PREVALENCE AND CORRELATES OF MENTAL HEALTH PROBLEMS AMONGST ADOLESCENTS WHO WITNESS PARENTAL INTIMATE PARTNER VIOLENCE

OLAPO ABISOLA

201266

A PROJECT SUBMITTED TO THE CENTER FOR CHILD AND ADOLESCENT MENTAL HEALTH, UNIVERSITY OF IBADAN IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE IN CHILD AND ADOLESCENT MENTAL HEALTH OF THE UNIVERSITY OF IBADAN

AUGUST 29, 2018

DECLARATION

This project is submitted in partial fulfilment of the award for the Master of Science in Child and Adolescent Mental Health in the University of Ibadan.

I hereby declare that this is my original work and that it has not been submitted for any degree or examination in any other university and that all the sources I have used or quoted have been indicated and acknowledged as complete references.

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Olapo Abisola

201266

CERTIFICATION

This is to certify that this study was carried out by Olapo Abisola in the Centre for Child and Adolescent Mental Health, University of Ibadan under my supervision.

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Dr. Jibril Abdulmalik Date

MB.BS. (Ibadan), M.H.P.M. (Maiduguri), MSc (Ibadan), MSc (Lisbon), FWACP

Centre for Child and Adolescent Mental Health

University of Ibadan, Ibadan, Nigeria

_____ _____

Professor Olayinka Omigbodun Date

MB.BS. (Ibadan), MPH (Leeds), FMCPsych, FWACP

Director, Centre for Child and Adolescent Mental Health

University of Ibadan, Ibadan, Nigeria

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LIST OF ABBREVIATIONS

APA	American Psychological Association
CDC	Centre for Disease Control and Prevention
HIV/AIDS	Human Immunodeficiency Virus/ Acquired Immune Deficiency Syndrome
IPV	Intimate Partner Violence
IRB	International Review Board
JSS	Junior Secondary School
NDHS	Nigeria Demographic and Heath Survey
NVAW	National Violence against Women
PTSD	Post Traumatic Stress Disorder
RSES	Rosenberg Self-Esteem Scale
SPSS	Statistical Package for the Social Sciences
SSS	Senior Secondary School
UNICEF-	United Nations Children Emergency Fund
WAEC	West Africa Examination Council
WHO	World Health Organization

ABSTRACT

Background: The prevalence of intimate partner violence among couples is high, affecting both genders and a significant number of these couples have children and/or adolescents living in these homes who are witnesses to these occurrences. Several studies have shown a high prevalence of mental health problems among adolescents exposed to parental intimate partner violence especially internalizing problems like depression and anxiety and externalizing problems which includes behavioural problems; an adolescent can be exposed to more than one form of intimate partner violence and an increase in co-morbidity of mental health problems in cases where there are more than one form of violence. Several studies has been conducted in high income countries on the physical and mental health consequences of children and adolescents exposure to IPV but very few studies has been carried out in low income countries therefore this study is expected to bridge the gap in knowledge.

Methodology: This study was a cross sectional study conducted in Alimosho local government area of Lagos state, Nigeria. Five private secondary schools and the arms of each of the classes used in this study were randomly selected. Three hundred and eighty five respondents who provided consent and assent were used in this study. Emotional and Physical violence as types of intimate partner violence were assessed in this study. The Patient Health Questionnaire (PHQ) and the Rosenberg Self-Esteem Scale was used to evaluate mental health status and the self-esteem of the respondents. Self-reported questionnaires written in English language were used as this is the acceptable language used in schools in Lagos state. Descriptive and inferential statistical analysis was utilized in this study. The Chi square test was used to evaluate for associations if any, between categorical variables, binary logistic regression was used to find relationships between variables.

Results: Majority of the respondents were between the ages of 14 and 17 (mid-adolescence), about 1 in 4 respondents had been exposed to parental intimate partner violence. The most common type of parental IPV reported in this study was emotional violence (24.4%). This study found a significant difference in the prevalence of mental health problems among adolescents who had witnessed parental IPV and adolescents who had not. Adolescents who had witnessed parental IPV were two times more likely to have had a mental health problem compared to adolescents who had not witnessed parental IPV. This study however, found no significant association between socio-demographic characteristics and adolescents exposure to parental IPV.

Over 60% of the respondents who had witnessed parental IPV met the criteria for anxiety, depression and alcohol abuse. Comparing the prevalence of mental health problems of adolescents who had witnessed parental IPV across the types of exposure to parental IPV, the prevalence of depression, anxiety and low self-esteem were statistically significant.

Statistically significant associations were found between depression, suicidal ideation and exposure to both types of parental IPV as compared with adolescents who had no exposure to parental IPV.

Conclusion: The findings in this study shows significant associations with studies carried out in other parts of the world. The study provided epidemiological data on adolescents' exposure to parental IPV and the mental health problems among adolescents who witnessed parental IPV. This study inferred that adolescents exposed to parental IPV are at a great risk of mental health problems as much as the direct victims of IPV. There is a serious need for policymakers to include the children and adolescents exposed to parental IPV in treatment and rehabilitation to reduce the risk of mental health problems.

Key words: intimate partner violence, mental health, self-esteem, adolescents

Word count: 590

CHAPTER ONE

INTRODUCTION

1.1. Background

Intimate partner violence (IPV) is a form of domestic violence, perpetuated by an intimate partner (Ferris, 2004). It usually happens in the context of an intimate relationship like in marriage, dating relationships and/or cohabitation (Barber, 2008; Kitara *et al.*, 2012; Oluremi, 2015).

The World Health Organization (WHO) defines intimate partner violence as "... any behaviour within an intimate relationship that causes physical, psychological or sexual harm to those in the relationship, including acts of physical aggression, sexual coercion, psychological abuse and controlling behaviours" (World Health Organization, 2012). For the purpose of this study, the term Parental IPV is used to describe IPV between couples who are also parents.

Intimate partner violence cuts across gender and victims of IPV can either be male or female (Ferris, 2004; Holtzworth-Munroe, 2005). Males are more likely to perpetuate IPV as a form of power exertion while females are more likely to commit IPV as a form of self-defence and retaliation (Barber, 2008; Swan *et al.*, 2008; Bair-Merritt *et al.*, 2010). However, females are more likely to experience IPV (Rich and Roman, no date; Ryan, Rich and Roman, 2015).

Globally, 30% of women have experienced IPV at one time or the other (Devries *et al.*, 2017). In Nigeria, 28% of women age 15-49 had experienced physical violence at least once since age 15 years and 11% reported that they had experienced physical violence within the 12 months prior to the survey (NDHS, 2014).

Direct victims of IPV suffer a number of immediate and long term health problems which includes physical injury, gastrointestinal disorders, chronic pain syndrome, depression and suicidal behaviour (García-Moreno and Pallitto, 2013; Alejo, 2014; Plazaola-castan and Ruiz-pe, 2017).

Indirect victims refer to every other individual that witness IPV, including children, adolescents and other family members (Levendosky, Lannert and Yalch, 2012; Ryan, Rich and Roman, 2015). Of all these people, children and adolescents are the most vulnerable and are also at risk for physical and mental health problems (Knopf, Park and Mulye, 2008; Devries *et al.*, 2017). One study showed that child abuse and/or domestic violence increases a child's risk for internalizing and externalizing outcomes in adolescence (Moylan *et al.*, 2010).

IPV has economic, social and physical and mental health implications affecting not only the individual and the family but also affects the society.

1.2. Statement of the problem

Violence is the leading contributor to, morbidity, disability and mortality among women aged 15 to 44 years (VicHealth, 2004). Women who have experienced violence are more likely to suffer from mental health issues and on-going physical conditions (VicHealth, 2004).

Direct victims of IPV are more likely to get legal and psychosocial support, often because they are the most affected, but it is also important for support to be given to indirect victims of IPV, including children who are exposed to parental IPV (Hamel and Nicholls, 2007; Carracedo, Fariña and Seijo, 2017).

Every year, about 3.3 to 10 million children are exposed to parental IPV (Mcvay, 2009; Moylan *et al.*, 2010; Smith and Ragavan, 2010). IPV tends to go on for a long period of time which means children can grow into adolescence in a toxic environment characterized by IPV (Perry, 2001;

Carracedo, Fariña and Seijo, 2017) and are more likely to experience abuse, neglect and other traumatic experiences (Dube *et al.*, 2002).

Children's exposure to parental IPV may be as direct as witnessing violence or indirect as observers of the violent hazards to their mother's physical and mental health (Rich and Roman, no date; Hamby *et al.*, 2011; Levendosky, Lannert and Yalch, 2012). Both are considered risk situations for the development of emotional, behaviour and school problems in children (Waits, 1984; Levendosky *et al*, 2002). Child abuse and/or domestic violence increases the risks for internalizing and externalizing outcomes in adolescence (Moylan *et al.*, 2010).

Intimate partner violence (IPV) damages a woman's physical and mental well-being, and indicates that her children are likely to experience abuse, neglect and other traumatic experiences (Dube *et al.*, 2002).

Despite the increasing incidence of IPV in Nigeria, very little research has been done on the prevalence, incidence and the effect of exposure to parental IPV on child and adolescent mental health.

1.3. Justification and relevance of the study

One of the reasons most women would not leave an abusive relationship is fear for the wellbeing of their children (World Health Organization, 2012; Fawole, Aderonmu and Fawole, 2005). Existing evidence from developed countries however, shows that children who witness IPV at home are more likely to experience other forms of violence (Devries *et al.*, 2017).

In Nigeria, very few services cater to the psychological wellbeing of victims of IPV and victims tend to seek help from leaders of religious organizations and family members (NDHS, 2014)

In Lagos State, there are three shelters for abused women. There is a Church-run shelter, the Ministry of Women's Affairs shelter and the ProjectAlert shelter (IRB, 2014). One of these shelters

has a comprehensive support service for victims of intimate partner violence and this includes counselling services for the women who are victims of IPV, legal aid, accommodation, skills acquisition, empowerment and medical support. However, there is no mention of the children of the women, who are victims and the help they get. It is important that in protecting the women, the children are also protected.

There is a dearth of information on the impact of parental IPV on children and adolescents and its immediate and long term mental health implications that can inform policy and service development. Therefore, this study aimed to bridge this gap in knowledge.

1.4. Aim

To determine the prevalence and correlates of mental health problems amongst adolescents who witness parental IPV.

1.5. Specific objectives

1. To determine the prevalence of adolescents who witness parental IPV.
2. To determine the socio-demographic correlates adolescents who witness parental IPV.
3. To determine the prevalence of mental health problems among adolescents who witness parental IPV.
4. To examine the association between adolescents' exposure to parental intimate partner violence and their mental health.

Word count: 1983

CHAPTER TWO

LITERATURE REVIEW

2.1 INTIMATE PARTNER VIOLENCE

2.1.1 Definitions

Intimate partner violence (IPV) refers to physical, sexual or psychological harm by a current or former partner or spouse (Rutherford *et al.*, 2007). The World Health Organization (WHO) defines IPV as "... any behaviour within an intimate relationship that causes physical, psychological or sexual harm to those in the relationship, including acts of physical aggression, sexual coercion, psychological abuse and controlling behaviours" (World Health Organization, 2012).

Parental IPV is defined in this study as violence between couples who are also parents, it is also described in some studies as inter-parental and marital violence (Booth, Crouter and Clements, 2001; Hamel and Nicholls, 2007; Moylan *et al.*, 2010; Umana *et al.*, 2014).

2.1.2 Types of intimate partner violence

The different types of IPV have been extensively categorized by Michael Johnson and colleagues; Johnson's categorization of IPV is centred on the nature of the control context of the relationship in which the violence takes place (Johnson, Leone and Xu, 2017). Johnson (1995) claimed that there were two distinct types of IPV and they were 'patriarchal terrorism' and 'common couple violence', but as he and his colleagues continued with the research, they grouped to IPV to four types, which included intimate terrorism, violent resistance, common couple violence and mutual violent control.

