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Intimate Partner Violence among Women of Reproductive Age

Leah Okenwa

Karolinska Institutet

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Intimate Partner Violence among Women of Reproductive Age – Magnitude Nature and Consequences for Reproductive Health

Leah Okenwa

Karolinska Institutet

From the Department of Public Health Sciences

Division of Social Medicine

Karolinska Institutet, Stockholm, Sweden.

INTIMATE PARTNER VIOLENCE AMONG WOMEN OF REPRODUCTIVE AGE - MAGNITUDE NATURE AND CONSEQUENCES FOR REPRODUCTIVE HEALTH

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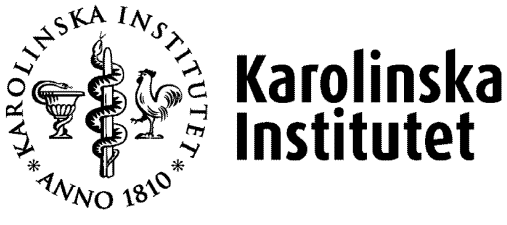

Stockholm 2011

Cover: A closer look.

A magnifying glass is a simple tool for seeing details. This may be a reminder to all stake holders i.e. Healthcare providers, family, friends, policy makers, law enforcement agents etc, but most importantly women and girls, to take a closer look in the combined effort towards IPV prevention and management.

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Motivation

Working as an optometrist at primary eye care level in Nigeria, i came in contact with women whose eye injury pattern was sometimes at variance with their own account of cause of injury. Somewhere along the lines, some women do open up and say the exact cause: they had been hit; they breakdown and cry with helpless resignation to fate. Unfortunately, nothing is ever said about pressing charges or leaving, they only talk about friends and family members mediating several times before or about nobody else being aware.

Curiosity thus became the motivation for this thesis. Questions such as why anyone should hit a spouse, why the women remain, why nothing else is done, other than friends and families pleading with the man to stop, why some women remain silent, potential consequences etc, all need to be answered. Most importantly in this Nigerian context, may be how friends and families can be properly harnessed in the prevention and management of intimate partner violence.

A quote from the book in the Light of Truth by Abd-ru-shin, thoroughly sums it all up. (Words in brackets, are own interpretation)

'It is thoroughly hammered into the girl that her life will be joyless unless she can go through it at the side of a man and that otherwise she will never be taken seriously. Wherever a member of the female sex turns she sees the glorification of *earthly* love, with maternal bliss as its highest aim! Thus, due to artificial pressure, the idea is formed that every girl who cannot achieve this is to be pitied and has partly wasted her time on earth. From the moment of her birth all thoughts, all desires and all plans are aimed at this, which is so deeply engrained as to become a part of her very flesh and blood. But all this is a very clever move ...with purpose of debasing human womanhood! ... And many a girl "escaped" by suddenly embarking upon a relationship which she contracted with great reluctance, (including doubt or deliberate blindness to the man's negative attitudes including violence) only because she refused to fall a miserable prey in her old age to the consequences of this wrong opinion, which hang like threatening swords over every girl's head!

A woman's principal task here on earth....is to ennoble her environment. Coming as she does from above, holding herself above with her delicate intuitive perception, and thus leading upwards in turn, she forms *the anchorage of man with the Light.* It is *thus* that you shall and *must* stand in Creation! Therefore become spiritually free within yourselves, you women and girls! The woman who is content to live *merely* as a (wife) and mother in her life on earth (putting up with even violence) has missed her real purpose and vocation!

--Abd-ru-shin

(Author of the book *In The Light of Truth*).

Abstract:
Background: Intimate Partner Violence (IPV) against women is now recognised as a problem of global magnitude, owing to its detrimental consequences on the health, social and economic welfare of women and their children. This scenario has prompted increased research to understand its risk factors and data has indicated contextual variation in this regard, warranting an assessment in each unique setting. A major constraint, however, on the detection and potential management of IPV lies in the poor disclosure of abuse by many women and their submission to abuse, particularly in Sub-Saharan Africa.
Objective: We studied the magnitude and risk factors for IPV exposure among women in a community of Nigeria (paper 1), extent of and factors associated with the disclosure of IPV in the community sample (paper 2), the association between IPV and reproductive health outcomes in a nationally representative sample of Nigerian women (paper 3) and women and men's attitudes towards IPV in a nationally representative sample (paper 4).
Methods: Structured interviews were conducted in a sample of over 900 women selected systematically from among visitors to a community health facility (papers 1 and 2). Women were probed on exposure to and disclosure of IPV, as well as demographic, social and empowerment measures. Secondary data was retrieved from the demographic and health surveys of Nigeria 2008, which utilised multi-stage sampling to gather demographic and health data on over 45,000 men and women, which was used to study the reproductive health outcomes in relation to IPV (paper 3) as well as model attitudes towards IPV using demographic, social and empowerment indicators (paper 4). Statistical analyses used included Chi-square tests and Logistic regressions.
Results: The 1 year prevalence of IPV was 29%, with significant proportions reporting psychological (23%), physical (9%) and sexual (8%) abuse. Independent predictors of IPV included in-access to information, women's autonomy in decision making and contribution to household expenses (paper 1). Fifty four percent of the participating women would not disclose IPV on the hypothetical situation of exposure. Among those willing to disclose, 37% (n=103) would disclose to some form of institutions (i.e. religious leaders, law enforcement officers (only 1% would actually disclose to the police). This institutional disclosure is in contrast to 68% who opted to disclose to close family and relatives. Ethnicity, woman's own use of alcohol and autonomy in household decision (e.g. having a say on household purchases), increased the likelihood of disclose IPV (paper 2). Exposure to IPV was associated with using modern forms of contraception; have a history of miscarriages, induced abortions, stillbirths, or infant mortality; and having many children. These associations remained even after adjustment for potential confounders including demographic and socioeconomic factors (paper 3). Although justification of IPV was common among men and women, a higher proportion of women justified IPV compared to men. For both men and women, justification of wife beating was associated with low education, rural residency and ethnicity. Access to information was associated with justification of abuse, sometimes in the unexpected manner. While in-access to newspaper was associated with an increased likelihood of justifying abuse among women, in-access to radio/tv decreased the likelihood of endorsing wife abuse among the women. The direct opposite was observed among men. Finally, having a shared autonomy in household decisions was associated with a reduced likelihood of justifying wife abuse among both women and men (paper 4).
Conclusion: IPV is rampant and is associated with detrimental reproductive health outcomes and contraception use among Nigerian women. Nigerian women justify IPV to a higher degree than men, with variations in gender regarding the determinants of such justification. Though many of the predictors of IPV exposure, disclosure and attitudes tend to corroborate previous work and theories, the association between empowerment indicator and these outcomes are sometimes contradictory to previous work, suggesting possible contextual differences. The thesis has important implications for prevention of IPV in Nigeria and further research.

List of Original Papers

This Thesis is based on the following publications, which will be referred to in the text as study and enumerated in roman numerals.

I. Okenwa L, Lawoko S., Jansson B. Exposure to Intimate Partner Violence amongst women of reproductive age in Lagos, Nigeria: Prevalence and Predictors. *Journal of Family Violence 2009: 24; 517-530.*

II. Okenwa L, Lawoko S., Jansson B. Factors associated with disclosure of Intimate Partner Violence among Women in Lagosn Nigeria. *International Journal of Injury and Violence Research, 2009; 1: 37-47.*

III. Okenwa L, Lawoko S., Jansson B. Contraception, reproductive health and pregnancy outcomes among women exposed to intimate partner violence in Nigeria The European Journal of Contraception and *Reproductive Health Care, Dec 2010;15:1–8*

IV. Okenwa L, Lawoko S, Jansson B. Attitudes towards wife beating: a comparison of predictors among men and women in Nigeria. (Submitted).

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1. Introduction

Intimate Partner Violence (IPV) against women is now recognised as a problem of global magnitude, owing to its detrimental consequences on the health, social and economic welfare of women and their children (Koenig et al., 2006; WHO, 2002, 2005, 2010). Though specific groups of women report higher exposure to IPV, the phenomenon cuts across all age, social and economic constellations and is evident in both heterosexual and homosexual relationships (Koenig et al., 2006; WHO 2002, 2005). Exposure to IPV among women has been associated with increased morbidity (e.g. poor reproductive health) and is documented as the third leading cause of mortality among women of reproductive age (Lemmey, McFarlane, Wilson & Malecha, 2001; WHO, 2002; Heise, 1994; Kruger, 2002). This scenario has prompted increased advocacy of screening for IPV in healthcare settings, thus imposing responsibilities on the healthcare sector for detection and management of the problem. A major constraint, however, on the detection and potential management of IPV lies in the poor disclosure of abuse by many women, particularly in Sub-Saharan Africa. Studies have indicated that women rarely disclose IPV exposure to relevant authorities, including police, healthcare providers and organisations working to protect women (McCauley, Kern, Kolodner et al, 1996; Scholle, Buranosky, Hanusa et al., 2003). This has been attributed to a lack of trust in these authorities, "respect" for husband and family, fear of reprisal attacks, economic dependence on the abusive partner, and concern for the safety and welfare of children (# Rodriguez, Quiroga, Bauer, 1996, Illka, 2005; Lee, Thompson, Mechanic, 2002; Bancroft, Silverman, 2000). While all this may be the case, data from the Sub-Saharan African region indicate that significant proportions of women themselves justify IPV (Uthman, Lawoko, Moradi, 2009; Lawoko 2007), providing anecdotal support for the importance of the role played by attitudes towards IPV in disclosure of and exposure to IPV. It is therefore incumbent on researchers and practitioners to understand factors associated with IPV disclosure and attitudes in a bid to inform interventions aimed at improving its detection and management. This thesis attempts to understand the interplay between these factors in a Nigerian context. To emphasise the public health importance of these issues, the extent, risk factors and health consequences of IPV, in one and the same context, make a valuable contribution to this thesis.

2. **Background**

2.1. Definitions of IPV, types/categorisation, magnitude and extent, risk factors and consequences for health

There have been criticisms of research into IPV, in which it has been described as stereotyped and prejudiced, often depicting men as perpetrators and women as victims. The differences in physical strength between the genders in general place men, rather than women, as potential perpetrators with a greater propensity to inflict injuries of significant magnitude and sometimes with fatal outcomes. The evidence for this is overwhelming, given the association between IPV and mortality/morbidity among women (Rennison & Welchans, 2000); Schafer et al., 1998; Koening et al. 2006; WHO, 2002, 2005, 2010, Emenike,Lawoko,Dalal, 2008 #), which is not so apparent among men.

In an attempt to disregard any underlying sex biases, IPV in general has been defined as any violence within an intimate relationship perpetrated by one partner on the other. Thus, IPV against women can be seen as a form of violence against women occurring in an intimate relationship. Violence against Women (VAW) is defined in the United Nations Declaration on the Elimination of Violence against Women (1993) as "any act of gender-based violence that results in, or is likely to result in, physical, sexual or psychological harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or in private life". But, while we have this general definition of VAW as a phenomenon, IPV lacks such a definition, although there is major overlap in content between the various conceptualisations presented.

