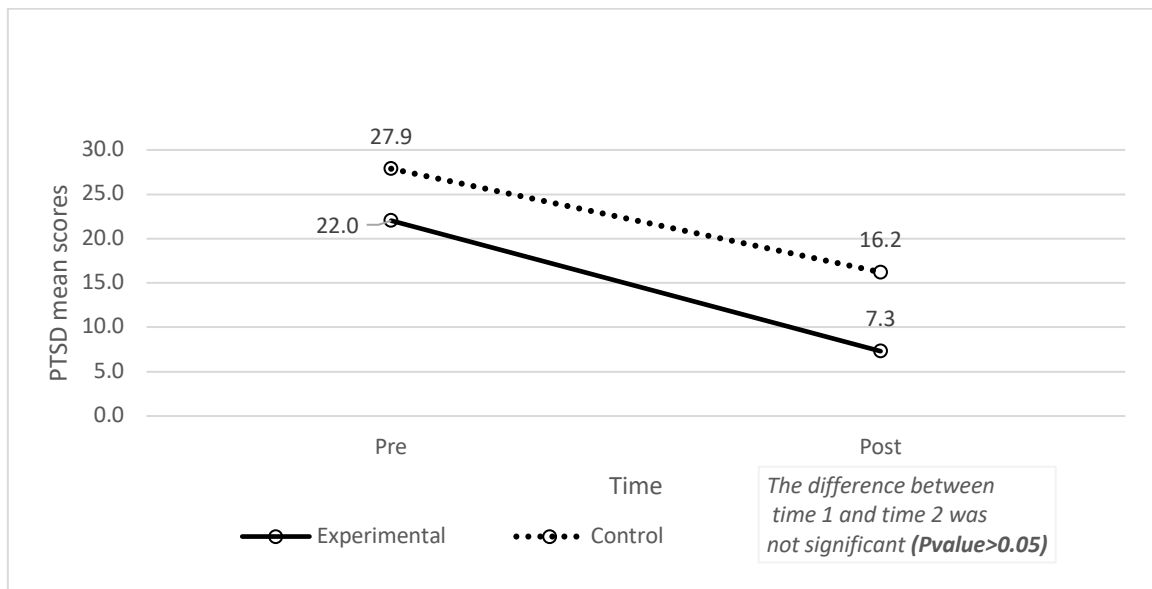


Figure 10 Average values for PTSD from experimental and control groups before and after intervention

Key words: IPV, anxiety, depression, PTSD, community support, Rwanda

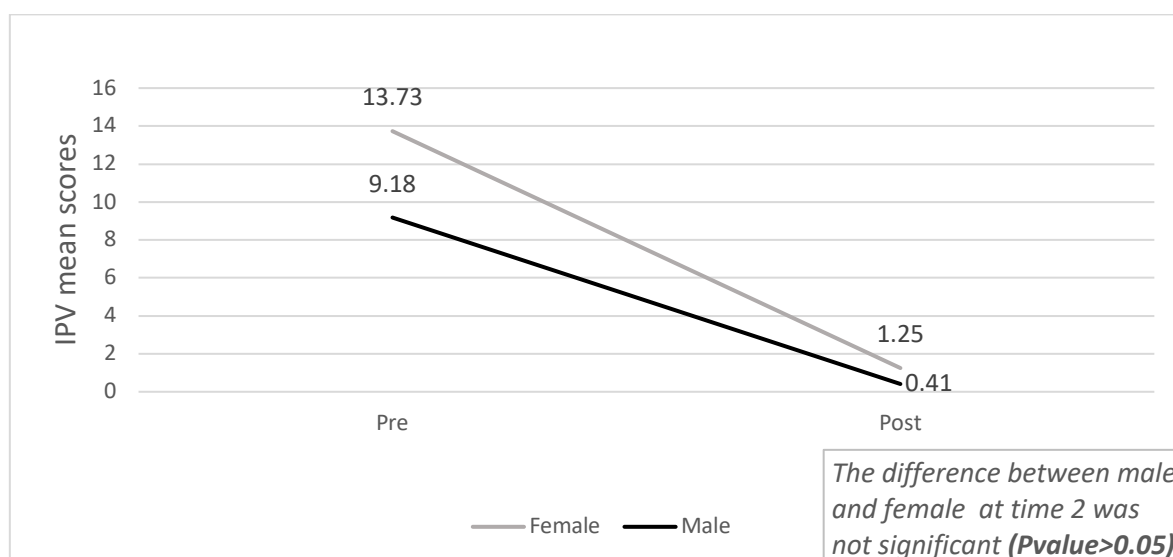


Figure 11 Average values for IPV from males and females in the experimental group before and after intervention