Intimate terrorism

It is also called coercive controlling violence. In a research done by Wangmann (2011) to analyse the different types of IPV and the type of perpetuators, she described intimate terrorism as the

typical or general perception of IPV where violence is perpetuated by a man against his female partner in other to control her (Jane, 2011). Johnson *et al* (2017) argued that "coercive controlling violence can be perpetrated by either men or women in a heterosexual or same-sex relationship. However it was stressed that IPV will be most common in heterosexual relationships, where it is primarily male-perpetrated" (Johnson, Leone and Xu, 2017).

Intimate terrorism occurs when one partner in a relationship uses coercive control and power over the other partner, using threats, intimidation, and isolation (Ferris, 2004). IPV may involve sexual, sadistic control, economic, physical, emotional and psychological abuse. Intimate terrorism is more likely to escalate over time, not as likely to be mutual, and more likely to involve serious injury (Ferris, 2004). In intimate terrorism, abuse may involve other forms of abuse and it tends to escalate quickly and victims are more likely to need medical care and shelters.

Violent resistance

Violent resistance is usually a response to intimate terrorism and women are more likely to use this type of violence to resist or react to coercive controlling violence. Wangmann cited that it was important to *"note that other researchers may also refer to this as 'female resistance, resistive/reactive violence, and, of course, self-defence"* (Jane, 2011).

Situational couple violence

Situational couple violence is not driven by control but a reaction to a dispute, controversy or situation. It occurs among men and women almost equally and has been described as one of the most common forms of IPV. Johnson (2011) describes it as a relationship dynamic where a situation becomes "incontrollable" which then leads to minimal forms of abuse that hardly deteriorates to serious or lethal forms of abuse. Even though men and women may equally

perpetrate this form of violence, it can still have a gendered impact with women being more likely to sustain injuries and to be fearful of their partner (Jane, 2011).

Mutual violent control

Mutual violent control is a rare type of IPV occurring when both partners act in a violent manner, battling for control (Ferris, 2004). This type of violence is uncommon and it is not well-known but it is important to understand that this is not about the 'mutual' use of violence but rather mutual use of coercive controlling violence (Jane, 2011)

Separation-instigated violence

In Johnson's new work with John Kelly (Kelly & Johnson 2008), this type of violence was added to the previously existing four. It describes violence that occurs context of separation, there is no history of violence nor does it continue after separation, rather it is confined to the period of separation and reflects the trauma or context of that event (Jane, 2011).

According to Johnson's typology, physical violence is present across all five types and the presence or absence of other controlling acts is used to make delineations (Jane, 2011), although the most acknowledged and known types of IPV were categorized by the US Department of Health and Human Services and they include:

Physical violence

Physical violence is the intentional use of physical force with the potential for causing death, disability, injury, or harm. Physical violence includes but is not limited to behaviours such as hitting, slapping, punching, kicking, biting, pushing, pulling hair, throwing objects at or using a weapon against a partner.

Sexual violence

Sexual violence is divided into three categories:

1) Use of physical force to compel a person to engage in a sexual act against his or her will, whether or not the act is completed;

2) Attempted or completed sex act involving a person who is unable to understand the nature or condition of the act, decline participation, or to communicate unwillingness to engage in the sexual act, e.g., because of illness, disability, or being under the influence of alcohol or other drugs, or because of intimidation or pressure.

3) Abusive sexual contact.

Threats of physical or sexual violence include the use of words, gestures, or weapons to communicate the intent to cause death, disability, injury or harm.

Emotional/psychological violence

Emotional/Psychological violence includes behaviours such as humiliation, threats, intimidation to control one's partner, verbal threats, including name calling and put downs. The partner may control how and with whom the other person spends time, limiting what they can wear, checking up on them frequently, and making them feel that they cannot leave the relationship. This form of violence may also include controlling how money is spent, using partner's credit cards or money without their permission, creating debt in partner's name, and pressuring the partner to use their income to support the abuser's lifestyle/needs. Typically, this form of abuse is the first to give signals of abuse. As the relationship continues, the abuse may escalate to physical and/or sexual violence.

Stalking

Stalking is often included among the types of IPV. According to researchers at the Department of Justice, stalking generally refers to "harassing or threatening behaviour that an individual engages in repeatedly, such as following a person, appearing at a person's home or place of business, making harassing phone calls, leaving written messages or objects, or vandalizing a person's property."

Figure 1 show how intimate partner violence interacts with other forms of abuse to directly and/or indirectly influence the overall health outcome of a child.

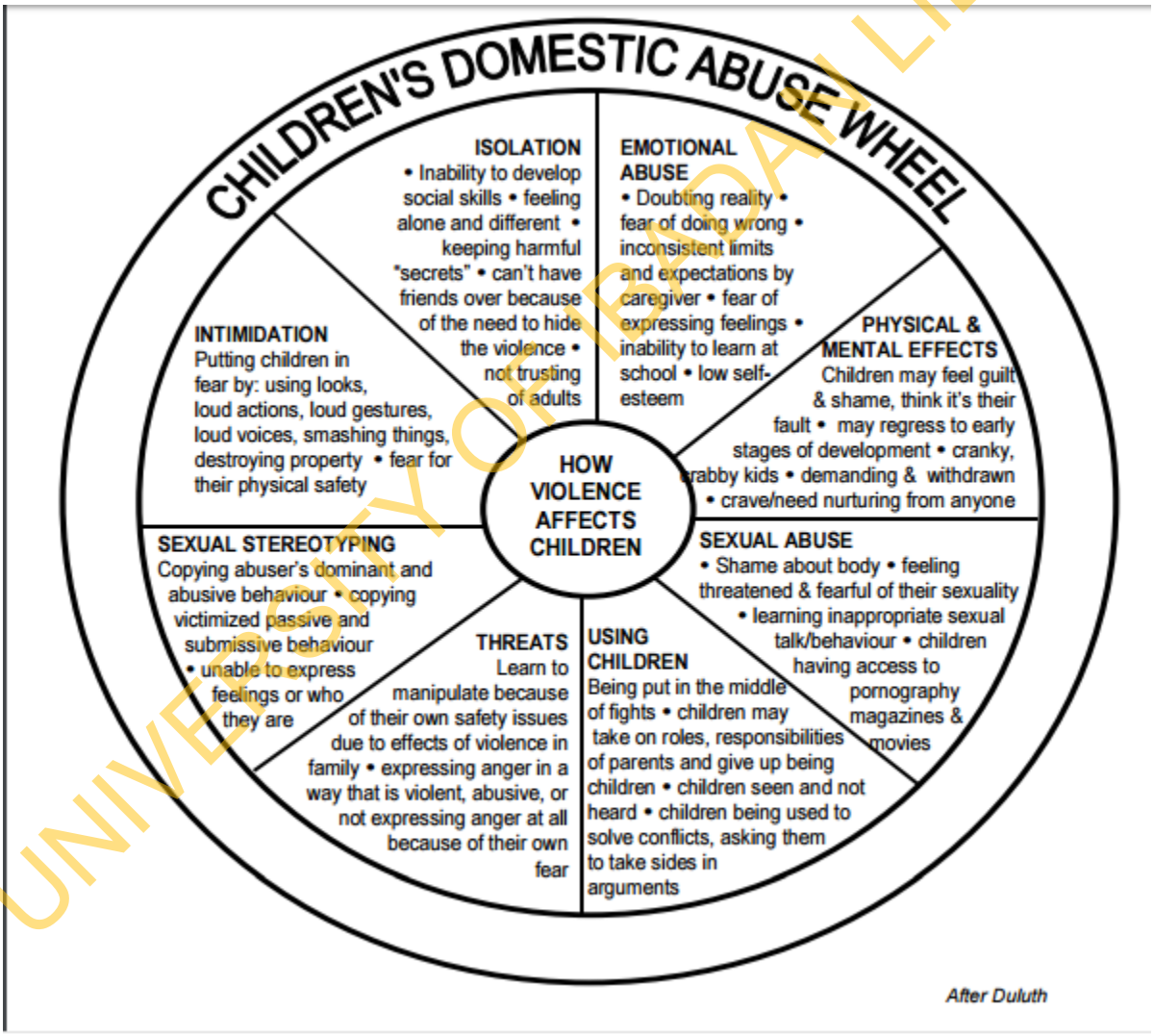

Figure 1: *Children Domestic Violence Wheel* (Child Matters, 2013)

2.1.3 Risk factors for intimate partner violence

Socio-demographic characteristics like low educational attainment, poverty, low income have been found to be risk factors for perpetrating or experiencing IPV (Capaldi *et al.*, 2012; Garcia-Moreno, 2012). Capaldi (2012) reported that family and relationship interactions, ability or inability to resolve conflicts puts an individual at risk of experiencing or perpetrating violence.

Exposure to parental IPV has been shown to be a risk factor associated with perpetration of IPV as the cycle of violence seems to continue in the families of victims of IPV (Rich and Roman, no date; Casanueva, Kotch and Zolotor, 2010; Murphy *et al.*, 2013; Ryan, Rich and Roman, 2015).

2.1.4 Prevalence of intimate partner violence

Globally, there is a 30% lifetime prevalence of IPV against women, a United States National Survey reported a 25% to 29% prevalence rate of IPV among women (Reid *et al.*, 2008) while a study in Uganda reported a prevalence rate of 24.1% (Kitara *et al.*, 2012). Some national surveys showed that 8% to 23% of men had experienced IPV (Reid *et al.*, 2008).

The most common types of IPV are physical violence and emotional/psychological violence, Kovach (2004) reported that 66.6% and 64.6% of women and men who were victims of IPV experienced physical violence. In Nigeria, 25% of women have experience physical violence in an intimate relationship (NDHS, 2014). The study carried out by Onigbogi *et al* showed a 50.5% prevalence of physical violence among Nigerian women (Onigbogi, Odeyemi and Onigbogi, 2015). Umana *et al* reported a 41.8% prevalence of psychological violence among female university students in Nigeria (Umana *et al.*, 2014) and Onigbogi *et al* also reported a 85% prevalence of psychological violence among women in Nigeria (Onigbogi, Odeyemi and Onigbogi, 2015).

There is an overlap between women's experience of IPV and their children's exposure to IPV. The U.S National Resource Centre on Domestic Violence stated that there is 30 to 60% overlay between violence against children and violence against women in the same families (National Resource Centre on Domestic Violence, 2002) and at least 25% of children witness parental IPV (Hamby *et al.*, 2011).

2.2 CONSEQUENCES OF INTIMATE PARTNER VIOLENCE

Intimate partner violence is a recognized public health problem that has been found to cut across several countries across the world (García-Moreno *et al.*, 2013; Wolverhampton, 2013). Several studies have been done to detect associations between IPV, public health and other aspects of health (physical and mental). According to WHO, women who experienced violence in the home were twice as likely as women who had not experienced violence to report poor health and physical and mental health problems, even if the violence had occurred years before (World Health Organization, 2012). Research reveals that the more severe the abuse, the greater its impact on the physical and mental health of both women and children (National Resource Center on Domestic Violence, 2002; Moylan *et al.*, 2010; García-Moreno *et al.*, 2013). Children and adolescents exposed to parental IPV may be denied basic needs both biological and emotional that could predispose them to cognitive, psychological, physiological and behavioural problems (Lourenço *et al.*, 2013).

2.2.1 Physical health consequences of intimate partner violence

The effects of IPV on physical health might be persistent and severe, some of which are classified under the acute or immediate physical injury section of the WHO article (García-Moreno and Knerr, 2012). In a study conducted in Nigeria, bruises were the most common effects of physical

violence in IPV (Antai, 2011). Children may suffer injury when defending the victimized parent (Federal Ministry of Health, 2008). Repeated physical assaults may directly increase risk of injuries or some chronic diseases, such as chronic pain, osteoarthritis, and severe head- aches (Coker *et al.*, 2002). Coker *et al* (2002) argued that although victims of IPV may require more hospital care, as they were more likely to frequent hospitals, be diagnosed and require hospital admissions although it was also possible that persons with chronic illnesses were more vulnerable to IPV.

Children and adolescents exposed to parental IPV are at risk of physical abuse that may result in injuries, disabilities and death (National Resource Center on Domestic Violence, 2002; Hamby *et al.*, 2011). Gastrointestinal problems and asthma are common among children exposed to parental IPV due to weak psychological adjustment (Kuhlman *et al*., 2012).