Ganley and Schechter (1996) defined Intimate Partner Violence (IPV) as a pattern of assaultive and coercive behaviours, including physical, sexual and psychological attacks, and also the economic coercion that adults or adolescents use against their intimate partners. *Children and Family Court Advisory and Support (USA)* conceptualises IPV as patterns of behaviours characterised by the misuse of power and control by one person over another who are or have been in an intimate relationship. It may occur in mixed-gender and same-gender relationships and has profound consequences for the lives of children, individuals, families and communities. These can be physical, sexual, emotional and/or psychological. The latter may include intimidation, harassment, damage to property, threats and financial abuse. The *Center for Disease Control (CDC),* USA, define IPV as physical, sexual, or psychological harm by a current or former partner or spouse, occurring in heterosexual or same-sex couples

and does not require sexual intimacy. Furthermore, the CDCs view IPV as occurring on a continuum, ranging from one blow that may or may not impact on the victim to chronic, severe battering. The *World Health Organisation (WHO)* defines IPV as behaviours within an intimate relationship that cause physical, sexual or psychological harm, including acts of physical aggression, sexual coercion, psychological abuse and controlling behaviours.

2.2. Types and categorisation of IPV

The definitions above suggest three main categories of IPV: physical, sexual, and psychological/emotional. Saltzman et al. (2002) describe them as follows:

2.2.1. Physical IPV

Acts that constitute physical IPV encompass the intentional use of physical force with the potential for causing death, disability, injury, or harm. Physical violence includes, but is not limited to the following: scratching; pushing; shoving; throwing; grabbing; biting; choking; shaking; slapping; punching; burning; use of a weapon; and, use of restraints or one's body, size, or strength against another person.

2.2.2. Psychological/emotional IPV

Included here is trauma to the victim caused by acts, threats of acts, or coercive tactics. Psychological/emotional abuse can include humiliating the victim, controlling what the victim can and cannot do, withholding information from the victim, deliberately doing something to make the victim feel diminished or embarrassed, isolating the victim from friends and family, and denying the victim access to money or other basic resources. Other aspects are threats of physical or sexual violence using words, gestures, or weapons to communicate the intent to cause death, disability, injury, or physical harm.

2.2.3. Sexual violence

This form of IPV is defined by three main acts: use of physical force to compel a person to engage in a sexual act against her or his will, whether or not the act is completed; an attempted or completed sex act involving a person who is unable to understand the nature or condition of the act, to decline participation, or to communicate unwillingness to engage in the sexual act, e.g., because of illness, disability, or the influence of alcohol or other drugs, or because of intimidation or pressure; and, abusive sexual contact.

2.3. Epidemiology

2.3.1. Magnitude and extent

It has been shown that there are cross-country and inter-regional variations in IPV prevalence rates. These variations may be attributable to contextual and methodological factors; however, prevalence rates in developing countries are generally higher (life-time prevalence 11-52%, yearly prevalence 4-29%) than those in developed countries, at 11-16% (Gage, 2005; Kishor & Johnson, 2004; Jewkes, Levin & Penn-Kekana, 2002; Ellsberg, Pena, Herrera, Liljestrand & Winkvist, 2000; Koenig, Lutalo, Zhao, Nalugoda, Wabwire-Mangen, Kiwanuka et al., 2003). Globally, prevalence rates vary from 10% to 69%, and it is reported that at least one woman in three has been beaten, coerced into sex or otherwise abused in her lifetime (Heise & Garcia-Moreno, 2002; Heise, Ellsberg, & Gottemoeller,1999).

In the *WHO Multi-country study on women's health and domestic violence against women*, between 6% and 59% of women reported experiencing sexual violence by an intimate partner in their lifetime, with the proportion usually falling between 10% and 50% in most of the participating locations (Garcia-Moreno et al., 2005).

2.3.2. Health consequences

Intimate partner violence against women has been linked to negative health outcomes, including physical injuries such as bruises and fractured bones (Koenig et al., 2003; Aimakhu et al., 2004; Fawole et al., 2005). Also shown to be related to IPV is Post Traumatic Stress Disorder (Tolman & Rosen, 2001; Petersen, Gazmararian & Clark, 2001; Golding, 1999; Campbell, 2002; Aidoo & Harpham, 2002). In addition, the experience of IPV may lead to behaviours that represent health risk, such as alcohol and substance dependence and suicide attempts (Roberts, Auinger & Klein, 2005; Silverman, Raj, Mucci & Hathaway, 2001).

Although IPV affects women of all ages, reproductive age is associated with increased vulnerability, and the increasing evidence supporting the adverse impact of IPV on women's reproductive health, further strengthens this assertion. Research indicates a correlation between IPV exposure and an increased risk of gynaecological disorders, unwanted pregnancies, terminated pregnancies, child loss during infancy, premature labour, more births, and sexually transmitted diseases including HIV/AIDS (Bourke-Martignoni, 2002; WHO, 2002; Heise, 1994; Ilika, 2002; Tjaden & Theonnes, 1997).

Intimate partner violence may also affect the health and well-being of children in the family. This is partly due to the increased rates of depression and traumatic stress, and the reduced quality of child attachment and parenting capacities that have been seen among victims of IPV. Studies have shown that the children of abused mothers have lower rates of immunisation and higher rates of diarrhoeal diseases, and are more likely to die before the age of five years (Asling-Monemi, Tabassum & Persson, 2008; Silverman et al., 2009).

2.3.2.1 The role of IPV in women's reproductive health, contraception use and pregnancy outcomes

Much attention has been paid to the impact of IPV on women's reproductive health outcomes, such as unintended pregnancies, terminated pregnancies, health-seeking behaviours during the ante-natal period, child loss during infancy, and the use of family planning methods. In itself, this is not surprising, in that women of reproductive age are at augmented risk of IPV (Emenike et al, 2005; Garcia-Morena et al., 2005; Kishor & Johnson, 2004).

Contraception: Contraception is generally used for pregnancy prevention and child spacing. Barriers to using contraception among women in low-income countries are a perception that it conflicts with their husbands' views on fertility preferences and family planning, and the view that contraception is socially or cultural unacceptable. For a woman to request her partner to use a contraceptive, especially a condom, may be interpreted by him as a direct accusation of infidelity, as an attempt by the woman to take a more active role in sexual decision-making, or as an attempt to interfere with his pleasure (Sathar, Jain, Rao, Haque, & Kim, 2005; Westoff & Bankole, 2000; Casterline, Sathar & Haque, 2001). Using focus groups, Kaye (2006) found a link between domestic violence and non-use of contraception and induced abortion.

Unintended/unwanted Pregnancies: One hypothesis is that women who end up with an unintended pregnancy might be experiencing an inability to control the timing of sexual relations or to negotiate contraception with their partners (Glander, Moore, Michielutte, Parsons, 1998; Gazmararian, 1995; Goodwin et al., 2000; Pallitto & O'Campo, 2004; Pallitto & O'Campo, 2005). A review of the literature by Pallitto et al. (2005) found a link between IPV and unintended pregnancy within some population groups. A study of a group of

Pakistani women using focus groups found that while many women chose to carry on with unplanned (unintended) pregnancies, some others chose to terminate such pregnancies. As is the case in some other countries, abortions are illegal and thus take place in an unsafe environment, thereby increasing the risks of post-abortion complications, such as secondary infertility and serious reproductive morbidity (Okonofua, 1994; Hussain & Khan, 2008). In some other cases, however, termination of pregnancy is not optional since these pregnancies end up as miscarriages or stillbirth. Studies .have shown a higher occurrence of miscarriages and stillbirths among women exposed to IPV.(Diop-Sidibe, Campbell, Becker, 2006; Emenike, Lawoko, Dalal, 2008)..

IPV in pregnancy and consequent pregnancy outcomes: Although some cultures frown at beating women during pregnancy (Ilika, Okonkwo & Adogu, 2002), IPV still occurs during pregnancy. Such cultural protection may only apply to physical IPV, and it is not clear whether or not it extends to other forms, such as psychological/emotional or sexual IPV. The complications of IPV during pregnancy are enormous, including injuries leading to hospitalisation, a higher rate of preterm delivery, and an increased risk of delivery of a low birth-weight infant. In a Nicaraguan study, women who were victims of IPV had a more than four times greater likelihood of delivering a low birth-weight infant. Although some argue that female victims of IPV take alcohol, smoke, or use other drugs in response to IPV, the reasoning is that, whether the preterm birth is the result of violence or secondary to the substance abuse, there is still a link, direct or indirect, to IPV (Valladres et al., 2005; Kuo et al., 2002). Findings from a cohort study from Uganda show that pregnant women exposed to IPV are more likely to deliver babies of low birth-weight and have a 37% higher risk of obstetric complications (such as hypertension, premature rupture of membranes, and anaemia) that necessitate antepartum hospitalisation (Kaye et al., 2006). In a case control study conducted on a Nicaraguan population, Valladeres et al. (2002) found that about 16% of cases of low birth-weight in the infant population could be attributed to physical abuse by a partner in pregnancy. Given the above, the role of IPV in pregnancy outcomes continues to be a source of concern that healthcare providers need to address.

1.3.3 Risk factors/determinants

A handful of frameworks and theories have attempted to explain the occurrence of and risk factors for IPV. Danis (2003), drawing on the work of earlier researchers, identified at least

four: social exchange (or deterrence) theory, social learning theory, feminist theory, and the ecological framework.

1.3.3.1. Social exchange theory postulates that human interaction is driven by the pursuit of rewards and the avoidance of punishments and costs (Blau, 1964). It postulates that perception of a relationship with another person is a function of what we put into that relationship and what we derive from it (Rusbult, 1983). Gelles and Cornell (1985, 1990) contend that domestic violence occurs when rewards do not outweigh the costs. Defensive physical action by the victim, loss of personal status, and dissolution of the domestic arrangement are all considered as costs in this context.

1.3.3.2. Social learning theory suggests that people learn to be violent by being immediately rewarded or punished after they commit violent behaviour, through what is called *reinforcement*, and by watching the experiences of others, called *modeling* (Bandura, 1973). Studies have shown correlations between witnessing abuse in early life and the perpetration of domestic violence and victimisation in later life (O'Leary, 1987).

1.3.3.3 Feminist theory suggests that domestic violence emanates from a "patriarchal" school system, which assigns men the responsibility for controlling and managing female partners (Dobash & Dobash, 1979; Yllo, 1993). Thus, domestic violence is attributed to a flaw in societal structure.

1.3.3.4. The ecological framework - an in-depth analysis

Due to its comprehensive nature, the ecological framework deserves a closer look.

The ecological framework contends that no single theory can be used to explain or predict domestic violence. The underlying theory proposes risk factors for domestic violence and interventions to address it at four major levels. The levels identified are individual, relationship, community and societal.

The ecological model explores the relationship between individual and contextual factors. Thus, violence is considered as the product of multiple levels of influence on behaviour (Figure 1). The model was first introduced in the late 1970s (Garbarino & Crouter, 1978) to examine child abuse, and was later applied to youth violence (Gabarino, 1985; Tolan & Guerra, 1994). It has also been used more recently to seek understanding of other types of

violence, such as IPV (Chaulk & King, 1998; Heise, 1998) and abuse of the elderly (Carp, 2000; Reis & Roth, 1993).

Figure 1: The ecological framework.

According to the ecological model, there are risk factors at four levels:

Individual-level factors

Contributing to the first level are the biological and personal-history factors that increase the likelihood that an individual will become a victim or perpetrator of violence. These include factors such as biological sex, age and substance use.

Biological sex: Vulnerability to and justification of IPV are greater among women than men, with consequent graver outcomes for women, such as physical injury (Rennison & Welchans, 2000; Schafer et al., 1998).