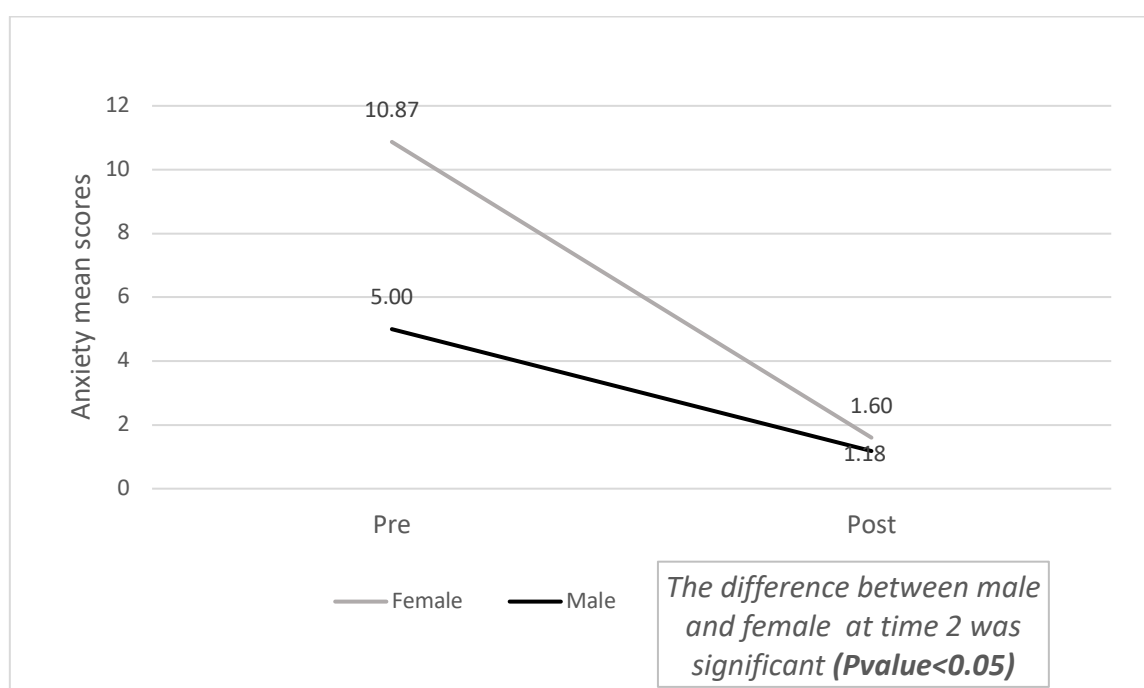


Figure 12 Average values for anxiety from males and females in the experimental group before and after intervention