Children exposed to parental IPV generally have poor health as their parents were 5 times more likely to visit primary health care centres and less likely to complete immunizations thereby exposing the child to even more physical health problems (Bair-Merritt *et al.*, 2008).

2.2.2 Mental health consequences of intimate partner violence

Studies have linked physical and sexual violence with poor mental health outcomes and most studies have identified stress to be the common factor for most mental health problems in IPV, either as a result of perceived fear or a result of actual fear. Common mental health problems identified in most studies include depression, suicide attempts, post-traumatic stress disorder, other stress and anxiety disorders, sleeping or eating disorders and psychosomatic disorders (García-Moreno and Knerr, 2012). In the WHO multi-country study, reports of emotional distress, thoughts of suicide, and attempted suicide were significantly higher among women who had ever

experienced physical or sexual violence than those who had not (World Health Organization, 2012), the study also identified alcohol and drug abuse, eating and sleep disorders, physical inactivity, poor self-esteem, post-traumatic stress disorder, smoking, self-harm and unsafe sexual behaviour as mental health implications of experiencing IPV (World Health Organization, 2012).

Exposure to parental IPV has been associated with mental health problems as maternal mental health is an indicator of the child's outcome (Durand *et al.*, 2011), studies have shown a significant association between maternal mental health status and children physical and mental health (Engle, 2009). Children exposed to parental IPV are at risk of both internalizing (depression, insecurity, anxiety and post- traumatic stress disorder) and externalizing problems (adjustment problems, aggressive behaviours and substance use) (Moylan *et al.*, 2010; Hamby *et al.*, 2011; Lourenço *et al.*, 2013). Children may also try to cope with violence by triggering neurophysiological and functional reactions like dissociation in violent situations (Perry, 2001; Omigbodun *et al.*, 2008).

Parental IPV can also be described a traumatic event that may predispose children and adolescents to suicide and self-harm (Butterworth, 2014; Omigbodun *et al.*, 2008). Children and Adolescents exposed to IPV may suffer from enuresis, sleep-related problems and eating problems (Omigbodun *et al.*, 2008)

2.2.3 Public health consequences of intimate partner violence

Victims of IPV have more health needs and seek medical care more than the general population and their use of medical services increased in frequency as the rate and severity of abuse rises (García-Moreno and Knerr, 2012). Women who experience IPV are less likely to seek preventive care, such as mammograms, cholesterol and blood pressure checks and cancer screening which inadvertently poses more cost as prevention costs way less than treatment. Children exposed to

parental IPV are more likely to be behind their peers mostly due to their parents inability to care for them due to their socio-economic distress, mental and/or physical health challenges (Center for Research on Women International, 2008).

Studies have revealed a relationship between academic performance and exposure to parental IPV as children and adolescents exposed to parental IPV are more likely to perform poorly in school which may lead to low productivity at school and/or workplace (Lourenço *et al*., 2013; Jofrebonet, Rosselloroig and Serrasastre, 2017). Ability to complete tasks in time, planning and prioritizing that is crucial to learning is usually deficient among children and adolescents exposed to parental IPV (Carracedo, Fariña and Seijo, 2017).

Increase in crime rates as a result of anti-social behaviour is also a consequence of exposure to parental IPV (Schulz, no date; Murphy *et al*., 2013; Holmes *et al*., 2018). Holmes *et al* (2018) also reported an increase in the cost of healthcare for children exposed to parental IPV.

The likelihood for the cycle of violence to continue is high as studies has revealed that majority of the perpetrators and victims of violence had been exposed to parental IPV as children and/or adolescents (National Resource Center on Domestic Violence, 2002; Hamby *et al*., 2011).

2.2.4 Socio-economic consequences of intimate partner violence

Women who experience IPV might become isolated either as a result of emotional abuse or low self-esteem and this affects their interaction with others, leaving them with no form of social support or someone to run to when abuse occurs and unable to participate in social activities (‘WHO | Violence against women’, 2016). CDC identified “restricted access to services, strained relationships with health providers and employers, isolation from social networks and homelessness” as some of the social consequences of IPV (*Consequences|Intimate Partner*

Violence|Violence Prevention|Injury Center|CDC, 2016). Victims of IPV may isolate their children and the children may be incapable of practicing social skills (Calson, 2002). Carracedo (2017) found that children and adolescents exposed to parental IPV were unable to maintain inter-personal relationships. The Federal Ministry of Health (2008) reported that IPV increases the costs of law enforcement and child welfare services in Nigeria.

Victims of IPV are also likely to become homeless along with their children (Calson, 2002; Zaky *et al.*, 2016) and unable to provide their children's basic needs.

2.3. ADOLESCENCE

2.3.1. Period of adolescence

Adolescence is the period between childhood and adulthood. It is mostly defined as a "transitioning" period for children into adulthood. According to Wikipedia, adolescence is a "transitional stage of physical and psychological development that generally occurs during the period from puberty to legal adulthood (age of majority)*"* (Wikipedia, 2016). The psychology dictionary professional reference defines adolescence as the stage of development which begins with the pubescent years around the age of ten and continues up until physical maturation is reached around the end of the teenage years, even though the same age range diverts among individual person (Psychology Dictionary, 2013). WHO defines adolescence as young people between the ages of 10 and 19 years ('WHO | Adolescent health', 2017) and this is the most widely used definition. Curtis defines adolescence as a "dynamically evolving theoretical construct informed through physiologic, psychosocial, temporal and cultural lenses" (Curtis, 2015). The definition of adolescence is culturally sensitive as it depends on the definition of adulthood in that society. Degner, while trying to define adolescence stated that the term adolescence cannot be used to collectively describe a certain period of time because of cultural and societal influences, she

argued that the definition of adolescence as the time period between the onset of puberty and age 21 lacks validity and fails to address the cultural differences, historical influences, and individual expressions of this transitional stage from childhood to adulthood (Degner, 2004). Adolescence can be defined biologically, as the physical transition marked by the onset of puberty and the termination of physical growth; cognitively, as changes in the ability to think abstractly and multi-dimensionally; or socially, as a period of preparation for adult roles (Wikipedia, 2016).

Adolescence is categorized into early (10-13years), middle (14-17years) and late adolescence (18-21) (Spano, 2004; Curtis, 2015) although according to UNICEF, there are two phases of adolescence and they are early adolescence and late adolescence (UNICEF, 2011). Adolescence is marked by physical, social and psychological changes.

UNICEF describes early adolescence as one where physical changes usually begin, typically with a growth spurt and soon followed by the development of the sex organs and secondary sexual characteristics (UNICEF, 2011). In a report written in 2009 by Christine, she also described puberty as the hallmark of early adolescence (Christine L. Ruva, 2009).

Christine (2009) described puberty as a combination of events characterized by development of primary and secondary sexual characteristics, major growth spurt and an increase in weight, strength, and endurance.

In this phase, adolescents become more aware of their gender, they become conscious of their physical appearance and behaviour and try to fit into perceived norms (UNICEF, 2011). Physical changes do not begin at the same time in all adolescents. In girls, the age of onset for puberty is between 8 to 13 years while boys begin two years later (Nancy Paulu and Jean Osborn, 2005). The succession of these events during puberty is consistent among adolescents, however, there may be

a great deal of deviation in the age of onset, duration, and tempo of these events between and within individuals (Stang and Story, 2005) and some of these deviations can be influenced primarily by heredity, although environmental factors, such as diet and exercise, also exert some influences (Wikipedia, 2016). Stang and Story (2005) also reported that about half of adult ideal body weight is gained during adolescence and peak weight gain follows the linear growth spurt by 3 to 6 months in females and by about 3 months in males.

The major sign of puberty for boys is spermarche, the first ejaculation which occurs on average, at age 13 and for girls, it is menarche, the onset of menstruation which occurs on average, between ages 9 and 18 years (Dambhare, 2012; Wikipedia, 2016). The age of onset for menstruation is also widely influenced by socio-economic, environmental, nutritional and geographical differences in the society (Dambhare, 2012)

Social changes imply a change in interactions or relationships in adolescence. Adolescence is a period where dependence is reduced and independence is developed (Erikson, 1994; Curtis, 2015; Schlozman Partners Healthcare, 2015). Adolescents are cognizant of their sexuality and they can develop a desire or sexual attraction for another person, who can be someone of the opposite sex or the same sex (American Psychological Association, 2002; Stang and Story, 2005). In early adolescence, these relationships usually last for a short period. In late adolescence, relationships usually last longer and become more significant (American Psychological Association, 2002; Nancy Paulu and Jean Osborn, 2005; Christine L. Ruva, 2009).

Adolescents are likely to search for new identities, identity as it relates to self-concept and self-esteem. Self-concept refers to how the adolescent perceives himself/herself most times in respects to talents, goals, life experiences, ethnic, religious, and sexual identity groups (Sanders, 2013).

It is not uncommon for adolescents to experience role confusion. Erikson (1950) described a stage of development in adolescence termed "Identity versus. Role confusion" where they experiment with different behaviours and take on different roles (Sanders, 2013). Adolescents are likely to seek out new experiences and engage in more risk-taking behaviour as they still develop control over their impulses (Raising Children Network, 2018).

2.3.2. Family life and adolescence

Hull (1904) described adolescence as a time of storm and stress and a very delicate state. There were three main areas in an adolescent's life that a parent influences; The family and home life, a child's community, and their peers (Amber Carlson, 2010). The family is the primary form of support for a child; Family structures, relationship with parents and parenting styles have all been found to influence child and adolescent outcome and are important in the development of self-esteem (David, Small and Family, 1987). Adolescent growth and development are profoundly influenced by the family environment in diverse ways either negatively or positively (Adolescent Health, 1990). In the context of an adolescent's life, family environment has a great effect on psychosocial development and stress processes (Auerbach and Ho, 2012). For example witnessing violence can have an influence on internalizing and externalizing problems, substance use, personality, and violent behaviour (Roberts *et al.*, 2010). Roberts *et al* (2010) stated that children exposed to IPV have high negative emotional reactivity, behavioural deregulations, externalizing problems, and lower IQs than the unexposed child.

Family dysfunction has been associated with aggression in school-going adolescents (McAdams III and Foster, 2009). Remschmidt *et al* stated that some adolescents are more at risk for substance use because of their social circumstances including poverty, family integration, dysfunctional and abusive families, relocation, discrimination and sexual exploitation (Remschmidt *et al*, 2007).

Even family socio-economic characteristics interplay with adolescents personality development (Zahid, Ahmed and Kingsolver, 2005)

Family conflict is a cause of stress for children and adolescents. Children may blame themselves for the conflict, leading to feelings of guilt and low self- esteem. The conflict between parents may also extend to adolescents by decreasing the quality of parenting, weakening the bonds between the adolescent and the parents. With these bonds weakened, self- control decreases, causing the adolescent to act out and engage in deviant behaviours (Amber Carlson, 2010). Social cognitive models emphasize that children learn to perpetrate IPV by observing and imitating such violence in their homes, without developing the skills to resolve conflict without using violence (Roberts *et al.*, 2010).

Studies have found a significant association between IPV and parenting and an article by Graham-bermann (2015) described the parenting style in homes where IPV occurs as "aggressive parenting". An adolescent exposed to parental IPV may be unable to enjoy the full benefits of both parents as studies have shown that IPV influences parenting role, parenting role may refer to preventing an intimate partner from providing parental care or threatening to take one's children away (Ahlfs-Dunn and Huth-Bocks, 2016). Also the parent experiencing IPV may be unable to take care of their children because of physical and/or mental health related problems forcing adolescents to become caregivers in the home (Calson, 2002). Child maltreatment, neglect and abuse have been said to go hand in hand with parental IPV. Edleson (1999) found that 30% and 60% of families experiencing IPV were documented as co-existing with child maltreatment (Murphy *et al.*, 2013).

Parenting and family interaction has been said to influence the adolescents' self-esteem and family type and socio-economic status are significantly associated with the development of self-esteem (Dobrescu, 2013)

2.3.3 Common mental disorders in adolescence

Mental disorders are diagnosable conditions characterized by changes in thinking, mood, or behaviour or some combination of these that can cause a person to feel stressed out and impair his or her ability to function (Whitlock and Schantz, 2008; Murphey, Barry and Vaughn, 2013). Mental health problems diagnosed in adulthood begin in adolescence and half of lifetime diagnosable mental health disorders start by age 14 (Knopf, Park and Mulye, 2008). Mental disorders in adolescence are common and an estimated 1 in 5 adolescents has a diagnosable mental disorder (Knopf, Park and Mulye, 2008; Murphey, Barry and Vaughn, 2013).