Age: Relative youth is a risk factor for being either a perpetrator (Black et al., 2001) or victim (Harwell & Spence, 2000; Romans et al., 2007; Vest et al., 2002) of IPV.

Education: Low level of education is the most consistent individual factor associated with both the perpetration and experiencing of IPV (Ackerson et al., 2008; Boy & Kulczycki, 2008; Boyle et al., 2009; Brown et al., 2006; Chan, 2009; Dalal, Rahman & Jansson, 2009; Gage, 2006; Jeyaseelan et al., 2004; Johnson & Das, 2009; Koenig et al., 2006; Martin, Taft & Resick, 2007; Tang & Lai, 2008). For example, women who report lower levels of education (primary or none) have a two to five-fold increased risk of IPV compared with higher-educated women (Ackerson et al., 2008; Boy & Kulczycki, 2008; Dalal, Rahman & Jansson, 2009; Koenig et al., 2004; Martin, Taft & Resick, 2007; Tang & Lai, 2008). This is due to the fact that lower educational attainment reduces a woman's exposure and access to resources, increases the acceptance of violence, and maintains unequal gender norms. Lower-

educated men were up to four times more likely to perpetrate IPV than higher-educated men (Ackerson et al., 2008; Dalal, Rahman & Jansson, 2009). Women with highers level of education report lower levels of IPV, suggesting that higher levels of education may act as a protective factor.

Antisocial behaviour: Studies show a consistent association between antisocial personality disorders and the perpetration of IPV. People with this kind of personality trait are more likely to disregard social norms, and have a tendency to become aggressive and impulsive, resulting in the perpetration of IPV (Abbey et al., 2004; Chan, 2009; Marshall, Panuzio & Taft, 2005).

Alcohol and other substance abuse: Although evidence for a causal association between harmful use of alcohol and violence is weak (Gil-Gonzalez et al., 2006), studies have shown that men who misuse alcohol are 1.6 to 4.8 times more likely to perpetrate IPV (Abrahams et al., 2004; Dalal, Rahman & Jansson, 2009; Flake, 2005; Gage, 2006; Johnson & Das, 2009; Koenig et al., 2004; Ramiro, Hassan & Peedicayil, 2004). The role of alcohol use is not entirely clear, since several reviews have found a weak or no relationship at all between alcohol use and the experiencing of IPV (Abbey et al., 2004; Gutierres & Van Puymbroeck, 2006; Söchting, Fairbrother & Koch, 2004; Tang & Lai, 2008; Testa, 2004).

Acceptance of violence: There are correlations between men's and women's attitudes to IPV and its perpetration, including victimisation. Men who believe that it is acceptable to beat their wives have a two-fold greater risk of perpetrating IPV (Abramson, 2004). Research shows that women who have acceptant attitudes towards IPV are more likely to experience IPV than those who do not (Boyle et al., 2009; Uthman, Lawoko & Moradi, 2009). Here, several factors interact to perpetuate the occurrence of IPV. These attitudes may be transmitted across generations through learning across the life-span, which includes men's and women's acceptance of IPV, men's conviction that women are inferior, restrictive gender roles, and dominant patriarchal values.

Relationship-level factors

At this level, there are factors arising from relationships with peers, intimate partners and family members. These make up people's closest social circle and can shape their behaviour and range of experiences.

Multiple partners: It is believed that some men engage in having multiple sexual partners as a means of achieving peer status and self-esteem, and of being able to relate to their female partners impersonally, thereby cutting out emotional bonding (Jewkes et al., 2006). Multiple partnership and a woman's own perception of infidelity on the part of her man are strongly associated with both the perpetration and experiencing of IPV (Abrahams et al., 2004; Chan, 2009; Dalal, Rahman & Jansson, 2009; Jewkes et al., 2006; Johnson & Das, 2009; Koenig et al., 2004; Tang & Lai, 2008; Vung & Krantz, 2009). Research findings show that such men are more likely to engage in risky sexual behaviours, such as a refusal to use condoms, which increases the risk of HIV infection for them and their partners. In a study by Garcia-Moreno et al. (2005), women whose current or most recent partner was violent were more likely than women in non-violent relationships to report at least one refusal to use a condom.

Differences in demographic status between the partners: While education among women is likely to reduce exposure to IPV, a woman having a higher education than her husband increases vulnerability to IPV. Also, shared autonomy between husband and wife in household decisions has been found to reduce the likelihood of exposure to IPV among women (Lawoko, Dalal, Jiayou & Jansson, 2007). While many interventions focus solely on perpetrators or victims, these findings point to the importance of viewing a relationship in a holistic manner (i.e. both partners) when designing interventions to address IPV exposure.

Community-level factors

At this level, there is an exploration of community contexts in which social relationships are embedded, such as schools, workplaces and neighbourhoods. The purpose is to identify the characteristics of the settings that are associated with people becoming victims or perpetrators of IPV.

Weak community sanctions against intimate partner and sexual violence: The level of abuse in a community is affected by how that community responds to IPV (Heise & Garcia-Moreno, 2002). In general, societies where abused women have access to a sanctuary or legal protection tend to exhibit lower exposure to IPV than those where such facilities and sanctions are weak or lacking (Counts, Brown & Campbell, 1992). Community sanctions/prohibitions may take the form of either formal legal sanctions or moral pressure from neighbours to intervene if a woman is beaten; sanctuaries can be shelters or consist in family-based support.

Poverty: Although IPV cuts across all socioeconomic groups, women living in poverty are disproportionately affected (Heise & Garcia-Moreno, 2002; Jewkes, Sen & Garcia-Moreno, 2002). The mechanism of poverty itself in the occurrence of IPV is not clear, but accompanying factors may contribute to IPV. Factors, such as overcrowding or hopelessness, feelings of stress, frustration and a sense of inadequacy at having failed to live up to the culturally expected role of provider, may all interact. Poverty may lead to marital disagreements or make it more difficult for women to leave violent or otherwise unsatisfactory relationships (Jewkes, Sen & Garcia-Moreno, 2002).

Societal-level factors

At this level, there are broader, macro-level factors that influence IPV, such as gender inequality, religious or cultural belief systems, societal norms, and economic or social policies resulting in gaps and tensions between groups of people. A typical example is the maintenance of patriarchy or male dominance, which is a reflection of gender inequality and inequities at a societal level, and legitimises IPV within a society (Russo & Pirlott, 2006; Taft, 2009). In some societies, men are viewed as economically and religiously superior to women, who are sometimes regarded as a liability (Ali & Bustamante-Gavino, 2008). Although these factors are located at the societal level, gender norms play out through behaviours at the levels of the community, relationship and individual. Women's subordination and submission is then considered to be normal, expected, accepted and, in some cases, attractive to men (Russo & Pirlott, 2006). This may in part explain why women in Sub-Saharan Africa are more likely to justify abuse than men (Uthman, Lawoko & Moradi, 2009).

The following neighbourhood-level factors have been found to be associated with higher rates of IPV: lower proportion of women with a higher level of education, higher neighbourhood poverty, higher neighbourhood unemployment rate, higher proportion of male and female illiteracy, higher proportion of individuals with a positive view of violence, lower proportion of women with a high level of autonomy, higher proportion of households that use corporal punishment (Ackerson et al., 2008; Boyle et al., 2009; Gage, 2005; Koenig et al., 2004; Koenig et al., 2006).

1.3.3.4. The ecological model from a public health perspective

The ecological model supports a comprehensive public health approach, which addresses not just an individual's risk of becoming a victim or perpetrator of violence, but also the norms, beliefs and social and economic systems that create the conditions for IPV to occur. A strong emphasis is placed on multiple and dynamic interactions among risk factors within and between different levels, which promotes the development and adaptation of cross-sectoral prevention policies and programmes. If we consider structural inequalities between women and men, for example, we find that although social constructions of masculinity and gender norms are risk factors for IPV and sexual violence, which are primarily situated at the societal level of the ecological model, the model also takes account of the fact that #such violence also manifests itself at other levels, e.g. in communities and relationships. It is also likely to be linked to other risk factors, such as the witnessing of violence between parents and alcohol abuse by male perpetrators (WHO, 2010; Uthman, Lawoko & Moradi, 2009).

1.4 Challenges to IPV management and measures

1.4.1 Attitudes towards IPV

The complexity with which individual attitudes influence IPV and victimisation, and indeed risk behaviours in general, requires a brief overview. Attitudinal change presents difficulties owing to such complexities. Yet, attitudes towards IPV are one of the strongest known risk factors for IPV exposure, and are currently gaining attention (Hanson, Cadsky, Harris & Lalonde, 1997). Justification of IPV does not occur at random. Data from the African region suggest that between 60% and 80% of women and men justify wife abuse (Uthman, Lawoko & Moradi, 2010). Jewkes (2002) suggested that an understanding of the social context in which IPV occurs is vital to understanding the causes of IPV. This is important, since gender norms and culture are known to shape most individuals' attitudes towards IPV (Hindin, 2003; Watts, Keogh et al., 1998). And that suggestion is further strengthened by the high IPV prevalence seen in most patriarchal and gender-restrictive societies (Kritz & Makinwa-Adebusoye, 1997; Oyediran, 2005). In such settings, IPV is a known correctional measure taken against erring women, where erring can be a perceived deviation from normative female roles, such as carer of the children, or obedient servant and respecter of her husband and his relatives (Haj-Yahia, 2003; Rani, Bonu & Diop-Sidibe, 2004; Koenig et al., 2003). Other roles may include preparing food properly, seeking one's husband's or other family

member's permission before going out, not arguing with the husband, and meeting the sexual needs of the husband (Hindin, 2003; Rani, Bonu & Diope-Sidibe, 2004; Oyediran & Isiugo-Abanihe, 2005; Lawoko, 2008). Thus, attitudes are an important risk factor, not only for victimisation but also for perpetration.

Justification of IPV and other gender-based harmful traditional practices against women is more common among women than men (Rani & Diop-Sidibe, 2004; Ilika & Ilika, 2005; Uthman, Lawoko & Moradi, 2009). This surprising observation may be due to the normalisation of IPV, as suggested in the social learning framework. Social learning theories postulate that individuals learn how to behave by observing and re-enacting the behaviour of role models. Thus, social norms and gender roles in a patriarchal society are learned within a social group, and transmitted from generation to generation (Berry, 1980). IPV exposure and attitudes appear to share similar socioeconomic and demographic determinants, providing anecdotal evidence that IPV victims and perpetrators are likely to belong to the same group, with acceptant attitudes towards abuse.

Gender and gender roles as a social construct further explain how exposure and attitudes to risk behaviours such as IPV may emerge. Gender is 'socially constructed' due to the fact that the ideas or pictures of what women and men are and what they are supposed to be are produced by the society in which they live. Gender is an achieved status, one that is constructed by psychological, cultural and social means. The day-to-day, continuous production of gender has been called **doing gender** (West & Zimmermann, 1987). This means that gender is "made" by us in our everyday lives in interactions with others. Thus, gender inequality refers to the obvious or hidden disparities between individuals due to gender, and may also reflect the inequalities manifest on numerous dimensions of daily life. Gender inequality is a result of distinctions that may be empirically grounded or socially constructed. According to Sen (1993), women try to resolve inequality through bargaining. The cooperative-conflicts framework, developed by Sen, recognises separate gender interests in relation to power, control and access to resources, acknowledges that individuals have competing interests in their quest for power and authority, and indicates that women use a variety of currencies to bargain in situations of inequality. According to Kaye et al. (2006), these currencies include seeking paid employment, setting up income-generating activities, and using contraception (including covert use). By improving women's autonomy, prestige and access to or control of financial resources, these currencies might lead to anxiety, insecurity, and perception of powerlessness in spouses. This is likely to increase the risk of domestic violence (Kaye et al., 2006).