Key words: IPV, anxiety, depression, PTSD, community support, Rwanda

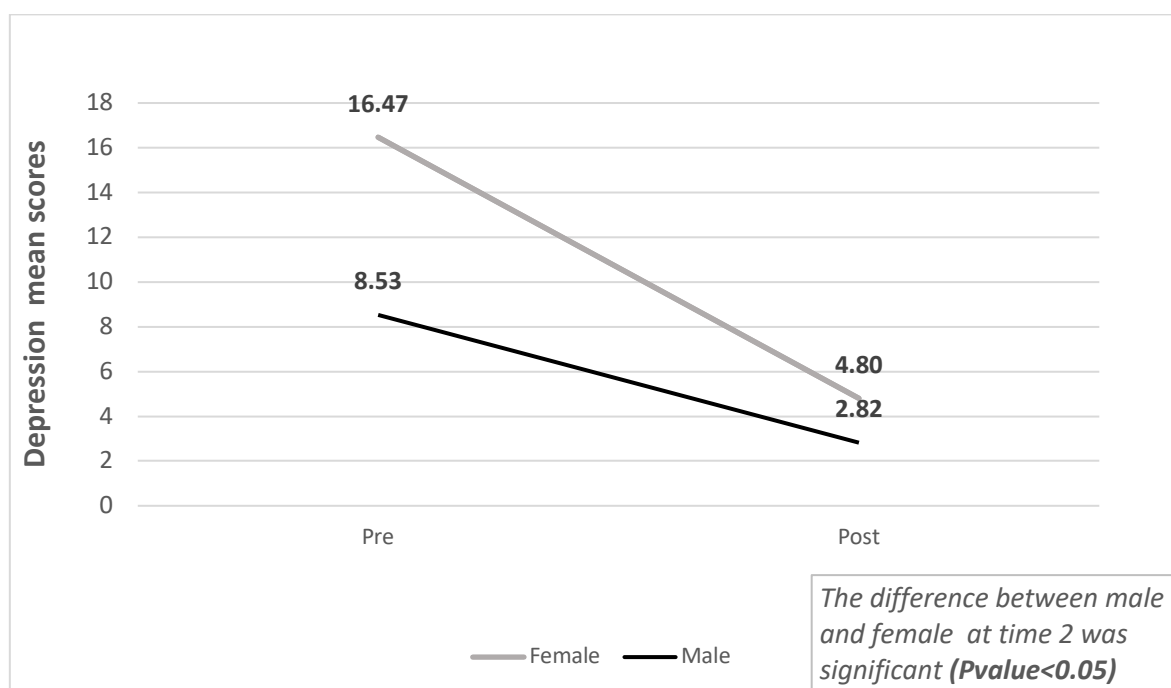


Figure 13 Average values for depression from males and females in the experimental group before and after intervention

The results showed that there was a significant difference across time point for IPV ($F_{(1,48)} = 12.38$; $p = 0.001$), anxiety ($F_{(1,48)} = 4.58$; $p = 0.037$), and depression ($F_{(1,48)} = 4.92$; $p = 0.031$), however the difference was not significant for PTSD ($F_{(1,48)} = 0.55$; $p = 0.461$). A significant difference between groups was also found with regard to all variables, IPV ($F_{(1,48)} = 15.15$; $p = 0.000$), anxiety ($F_{(1,48)} = 5.69$; $p\text{-value} = 0.021$), depression ($F_{(1,48)} = 5.40$; $p\text{-value} = 0.024$), and PTSD ($F_{(1,48)} = 9.26$; $p = 0.004$) (Table 26). There was also a significant interaction between time and group for IPV ($F_{(1,48)} = 12.38$; $p = 0.001$), anxiety ($F_{(1,48)} = 4.58$; $p = 0.037$) and depression ($F_{(1,48)} = 4.92$; $p = 0.031$) (Table 26). Following this interaction, it was indicated that the experimental group had very lower scores after the intervention. However, the scores of the control group slightly decreased (Figure 7 - 10).

Key words: IPV, anxiety, depression, PTSD, community support, Rwanda

Additionally, the results show that there is a significant interaction between sex and time point for anxiety ($F_{(1,30)}=6.25$; $p=0.018$), and depression ($F_{(1,30)}=7.02$; $p=0.013$). The interaction was not significant for IPV ($F_{(1,30)}=0.55$; $p=0.461$) (Table 27). Following these interactions, it was indicated that the experimental group had very lower scores after the intervention compared to the control group. On the other hand, both males' and females' IPV scores have been reduced to almost the same level (Figure 11), while both anxiety and depression scores decreased more in females than in males (Figure 12 - 13).