Common mental disorders among adolescents include depression, anxiety disorders, attention-deficit/ hyperactivity disorder and substance use disorder (Knopf, Park and Mulye, 2008). Murphey categorized mental disorders that are common in adolescence as "mood disorders (e.g., depression and bipolar disorder); behavioural disorders (e.g., various acting-out behaviours, including aggression, destruction of property, and some problems of attention and hyperactivity) and anxiety disorders (including social anxiety disorder, obsessive-compulsive disorder (OCD), post- traumatic stress disorder, and phobias)" (Murphey, Barry and Vaughn, 2013).

Male adolescents are more likely to be diagnosed with externalizing problems as opposed to female adolescents who are more likely to be diagnosed with internalizing problems (Murphey, Barry and Vaughn, 2013).

2.4. CORRELATES OF ADOLESCENTS MENTAL HEALTH PROBLEMS

2.4.1 Anxiety disorders

Anxiety disorders are a common mental disorder in adolescence, sometimes co-occurring with depression (Columbia University, 2005). According to the Diagnostic and Statistical Manual of Mental Disorders fifth edition (DSM V), anxiety disorders include disorders that share features of excessive fear and anxiety and related behavioural disturbances (American Psychiatric Association, 2013). Anxiety disorders have a prevalence rate of about 15% to 30% in adolescents which is much higher than the prevalence rates in adults at 10% to 20% (Tassin *et al.*, 2014). WHO ranks anxiety disorders as the 6th (3.4%) largest contributor to global disability (World Health Organization, 2017). According to Tassin *et al*, the common types of anxiety in adolescence are panic disorders and social phobias with the most common being social phobia with the first physical, cognitive and behavioural manifestations of social anxiety disorder occurring during adolescence (Tassin *et al.*, 2014). Anxiety disorders in adolescents often co-occur with either another anxiety disorder or another psychiatric disorder. No less than a third of adolescents with anxiety disorders meet the criteria for two or more anxiety disorders (Abbo *et al.*, 2013) .

A research done by Abbo *et al* revealed some predictors of anxiety disorders in adolescence; which are strongly indicated by social disadvantage such as large family size, overcrowding, low socioeconomic status, family disruptions, parent unemployment, father's criminality and school difficulties (Abbo *et al.*, 2013)

2.4.2 Depression

Depression is the one of the most common mental disorder in adolescence with prevalence rates as high as 10-20%. It is characterized by the "sad, empty, or irritable mood, accompanied by somatic and cognitive changes that significantly affect the individual's capacity to function" (American Psychiatric Association, 2013). A national school-based survey done by the Center for Disease Control and Prevention in 2012 showed that 29% of 9-12 grade students reported having symptoms of depression (Murphey, Barry and Vaughn, 2013). Female adolescents have higher prevalence rates of depression (36%) than male adolescents (22%) (Murphey, Barry and Vaughn, 2013). Depression is ranked by WHO as the single largest contributor to global disability (7.5% of all years lived with disability in 2015) and also the major contributor to suicide deaths, which number close to 800 000 per year (World Health Organization, 2017)

2.4.3 Suicide/Self-harm

Suicide and self-harm all around the world are a public health concern. Suicide is a premeditated act of taking one's own life (Butterworth, 2014; Hetrick, 2017), Sarah Hetrick defines self-harm as "the harming of oneself regardless of intention or purpose" (Hetrick, 2017). Hagell pointed out that although self-harm cuts across age groups, it peaks at mid-adolescence (Hagell, 2013). In Nigeria, there has been very few studies on self-harm but suicidal behaviours have been used to describe this same act (Omigbodun et al, 2008). Omigbodun *et al* (2008) reported that 12% of adolescents in Southwest Nigeria reported that they had attempted suicide in the past year. Another study describes the general prevalence of self-harm as 10% of the adolescent population generally stating that self-harm is more common in females than males in early adolescence but generally increases in males in late adolescence (Hawton *et al.*, 2012).

2.4.4 Substance use

DSM V describes substance use disorder as "a cluster of cognitive, behavioural, and physiological symptoms indicating that the individual continues using the substance despite significant substance-related problem" (American Psychiatric Association, 2013). Substance use causes significant distress in the overall functioning of an adolescent affecting relationships and academic achievement (Columbia University, 2005). The use of psychoactive substance usually begins among school aged children especially adolescents (Ani, 2014) and early initiation has been linked to early dependency (Eniojukan, Adje and Oyita, 2015). Adolescents' substance use contributes to psychological, legal, medical and even social consequences later in life (Butler Center for Research, 2016).

2.4.5 Self esteem

Self-esteem indicates a person's overall sense of worth and how individuals see themselves, how they are seen and how they wish to be seen (Dobrescu, 2013). In adolescence, age, gender and physical attributes define self-esteem and even material things like mobile phones become a symbol that validates self-esteem (Dobrescu, 2013). Low self-esteem among adolescents has been associated with high risk taking behaviours including substance use and indiscriminate sex (Erol and Orth, 2011). Dobrescu (2013) cited a study carried out by Santrock in 1995 that reported that self-esteem is an emotional variable with consequences that include substance abuse (drug abuse), alcohol consumption, delinquent behaviours, depression, anger, hostility, aggressive behaviour and dysfunction in life.

2.5 ADOLESCENT MENTAL HEALTH AND ACADEMIC PERFORMANCE

Various studies show the relationship between mental health and academic performance. Mental health problems do not affect only the emotional domain of an adolescent but also the social and

academic domains (Columbia University, 2005). A study showed that students experiencing high levels of psychosocial stress tend to do poorly in school (Oregon Public Health Division, 2006) and that school difficulties may be a sign of a developing or unrecognized mental health problem (Columbia University, 2005).

Poor school attendance as a result of vague, unexplainable physical health problems can be a sign of mental health problem (DeSocio and Hootman, 2004) which in turn can lead to academic difficulties. Secondary school students who have mental health problems are more likely to score low marks in all subjects and are more likely to repeat than adolescents with physical disabilities as a whole (Wagner and Cameto, 2004). Common mental disorders are associated with academic difficulties. Adolescents with emotional and behavioural disorders who present with externalizing problem behaviours like attention and conduct disorders are more likely to experience academic difficulties and stop schooling than adolescents that present with internalizing ones like mood and anxiety disorders (Nelson *et al*, 2004; Breslau *et al*, 2008). High depression scores have been linked to low academic achievement, high academic anxiety, increased school suspensions and decreased ability or desire to complete schoolwork, concentrate, and attend class (Columbia University, 2005). Adolescents who have attempted suicide over a one year period show significantly lower levels of academic performance than adolescents who have never attempted suicide (Slap *et al*, 2001) but it can also be that academic performance was the reason for attempting suicide in the first place. According to a study done by Martin *et al*, adolescents who perceive their academic performance as bad were three times more likely to report suicidal thoughts and ten times as likely to report suicide attempts than students who were satisfied with their academic performance (Martin *et al*, 2005).

2.6 RELEVANCE OF THIS STUDY TO CHILD AND ADOLESCENT MENTAL HEALTH

Adolescence is a very critical stage of development, as the physical, cognitive and emotional development of adolescents comes with its own stresses. The family as a unit of financial, social and emotional support affects adolescents' outcome either in a good or a bad way (Aufseeser, Jekielek and Brown, 2006). In some parts of Nigeria, some forms of violence in the home between parents especially against the wife is regarded as acceptable (Arisi, 2011). On the other hand, exposure to IPV is regarded as a form of child abuse termed as "psychological violence" (Lourenço *et al.*, 2013). Exposure to IPV has been regarded as a risk factor to a number of mental health problems (Moylan *et al.*, 2010) and mental health problems have been linked to poor academic performance and low self-esteem and this creates a huge burden on an otherwise stressed adolescent.

This study will generate information about the association between exposure to parental IPV and mental wellbeing of at-risk adolescents. This should be a starting point for further research and attention to the children and adolescents found in such scenarios, with respect to service planning and delivery.

Word count: 5531

CHAPTER THREE

METHODOLOGY

3.1 Study location

This study was carried out in Lagos State which is located in the South-western geopolitical zone of Nigeria (Wikipedia, 2006). Although the smallest in land area of Nigeria's 36 states, Lagos State is the most economically important state in Nigeria. It is a major financial centre and the fifth largest economy in Africa (Wikipedia, 2006). The latest reports estimate the population of Lagos State at 21 million, making Lagos the most populous state/megacity in Africa. Lagos State is divided into an island portion and mainland. On the North and East it is bounded by Ogun State while in the West it shares boundaries with the Republic of Benin. Behind its southern borders lies the Atlantic Ocean. Lagos State has 22% of its 3,577 km^2 as lagoons and creeks. Lagos State has a total of 18 tertiary institutions and 319 public secondary schools. Statistics for the number of private secondary schools was unavailable.

Alimosho is a Local Government Area (LGA) in the Ikeja Division and the largest LGA in Lagos, with 1,288,714 inhabitants, according to the official 2006 Census (Wikipedia, 2017). It has now been subdivided into 6 Local Community Development Areas (LCDA). The six sub-divisions created out of the old Alimosho are Agbado/Oke-odo LCDA,Ayobo/Ipaja LCDA, Alimosho LG, Egbe/Idimu LCDA, Ikotun/Igando LCDA and Mosan Okunola LCDA. The LGA contains the urban area of Egbeda/Akowonjo.

Although Yoruba language is widely spoken in Lagos State, Lagos is cosmopolitan and all ethnic groups and languages in Nigeria are present there. Lagos State also consists majorly of Muslims and Christians (Wikipedia, 2018).

There are about 281 private secondary schools and 70 public secondary schools in Alimosho LGA (Lagosschoolsonline, 2018).

3.2 Study design

This study is a school-based cross-sectional study of adolescents in Lagos.

3.3 Study population

Inclusion criteria

All adolescents between 10 and 19 years who attended the schools that gave permission to carry out research, which provided consent and assent.

Exclusion criteria

Adolescents diagnosed and/or treated for a mental disorder.

3.4 Sample size

The sample size was calculated using the Leslie Kish formula

Where $\frac{Z^2pq}{d^2}$

Z=standard deviation set as 1.96

P=estimated prevalence which is set at 0.5

d=degree of error set at 0.05

This resulted in a sample size of 384. In order to account for non-response, with an estimated response rate set at 80%, the calculated sample size came up to 460. However, 75 adolescents did not provide consent or assent and were excluded from the study and the sample size was reduced to 385 as shown in Table 1.

Table 1: Distribution of respondents in each school (N=460)

	Informed consent		
Schools	Yes	No	Total
School 1	88	4	92
School 2	90	2	92
School 3	69	23	92
School 4	89	3	92
School 5	49	43	92
Total	385	75	460

3.5 Sampling technique

A multi-stage sampling technique was employed. The first stage involved purposively selecting the Alimosho LGA of Lagos State because of its socio-demographic and sociocultural diversity and it's being the most populated LGA.

In the second stage; 5 private secondary schools were randomly selected by using balloting. The names of private secondary schools were written in a piece of paper, folded and placed in a container, five schools were picked and in the instance where permission was not given by the school another school was picked instead. In each of the schools picked, different arms of classes were also randomly selected by writing the names of the different arms of each class in folded papers in a container and picking two.

Junior Secondary School one (JSS 1) and Senior Secondary School three (SSS 3) were exempted from the study because JSS 1 students were below the age required to participate in the study while

SS3 students were preparing for the West Africa Examination Council (WAEC) examinations as at the time of the study.

In the third stage, 92 respondents were selected in each school with 11 respondents in each of the arms of the junior classes and 12 respondents in each arm of the senior classes. The classes had a minimum of 25 students in each arm. Respondents were selected by giving the first student and omitting the next student on the row till 11 or 12 as the case may be was completed.

3.6 Study instruments

Three study instruments were used in this study.