Further, recent findings based on 17 Sub-Saharan African countries provide strong evidence for gender inequalities at community and societal levels as predictors of attitudes towards IPV (Uthman, Lawoko & Moradi, 2010).

Accordingly, understanding risk groups and factors associated with attitudes towards IPV is paramount for interventions directed at attitudinal change. This thesis provides vital data in this regard.

1.4.2 Willingness to disclose, underreporting and underestimation

A major problem faced by researchers and activists alike is the underestimation of IPV due to issues of disclosure. Constraints on disclosure reported by some women are the perception that clinicians lack interest in IPV, lack of trust in healthcare providers, the threats of more violence against them and/or their children, retaliation by their partner, embarrassment, and lack of alternative economic resources (Rodriguez, 1996; Ilika, 2005; Lee, Thompson & Mechanic 2002; Bancroft & Silverman, 2002). Women's ability and willingness to disclose abuse is influenced by their personal emotional strength, adherence to gender roles, decision autonomy, receptiveness to questioning, degree of social disempowerment, and perception of available social support (Mazza, Denneerstein & Ryan, 1996). The constraints inevitably also constrain the management of IPV itself.

Disclosure in a clinical setting: There have been calls to utilise the healthcare sector for the purpose of enhancing disclosure of IPV. This is due to the health sector's crucial role in the life of women. Women come into contact with healthcare for various reasons, in particular their reproductive, physical and psychological health. Other reasons are routine check-ups and the ill-health of their children. With regard to IPV disclosure, three groups of women have been identified among those visiting reproductive health clinics: women who will disclose abuse or fear of it; women who will not openly disclose abuse, but will present with violence-related physical symptoms (e.g. bruises), and also reproductive health complications (e.g. lacerations or a history of unexplained pregnancy complications); and, finally, women living in a violent relationship but who do not report or show any signs of violence (Watts & Mayhew, 2004).

Some interventions have focused on harnessing the 'advantage position' of healthcare settings in encouraging women to disclose and get help. This has been done by trying to incorporate IPV screening into clinical routines, training healthcare providers, and developing

protocols and tools for the appropriate identification and referral of victims. Despite these steps, there is a level of unwillingness among some healthcare providers to screen, citing fear of offending the woman and fear of delving into matters that they are ill-equipped to handle (Velzeboer et al., 2003).

The influence of culture on healthcare providers' preparedness to screen for IPV in clinical settings: Studies show that although women feel comfortable within a healthcare setting about being asked about IPV exposure, only 8-10% of healthcare personnel (HCP), routinely screen (Stenson et al. 2001; Stenson et al., 2005; Swahnberg & Wiljma, 2007). Also, HCPs' own attitudes to IPV may prevent them from inquiring about such private issues. Recent studies from Nigeria show that male HCPs were more likely than their female counterparts to blame the victim of abuse (John et al., in press). This may be a reflection of belief in the patriarchal system operational within their society. Other factors mentioned in the John et al. study, which influence HCPs' readiness to screen, are HCPs' ethnicity and age. The influence of ethnic affiliation on culture has been widely discussed; in Nigeria, age is an important factor, since respect on the basis of age difference (no matter how little) is a paramount feature and aspect of Nigerian culture.

In sum, an understanding of risk groups and factors associated with the disclosure of IPV among women is of paramount importance for the adaptation of training needs for healthcare providers so as better to enhance disclosure among the most vulnerable women. This is particularly called for in societies with limited resources. In this thesis, vital Nigerian data on such risk factors are analysed.

1.5 IPV in Africa – a review of the Nigerian context

The prevalence of physical IPV in Africa ranges from 13% in Zimbabwe to 45% in Ethiopia. These figures are based on findings from a combination of population-based studies. Africa itself presents peculiar risk factors, most of which are culture-induced. For example, wife beating is regarded an acceptable part of marriage, an acceptance that is seen among victims and perpetrators alike (Fawole et al., 2005; Odjurin, 1993; Lawoko, 2006; Lawoko, 2008).

Expected patterns of behaviour mapped out by culture and tradition are carried across generations. Gender roles and identifications are often reinforced as children develop. For males, this may include discipline and wife control (Cornell & Messserschmidt, 2005; Wood

& Eagly, 2002). In Nigeria, the bride price system, in which a woman's family places monetary and material demands on a prospective groom, gives men proprietary 'ownership' of their wives (Bamgbose, 2002). However, the practice of bride price within Nigeria varies between ethnic groups. There are three major ethnic groups, the Hausa/Fulani, Ibo and Yoruba, and over 200 other ethnic minorities.

Nigeria is a very religious country, with the three main religions identified as Christianity, Islam and Traditional. All three religions are known to advocate female submission to varying degrees. As with bride price and ethnicity, the practice of religion in Nigeria seems to be polarised, i.e. between a Muslim north and a Christian south. Both regions are, however, interspersed with the practice of traditional religion among some inhabitants. With regard to ethnic affiliation, religion also plays a role, with majorities of Muslim Hausa/Fulani and of Christian Ibos, and a mixed religion among the Yoruba. The interplay of factors, such as religion, ethnicity and culture, in the occurrence of IPV needs closer scrutiny. In fact, Section 55 of the penal code used in the north allows a husband to "discipline" his wife for so long as the action does not amount to the "infliction of grievous hurt" (Feminist.com, 2006).

1.5.1 Culture vs. power and control: Is culture a cause of or an excuse for IPV?

It has been suggested that culture may be an excuse for male violence, rather than a cause of it (Armstrong, 1990). There is a thin line between culture and power/control. It appears that the research on IPV in an African context lumps together a lot of issues concerning culture. For example, aspects of IPV theorised as cultural in an African context are similar to attitudes regarded in other countries as issues of power and control, or as dysfunctional in individual psychology or the family (Bowman, 2003). The continual portrayal of culture as contributory to the causation of IPV may present problems from the perspectives of prevention and eradication for two reasons. First, efforts geared at changing culture usually present with challenges, especially resistance. Second, there will be little or no emphasis on perpetrator-focused interventions, such as anger management, or interventions addressing a dysfunction in the individual or family. Taking distance from this view is essential for the prevention and management of IPV in countries like Nigeria.

1.6 Rationale for the current study

The need to update data concerning IPV and its consequences for reproductive health

The role IPV plays in reproductive health outcomes for women and child health cannot be overemphasised. There is a continuous need to produce data, either as an indication that the problem is not being addressed or in the evaluation of existing programmes. Practices peculiar to Nigerian society add voice to the need for continued emphasis on matters related to IPV. In Nigeria, the family authority structure gives men the autonomy to take major domestic decisions without reference to women, thereby placing women in a subordinate position, and making them vulnerable to various acts of gender-based violence (Okemgbo, Omideyi & Odimegwu, 2002). For example, although it is culturally unacceptable to inflict acts of violence upon a pregnant or lactating mother, wife beating is an acceptable practice in most parts of Nigeria (Ilika, Okonkwo & Adogu, 2002). This phenomenon even has legal backing in northern Nigeria, where Section 55 of the Penal Code allows a husband to "discipline" his wife provide that the action does not amount to the "infliction of grievous hurt" (Feminist.com, 2006). Other beliefs and practices, such as polygamy and husbands' preferences for many children, particularly male children, may increase women's vulnerability to IPV if they are not fulfilled (Ilika, 2002). Thus, it may be that a substantial number of women of reproductive age in Nigeria experience unintended or unwanted pregnancies, coerced sex, poor spacing of pregnancies, and reproductive health problems. The association between IPV and reproductive health outcomes and practices is explored in this thesis.

Underreporting a threat to management

Another major problem requiring further scrutiny in the Nigerian context is the underreporting of IPV. The traditional belief that marriage is strictly a family affair dictates that domestic issues, including violence, should be resolved within the family. It is therefore common that women report to friends and family rather than to law-enforcement agencies. Indeed, recent studies emerging from the country indicate that only 1% of victims of IPV are likely to report abuse to the police (Ilika, 2002; Fawole, 2005). Underreporting compounds IPV from prevention, support and management-point perspectives. The factors involved, however, have yet to be explored in detail, and may be vital to interventions designed to encourage the disclosure of IPV. The current thesis undertakes to scrutinise such factors.

The U-shape effect and the dangers of replicating interventions

In the field of IPV research, the U-shape effect with regard to certain aspects of determinants and consequences is a common feature. Factors such as age, level of education and

socioeconomic status have opposite effects in terms of acting as predisposing or protective factors (Jewkes, 2002). Whereas in some studies, they appear as protective factors (Jones et al., 1999; Lawoko 2008), in others they are seen as predisposing factors (Lawoko, 2008). A typical example is female empowerment, which can be derived from the education, income and community roles of women. In some studies, education appears to have an inverted 'U' shape; that is, it acts as a protective factor at both the lowest and highest, but not at the intermediate, educational level. The explanation is that, with some level of education, women are able to challenge certain aspects of traditional sex roles. This sort of empowerment increases the risk of violence until an educational level high enough for protective effects to predominate is attained (Counts, Brown & Campbell, 1992). The reason for this is that education provides empowerment through social networks, self-confidence, and an ability to use information and resources available in society, which may also translate into wealth (Jewkes, 2002).

Economic empowerment is another factor for which a U-shape effect has been observed. While acting as a risk factor in some settings (Ellsberg et al., 1999; Okenwa et al., 2009; Okenwa et al., 2010), it has been observed to be a protective factor in others (Schuller et al., 1996; Rao et al. 1997).

Although there is consistency of findings concerning the associations between IPV and some reproductive health outcomes, specifically infant mortality and stillbirths, the same cannot be said of contraception use. The U-shape effect is again seen for this particular outcome. IPV has been divergently associated with low use of contraception (Ricket et al., 2002; Diop-Sidibe et al., 2006; Chan & Martin, 2009; Gee et al., 2009), and also with increased use of contraception (Casterline et al., 2001; Alio et al. 2009). It is possible that women respond differently to IPV; that is, some choose not to use contraception in accordance with a violent partner's wish, whereas some others proceed to use it and thereby increase the risk of violence.

The existence of so-called U-shape associations makes it essential to study IPV in each individual setting, and design interventions specifically and appropriately adapted in accordance with observed dynamics and trends. They serve as a warning signal, and indicate the need for caution in replicating interventions between settings without thorough analysis of each context.

2 Study aim and hypotheses

Aim

The current thesis scrutinised the magnitude and nature of IPV in Nigeria, i.e. exposure, disclosure, attitudes and risk factors, and its consequence for Nigerian women.

2.1 Hypotheses

We hypothesised that:

1. the prevalence of IPV among women of reproductive age in Nigeria would be high, with variations according to demographic and socioeconomic factors (Paper 1).
2. justification of IPV among men and women would be high and would correlate with socio-demographic and empowerment factors (Paper 4).
3. Willingness to disclose IPV would be low and vary according to attitudes towards IPV and socio-demographic factors (Paper 2).
4. Experiences of IPV would be associated with adverse reproductive/sexual health outcomes and practices (Paper3.