6.4 Discussion

To the best of our knowledge, this is the first study conducted to examine the effectiveness of CBA on IPV and psychological disorders in Rwanda. As hypothesized and found in prior studies, IPV was associated with depression symptoms (Ahmadabadi et al., 2020; Chilanga et al., 2020; Esie et al., 2019; Lövestad et al., 2017; Umubyeyi et al., 2014), anxiety (Davoren et al., 2017; Umubyeyi et al., 2014) and PTSD (DeJonghe et al., 2008; Umubyeyi et al., 2014). Notably, we found a significant effectiveness of CBA in reducing IPV occurrence and depression symptoms among couples in experimental group when compared with those under control group. Although, the couples in control group didn't receive CBA intervention packages, they were receiving the interventions from programs or prevention policies already established by the government of Rwanda.

The government actions on prevention of IPV have included sensitization campaigns, Umugoroba w'ababyeyi "evening of parents", the One Stop Centres and the lawful prosecution of offenders, but the numbers of IPV cases are still at the rise.

Key words: *IPV, anxiety, depression, PTSD, community support, Rwanda*

Evening of parents (umugoroba w'ababyeyi/w'umuryango) was officially launched by the Ministry of Gender and Family Promotion (MIGEPROF) in March 2013 with objective of preventing and responding to IPV issues. In the evening of parents, the parents from the same community or village sit together and discuss on governmental plans and social issues (domestic violence, hygiene, nutrition, positive parenting, sexual and reproductive health, security, etc).

It is like mutual education where one educates each other in general about different subjects for the safety of families' welfare. Later on, the Isange One Stop Centre was established and has voiced out to providing a holistic care to victims of GBV given the complexity and poor outcomes from violence. The unit pointed out that the holistic approach should be scaled up throughout the country and be closer to the population from the first or smallest healthcare center provider (Nyamwasa et al., 2015). The practitioners believed that the IPV affect the physical, social and psychological health of the victims, and therefore the treatment should respondents to those various needs.

In view of the legal perspectives, there are several limitations (Clear, 2007; Richie, 2014). First, the law is basically designed to respond to isolated behaviors or actions that are defined as crimes. Punishment, when it is applied, therefore focuses on individual incidents out of context and seldom reaches a level that responds to the level of the truth, felt violation. Research suggests that most women do not feel satisfied with incidence-based criminal justice responses (Richie, 2014).

Key words: IPV, anxiety, depression, PTSD, community support, Rwanda

The second, related problem with legal responses that emerge from criminalization is that while laws can prohibit physical and economic abuse, the law is ill-equipped to deal with the social control and disenfranchisement that characterize most abusive relationships, let alone in society. Most victims who experience IPV report other experiences of discrimination, disregard, etc., and criminal legal responses in the form of punishment do not address these social issues, that reinforce the problem (Clear, 2007; Richie, 2014). Even those women for whom punishment logic brings some relief from the criminal legal system, their lives are not restored to pre-violence satisfaction or stability.

The overall picture of the effectiveness of criminalization suggests that while there may be a short term protective benefit, there is very little conclusive evidence that criminalization *in and of itself* “works” or is beneficial for the majority of women who experience IPV in the long run (Richie, 2014). Worryingly, it has been observed that a big percentage of men who have been imprisoned for assaulting their wives do not change their attitude towards women dignity and gender equality. Instead, when they discover that physical assault is severely punished, they resort to subtle psychological violence that are even more destructive but difficult to report to justice. Furthermore, punishment of IPV perpetrators does not necessary reduce psychological sufferings of victims, and in many cases, perpetrators’ family members incite victims to advocate for their release. That is, penalty inflicted to IPV perpetrators do not necessary bring peace in the family.

Key words: IPV, anxiety, depression, PTSD, community support, Rwanda

Despite the aforementioned efforts, IPV is still evident and, in some cases, even increasing psychosocial problems among couples and families (Dunkle et al., 2019). The pioneer of CBA in Rwanda (LIWOHA) shows that these violent behaviors are induced by life wounds thus the need to work on them, punishment itself does not discourage husbands from impacting negatively their wives and children's lives. In post-conflict societies like Rwanda, local communities had a high number of wounded people. It has been observed that at the slightest disagreement, these people do not only engage in conflicts but also attract many others in it, which create inextricable situations that are potential source of new forms of violence. This study findings highlighted that the additional packages of CBA to the existing IPV intervention have significant effects on IPV, anxiety, and depression symptoms reduction in couples under the intervention group. However, there was no significant impact of CBA on PTSD symptoms reduction as our results showed in the experimental group. This means that the effects of added CBA intervention to the existing IPV prevention program did not have significant impact on decreasing of PTSD symptoms.