1. Socio demographic questionnaire

This consists of questions relating to socio-demographic characteristics adapted from a questionnaire used in a previous study on adolescents in rural and urban Ibadan (Omigbodun *et al*, 2008). A section on exposure to parental IPV was added here, with four questions, as follows:

1. Have you ever seen or overheard your parents shouting at each other?

   If yes, please provide an example.

2. Have you ever seen or overheard your parents calling each other rude or hurtful names?

   If yes, please provide an example.

3. Have you ever seen or overheard your parents hitting, slapping or throwing things at each other?

   If yes, please provide an example.

4. Have you ever felt either parent was in danger as a result of the other's actions?

If yes, please provide an example.

The follow up request to provide an example was an opportunity for the students to narrate their experiences, if they answer yes to any of these questions.

Adolescents' exposure to parental IPV was measured by any positive response to the above questions as shown in Table 2, as earlier described by Devries et al., (2017) for the assessment of exposure to parental IPV.

Table 2: Coding of Violence Variable

Variable name	**Item**	**Coding**
Emotional/Psychological violence	Have you ever seen or overheard your parents shouting at each other?	Coded 1 if answered yes; 0 if answered no
	Have you ever seen or overheard your parents calling each other rude or hurtful names?	Coded 1 if answered yes; 0 if answered no
Physical violence	Have you ever seen or overheard your parents hitting, slapping or throwing things at each other?	Coded 1 if answered yes; 0 if answered no
	Have you ever felt either parent was in danger as a result of the other's actions?	Coded 1 if answered yes; 0 if answered no

2. Patient Health Questionnaire (PHQ)

The Patient Health Questionnaire (PHQ) is a screening tool for mental health disorders, a self-administered version of the Primary Care Evaluation of Mental Disorders (PRIME-MD). This instrument contains the mood (PHQ-9), anxiety (GAD-7), alcohol abuse, eating problems and somatoform modules and h has been found to be as diagnostically effective as the clinician-administered version and even more efficient to use (Spitzer *et al.*, 1999). It has been used severally in Nigeria (Adewuya, Ola and Afolabi, 2006; Shittu *et al.*, 2014). In this study, the depression, anxiety and alcohol abuse modules were used.

The Depression Module consists of 9 items: all items were answered using a 4-point Likert scale ranging from "not at all" to "nearly all the days" (0 representing "not at all" and 3 representing "nearly all the days"). The maximum point obtainable is 27 and the least 0. 0-4,5-9, 10-14, 15-19 and 20-27 points signified no or minimal depression, mild, moderate, moderately severe and severe depression respectively (Singh, Gupta and Grover, 2017). In this study however, respondents who scored above 5 points were said to have depression irrespective of severity.

Question 2(i) in the depression module ("thoughts that you would be better off dead…") of the PHQ was used to measure suicidal ideation as used in a research carried out in Lagos by Adewuya *et al* (Adewuya *et al.*, 2016).

The Anxiety Module consists of 7 items; all items were answered using a 4-point Likert scale ranging from "not at all" to "nearly all the days" (0 representing "not at all" and 3 representing "nearly all the days"). The maximum point obtainable is 21 and the least is 0. 0-4, 5-9. 10-14, 15-21 represent no, mild, moderate and severe anxiety respectively. However respondents who scored above 5 points were said to have anxiety irrespective of severity.

The Alcohol Abuse Module consists of 5 items, "No" was represented as 0 and "Yes" was represented as 1. Answering "Yes" to any of the questions was described as alcohol abuse as the questions indicated harmful use of alcohol (Example: You had a problem getting along with other people while you were drinking).

3. Rosenberg Self-Esteem Scale

The Rosenberg Self-Esteem Scale, a widely used self-report instrument for evaluating individual self-esteem and has been used in Nigeria (Nnabuife *et al.*, 2018). All items were answered using a 4-point Likert scale format ranging from strongly agree to strongly disagree (0 being strongly disagree and 3 being strongly agree for positive feelings; 0 being strongly agree and 3 being strongly disagree for negative feelings) although questions 3, 5, 8, 9 and 10 were reversely scored (3 representing strongly disagree and 0 representing strongly agree) ('Rosenberg self-esteem scale', 1997). The total score obtainable is 30; a score of less of 15 indicates low self-esteem.

Prior to the commencement of data collection on the study participants, the instruments were pre-tested on 15 adolescents that were not included in the final sample. The instruments were tested to ensure that the respondents understood the questions and to determine potential changes that needed to be made to the instruments. No change was made to the instruments, as they were understood by the adolescents.

3.7 Ethical considerations

Ethical approval was obtained from the Lagos State University Teaching Hospital (LASUTH) and permission from the Ministry of Education in Lagos State and the chosen schools.

Students were given informed consent forms to take home to their parents a week before the data collection commenced. The researcher visited the schools after 48 hours to collect the informed

consent forms as well as remind those who may have forgotten about it or replace the forms if they are misplaced and assent was obtained from the adolescents. The aim/objectives, benefits/risks of the study were explained to the respondents in the English language as appropriate to their age, respondents were also informed of their right to refuse participation, to stop participation at any time and the confidentiality of the information provided.

Information obtained from study respondents was kept confidential as no name was written on the questionnaires and each participant had a code as identifier.

3.8 Study procedure

A proposal was submitted to the Ethics Committee of Lagos State for ethical approval and permission was sought from the Lagos State Ministry of Education and the School Management respectively.

Informed consent was obtained from the parents or legal caretakers of the adolescents; assent from the adolescents. Assent forms were given to the students before the study and were signed with the supervision of their parents or legal caretakers. Adolescents who do not give assent and were unable to get consent were excluded from the study.

Self-reported questionnaires were administered to all respondents who meet the inclusion criteria with the help of the teachers and vice principals of the selected schools. Questionnaires were administered and collected in the classrooms after lunch break and the completion process took about forty-five minutes to one hour.

All questions were in English language as that is what is widely spoken in schools in Lagos State as well as being the formal language of instruction.

3.9 Data management

Data collected was entered into the computer to be analysed using IBM Statistical Package for the Social Sciences Statistics 22 (IBM SPSS version 22) and cleaned. Frequency and percentages tables were used to present socio-demographic characteristics, prevalence of exposure to parental IPV and prevalence of mental health problems among at risk adolescents exposed to parental IPV.

Chi square was used to examine associations between socio-demographic characteristics and adolescents' exposure to parental IPV. Chi square and binary logistic regressions were used to evaluate associations between exposure to parental IPV and adolescent mental health status.

Word count: 1969

CHAPTER FOUR

RESULTS

INTRODUCTION

This chapter presents the results of the analysis of the survey responses on the prevalence and correlates of mental health problems amongst adolescents who witness parental IPV. Three hundred and eighty five (385) copies of the questionnaires were distributed to the respondents and all were returned (100% response rate). The chapter is organized into two (2) sections. The first section focuses on the description of the participants, their parents' socio-economic characteristics, parental IPV and mental health status. The second section evaluates the association between exposure to parental IPV and adolescent mental health among secondary school students.

4.1 Socio-demographic Characteristics of the Respondents

The respondents consisted of 385 adolescents with 193 (50.1%) females and 192 (49.9%) males. The mean age of participants was 13.6 ±1.7 years.

Respondents were from monogamous (357, 92.7%) and polygamous (28, 7.3%) families. Three hundred and twenty two lived with both parents (332, 86.2%) and forty-seven respondents (12.2%) work to earn money before or after school. Descriptive statistics for all socio-demographic variables are summarized in Tables 3a and 3b

Table 3a: Socio-demographic Characteristics of all Respondents: Personal Characteristics

N=385

Variable	Frequency (n)	Percentage (%)
Respondents' age		
10-13 years	180	46.7
14-17 years	195	50.7
18-19 years	10	2.6
Total	385	100
Gender		
Male	192	49.9
Female	193	50.1
Total	385	100
Religion		
Islam	69	17.9
Christian	293	82.6
Others	21	5.4
Total	385	100
Work to earn money before or after school		
Yes	47	12.2
No	338	87.8
Total	385	100
Expressed likeness for family		
Yes	372	96.6
No	13	3.4
Total	385	100

Table 3b: Socio-demographic Characteristics of all Respondents: Family Characteristics'

N=385

Variable	Frequency (n)	Percentage (%)
Family type		
Monogamous	357	92.7
Polygamous	28	7.3
Total	385	100
Parents marital status		
Married	349	90.6
Unmarried	36	9.4
Total	385	100
Person lived with presently		
Parents	332	86.2
Mother	31	8.1
Father	6	1.6
Other relatives	15	3.8
Non-relatives	1	0.3
Total	385	100
Level of father's education		
No Formal/I do not know/Koranic Education	86	22.3
Primary/Secondary Education	34	8.8
Tertiary Education	265	68.9
Total	385	100
Level of mother's education		
No Formal/I do not know/Koranic Education	94	24.4
Primary/Secondary Education	42	11.0
Tertiary Education	249	64.6
Total	385	100

4.2 Prevalence of exposure to parental IPV among adolescents

Overall, ninety-seven (25.2%) of the adolescents had been exposed to parental IPV. Of these, ninety-four (24.4%) had witnessed emotional/psychological violence and thirty (7.8%) had witnessed physical violence. The prevalence of adolescents' exposure to each type of parental IPV is summarized in Table 4

Table 4: Prevalence of exposure to parental IPV among adolescents

N = 385

Variable	Yes n (%)	No n (%)	Total N (%)
Exposure to at least 1 type of IPV	97 (25.2)	288 (74.8)	385 (100)
Exposure to emotional parental IPV	**94 (24.4)**	**291 (75.6)**	**385 (100)**
Saw or heard parents shouting at each other	93 (24.2)	292 (75.8)	385 (100)
Saw or heard parents calling each other rude names	44 (11.4)	341 (88.6)	385 (100)
Exposure to physical parental IPV	**30 (7.8)**	**355 (92.2)**	**385 (100)**
Saw or heard parents hitting, slapping or throwing things at each other	26 (6.8)	359 (93.2)	385 (100)
Felt either parent was in physical danger as a result of the other's actions	22 (5.7)	363 (94.3)	385 (100)

4.3 Socio-demographic Correlates of Adolescents who witnessed Parental IPV

Forty-nine respondents (50.4%) who had witnessed parental IPV were between the ages of 14 and 17 years. More than half of them were Christians (79, 81.4%) and ten respondents (10.3%) who had witnessed parental IPV did not like their family.

There was no statistically significant association between personal characteristics of the respondents and their exposure to parental IPV at 5% level of significance with the exception of respondents that expressed likeness for their family. See Table 5a.

There were no significant association between family characteristics of the respondents and their exposure to parental IPV at 5% level of significance. See Table 5b.