3. Methods

3.1 Study context - Nigeria

The study is based on data at both national and community level. The study setting is Nigeria, and the community study was carried out in Lagos, which was the capital of Nigeria until 1991 before the capital was moved to Abuja.

3.1.1. Brief history, geography and vital statistics of Nigeria

Nigeria is located in western Africa, bordering the Gulf of Guinea, with a total land area of 923,768 sq. km. The country is divided into 36 states, and made up of over 250 ethnic groups, each with a rich historical background. There are three majority ethnic groups, Hausa (predominantly Muslims), Ibo (predominantly Christians), Yoruba (a mix of Christians and Muslims), and there are other minority groups. First discovered by the Portuguese, Nigeria is the product of the 1914 British amalgamation of people of various ethnicities and cultures living around the rivers Niger and Benue. This was done for the sole purpose of easy colonial administration. The areas that eventually became the country Nigeria were colonised by the

British, which explains why the official language is English. Nigeria gained independence in 1960.

Nigeria has had and still has its own share of violence, having experienced one civil war, which lasted between 1967 and 1970, and various internal ethno-political and religious crises. The civil war was the result of a forceful power seizure (coup d'état) by the military from the elected government. The country has witnessed intervals of democratic and coup-induced military rule since its independence. Presently, it is a federal republic with a democratic system of government, which was inaugurated in 1999 after over sixteen years of military rule. Ethnic militancy is another form of violence that has become synonymous with Nigeria. Some examples are the Odua People's Congress (OPC), which was originally established to propagate the cause of the Yoruba ethnic group, but later became known for acts of terror and anti-social behaviours, including violence. Another group consists of those fighting for equal resource-sharing, especially concerning the oil-rich Niger Delta, which is a major contributor to the Nigerian economy. An example is the Movement for the Emancipation of the Niger Delta (MEND), which is known for violence against oil companies and their staff, and especially the expatriate community.

With a population of over 131 million, Nigeria is the most populous country in Africa, and the eighth most populous in the world. Nigeria is a member of the Commonwealth of Nations, and is listed among the 'Next Eleven' economies as one of the fastest growing economies in the world. Nigeria is the third largest economy in Africa and a regional power in Africa. According to latest data, GDP per capita is $1,400, the literacy rate 68%, life expectancy at birth 47 years, and infant mortality about 97 per 1,000 live births (CIA World Facts Book, 2006). Nigeria remains a developing country.

3.1.2. Laws in Nigeria

Nigeria has four distinct systems of law: ***English Law,*** which is derived from colonial British rule; ***Common Law,*** which stems from development of its post-colonial independence; and ***Customary Law,*** which is derived from indigenous traditional norms and practice, including the dispute resolution meetings of pre-colonial Yorubaland secret societies and the Epke and Okónkò of Igboland and Ibibio Land.

The latest addition is ***Sharia Law***, applied only in the predominantly Muslim north of the country. It is an Islamic legal system, which had long been in use even before the colonial

administration in Nigeria. In 1999 it was politicised and officially introduced in the northern state of Zafara, and has now been implemented in eleven other northern states. Under the ***Sharia Penal* Code**, offences like alcohol consumption, homosexuality, infidelity and theft carry harsh sentences, including amputation, lashing, stoning and long prison terms.

These laws, particularly the customary and Sharia laws, have important implications for exposure to, disclosure of and attitudes towards IPV in Nigeria.

3.1.3. Lagos and the Lagos University Teaching Hospital

Lagos, as the former capital of Nigeria, has the features that capital cities are known for: urbanisation and rural-urban migration, including migration from neighbouring countries. The provisional current population of Lagos State is about 9,013,534, and Lagos is probably the largest melting point for all the ethnic groups of Nigeria. It has a history of inter-ethnic violence between Hausa and Yoruba, especially in the Idi-Araba district where the Lagos University Teaching Hospital (LUTH) is located. Lagos is rich in culture and also infamously known for 'area boys and OPC', who terrorise and unleash various forms of violence on residents.

3.2. The study settings

Studies 3 and 4 are based on a nationally representative sample drawn from all over Nigeria. Studies 1 and 2 are based on data from a community hospital in Lagos City, Nigeria

Lagos University Teaching Hospital, from which data for studies 1 and 2 were derived, is a teaching hospital attached to the University of Lagos. It is the largest teaching hospital in Nigeria with 761 beds, and with the College of Medicine which provides medical training for hundreds of medical, dental, pharmacy and other science students. It is a fee-paying federal-government referral hospital, providing primary, secondary and tertiary healthcare.

3.4. Study design, procedures, participants and ethical considerations

3.4.1. Studies 1 and 2

Systematic sampling was used to select a convenient (appropriate) number of women, totalling 934, aged 15-49 years visiting LUTH's Obstetrics and Gynaecology Department. Assuming a binomial distribution, the necessary sample was established using a power analysis. A sample size of about 900, a statistical significance level of alpha=0.05, and an estimated average yearly

probability of IPV occurring in developing countries of 0.125 (based on data from several countries) was considered convenient for this study, since such conditions secure very good statistical power (of over 0.80). The eligible woman, under the guidance of trained personnel, responded to a questionnaire comprising previously validated questions. After each completed interview, which usually lastedabout 20 minutes), a randomly selected visitor in the waiting room (waiting to see the physician) was targeted and interviewed. Nobody refused to be interviewed, although some women opted not to answer some of the items in the questionnaire, which led to some missing data. The sampling was considered systematic in that a woman was selected for interview every 20 minutes from among those in the waiting room at that time. Interviewers took turns up until the evening of each day. The procedure was followed every day for 30 days. Interviewers received specific training in general questionnaire management and ethical considerations, and were given a general introduction to IPV. Ethical issues included respect for privacy and emphasis on voluntary participation among others.

The study design was cross-sectional, and papers 1 and 2 are based on the study's cross-sectional data.

3.4.2. Studies 3 and 4

Studies 3 and 4 used secondary data from the Nigerian Demographic and Health Surveys of 2008 (NDHS, 2008). Demographic and Health Surveys (DHSs) are carried out in many developing countries every five years, and are funded by United States Agency for International Development (USAID). The key objective of a DHS is to assist participating countries in monitoring their demographic and health situation on a five-year basis. The participating countries have main responsibility for implementation. At a broad level, a DHS provides detailed data on fertility, marriage, awareness/utility of family planning methods, nutritional status of women and children, awareness regarding sexually transmitted diseases (including HIV), maternal and child health, and mortality, empowerment and socioeconomic conditions, and domestic violence. The survey procedure (e.g. organisation and sampling methods) and the instruments used have received ethical approval from the Institutional Review Board of Opinion Research Corporation (ORC, Macro International Incorporated).

The 2008 Nigerian DHS was performed in conjunction with the Nigerian National Population Commission (NPC). Ethical approval for the instruments and survey procedure was granted by the Institutional Review Board of the Macro International Opinion Research Corporation.

Administratively, Nigeria is divided into states. Each state is subdivided into local government areas (LGAs), and each LGA is divided into localities. In addition to these administrative units, during the 2006 Population Census, each locality was subdivided into convenient areas called census enumeration areas (EAs). The primary sampling unit (PSU), referred to as a cluster for the 2008 NDHS, is defined on the basis of EAs from the 2006 EA census frame. The 2008 NDHS sample was selected using a stratified two-stage cluster design consisting of 888 clusters, 286 in urban and 602 in rural areas. A representative sample of 36,800 households was selected for the 2008 NDHS survey, with a minimum target of 950 completed interviews per state. In each state, the number of households was distributed proportionately among its urban and rural areas. A complete listing of households and a mapping exercise were carried out for each cluster, with the resulting lists of households serving as the sampling frame for the selection of households at the second stage. All private households were listed. The NPC listing enumerators were trained to use Global Positioning System (GPS) receivers to take the coordinates of the 2008 NDHS sample clusters.

At the second stage of selection, an average of 41 households was selected in each cluster, by equal-probability systematic sampling. All women aged 15-49 who were either permanent residents of the households in the 2008 NDHS sample or visitors present in the households on the night before the survey were eligible to be interviewed. In a subsample of half of the households, all men aged 15-59 who were either permanent residents of the households in the 2008 NDHS sample or visitors present in the households on the night before the survey were eligible to be interviewed.

In addition, a subsample of one eligible woman in each household was randomly selected to be asked additional questions about domestic violence. It is this subsample that was used in papers 3 and 4 of this thesis. Papers 3 and 4 are based on these cross-sectional data.

Relevant demographic characteristics of the participants in all studies are presented in the results section.

3.5. Questionnaire measures

3.5.1. Studies 1-4

Many of the questions for the community studies (1 and 2) were adapted from the Demographic and Health Surveys (DHS) questionnaires, since these have been extensively validated in an

African context. The comprehensive questionnaire covered women's and their husbands' background, reproductive history, use of family planning methods, fertility preferences, child mortality, awareness of and precautions against sexually transmitted diseases, marriage and sexual behaviour, *domestic violence, attitudes towards IPV, disclosure of IPV, psychosocial health outcomes*, and demographic, economic and social-status indicators. The main variables of interest in the four studies are described in detail below.

Intimate partner violence (IPV) was assessed using a modified version of the Conflict Tactic Scale (CTS) (Strauss, 1990), which assesses whether participants have, since the age of 15 years and during the past twelve months, experienced abuse perpetrated by their current husband/partner. Experience of IPV over the past twelve #months was of primary interest for this study. *Exposure to physical IPV in the past year* was operationalized as being slapped, kicked, bitten, pushed, punched, choked, burnt on purpose, or assaulted using a knife or other weapons (1=No, 2=Yes). *Exposure to sexual IPV in the past year* was operationalized as having being physically forced to have unwanted sexual intercourse, perform degrading or humiliating sexual acts, or engage in sexual intercourse out of fear (1=No, 2=Yes). *Exposure to psychological IPV in the past year* was operationalized as having been exposed to verbal abuse, insults, made to feel bad about oneself, belittled in front of other people, scared or intimidated, threatened with violence, or threats to harm loved ones, etc. (1=No, 2=Yes).

IPV was used as the dependent variable in Study 1 and as one of the independent variables in studies 2-4.

Attitudes towards IPV were assessed using commonly used questions assessing attitudes in an African context. The questions assess whether participants would justify wife beating in five hypothetical situations: if the wife goes out with another man, neglects the children, argues with her partner, refuses to have sex with her partner, or cooks bad food/or food is served late. Response options were yes, no or don't know. An affirmative response to one or several of these questions was considered having a tolerant attitude towards IPV, while a "No" response to all five situations denoted a non-tolerant attitude. This categorisation is in line with the recent discussion concerning the achievement of "zero-tolerance" of violence against women (Kitzinger & Hunt, 1994).

Attitudes towards IPV were used as the dependent variable in Study 4 and one of the independent variables in Study 2.

Disclosure of IPV: Participants responded to a hypothetical question: "Would you disclose abuse?" The response alternatives were yes, no or don't know. Those responding "Yes" to this question were probed further to find out to whom they would report. The response alternatives to this follow-up question were: woman's family only, husband's family and close friends only, both families, religious leaders, the police and other types of institutions. These groups were categorised into two broader groups: Group 1: families and close friends (comprising those who would report to the woman's family only, husband's family and close friends only, and those who would report to both), and Group 2: institutions (comprising religious leaders, the police and other types of institutions).