The basic philosophy of the new model (CBA) is that the professionals do come with an “expert model” with a methodology that has fixed steps. They do not propose solutions to solve problems identified, but they rather engage beneficiaries in a sort of “healing journey” where each couple work on life wounds that induced family conflicts, domestic and sexual violence. Furthermore, beneficiaries try to identify their own resources (potential) on which they could rely in the initiation of the healing process. Hence, beneficiaries identify themselves the causes of IPV, the consequences on their lives and come with their own solutions. Another important feature of the model is that former victims and authors of IPV

Key words: IPV, anxiety, depression, PTSD, community support, Rwanda

become active resources in the community who engage themselves in identifying and helping new victims of violence. Hence, the ultimate outcome of the process is community appropriation of competences brought by professionals. Obviously, the new model is underpinned by the idea that if most life wounds are shared by members of community, then the healing process should be also a shared experience that is totally owned by victims, authors and community members. This developed model works not only on individual wounds but also on relational and societal wounds that constitute the root causes of domestic violence globally and IPV in particular (Doyle et al., 2018; Dunkle et al., 2020; Levitov et al., 2022).

6.5 Conclusion

The results indicated a sound efficacy of CBA for individuals with IPV, depression, and anxiety symptoms. As compared to control group receiving the government education package on laws and policies preventing IPV in the community, the experimental group that received LIWOHA package demonstrated very significant benefits in lowering levels of IPV, anxiety, and depression. Based on these results, the clinicians and stakeholders should address IPV, anxiety and depression symptoms by using CBA rather than government education package on laws and policies. Results from our study didn't prove tangible effect on persistent PTSD symptoms, which may mean that IPV experience is associated with pre-existing chronic PTSD resulting from other historical traumatic circumstances including the genocide against Tutsi in Rwanda.

Key words: IPV, anxiety, depression, PTSD, community support, Rwanda

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Key words: IPV, anxiety, depression, PTSD, community support, Rwanda

GENERAL DISCUSSION

This section briefly interprets the key findings of this research establishing the interconnection between studies, and highlights limitations and implications for future consideration.

The main objective of the research was to comprehend the scope of IPV in Rwanda, its psychological impact on adults/parents as well as on their children, and assess the efficacy of the existing intervention model that is hypothesized to impact on IPV experiences and mental health outcomes (anxiety, Depression, PTSD).

Specific objectives included:

1. Analyze the magnitude (trends and correlates) of IPV in the contemporary Rwanda
2. Assess the outcomes (mental and physical health) from the IPV experience
3. Evaluate the effectiveness of existing intervention model that address IPV exposure and its outcomes.

Research findings reported in this thesis are in conformity with the the general and specific objectives of the study. Findings of are consistent with the general hypothesis of the study and are aligned with the study's overall goal and specific objectives.

IPV prevalence was hypothesized to be endemic in Rwanda and associated with poor outcomes (physical and mental) to exposed adults and collateral negative effects on offspring. It was equally assumed that an intervention targeting exposed victims and perpetrators will lower IPV occurrence (victimization and perpetration), and the improvement in outcomes (e.g., anxiety, depression, PTSD).

❖ **Key findings**

IPV, among other types of domestic violence (e.g., child abuse, child neglect, gender-based violence), constitutes a serious public health concern given the associated morbidity and mortality from IPV exposure and victimization that range from injuries to homicide or/suicide (Miller & McCaw, 2019). This common type of violence, that includes physical/sexual and psychological violence, is reported throughout the world and has been shown to be harmful to both physical and mental health (Coker, et al., 2002). In the contemporary Rwanda, IPV is consistently reported at rise in the last five years and affect both men and women, and their offspring (Bahati, et al., 2022; Chatterji & Heise, 2021).