Table 5a: Personal characteristics of respondents with exposure to parental IPV

N = 385

	Exposure to IPV				
	Yes	**No**	**Total**	**χ^2**	**p value**
	n (%)	n (%)	N (%)		
Age					
10 - 13 years	44 (45.4)	136 (47.2)	180 (46.8)		
14 - 17 years	49 (50.4)	146 (50.7)	195 (50.6)		
18 - 19 years	4 (4.1)	6 (2.1)	10 (2.6)	1.217	0.505*
Total	97 (100)	288 (100)	385 (100)		
Gender					
Male	48 (49.5)	144 (50.0)	192 (49.9)		
Female	49 (50.5)	144 (50.0)	193 (50.1)	0.008	1.000
Total	97 (100)	288 (100)	385 (100)		
Religion					
Islam	11 (11.4)	58 (20.1)	69 (17.9)		
Christian	79 (81.4)	216 (75.0)	295 (76.6)		
Others	7 (7.2)	14 (4.9)	21 (5.5)	4.266	0.118
Total	97 (100)	288 (100)	385 (100)		
Expressed likeness for family					
Yes	87 (89.7)	285 (99.0)	372 (3.4)		
No	10 (10.3)	3 (1.0)	13 (96.6)	19.102	0.000*
Total	97 (100)	288 (100)	385 (100)		

* indicates Fisher's exact score

Table 5b: Family Characteristics of Respondents with Exposure to Parental IPV

N=385

	EXPOSURE TO IPV				
	Yes	**No**	**Total**	χ^2	**p value**
	n (%)	n (%)	N (%)		
Family type					
Monogamous	91 (93.8)	266 (92.4)	357 (92.7)		
Polygamous	6 (6.2)	22 (7.6)	28 (7.3)	0.22	0.664
Total	97 (100)	288 (100)	385 (100)	7	
Parents marital status					
Married	83 (85.6)	266 (92.4)	349 (90.6)		
Unmarried	14 (14.4)	22 (7.6)	36 (9.4)	3.95	0.067
Total	97 (100)	288 (100)	385 (100)	1	
Fathers' level of education					
No Formal/I do not know/Koranic Education	22 (22.7)	64 (22.2)	86 (22.3)		
Primary/Secondary Education	11 (11.3)	23 (8.0)	34 (8.8)	1.08	0.607
Tertiary Education	64 (66.0)	201 (69.8)	265 (68.8)	4	
Total	97 (100)	288 (100)	385 (100)		
Mothers' level of education					
No Formal/I do not know/Koranic Education	0 (0.0)	2 (0.7)	2 (0.5)		
Primary/Secondary Education	38 (39.2)	96 (33.3)	134 (34.8)	1.68	0.480*
Tertiary Education	59 (60.8)	190 (66.0)	249 (64.7)	2	
Total	97 (100)	288 (100)	385 (100)		

* indicates fisher's exact score

4.4 Prevalence of mental health problems among adolescents who witness parental IPV

Sixty-one (62.9%) respondents who had witnessed parental IPV met the criteria for any mental health problem (depression, anxiety and alcohol abuse). The most common mental health problem in adolescents who had witnessed parental IPV was depression (58.8%). Other common mental health problems were low self-esteem (79.4%) and anxiety (32%). See Table 6

In both types of parental IPV, depression, anxiety, low self-esteem and suicidal ideation were common problems among adolescents who had witnessed parental IPV. See Table 7

Table 6: Prevalence of Mental Health problems and low self-esteem among respondents who witness parental IPV

N = 385

Mental Health Problems	Adolescents exposed to parental IPV				
	Yes	**No**	**Total**		
	n (%)	n (%)	N (%)	χ^2	**p value**
Any mental health problem					
Yes	61 (62.9)	111 (38.5)	172 (44.7)		
No	36 (37.1)	177 (61.5)	213 (55.3)	17.399	0.000
Total	97 (100)	288 (100)	385 (100)		
Depression					
Yes	57 (58.8)	97 (33.7)	154 (40.0)		
No	40 (41.2)	191 (66.3)	231 (60.0)	19.021	0.000
Total	97 (100)	288 (100)	385 (100)		
Anxiety					
Yes	31 (32.0)	45 (15.6)	76 (19.7)		
No	66 (68.0)	243 (84.4)	309 (80.3)	12.219	0.001
Total	97 (100)	288 (100)	385 (100)		
Alcohol abuse					
Yes	4 (4.1)	7 (2.4)	11 (2.9)		
No	93 (95.9)	281 (97.6)	374 (97.1)	0.749	0.001*
Total	97 (100)	288 (100)	385 (100)		
Suicidal ideation					
Yes	28 (28.9)	32 (11.1)	60 (15.6)		
No	69 (71.1)	256 (88.9)	325 (84.4)	17.387	0.000
Total	97 (100)	288 (100)	385 (100)		
Low self-esteem					
Yes	77 (79.4)	265 (92.0)	342 (88.8)		
No	20 (20.6)	23 (8.0)	43 (11.2)	11.671	0.001
Total	97 (100)	288 (100)	385 (100)		

* indicates Fisher's exact score

Table 7: Prevalence of Mental Health problems and low self-esteem in relation to the types of parental IPV

Mental Health Problems	Adolescents exposed to Emotional IPV n (%)	Adolescents exposed to Physical IPV n (%)	χ^2	p value
Depression				
Yes	55 (58.5)	18 (60.0)		
No	39 (41.5)	12 (40.0)	12.381	0.002
Total	94 (100)	30 (100)		
Anxiety				
Yes	31 (33.0)	9 (30.0)		
No	63 (67.0)	21 (70.0)	9.331	0.009
Total	94 (100)	30 (100)		
Alcohol abuse				
Yes	4 (4.3)	4 (13.3)		
No	90 (95.7)	26 (86.7)	2.516	0.284
Total	94 (100)	30 (100)		
Suicidal ideation				
Yes	27 (28.7)	13 (43.3)		
No	67 (71.3)	17 (56.7)	3.701	0.157
Total	94 (100)	30 (100)		
Low self-esteem				
Yes	74 (78.7)	24 (80.0)		
No	20 (21.3)	6 (20.0)	7.989	0.018
Total	94 (100)	30 (100)		

4.5 Associations between exposure to parental intimate partner violence and their mental health

There were significant associations between exposure to emotional violence and anxiety, suicidal ideations and depression with P values 0.000, 0.000 and 0.000 respectively (P ≤. 05). See Table 8. Following logistic regression analysis of the seven variables that were statistically significant on the bivariate analysis, all the variables remained statistically significant ($p < 0.05$). However, the association between depression and exposure to parental physical IPV no longer remained significant ($p = 0.61$).

Table 8: Association between adolescents' exposure to parental IPV and their mental health
N=385

	Exposure to emotional IPV					Exposure to physical IPV				
	Yes	No	Total	χ^2	p value	Yes	No	Total	χ^2	p value
Depression										
Yes	55	99	154			18	12	30		
No	39	192	231	17.755	0.000*	136	219	355	5.423	0.020*
Total	94	291	385			154	231	385		
Anxiety										
Yes	31	45	76			9	67	76		
No	63	246	309	13.757	0.000*	21	288	309	2.162	0.141
Total	94	291	385			30	355	385		
Suicidal ideation										
Yes	27	33	60			13	47	60		
No	67	258	325	16.391	0.000*	17	308	325	19.043	0.000*
Total	94	291	385			30	355	385		
Alcohol abuse										
Yes	4	7	11			4	7	11		
No	90	284	374	0.876	0.269	26	348	374	12.865	0.007*
Total	94	291	385			30	355	385		
Low self-esteem										
Yes	74	23	97			24	37	61		
No	20	268	288	12.807	0.001*	6	318	324	2.558	0.127
Total	94	291	285			30	355	385		

* indicates a significant association at $P \leq 0.05$

Word count: 1654

CHAPTER FIVE

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 DISCUSSIONS

This chapter discusses and attempts to provide rationale for the key findings of this study in relation to existing literature and anecdotal evidence. The prevalence of adolescents' exposure to parental IPV and mental health problems, socio-demographic correlates of adolescents who witness parental IPV and association between adolescents' exposure to parental IPV and adolescents' mental health were examined. The chapter concludes by highlighting some of the limitations of the study and suggestions for further studies.

Socio-demographic characteristics of all respondents

Three hundred and eighty five adolescents drawn from five private secondary schools randomly selected participated in this study. Female adolescents (50.1%) were slightly more represented in this study and majority of the respondents (50.7%) were between the ages of 14 and 17 years.

A larger proportion of the respondents was from monogamous homes and lived with both parents (92.7% versus 86.2%). Over eighty per cent of the respondents were Christians. The schools used in the study were privately owned by Christians and four out of the five schools were headed by a Christian. This could have impacted the characteristics of students found in the schools as morning activities usually included typical Christian activities (praises to God, bible reading and exaltation).

Less than 15 percent to the respondents work (housekeeping, bead making, game designing and baking) to earn money before or after school which might imply their low parental financial capabilities. This is consistent with the findings of a Nigerian study among 225 children between

the ages of 8 and 17 reported significant association between parents' socio-economic characteristics and child labour (Omokhodion, Omokhodion and Odusote, 2006).

Child labour to augment family income is a common phenomenon in developing countries and may include activities such as street begging, hawking, shoe shining, car washing and bus conducting (Ugochukwu *et al.*, 2012), it may not however be indicator of poverty or underdevelopment as parents might view it as an opportunity to kick start a child's occupational career and/or skills (Elegbeleye, O. S, 2012).

Prevalence of adolescents who witness parental intimate partner violence

Children and adolescents living in homes where IPV occurs are likely to be exposed to the violence (Rich and Roman, no date; Ryan, Rich and Roman, 2015). Exposure to IPV has been used to describe children or adolescents' observation of IPV instead of witnessing IPV as that might imply a direct exposure to IPV (Hamby *et al.*, 2011) ;at least 4 in 10 female victims of IPV have children under the age of 12 (National Resource Center on Domestic Violence, 2002).

Every year, 3.3 million to 10 million children are exposed to parental IPV(AFSEC, 2000; Moylan *et al.*, 2010; Smith and Ragavan, 2010; Hamby *et al.*, 2011). A systematic review of 122 publications showed that adolescents (25.4%) are the main targets of abuse in homes where IPV exists (Lourenço *et al.*, 2013).

In this study, the general prevalence of adolescents who had witnessed parental IPV was 25.2%, this implies that at least 1 in 4 of adolescents were exposed to parental IPV. The findings of this research is consistent with a study carried out in Brazil among 3007 participants above the age of 14, which reported a prevalence of adolescent exposure to IPV at 26.1% (Zanoti-jeronymo, 2009).

Two forms of IPV were identified in this study; Emotional/Psychological violence and physical violence and some of the respondents had been exposed to both forms of IPV and this is consistent with studies as cited by Lourenço (2013) which indicated that children or adolescents may be exposed to more than one form of IPV.

Adolescents in this study were exposed to more than one type of IPV; emotional/Psychological violence and physical violence. Determining differences in prevalence of adolescents' exposure to parental IPV in relation to typology was difficult as many studies have a general prevalence of exposure to parental IPV without grouping them in forms or types (Moylan *et al.*, 2010). However, a study conducted among adolescents in Brazil reported that children or adolescents may be exposed to more than one form of IPV (Lourenço, 2013)

The most common parental IPV identified in this study is emotional violence (24.4%). This is not surprising as studies carried out in Nigeria reported the prevalence of emotional/psychological violence in an intimate relationship as high as 41.8% and 93% (Umana *et al.*, 2014; Oluremi, 2015) which suggests that emotional violence is the easiest type of IPV to perpetrate. Verbal abuse is one of the common ways perpetrators of IPV control their partners' behaviours (Calson, 2002). Furthermore, the prevalence of emotional violence as reported by the adolescents in this study may infer a great level of awareness by adolescents about what is right or wrong or even appropriate regarding interaction between two people. Some studies have argued that physical violence is more popularly accepted than emotional violence and referred to as IPV (Pelser *et al.*, 2005) but the findings of this study shows otherwise.

An Ugandan study conducted by Devries *et al* among 3427 participants between the ages of 11 and 14 years reported that 26% of adolescents had ever seen or heard their parents shouting at each

other (Devries et al., 2017). In this current study, 24.2% of adolescents had seen or heard their parents shouting at each other although it was noted by Hamby *et al* (2011) that it is difficult to use "hearing violence" as a yardstick to measure exposure parental IPV although "hearing violence" has also been described in itself as a form of exposure to IPV.

In this study, only 7.8% of the respondents were exposed to physical violence. The findings in this study was low compared to a study carried out by Devries *et al* (2017) that showed a 14% prevalence of adolescent exposure to physical violence. Physical violence is the most recognized form of IPV (Pelser *et al.*, 2005; Kumar, 2012; Oluremi, 2015). However, the findings of this study shows that although physical violence is the most recognized and commonly publicized, emotional/psychological is more commonly perpetrated. A study carried out in Nigeria among 400 mothers found that 28.3% had experienced physical violence in the last 12 months. This proportion is about half the prevalence rate of psychological violence (55%) found in the same study (Onigbogi, Odeyemi and Onigbogi, 2015).

The similarities in the findings as related to prevalence of adolescents' exposure to parental IPV might be attributed to the use of similar questions to measure exposure to IPV (Devries *et al.*, 2017).

Socio-demographic correlates of adolescents who had witnessed parental IPV

This study found that about 50 percent of the respondents exposed to parental IPV were in mid-adolescence. Hamby (2011) in a survey carried out in the United States among 4549 participants between the ages of 0 to 17 years showed that respondents between the ages of 14 and 17 were more exposed to violence in the home.