Disclosure of IPV was used as the dependent variable in Study 2.

The *reproductive health indicators* assessed in this study, with response alternatives in brackets, were as follows. *Pregnancy was* assessed by asking 'Are you pregnant now (1=No, 2=Yes)? *Pregnancy wish* was used to determine if the currently pregnant women were ready to get pregnant as at the time they did, or if they would have preferred to wait till later (1=Then, 2=Later). *Total number of births* was assessed by asking how many children the women had ever given birth to (1=0 to 4 children, 2=5 and above). *Desire for the #latest child was* assessed by whether the respondent wanted the child then or later/not at all (1=Then, 2=Later). *Infant mortality* was assessed by asking the women if they had had a child who died before age five (1=No, 2=Yes). *Miscarriages and stillbirth* were assessed by asking women if they had ever had a pregnancy that miscarried, aborted or ended in a stillbirth 1=No, 2=Yes). *Use of Contraceptives* was assessed in two categories. Respondents using folk, traditional methods (i.e. withdrawal, rhythm and lactational amenorrhea) and those not using any method at all formed one category. The second category was made up of respondents using modern methods, which include IUDs, pills, male and female condoms, jellies and forms, injectables.

Reproductive health indicators were used as the dependent variables in Study 3.

Socio-demographic variables for which response alternatives are presented in brackets included: age, education (1=None, 2=Primary, 3=Secondary, 4=Higher), religion (1=Catholic, 2=Other Christian, 3=Islam, 4=Other); ethnicity (1=Hausa/Fulani, 2=Yoruba, 3=Ibo, 4=Others); place of residence (1=Urban, 2=Rural); Region (1=North Central, 2=North East, 3=North West, 4=South East, 5=South West, 6=South South).

Empowerment indicators, with response options in brackets, were as follows: *access to information*, assessed using frequency of reading newspapers, listening to radio, and watching TV, all with response alternatives (1=Almost Everyday, 2=At Least Once Weekly, 3=Less Than Once Weekly, 4=Almost Never/Not At All); *decision autonomy*, assessed by asking respondents whether they had a say on household expenditures, healthcare and household purchases (1=Complete Say, 2=Partial Say, 3=No Say); *women's and household's economic position*, assessed by inquiring whether the woman contributes to household purchases, and whether the household has problems making ends meet, or problems managing monthly expenditures (1=Yes, 2=No).

Behavioural variables included respondents' and partners' use of alcohol, smoking habits, and polygamy (1=Yes, 2=No).

The wealth index

A wealth index, based on each household's facilities, was used as a proxy for economic status. Information was collected in the 2008 NDHS on household ownership of a number of consumer items, such as a television, bicycle or car. Information about dwelling characteristics, such as source of drinking water, type of sanitation facilities, and type of material used in flooring were collected. Each household was assigned a score for each asset, and the scores were summed for each household; individuals were ranked according to the total score of the household in which they resided. The sample was then divided into quintiles, from one to five. The level of wealth index ranges from the first to the fifth quintile, corresponding to the least and most well-off, respectively. For this study the first two quartiles were merged to form one group, poor, while the last 2 quartiles were merged to form one, rich (i.e. categorised as 1=Poorest, 2=Poor, 3=Least poor)

A selection of demographic, economic, social and behavioural variables were used as independent variables in each of the studies.

3.6 Statistical analyses

Data analysis was performed using the SPSS statistical package, version 15.0. Missing data were treated as such; that is individuals with missing data on major dependent variables studied were not included in the analysis of those variables. Comparison of individuals with peers who had responded with regard to demographic, social and economic variables yielded statistically

insignificant results, indicating that respondents and non-respondents to specific questions did not differ on these items.

In all papers, relevant univariate and multivariate statistics were used to test for associations between the dependent and independent variables. Chi-square tests were used to assess associations at the univariate level. The independent contributions of the explanatory variables were assessed using logistic regression in a multivariate analysis in order to adjust for possible confounding. Directions and magnitudes of associations were expressed as adjusted odds ratio. The significance level was set at $p<0.05$ for all the statistical analyses.

4.0 Results (main findings)

4.1 Demographic, social and economic characteristics of study participants in the community and national studies

The characteristics of participants on relevant variables for the four studies are presented in table 1 and table 2 in the Appendix. Note that the proportions (%) may not necessarily add up to 100% as participants may not have responded to all questions

4.2 Prevalence of IPV (Study 1)

The life-time prevalence of any form of IPV (implying at least one of physical, psychological or sexual abuse) was 47.7%. Life-time prevalence for specific types of violence was: physical violence 18.4%, psychological violence 37.7%, and sexual violence 15.4%. The yearly prevalence for any form of IPV was 29.1%, with prevalence rates for specific types of IPV as follows: physical 8.6%, psychological 22.8%, and sexual 8.3%.

Table 3: Prevalence of IPV at national and community level

Type of IPV	Yearly Prevalence (%)	
	National	Community
Any IPV	**28.5**	**29.1**
Physical	**15.1**	**8.6**
Psychological/emotional	**22.5**	**22.8**
Sexual	**3.4**	**8.3**

National data are reported in the Nigerian DHS 2008 report and used here for comparison.

4.3 Factors associated with IPV exposure in the multivariate analyses (Study 1)

After adjusting for possible confounders, a number of demographic, financial and empowerment factors (i.e. autonomy in the household and access to information) remained significantly associated with IPV exposure. Compared with those aged 25-44 years, women aged 15-24 were at a greater risk of physical, sexual and any form of IPV. Having a child increased the likelihood of abuse in general, and psychological abuse in particular. Having difficulties in managing monthly expenditures increased the risk of exposure to physical IPV among the studied women. Having full autonomy on household decisions regarding spending money increased the likelihood of sexual abuse, while contributing to household expenditures increased the likelihood of all three forms of abuse. Access to newspaper and limited access to TV were associated with a greater likelihood of psychological and sexual abuse.

4.4 Disclosure of IPV

About 54% of the women interviewed were unwilling to disclose abuse. Among those willing to disclose, 68% were willing to report to families and close friends, compared with 32% who were willing to report to institutions. A further breakdown shows that over 28% would report to the man's family, and 26% to religious leaders, compared with barely 1% willing to report to the police.

4.5 Factors associated with disclosure of IPV in the multivariate analyses

Some demographic, behavioural and empowerment indicators were significantly associated with disclosure of abuse among the studied women even after possible confounding was adjusted for in a multivariate regression. Compared with other ethnic groups, Ibo women were less willing to disclose abuse. Women using alcohol, with a say on household purchases and a say on visiting relatives/friends where more willing to disclose IPV than peers who did not use alcohol and without autonomy on household decisions. Contrary to our hypothesis, exposure to IPV and attitudes towards IPV did not independently predict willingness to disclose IPV.

4.6 Attitudes to IPV among men and women in Nigeria (Study 4)

As indicated in Table 4 (see appendix), significantly more women than men would justify wife beating on all the scenarios presented.

Factors associated with attitudes to wife beating

Socio-demographic indicators accounted for 9% and 10% of the variation in justification of IPV among women and men, respectively. Here, factors such as younger age, no or lower levels of education, were all associated with justification of IPV among men and women. Urban residency, being of Ibo and Yoruba ethnicity and being in the rich quintile reduced the likelihood of justifying wife abuse. In contrast with peers from the south-western region, men and women from the north-eastern, south-eastern and south regions exhibited a greater likelihood of justifying abuse.

Empowerment factors explained 10-11% of the variation in attitudes towards IPV. While increasing access to information via newspapers/magazines increased the likelihood of justifying wife beating among men, justification of abuse tended to increase with frequent access to such media among women. Listening to radio, on the other hand, was associated with an increased likelihood of justifying abuse among women but a reduced likelihood among men. Men and women living in households where the husband had full autonomy in household decisions reported a higher likelihood of justifying abuse than peers living in households with shared autonomy or households with women having full autonomy.

Exposure to physical and sexual IPV among women was associated with an increased likelihood of justifying wife abuse.

4.4 **Association between IPV and reproductive health outcomes and contraception use**

Table 5 (see appendix) shows the unadjusted odds ratios of IPV and reproductive health outcomes, which depict a greater likelihood of poor reproductive health outcomes among women exposed to physical, sexual or emotional IPV.

As shown in Table 6 (appendix), even after adjusting for socio-demographic factors (i.e. age, education, religion, ethnicity, place of residence, and region), exposure to IPV remained significantly associated with adverse reproductive health outcomes, except for the associations between emotional violence and pregnancy status, sexual violence and contraceptive use, and sexual violence and pregnancy status.

5.0 Discussion

5.1. Exposure to IPV - extent, predictors and association with reproductive health outcomes and practices

Extent: Using data from a community clinical sample and a nationally representative sample, this thesis examined the magnitude, risk factors and reproductive consequences of IPV, and also challenges to disclosure and attitudes towards abuse. The results indicated a high prevalence of psychological, physical and sexual abuse, ranging in magnitude between 8% and 29% (Paper 1), which corroborates previous work in the field (Jewkes et al., 2002; Koenig et al., 2003; Obi & Ozumba, 2007; Ezechi et al., 2004). Psychological/emotional IPV was consistently the most common form of IPV, at both community (22.8%) and national (22.5%) level. Accordingly, it is time to start looking beyond physical and sexual IPV and more closely at psychological/emotional IPV. The high extent of IPV observed in the community clinical sample demonstrates the need for screening for IPV in healthcare. Research suggesting that female clients (Stenson et al., 2001, 2005) and their healthcare providers (Furniss et al., 2007; Bair-Merritt et al., 2006) are in favour of screening for IPV further supports this notion.

Reproductive health correlates: We observed strong associations between exposure to IPV in all its forms (physical, sexual and psychological/emotional) and adverse reproductive health outcomes, such as infant mortality and stillbirths, in line with previous evidence on the role played by IPV in maternal and child health (Bourke-Martignoni, 2002; WHO, 2002; Heise, 1994; Ilika, 2002; Tjaden & Theonnes, 1997). Two out of the eight Millennium Development Goals (MDGs), adopted by leading international organisations, focus on improving maternal

and child health. If the MDGs are to be achieved by 2015, as planned, it may be necessary to adopt policies and strategies incorporating domestic violence detection and management when confronting matters concerning maternal and child health. Given the high prevalence of IPV observed in our study, threats of violence need to be taken more seriously.

Among the strategies proposed to improve maternal health is the prevention of unwanted pregnancies through the use of contraception and access to safe abortion (World Bank, 1999). However, results from the present study indicate a higher likelihood of contraception use among victims of IPV, corroborating some previous studies (Bawah et al., 1999; Alio, Nana & Saliu, 2009), but contradicting others, which show a lower likelihood of contraception use among IPV victims (Chan & Martin, 2009; Diop-Sidibe, Campbell & Becker, 2006).

Although the study designs used in this and previous assessments do not allow for causal conclusions to be drawn, the reasons why women's use of contraception in Nigeria is related to an increased likelihood of IPV exposure deserves further attention. Efforts aimed at improving the reproductive health outcomes and practices of women in Nigeria may benefit from the incorporation of policies to manage IPV. At present, most family planning programmes mainly target the sensitisation of women. The nature, scope and eventual success of any sensitisation initiatives to manage women's reproductive health will benefit from the involvement of their male partners, since they are the potential perpetrators of IPV.