➤ **Trends and correlates of IPV in the contemporary Rwanda**

The incidence of IPV in Rwanda over the past five years is at rise (Bahati, et al., 2022). The number of women reporting IPV experience has increased from 40% (in 2015) to 46% (in 2020), compared to males, for whom the incidence of IPV has slightly decreased from 20% (2015) to 18%. From our research findings, it was found that while women are more frequently the victims of physical violence, males are more likely to experience psychological and emotional abuse. The major risk factors are limited education (the husband), alcohol use (by the wife, the husband, or both), and being of poorest family. These results imply that education level influence IPV occurrence, i.e., lower level of education as risk factor versus higher level of education as protective factor.

The finding is congruent with the systematic review sustaining the fact that increased women's literacy is associated with reduction of risk of IPV (victimization), when men's higher level of education tends to lower the likelihood of IPV perpetration (Nagaggala, Reddy, & Manda, 2021).

Although this research didn't assess the social determinants of IPV exposure, it is however hypothesized the higher level of education to challenge social beliefs and norms that frequently fuel violence. Education can also be understood in the informal sense, i.e., providing more education opportunities in the community that are sound to challenge social norms and change people's perceptions of masculinity and femininity. As a result, policy development and law enforcement strategies should be supplemented by education (formal and informal) to impact traditional beliefs, social norms, gender roles (femininity versus masculinity), and learning the effective way to manage conflicts in the couple.

In addition, it has been observed that drinking alcohol (by the woman, the husband, or both) is linked to recurrent IPV victimization and perpetration. It is not obvious, though, whether excessive alcohol use and addiction are risk factors or a result of IPV exposure. Existing studies support the fact that binge drinking, heavy drinking, and regular drinking conflict with brain function and, over time, have a negative impact on mental health and behavioral functioning, including sporadic or frequent impulsive anger outbursts or aggression (Shivani, Goldsmith, & Anthenelli, 2002, Sonate, et al., 2021). Alcohol use is also sometimes regarded as a harmful coping mechanism for treating mood disorders (such as anxiety, depression, or PTSD) or psychological distress (emotional pain) brought on by an IPV encounter.

This two-way relationship between alcohol consumption and IPV needs to be further investigated to better comprehend what occurs first and, ultimately, to inform management models. Consequently, the results are informative and would inspire public policies and strategies that leverage literacy and counteract addiction to alcohol and drugs considered as triggers of IPV (Abdi, Mahmoodi, Afsahi, Shaterian, & Rahnemaei, 2021).

Our results revealed also the frequency of IPV experiences to be higher in young husbands between the ages of 30 and 39. It is crucial to consider that a number of variables, including personal factors (such as age), academic success, household status (wealthy vs. poor), community (individualism vs. collectivism), and social factors, interact to influence the prediction of IPV experience (e.g., traditions, norms, roles, hierarchy) (Lawson, 2012). Being young socially predisposes one to indoctrination (i.e., propensity to learn and accept a set of beliefs without question), which in turn may influence one's behavior, such as thinking that men and women are inferior to one another. Considering the new era and the government of Rwanda's efforts to promote gender equality and equity, the current generation is thought to be transitioning from outdated beliefs and customs to modernized ones, which can be frustrating and contentious. Education, both formal and informal, is important in this circumstance to mitigate domestic violence and IPV.

➤ **Outcomes and collateral effects of IPV exposure**

This research evidenced a strong correlation between IPV exposure and poor physical and mental health outcomes.

Obviously, physical intimate partner violence will result in long-lasting physical injuries, including strangulation and other injuries that are inflicted to the IPV victim.

Specifically, results from this research supported the positive significant association between IPV exposure and mental health difficulties. It is indicated that IPV-exposed Rwandans have a higher risk of developing mental disorders compared to unexposed Rwandans, 32.4% versus 11.7%. IPV has a cumulative effect on the deterioration of mental health, despite the greater mental prevalence rates in Rwanda's general population and the severity of these rates among survivors of the Tutsi genocide (Kayiteshonga, Sezibera, Mugabo, & Iyamuremye, 2022). However, the direction of the relationship between IPV exposure and the occurrence of mental disorders is debatable and requires further research in Rwanda. In this post-genocide Rwandan population, it would be fascinating to determine whether exposure to IPV has caused the occurrence of mental disorders or whether pre-existing mental health issues constitute a vulnerability to IPV exposure.