This study found that female adolescents are slightly more at risk of being exposed to parental IPV. This may be due to the higher prevalence of females than males used in this study. The finding of this study is consistent with the study carried out by Hamby (2011) that found that females are more at risk of exposure to parental IPV.

Many of the respondents exposed to parental IPV were Christians and were from monogamous families. These findings should be interpreted with caution as this represents the majority of the sample population.

Majority of the parents of the respondents who have been exposed to parental IPV in this study had high academic qualifications (Tertiary Education). This findings is inconsistent with studies carried out Nigeria that shows that mothers with low educational attainment are at risk of experiencing of IPV (Onigbogi, Odeyemi and Onigbogi, 2015; Titilayo, Anuodo and Palamuleni, 2017).

The findings of this study revealed no significant association between socio-demographic characteristics and adolescents exposure to parental IPV. This is consistent with a study carried out in Nigeria among 400 mothers that showed no significant association between socio-demographic characteristics and experiencing IPV (Omuemu and Ogboghodo, 2016). The similarities found in both studies may be a result of the study area as both studies were carried out in Nigeria.

Prevalence of mental health problems among adolescents who had witnessed parental IPV

Exposure to parental IPV has been linked to mental health problems especially emotional and behavioural problems (Moylan *et al.*, 2010; Roberts *et al.*, 2010). This study found that over 60 percent of adolescents who had witnessed parental IPV met the criteria for anxiety, depression

and/or alcohol abuse compared to about 38 percent of adolescents who had not witnessed parental IPV. The findings is consistent with several studies that showed that exposure to parental IPV is a risk factor for mental health problems in adolescence (Smith and Ragavan, 2010; Wright *et al.*, 2011; Levendosky, Lannert and Yalch, 2012; Lourenço *et al.*, 2013).

Depression was the most common mental health problem found in this study among adolescents exposed to parental IPV. Several studies have associated depression with children and adolescents exposure to IPV (Calson, 2002; Moylan *et al.*, 2010; Carracedo, Fariña and Seijo, 2017). The prevalence of depression among adolescents exposed to parental IPV is not surprising as studies have shown that depression is prevalent in violent environments including homes (Bach and Louw, 2010).

The prevalence of low self-esteem was high among respondents in this study irrespective of exposure to parental IPV. The third stage of development (Identity versus identity confusion) according to Erikson (1994) described adolescence as a period where identity must be formed and failure to achieve this may result in a feeling of confusion and isolation. Conforming to a particular peer group does not always address the underlying identity problem (Erikson, 1994).

Abdel-Khalek (2017) described self-esteem as subjective and criticized the RSES as being easily misinterpreted. For example, item 8 of the RSES "I wish I could have more respect for myself" may be interpreted as either the person has sufficient respect for himself however wishes to have more or the person has little respect for himself and wishes to have more (Abdel-khalek, 2017).

The high prevalence of low self-esteem in this study may be attributed to external factors like age, physical abilities, academic achievements and hormonal changes. Munteau (2013) reported that

hormonal changes causes a fluctuation in self-esteem and self-esteem eventually increases and stabilizes in adulthood (Erol and Orth, 2011; Dobrescu, 2013).

This study however found a statistically significant difference between adolescents' exposure to parental IPV and low self-esteem. The findings is consistent with several studies that found an association between exposure to parental IPV and low self-esteem (Calson, 2002; Smith and Ragavan, 2010; Family and Children's Trust Fund of Virginia, 2014; Graham-bermann, 2015; Zaky *et al.*, 2016; Carracedo, Fariña and Seijo, 2017). Carlson (2002) theorized that lack of parental support as a result of persistent violence in the home can result in low self-esteem or a consistent decrease in low self-esteem in the adolescent who witness parental IPV.

This current study found that anxiety was two times more prevalent in adolescents who had witnessed parental IPV. Several studies had placed anxiety and depression in the same category when referring to consequences associated with exposure to parental IPV but the findings in this study refutes this as the prevalence of anxiety is much lower than depression and low self-esteem. This dissimilarity may be as a result of coping mechanisms reported by some studies (Calson, 2002; Wurdeman, 2015) that may have been developed as they go through adolescence as majority of the respondents exposed to parental IPV are in middle adolescence. However in a study carried in Spain among 132 children with mean age 9.54 years, Carracedo (2017) reported that children exposed to parental IPV have poor coping skills. Family disruptions has been listed as a predictor of anxiety disorders in children and adolescents (Abbo *et al.*, 2013).

There is no study known to the researcher as at the time of this study that explored the association between suicidal ideation and adolescents' exposure to parental IPV although some studies have described IPV as a form of family dysfunction as it disrupts the family dynamics and causes stress to the direct victims and those who witness it (Prinstein *et al.*, 2000). Prinstein (2000) in a study

carried out in the United States among 96 adolescents reported that the severity of suicidal ideation is dependent on the inter-relationship between family dysfunction and psychological problems.

The prevalence of suicidal ideation may indicate the severity of the depression among adolescents who witnessed parental IPV in this study (Dube *et al.*, 2001; American Psychiatric Association, 2013). The prevalence of suicidal ideation found in this study however, may have been watered down by the use of only one question as one question may not accurately capture the true intent of the individual as opposed to the Suicidal Ideation Questionnaire (SIQ) as used by Prinstein (2000).

This study found a low prevalence of alcohol abuse among both adolescents who had witnessed parental IPV and adolescents who had not. However, there was a slightly higher proportion of alcohol abuse among adolescents who had witnessed parental IPV.

The prevalence of alcohol abuse found in this study is consistent with other studies (Butler Center for Research, 2016) although very low as opposed to findings obtained in other studies (Eniojukan and Chichi, 2015; Eniojukan, Adje and Oyita, 2015). These differences in prevalence can be as a result of the study area used and cultural differences. This study used private schools while the studies with high prevalence of alcohol abuse were carried it in public schools, this may imply that private schools have the capacity to properly monitor and supervise students placed in their care. The study mentioned was carried out in Delta state, Nigeria where it is culturally acceptable to drink alcohol. The low prevalence may also be as a result of the unwillingness of the students to disclose information on alcohol use as they may not want to be viewed as “immoral” or “spoilt”.

Butler Center for Research (2016) reported that adolescents are frequently diagnosed with substance use disorders using dependency and persistent use criteria intended for the adult population which may not be properly representative of the adolescent population.

This current study while comparing the prevalence of mental health problems of adolescents who had witnessed parental IPV across the types of exposure to parental IPV, the prevalence of depression, anxiety and low self-esteem were statistically significant. The findings is consistent with other studies carried out in developed countries (Lourenço *et al.*, 2013; Family and Children's Trust Fund of Virginia, 2014; Graham-bermann, 2015).

Association between adolescents' exposure to parental IPV and their mental health

Intimate partner violence has been regarded as a traumatic experience for victims (Dube *et al.*, 2002; Levendosky, Lannert and Yalch, 2012). Several studies carried out around the world have established an association between parental IPV and adolescents negative mental health outcomes (Bair-Merritt, 2006; Moylan *et al.*, 2010; Hamby *et al.*, 2011; Greeson *et al.*, 2014; Devries *et al.*, 2017).

This study found significant associations between exposure to both types of parental IPV and depression. There was also a significant association between exposure to emotional IPV and anxiety, these findings were consistent with several studies that showed a significant association between exposure to parental intimate partner violence and mental health problems (Bach and Louw, 2010; Smith and Ragavan, 2010; Wurdeman, 2015).

The most common mental health problems reported in some of these studies among adolescents' exposed to parental IPV are internalizing problems which includes anxiety and depression (Moylan et al., 2010; Smith and Ragavan, 2010). In this study however, there was no significant association between exposure to physical IPV and anxiety. This may be as a result of the age group (middle adolescence) used in this study and the development of coping mechanisms as discussed earlier.

Suicidal ideation was associated with both emotional and physical IP. There is paucity of data in how suicidal ideation interplays with exposure to IPV but it can be inferred that because suicidal ideation is closely associated with depression and low self-esteem, the associated factors may be the reason for the high prevalence. Even though there has not been studies that linked suicidal ideation to exposure to parental IPV, several studies had identified family dysfunction as a risk factor for suicide and self-harm (Prinstein *et al.*, 2000; Hawton *et al.*, 2012; Butterworth, 2014).

This study found a significant association between exposure to physical IPV and anxiety but no significant association between exposure to emotional IPV and anxiety even though there is a higher prevalence of alcohol abuse among respondents exposed to emotional violence. This study is consistent with findings that reported substance use as a consequence of exposure to parental IPV (Jofrebonet, Rosselloroig and Serrasastre, 2017).

This current study showed no significant relationship between low self-esteem and exposure to parental IPV which is inconsistent with several studies conducted in high income countries that reported low self-esteem as a consequence of witnessing parental IPV (Tomar, 2001; Calson, 2002; Moylan *et al.*, 2010; Lourenço *et al.*, 2013; Murphy *et al.*, 2013). This inconsistency may be a result of family relationships, parenting styles, attachment between adolescents and their parents and the possibility of child maltreatment, neglect or abuse as reported in some of these studies (Carlson, 2010; Moylan *et al.*, 2010; Murphy *et al.*, 2013; Greeson *et al.*, 2014).

5.2 STRENGTH OF THE STUDY

This study is the first study known to the researcher that examined the prevalence and correlates of mental health problems among adolescents who witness parental IPV in Nigeria.

5.3 LIMITATIONS OF THE STUDY

The limitations of this study are as follows;

a. The embargo placed by Lagos state government on the involvement of public schools in research; the use of private schools only gave insight to a certain socio-demographics.
b. A few respondents were not living with their parents hence; the information gotten from them may not be accurate.

5.4 RECOMMENDATIONS

The following recommendations have been made based on the findings of this study;

1. Policy makers should look into creating preventive services integrated in religious and judiciary institutions that include a thorough counselling, conflict management skills training and mentorship for married couples. This should reduce the prevalence of parental IPV and also reduce the prevalence of children and adolescents who witness it.
2. A follow up study on adolescents' exposure to parental IPV and how it interacts with family dynamics and/or relationship, development of attachments between family members, child abuse and/or neglect should be carried out. This will help stakeholders and/or policymakers to understand the complexities of exposure to parental IPV in cultural contexts.
3. Schools should be empowered to provide first aid services to adolescents who are victims of intimate partner violence since schools provide a non-discriminatory and less stigmatizing platform to address health and family issues among in-school children.

5.5 CONCLUSION

This study has provided epidemiological data on the prevalence of exposure to parental IPV among secondary school adolescents in Lagos state, Nigeria. Correlates of exposure to parental IPV found in this study included depression, anxiety, low self-esteem and suicidal ideation. The prevalence of adolescents' exposure to parental intimate partner violence is at par with other parts of the world and the significant association with mental health problems should spur a screening in situations where a parent has suffered a form of intimate partner violence. Policymakers can be better informed about the associated risks and/or consequences of children and adolescents exposure to parental IPV. In other words, there should be a relationship between all systems of care for all victims of IPV including children and adolescents who may not have directly witnessed it but have been exposed to it in any way.

Word count: 3176

*Total word count: 14,903

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APPENDIX ONE

INFORMED CONSENT FORM

Name of principal investigator: Olapo Abisola

Department: Centre for Child and Adolescent Mental Health

Email: aviyahwiliams@gmail.com

Phone number: 08157478741

Title of the research:

Exposure to parental intimate partner violence and adolescent mental health

Name(s) and affiliation(s) of researcher(s) of applicant(s):

This study is being conducted by Miss Olapo Abisola of the Centre for Child and Adolescent Mental Health.

Sponsor(s) of research:

This research is self-sponsored.

Purpose(s) of research:

The purpose of this research is to determine the effects of the social environment on the emotional well-being of secondary school students.

Procedure of the research:

1. Five private secondary schools will be recruited for this study.

2. The proportion of students selected from each school will be proportional to the comparative total student population of each school. At least two arms of randomly selected classes will be utilized from each school.

3. Self-reported questionnaires will be administered to all participants who meet the inclusion criteria. Adolescents who have not witnessed parental intimate partner violence will be used as the control group to compare mental health status of at risk adolescents.

Expected duration of research and of participant(s)' involvement:

The research duration is about 3 months and participant{s}' involvement is about 30mins -1hr.

Risk(s): There is no risk on the part of researcher and the participant[s].