Predictors: Due to the extent and health consequences of IPV, this study undertook to understand some of its determinants. The study of risk factors for IPV has received considerable attention in the literature. Notwithstanding this, the direction of association between certain of these predictors (e.g. empowerment indicators) and IPV exposure varies according to societal context. Thus, it is warranted to study predictors of IPV in their unique settings, and to replicate such studies in societies undergoing rapid demographic, social and cultural transitions, like most Sub-Saharan African countries.

This thesis, with its current data, adds to the growing literature indicating that demographic factors, such as low age and having children are independently associated with increased vulnerability to IPV. That having children increases IPV vulnerability might be explained by social-bonding theory. Some authors (Little & Kaufman, 2002; Romans et al., 2007) have observed that family bonding is significant to a woman's choice to remain in an abusive relationship. In the Sub-Saharan African context, where the husband remains the

breadwinner, this problem is particularly acute, since women worry about their children's welfare when considering separation.

Consumption of alcohol among women was found to be associated with exposure to IPV. Moreover, women whose partners used alcohol or smoked were more likely to experience abuse. These findings are in line with previous work in the field (Heise et al., 2002; Silverman, Raj, Mucci & Hathaway, 2001). Our multivariate analyses, however, could not firmly establish these factors as independent risk factors for IPV, suggesting that possible confounding by other study variables may have been an issue. Future research in the field may need to undertake careful analysis of the variables that possibly confound or mediate the relationship between behavioural factors and IPV exposure.

The role of social and structural empowerment in eliciting IPV remains an area of controversy when viewed in general in a Sub-Saharan African context. Our results provide evidence that empowerment, as indicated by education, literacy, employment and family financial stability may be a protective factor against IPV, which corroborates some data from Sub-Saharan Africa (Jewkes, Levin & Penn-Kekana, 2002; Lawoko, 2006; Lawoko et al., 2007) but contradicts other data (Chakwana, 2004; Zimbabwe Demographic and Health Survey, 2006 [ZDHS 2006]).

However, the multivariate analyses could not confirm education, literacy, employment as independent predictors of IPV, suggesting that further investigation of possible confounding variables in future research may provide deeper insight into the relationship between empowerment and IPV. On the other hand, other empowerment indicators, such as participation in household decisions and contribution to household expenses, increased women's vulnerability to IPV, which is inconsistent with some previous findings (Aimakhu et al., 2004; Obi & Ozumba, 2007) but supports others (e.g. Koenig, Ahmed, Hossain &

Khorshed, 2003). The multivariate analyses confirmed these factors as possible independent determinants of IPV.

Our results may reflect circumstances where women's involvement in domestic affairs (e.g. decision-making and breadwinning), which is traditionally seen as belonging to the male domain in some societies, is likely to cause spousal conflicts, reflected here in the form of domestic violence. Overall, the findings suggest that the relationship between social and structural empowerment and IPV is complex. For these reasons, each empowerment indicator and its role in IPV deserves an assessment on its own right in each unique society. In a Nigerian context, specifically in Lagos, it seems that whereas social empowerment of women outside the home (e.g. through education and employment) may provide protection against IPV, empowerment in the domestic arena (i.e. participation in domestic decisions and with regard to domestic expenses) may increase vulnerability. These findings are in line with the feminist theory, where it is suggested that domestic violence emanates from a "partriarchal" school assigning men and women different roles (Dobash & Dobash, 1979; Yllo, 1993). Any flaws in fulfilling such normative roles, particularly among women (e.g. taking decisions seen in that society to be made by men and engaging in income generating activities) is likely to result in IPV. The findings are further corroborated in the ecological model (Heise 1988; Chaulk & King, 1998) where the occurrence of IPV is attributed to a number of factors at different levels from individual to society. Among these is the relational level where factors including divergences from societal expectations of men and women's roles in the domestic arena (e.g. decision autonomy) may increase the likelihood of IPV.

There is a consensus in the literature that access to information via the mass media is likely to reduce vulnerability to IPV (Okenwa & Lawoko, 2008; Lawoko, 2006; Lawoko et al., 2007),

and the current data seems to point in this direction, since exposure to newspapers and television was found to reduce vulnerability to IPV. However, whether it is exposure to the media per se or whether the media address issues relating to women's empowerment has so far been an area of only peripheral discussion (Lawoko, 2008). The social learning theory purports that violent behaviour is learnt by watching the experiences of others, a process called modelling (Bandura, 1973). Further, feminist theories suggest that norms imbedded in particular societies may give men an upper hand, to inflict acts of violence against their spouse. Our findings and other previous work (Okenwa & Lawoko, 2008) provide hope that such in-learnt normative behaviours could be broken by access to information channelled via mass media. Future research however on the content of information channelled via the mass media may provide further understanding of the mechanisms linking limited media exposure to IPV vulnerability.

While the study of predictors of IPV may provide valuable information for intervention, our findings suggest that challenges to the estimation, detection and management of IPV in Nigeria may be compounded by issues surrounding disclosure and attitudes towards the phenomenon. The following discussion views these challenges more closely.

5.2. The disclosure of IPV and attitudes towards IPV – challenges to management

Disclosure of IPV is crucial not just for the support and protection of victims, but also for research. Our study probed women's willingness to disclose, as measured by a hypothetical question probing whether they would disclose abuse and, if so, to whom such disclosure would be made. More than half the studied women (54%) indicated they would not disclose abuse. Among those opting for disclosure, the extended family emerged as the preferred portal. Willingness to disclose to institutions was low in this study (e.g. only 1% opted to disclose to the police).

These findings are in agreement with other research conducted within an African culture (Rodriguez, Quiroga, Bauer, 1996; Rubertsson, Hildingsson, Rådestad, 2008; Obi, Ozumba, 2007). They further substantiate the role of the extended family in arbitrating marital conflicts, including violence, and suggest a disinclination to capitalise on established institutions that purport to protect women from abuse. It is suggested that women perceive marital problems as their own(Illka, Okonkwo,Adogu, 2002) thus constituting internal barriers. On the other hand, that women refrain from the institutional disclosure of IPV might be an indicator either of a lack trust in institutions or of the institutions lacking interest in domestic problems. Data from developed and other non-African cultures suggest that this may be the case (Rodriguez, Sheldon, Bauer, 2001; Hegarty, Taft, 2001; Peckover, 2003) Further research is warranted to investigate institutional readiness to assist abused women within the African culture in Nigeria.

A number of the demographic variables were found to be significantly associated with willingness to disclose abuse. Catholic women were most willing to disclose when compared with other Christian denominations, although they were, together with Muslim women, less willing to disclose to institutions than Protestants. Though these findings add to the literature suggesting that ethnicity and religion may affect women's choices in terms of disclosure and acceptability of IPV (Bankroft, Silverman, 2002; Mazza, Dennerstein, Ryan, 1996; Peckover 2003; Adewale, 2007; Sudakarta, Niara, 1993), they may also suggest that institutional readiness to assist abused women may vary according to their religious and ethnic affiliations. Further research is warranted to test the latter hypothesis.

Our findings show that, after Ibo women, Yoruba women are more likely than women from "other" ethnic groups to disclose to families (although this relationship did not reach statistical significance). The reason for this might be that, among the Yoruba, women enjoy high status as mothers, sisters and daughters within the family. Like men, they hold leadership positions and authority within matrilineages, but do not enjoy the same benefits as

wives (Peckover 2003; Adewale, 2007). Thus, it can be postulated that Yoruba women tend to report more to families because of their higher status as sisters and daughters.

The women having some form of autonomy in household decisions (a say on expenditure, purchases, number of children to have, and visiting friends) were found to be more willing to disclose abuse than their peers without such autonomy. These results were confirmed in the multivariate analysis. It is suggested that women's social and economic empowerment is likely to lessen dependence on their partners(Montalvo-Liendo, 2009). Such independence is often reflected in an ability to speak out. Our findings are in line with other studies that highlight the role of education in the empowerment of women to denounce intimate partner violence (Olusanya, Okpere, Ezimokhai, 1985; Oyediran, Isiugo-Abanihe, 2005; Lawoko et al, 2007). Empowering factors, such as education and access to information, were also found to be significant in our study of IPV disclosure. Women with little or no education preferred reporting to families and were less willing to disclose to institutions. A likely explanation is that education enlightens women on their options, and thus empowers them to challenge the traditional norm of gender inequality. Lack of access to information may also be another reason why women remain bound to tradition. Our findings seem to point in this direction, since women without access to radio or television were found to be more disposed to disclose to families than to the institutions.

One of the factors influencing willingness to report IPV in our study is the experience of IPV in itself. Women who have experienced physical, psychological and sexual violence in general were more willing to report abuse when contrasted with non-abused peers, corroborating previous work where actual disclosure rather than willingness to disclose has been studied (Illka, Okonkwo,Adogu, 2002, Lawoko et al, 2007). These findings could not, however, be confirmed in the regression analyses, suggesting a possible confounding effect that warrants further investigation. Contrary to our expectations, women with tolerant

attitudes towards IPV in our study did not differ from their peers with intolerant attitudes to IPV regarding willingness to disclose. This appears to contradict theories linking exposure to intimate partner violence to tolerant attitudes towards violence itself among women (Ruiz-Perez, Plazaola-Castano, Del Rio-Lozano, 2006). Capitalising on these previous works, we had expected to observe higher willingness to disclose IPV among women with intolerant attitudes to IPV. Thus, the role of attitudes in disclosure of IPV deserves further investigation before firm conclusions can be drawn.

Another challenge to the management of IPV is its widespread endorsement as a means of correcting digressions from normative gender roles. In our nationally representative sample (Paper 4), significant proportions of women and men endorsed wife abuse. Moreover, consistent with data from other Sub-Saharan countries (Uthman et al., 2009; Rani et al., 2004), more women justified wife beating than men. The reasons why potential victims justify abuse to a greater extent than potential perpetrators are not clear. Women remain dependent on their husbands, who often are the breadwinners in the household (Haj-Yhia, 2002). Thus, our findings might reflect circumstances where women are conditioned to justify abuse to secure future supplies of bread and butter, not only for themselves but also for their children. Also, social learning theory implies that gender roles in a patriarchal society are learned within a social group and transmitted from generation to generation (Berry, 1980). Our finding that over 30% of men and women in a nationally representative sample justify wife beating provides evidence of prevailing patriarchal practices in the Nigerian context.

Demographic factors stood out as important predictors of justification of wife beating. Among both men and women, education and urban residency reduced the likelihood of justifying abuse, corroborating previous findings from Kenya (Lawoko, 2008), and other findings that show a social gradient in attitudes towards wife beating (Gonzales-Brenes,

2004). Education and urbanisation in Nigeria have taken a Western European trend, since Nigeria is a former British colony. As such, liberal ideas, like those in Western countries, characterise the Nigerian education system and urban development. Thus, despite changes in perceptions and orientations brought about by modernisation and education, our findings provide evidence of strict adherence to old traditions in certain aspects, not least in the domestic arena, and particularly among rural dwellers.

Illiteracy, closely related to education, on the other hand, was found to be significantly related to justification of abuse among men but not women, warranting further investigation into why illiterate and literate women do not differ with regard to the justification of abuse. Qualitative interviews among women could provide in-depth understanding of this issue. Ethnic Yoruba and Ibo participants showed a lower likelihood of endorsing wife abuse, supporting the notion that some ethnic groups, because of their cultural values, may be more gender-restrictive than others, and therefore endorse punishment for subverting gender norms to a greater extent than others. Overall, these findings have implications for increased awareness creation concerning IPV and related gender issues in certain specific demographic (e.g. ethnic) groups, and for enhancing opportunities for adult education, especially for women with little or no education.