Concomitantly, our findings reported significant association between increased IPV and poor utilization of antenatal care (ANC) services. Exposed IPV women will use fewer ANC services, particularly delayed ANC consultations (after the first trimester of pregnancy) and insufficient ANC consultations (less than 4). Such a result is extremely concerning because it puts both mother and child at risk. It is well understood that utilizing ANC services will prevent or anticipate pregnancy complications such as pre-term or premature delivery, maternal and child mortality, malnutrition, and risk of stunting (Mondal & Paul, 2017). The risk of stunting for children aged 3- 5years constitutes a major concern in Rwanda.

The existing reports estimated the proportion of stunted children to drop from 38 percent in 2014/2015 to 33 percent in 2019/2020 (NISR,2021). Therefore, it would be important that ANC consultations package include the IPV screening given its negative impact on the use of ANC services. Handful research findings have established sufficient use of ANC services to be directly associated inwith improved birth outcomes and longer-term reductions of child mortality and malnourishment (Kuhnt & Vollmer, 2017). As a result, it is critical to consider whether the ANC consultation package should include IPV screening and counseling.

Moreover, results from this study showed that parents IPV exposure had unintended consequences on their offspring. Unreasonably, it is thought that when parents are fighting behind each other's backs, the children are unaware and thus unaffected. However, there are situations where parents will physically abuse their kids in front of them, and sometimes kids become secondary victims of the abuse through various means, such as abuse, neglect, or being specifically targeted by the abuse. Our findings confirmed a link between parental IPV and behavioral and mental health issues in kids. For instance, it is known that kids and teens from IPV-exposed households are more likely to experience depression, anxiety, and other problematic behaviors like irritability and conduct issues (Rosser-Limiñana, Suriá-Martínez, & Mateo Pérez, 2020). The mechanisms by which parental IPV affect offspring remain unclear and of great importance in research.. However, findings from our research demonstrated that parental distress and negative parenting mediate the relationship between parental IPV experience and child mental illness.

In other words, exposure to IPV is positively correlated with parental psychopathology and negative parenting. Negative parenting is literally defined as a collection of neglectful, harsh, or detrimental actions or behaviors that are believed to have a negative impact on a child's mental and physical development. Clinical psychologists and psychiatrists have also hypothesized a poor prognosis for adverse childhood experiences (ACEs) in maturity and found that ACEs are associated with problematic psychiatric disorders in children and adolescents, and a long run in adult psychiatric patients. Therefore, any intervention that prevents or reduces parental IPV and improves parental psychopathologies will save the lives of children by promoting supportive and positive parenting.

➤ **Effectiveness of IPV intervention model**

The results of a study that assessed the effectiveness of an existing evidence-based community approach developed by LIWOHA, a local non-governmental organization are described in the last section of this dissertation (study 6). This intervention model is different in two ways. First, victims and abusers are brought together as a couple, and then the couples are helped in a group setting. Second, the working model is also unique: "We heal together." This means that the conflicting wife and the husband help each other find the root causes of their violence (being a victim or a perpetrator) or find ways to deal with the violence and the stress it causes. At the end of a thirteen sessions journey, the couples agree on how to keep what they've learned from the on-going healing journey. Consequently, at the completion of the series sessions, graduates create community-based mechanisms, such as a group of IPV facilitators or counselors (Abafashamyumvire), which constitute peer-help structures in the community.