Cost to the participants, if any, of joining the research;

Your child'

Benefit[s]:

This research will generate information about the association between exposure to parental intimate partner violence and the emotional wellbeing of at-risk adolescents. This should be a starting point for further research and attention to the children and adolescents in such scenarios, with respect to service planning and delivery.

Confidentiality:

All information collected in this study was strictly confidential and strictly for research purposes only.

Voluntariness:

Your child's participation in this research is entirely voluntary.

Alternative to participation:

If you chose for your child not to participate, it will have no effect on them, family members or their education.

Due inducement[s]:

Your child will not be provided any money or gifts for taking part in the research, however they will be given pens to fill the questionnaires which they can keep afterwards.

Consequences of participant's decision to withdraw from research and procedures for orderly termination of participation:

Your child does not have to take part in this research if they do not wish to. They may stop participating at any time without consequences.

Modality of providing treatment and action[s] to be taken in case of adverse event[s]: Nil

What happens to research participants and communities when the research is over:

The research work will serve as a literature for individual's to gain knowledge.

It will enlighten participants, communities, ministry of women affairs and other related ministries on the formulation of policies, implementation, direction and evaluation of the system of care for children and adolescents that are exposed to parental intimate partner violence.

Statement about sharing of benefits among researchers and whether this include participants:

Not applicable

Any apparent or potential conflict of interest: No conflict of interest

Statement of person obtaining informed consent: I have fully explained this research to my respondents and have given sufficient information, to make an informed decision.

DATE:

SIGNATURE:

NAME:

Statement of person giving consent: I have read the description of the research or have had it translated into language I understand that my child's participation is voluntary. I know enough about the purpose, methods of the research study to judge that I want my child to take part in it.

DATE:

SIGNATURE:

NAME:

Detailed contact information including contact address, telephone, fax, e-mail and any contact information of research[s], institution HREC and head of institution:

This research has been approved by the Health Research Ethics Committee of the Lagos State University Teaching Hospital, If you have any question about your child's participation in this

research, you can contact the principal investigator- Miss Abisola Olapo on 08157478741. You can also contact the director, Center for Child and Adolescent Mental Health Professor Omigbodun via e-mail on olayinkaomigbodun@gmail.com

PLEASE KEEP A COPY OF THE SIGNED INFORMED CONSENT.

APPENDIX TWO

ASSENT FORM

My name is Olapo Abisola. I am a student researcher from the Centre for Child and Adolescent mental health, University of Ibadan. I am asking if you would like to take part in a research study called "Prevalence and correlates of mental health problems amongst adolescents exposed to parental intimate partner violence".

If you agree to be in this study, you will be given an eight (8) page questionnaire to fill, it may take you about 45 minutes to complete the questionnaires. Completing the questionnaires may make you feel a little frustrated; this study may help policymakers make good decisions about adolescents living in these situations.

Please talk this over with your parents before you decide whether or not to participate. I have asked your parents to give their permission for you to take part in this study but even if your parents said "Yes" to this study, you can still decide to not take part in this study and that will be fine.

If you do not want to be in this study, then you do not have to participate. This study is voluntary which means you can decide whether or not to take part in this study. Being in this study is up to you and no one will be upset in any way if you do not want to participate or even if you change your mind later and want to stop.

Signing your name at the bottom means you agree to be in this study.

Date:……

Signature of adolescent:……..

Name of adolescent:……..

APPENDIX THREE

SOCIO-DEMOGRAPHIC QUESTIONNAIRE

Serial Number: __ __ __ __

Today's Date: __ __/__ __/__ __

Please write the answers to the questions or draw a circle where it applies to you. This is not an examination it is only to find out about you and your health.

SECTION I

Personal Information

1. Name of School:

2. Class:

3. What is your date of birth? Date of Birth: _____ _____ _____

Day Month Year

4. How old are you? ____

5. Are you a boy or a girl? (a) boy (b) girl.

6. Do you practise any religion? No Yes

7. Please write down the exact place you attend for worship

_____

(a) Islam (b) Orthodox Christian (c) Pentecostal Christian (d) Traditional religion (e) Other

8. How much does the teaching of your religion guide your behaviour?

(a) Very much (b) much (c) Just a little (d) Not at all

9. How much does the teaching of your religion guide your family life?

(a) Very much (b) much (c) Just a little (d) Not at all

Family Information

10. Family Type: (a) Monogamous (b) Polygamous

11. Marital Status of Parents:

(a) Married (b) Separated/Divorced (c) Father is dead (d) Mother is dead (e) Mother & Father are dead

12. Number of Mother's Children:

13. Number of Father's Children:

14. What is your position among your father's children? _____

15. What is your position among your mother's children? _____

16. How many husbands has your mother had? _____

17. Who do you live with presently?

(a) Parents (b) Mother (c) Father (d) Grandparents (e) Grandmother

(f) Grandfather (g) Other [please specify] _____

18. Who brought you up from your childhood?

(a) Parents (b) Mother (c) Father (d) Grandparents (e) Grandmother

(f) Grandfather (g) Other [please specify] _____

19. How many different people have you left your parents to live with from your childhood?____

20. If more than one person, list the people, time spent and whether experience was good or bad?

Person lived with	From which age to which age	Experience (good or bad)
_____	_____	_____
_____	_____	_____
_____	_____	_____

21. Do you do any kind of work to earn money before or after school? Yes No

22. If yes, please describe what you do _____

23. Level of Father's Education

(a) No Formal Education (b) Koranic School (c) Primary School (d) Secondary School

(e) Post-Secondary (Non-University) (f) University Degree and above (e) I do not know

24. Occupation of Father: [Write the exact occupation] _____/ I do not know

25. Level of Mother's Education

(a) No Formal Education (b) Koranic School (c) Primary School (d) Secondary School

(e) Post-Secondary (Non-University) (f) University Degree and above (e) I do not know

26. Occupation of Mother: [Write in the exact occupation] _____/ I do not know

27. Please indicate if your father or mother or the person you live with owns any of the following

Material	Yes	No
a) House		
b) Motor Car		
c) Flat Screen TV		
d) Satellite TV		
e) Computer/Laptop		
f) Fridge		
g) Mobile Phone		
h) Air Conditioner		
i) Generator set		
j) Gas Cooker		

28. Do you like your family? Yes No

29a. If Yes, Why? _____

29b. If No, Why? _____

30. Have you ever seen or overheard your parents shouting at each other?

If yes, please provide an example.

31. Have you ever seen or overheard your parents calling each other rude or hurtful names?

If yes, please provide an example.

32. Have you ever seen or overheard your parents hitting, slapping or throwing things at each other?

If yes, please provide an example.

33. Have you ever felt either parent was in danger as a result of the other's actions?

If yes, please provide an example.

APPENDIX FOUR

PATIENT HEALTH QUESTIONNAIRE

Serial Number: __ __ __ __
Today's Date: __ __/__ __/__ __

1. During the last 4 weeks, how much have you been bothered by any of the following problems?	**Not bothered**	**Bothered a little**	**Bothered a lot**
a. Stomach pain			
b. Back pain			
c. Pain in your arms, legs, or joints (knees, hips, etc.)			
d. Menstrual cramps or other problems with your periods			
e. Pain or problems during sexual intercourse			
f. Headaches			
g. Chest pain			
h. Dizziness			
i. Fainting spells			
j. Feeling your heart pound or race			
k. Shortness of breath			
l. Constipation, loose bowels, or diarrhea			
m. Nausea, gas, or indigestion			

2. Over the last 2 weeks, how often have you been bothered by any of the following problems?	**Not at all**	**Several Days**	**More than half the days**	**Nearly every day**
a. Little interest or pleasure in doing things				
b. Feeling down, depressed, or hopeless				
c. Trouble falling or staying asleep, or sleeping too much				
d. Feeling tired or having little energy				
e. Poor appetite or overeating				
f. Feeling bad about yourself — or that you are a failure or have let yourself or your family down				
g. Trouble concentrating on things, such as reading the newspaper or watching television				
h. Moving or speaking so slowly that other people could have noticed? Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual				
i. Thoughts that you would be better off dead or of hurting yourself in some way				

3. Questions about anxiety.			
a.	In the last 4 weeks, have you had an anxiety attack — suddenly feeling fear or panic?	**NO**	**YES**
If you checked "NO", go to question #5.			
b.	Has this ever happened before?		
c.	Do some of these attacks come suddenly out of the blue — that is, in situations where you don't expect to be nervous or uncomfortable?		
d.	Do these attacks bother you a lot or are you worried about having another attack?		

4. Think about your last bad anxiety attack.		**NO**	**YES**
a.	Were you short of breath?		
b.	Did your heart race, pound, or skip?		
c.	Did you have chest pain or pressure?		
d.	Did you sweat?		
e.	Did you feel as if you were choking?		
f.	Did you have hot flashes or chills?		
g.	Did you have nausea or an upset stomach, or the feeling that you were going to have diarrhea?		
h.	Did you feel dizzy, unsteady, or faint?		
i.	Did you have tingling or numbness in parts of your body?...		
j.	Did you tremble or shake?		
k.	Were you afraid you were dying?		

5. Over the last 4 weeks, how often have you been bothered by any of the following problems?		**Not at all**	**Several days**	**More than half the days**
a.	Feeling nervous, anxious, on edge, or worrying a lot about different things.			
If you checked "Not at all", go to question #6.				
b.	Feeling restless so that it is hard to sit still.			
c.	Getting tired very easily.			
d.	Muscle tension, aches, or soreness.			
e.	Trouble falling asleep or staying asleep.			
f.	Trouble concentrating on things, such as reading a book or watching TV.			
g.	Becoming easily annoyed or irritable.			

6. Questions about eating.		
a. Do you often feel that you can't control what or how much you eat?	**NO**	**YES**
b. Do you often eat, within any 2-hour period, what most people would regard as an unusually large amount Of food?		
If you checked "NO" to either #a or #b, go to question #9.		
c. Has this been as often, on average, as twice a week for the last 3 months?		
7. In the last 3 months have you often done any of the following in order to avoid gaining weight?	**NO**	**YES**
a. Made yourself vomit?		
b. Took more than twice the recommended dose of laxatives?		
c. Fasted — not eaten anything at all for at least 24 hours?		
d. Exercised for more than an hour specifically to avoid gaining weight after binge eating?		
8. If you checked "YES" to any of these ways of avoiding gaining weight, were any as often, on average, as twice a week?	**NO**	**YES**
9. Do you ever drink alcohol (including beer or wine)?	**NO**	**YES**
If you checked "NO" go to question #11.		
10. Have any of the following happened to you more than once in the last 6 months?	**NO**	**YES**
a. You drank alcohol even though a doctor suggested that you stop drinking because of a problem with your health.		
b. You drank alcohol, were high from alcohol, or hung over while you were working, going to school, or taking care of children or other responsibilities.		
c. You missed or were late for work, school, or other activities because you were drinking or hung over.		
d. You had a problem getting along with other people while you were drinking.		
e. You drove a car after having several drinks or after drinking too much.		

11. If you checked off any problems on this questionnaire, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

Not difficult at all	**Somewhat difficult**	**Very difficult**	**Extremely difficult**

APPENDIX FIVE

ROSENBERG SELF ESTEEM SCALE

Serial Number: __ __ __ __

Today's Date: __ __/__ __/__ __

Instructions: Below is a list of statements dealing with your general feelings about yourself. If you **strongly agree**, circle SA. If you **agree** with the statement, circle A. If you **disagree**, circle D. If you **strongly disagree**, circle SD.

1. On the whole, I am satisfied with myself.	SA	A	D	SD
2. At times, I think I am no good at all.	SA	A	D	SD
3. I feel that I have a number of good qualities.	SA	A	D	SD
4. I am able to do things as well as most other people.	SA	A	D	SD
5. I feel I do not have much to be proud of.	SA	A	D	SD
6. I certainly feel useless at times.	SA	A	D	SD
7. I feel that I'm a person of worth, at least on an equal plane with others.	SA	A	D	SD
8. I wish I could have more respect for myself.	SA	A	D	SD
9. All in all, I am inclined to feel that I am a failure.	SA	A	D	SD
10. I take a positive attitude toward myself.	SA	A	D	SD