Very importantly, results of the randomized controlled trial (RCT), design of the study, demonstrated significant improvements in the intervention group as compared to control group at all the times of assessment (pre- and post-intervention) and in most of the variables considered. Improvement in both independent and outcome variables included a reduction in IPV experience (victimization and perpetration) and improvement in mental health symptoms (depression, anxiety). Anxiety and depression improved significantly more in women than in men; women who are typically viewed as victims and men considered globally as perpetrators. However, the intervention was not associated with a significant reduction in PTSD symptoms overtime. Such a finding reveals extremely essential clinical considerations regarding whether PTSD symptoms can be alleviated or improved in a very short period, or whether PTSD symptoms will improve more slowly than depression and anxiety symptoms. Nonetheless, the findings imply that in addition to what can be accomplished in a group setting or community-based treatment, PTSD symptoms (possibly chronic PTSD that predates the IPV experience) will require individualized treatment to tackle and resolve this psychiatric category associated with IPV experiences.

❖ **Limitations**

This study was conducted in a post-genocide country, where its associated behavioral and mental problems (anxiety, depression, PTSD, irritability,...) are highly prevalent and intertwined with IPV outcomes.

In Rwanda, this research is unique as it contributes to the deeper understanding of the IPV multifaceted reality and management strategies. Moreover, this research has used larger sample size, which allows undoubted generalization of its results countrywide. The

quantitative data collection and data analysis has allowed to scrutinize the association between variables and predict intervention effect over outcome variables.

Importantly, results from this research have highlighted the association (not necessarily causality/causation) between the considered variables, with more focus on possible implications for practitioners and policy makers. However, the cross-sectional design of the research represents limitation in the areas of social and behavioral sciences. Possibly a mixed-method design would add on with qualitative data to supplement what is produced from the cross-sectional design. For example, the direction of the association established quantitatively between IPV and mental health burden (e.g., PTSD) would be clarified by an in-depth interview that clarifies the individual historical background and therefore specify which one caused the other. At the phenomenological level, it would have been better to deeply assess the spillover and crossover effects of the parents' IPV and child behavioral dysfunctions over the time.

❖ **Key conclusions**

IPV, one of forms of domestic violence, is unanimously a threat to public health and remains a complex challenge to human security. It is rooted in our beliefs and practices about gender (masculinity and femininity) and occurs in all settings and standings of life.

- For many years, however, women have been considered as the presumed victims of IPV, but recent research findings indicate that both women and men can be victims and perpetrators despite the context of severity, outcomes, and reported cases. Because they are regarded as extreme and serious instances, deaths (homicide, suicide) are unavoidably

reported to the police. Statistics made public by both governmental and non-governmental organizations in the specific context of Rwanda, show that the problem of domestic violence, and IPV in particular, is a significant and expanding issue in the contemporary Rwanda. Results indicated that women self-reported rate of IPV increased from 40% in 2015 to 46% in 2020 respectively.

- Healthcare service providers should deserve particular attention to pregnant women screened for IPV to prevent worst health problems for both mother and foetus.
- Also, the evidence suggests that IPV have a direct effect on parenting. Results from this research support the assumption of existing collateral effects of IPV on children exposed to parental IPV, which include a variety of conduct disorders and several psychological/psychiatric disorders.
- IPV survivors may briefly experience one or more of the evaluated psychopathologies (anxiety, depression), whereas others may experience PTSD, a condition that can last for a very long time. Based on the results, the Community-based approach initiated by LIWOHA, address IPV, depression and anxiety symptoms more than government laws and policies. However, no tangible effect on persistent PTSD symptoms, which may mean that IPV experience is associated with pre-existing other chronic traumatic circumstances including the individual history of life and/or the 1994 genocide against Tutsi in Rwanda.

❖ **Key recommendations**

This research has led to two very important recommendations:

- Policymakers and practitioners are suggested to consider the IPV as multifaceted phenomenon which requires a multidisciplinary approach in understand its root causes and while designing effective interventions.
- Future research efforts are encouraged to address questions raised from this dissertation. For example, (1) a longitudinal randomized clinical trial and crossover/spillover study can explore the association between IPV experience (victimization and perpetration) and social factors (social beliefs, norms, roles), (2) the association between IPV and alcohol or/and drugs abuse, and (3) the improvement in mental health outcomes associated with IPV, with more focus on persistent PTSD symptoms that are assumed to be ubiquitous to severe IPV victimization.

APPENDICES