The associations between indicators of access to information and endorsement of wife abuse were in some cases contradictory. In the case of newspaper reading, the finding is in the expected direction; that is, women who do not read newspapers are more likely to justify abuse. On the other hand, with increasing frequency of listening to radio, there was an increased tendency to justify wife beating among women, but a reduced tendency among men. While the latter might be expected when viewed from a Western perspective, the findings for women are reconcilable in a Nigerian setting. Although radio and TV are regarded as sources of empowerment in Western countries, programme content is debatable

in Nigeria. Most indigenous Nigerian dramas and soap operas emphasise traditional beliefs. The symbol of a bad wife is one who deviates from her expected normative roles, which includes respect for the husband and his family. These programmes are often packaged in a manner designed to teach women the consequences of not conforming. This is rather unfortunate, since the Nigerian film industry is viewed widely in most Sub-Saharan countries. It is a suitable medium for reaching many Africans, women and men alike, with interventions aimed at fostering positive attitudes towards woman, while discouraging aggression from men. The discrepancy in the content and quality of print and electronic media, and also the visual media, probably explains to some degree our findings on the association between attitudes towards wife beating and access to information. Considering however that access to information was associated with a reduced risk for IPV exposure (paper 1) and disclosure (paper 2), its negative association with attitudes towards IPV among Nigerian women deserves further investigation in future work.

Among women, the current study also assessed the association between exposure to IPV and attitudes towards wife beating. Women experiencing physical and sexual abuse exhibited a greater likelihood of endorsing abuse, supporting the social learning theory discussed previously. Another plausible explanation lies in the fact that that repeated abuse may diminish a woman's self-esteem, and thereby increase her propensity to blame herself for whatever is triggering the abuse (e.g. burning the food). At that point, the foundation has been laid to justify any action to "punish" acts that depart from normative female roles. The psychosocial impact of conditioned abuse, and how this may impact on attitudes towards abuse, is worthy of greater attention in research.

5.3. Implications for intervention and further research

Despite possible underestimation, the high yearly prevalence of IPV among women in both study samples (clinical and national), together with its grave consequences for the health of

abused women and their children, suggest that IPV is a public health problem in Nigeria, warranting multifaceted interventions, as indicated in our analysis of predictors of IPV exposure, disclosure and attitudes.

Women's preference to disclose IPV to families rather than institutions further substantiates the role of the extended family in arbitrating marital conflicts, including violence. This may have important implications for family focused/based interventions on the one hand, and the training of law enforcers as well as religious leaders to make them more proactive in recognising, handling and dealing with reports of IPV on the other. Previous studies also point to the important role of healthcare in screening for IPV, and suggest that women are more likely to disclose IPV if probed by their healthcare providers (Stensson et al., 2001; Stensson et al., 2005).

The distorted attitudes towards abuse of women observed in our Nigerian samples call for urgent consideration of IPV management. Attitudinal change, particularly when attitudes are tied to cultural, ethnic and religious values, is usually difficult, but our findings provide promise that education might help modify attitudes towards IPV. The role of the media remains unclear with regard to attitudes towards IPV. Although access to newspapers seems to modify attitudes towards IPV, the contrary was observed regarding access to radio and TV. These findings might reflect differences in the contents of the various media. The content of media and how it may impact on IPV attitudes deserve further attention in future research, possibly through in-depth qualitative studies.

Finally, our studies provide important baseline data linking exposure to IPV to modern reproductive health practices and adverse reproductive health outcomes in Nigeria. Though causal inferences

cannot be drawn due to their cross-sectional design, the studies have important implications for policy and education concerning the management of women's reproductive health. Such initiatives should acknowledge, detect and manage IPV, and they may benefit from involving male partners, the usual perpetrators of IPV. Studies with a longitudinal design are warranted to establish whether there are causal relationships between IPV and reproductive health practices and outcomes.

5.4. Methodological strengths and weaknesses

One strength of the studies reported in this thesis lies in their careful selection of participants, which assures representativeness at the clinical and national levels. The large number of variables also provided an opportunity to assess the independent contributions of potential predictors, free from contamination by potential confounders. Adherence to strict ethical conditions in the conduct of domestic violence studies was also an extra-precaution taken in data collection. Despite all this, important weaknesses of the design deserve acknowledgement. Due to the cross-sectional nature of the data, it is difficult to assign causality in the observed associations. Also, in-depth understanding of factors, such as attitudes towards IPV or disclosure of abuse, could not be achieved with a quantitative approach. Future research exploring these factors using qualitative methods is crucial.

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APPENDIX

Table 1: Showing the demographic and socio economic characteristics of participants in the community sub-studies (papers 1 -2)

Variable	Frequency	
	n	%
AGE		
15-24	102	11.2
25- 34yrs	562	61.7
35 – 44yrs	222	24.4
45 – 49yrs	17	1.9
EDUCATION		
Primary	39	4.3
Secondary	195	21.4
Post secondary	664	72.9
LITERACY		
Can't read /reads parts of sentence	68	7.5
Able to read whole sentence	753	82.7
RELIGION		
Catholic	290	31.8
Protestant	392	43.0
Muslim	78	8.6
Others	136	14.9
ETHNICITY		
Yoruba	399	43.8
Ibo	372	40.8
Others	123	13.5
READS NEWSPAPAPER		
Almost everyday	265	29.1
At least once weekly	339	37.2
Less than once weekly	103	11.3
Almost never/not at all	199	21.8
LISTENS TO RADIO		
Almost everyday	546	59.9
At least once weekly	184	20.2
Less than once weekly	64	7.0
Almost never/not at all	114	12.5
WATCHES TV		
Almost everyday	802	88.0
At least once weekly	55	6.0
Less than once weekly	27	3.0
Almost never/not at all	15	1.6

ALCOHOL		
At least 4 times a week	129	14.2
At least once a month	774	85.0
SMOKE		
Yes	4	0.4
No	890	97.7
HUSBAND'S ALCOHOL INTAKE		
Yes	248	27.2
No	585	64.2
HUSBAND SMOKES	4	0.4
Yes	890	87.4
No		
HAVE CHILD/CHILDREN	505	55.4
Yes	379	41.6
No		
HUSBAND/PARTNER HAS OTHER WIFE / WIVES		
Yes	36	4.0
No	706	77.5
RESPONSDENT WORKING		
Yes	536	58.8
No	321	35.2
WORKING AT HOME		
Yes	153	16.8
No	510	56.0
PROBLEMS MAKING ENDS MEET		
Yes	376	41.3
No	408	44.8
PROBLEMS MANAGING MONTHLY		
EXPENDITURES	177	19.4
Yes	605	66.4
No		
SAY ON MONEY USE	401	44.0
Complete say	223	24.5
Partial say	67	7.4
No say		
SAY ON HEALTH CARE	258	28.3
Complete say	319	35.0
Partial say	200	22.0
No say		
SAY ON HOUSEHOLD PURCHASE	106	11.6
Complete say	259	28.4

Partial say	409	44.9
No say		
SAY ON VISITING FAMILY & FRIENDS	180	19.8
Complete say	452	49.6
Partial say	143	15.7
No say		
SAY ON NUMBER & WHEN TO HAVE CHILDREN	50	5.5
Complete say	558	61.3
Partial say	103	11.3
No say		
CONTRIBUTION TO HOUSEHOLD EXPENSES	185	20.3
None	367	40.3
About Half	103	11.3
More than or all		

Table 2: showing demographic characteristics of participants at the national level (Papers 3-4)

Variables	Women		Men	
	n	%	n	%
AGE				
15-19	6591	19.7	2571	16.6
20- 29yrs	12406	37.2	4845	31.3
30 – 39yrs	8440	25.3	3824	24.7
40 – 49yrs	5948	17.8	2598	16.8
EDUCATION				
None	13242	39.7	3656	23.6
Primary	6591	19.1	3253	21.0
Secondary	10905	32.7	6490	41.9
Higher	2647	7.9	2087	13.5
LITERACY				
Can read little/nothing	18817	56.4	5847	37.8
Can read whole sentences	14371	43.0	9558	61.7
RELIGION				
Catholic	3583	10.7	1658	10.7
Other Christian	13588	40.7	6249	40.4
Islam	15449	46.3	7254	46.8
Traditionalist	535	1.6	215	1.4
Other	53	0.2	64	0.4
ETHNICITY				
Hausa/Fulani	9546	28.6	4449	28.7
Yoruba	4861	14.8	2427	15.7
Ibo	4583	13.7	1933	12.5
Other	14395	43.1	6677	43.1
READS NEWSPAPAPER/MAGAZINE				
Not at all	26323	78.8	8460	54.6
Less than once weekly	3396	10.2	2740	17.7
At least once weekly	2547	7.6	2832	18.3
Almost everyday	878	2.6	1353	8.7
LISTENS TO RADIO				
Not at all	11335	34.0	1855	12.1
Less than once weekly	5074	15.2	1409	9.1
At least once weekly	7380	22.1	3280	21.2
Almost everyday	9452	28.3	8886	57.4
WATCHES TV				
Not at all	17755	53.2	5878	38.0
Less than once weekly	3666	11.0	2349	53.2
At least once weekly	4598	13.8	2949	19.0
Almost everyday	7214	21.6	4249	27.4
HAVE CHILD/CHILDREN				
Yes	23751	71.1	7046	45.5
No	9631	28.9	8440	54.5
	9634	28.9	7046	45.5

NUMBER OF CHILDREN	13667	40.9	4278	27.6
None	10084	30.2	4162	26.9
1-4				
More than 4	15583	46.7	6723	43.4
	8371	25.1	8753	56.6
TYPE OF MARRIAGE				
Monogamy	19449	58.3	2595	16.8
Polygamy	13683	41.3	12859	83.0
RESPONSDENT WORKING				
Yes	8514	25.5	4403	28.4
No	2620	7.8	980	6.3
	1883	5.6	73	0.5
SAY ON MONEY USE	25	0.1	17	0.1
Respondent alone				
Respondent and Spouse/partner	2068	6.2	Not applicable	
Spouse/Partner alone	8032	24.1		
Other	13690	41.0		
	68	0.2		
SAY ON OWN HEALTH CARE	30	0.1		
Respondent alone				
Respondent and Husband/partner	1289	3.9	12732	82.2
Husband/partner alone	7619	22.8	2248	14.5
Someone else	14870	44.5	346	2.2
Other	61	0.2	151	1.0
	33	0.1		
SAY ON LARGE HOUSEHOLD PURCHASE				
Respondent alone	3587	10.7	8375	54.1
Respondent and Husband/partner	7852	23.5	2297	14.8
Husband/partner alone	12340	37.0	4640	30.0
Someone else Don't know/depends	64	0.2	163	1.0
Other	28	0.1		
SAY ON HOUSEHOLD PURCHASE FOR DAILY NEEDS				
Respondent alone	2464	7.4	7890	50.9
Respondent and Husband/partner	10423	31.2	6456	41.7
Husband/partner alone	10916	32.7	854	5.5
Someone else Don't know/depends	50	0.1	239	1.5
Other	27	0.1		
SAY ON VISITING FAMILY & FRIENDS				
Respondent alone	1459	4.4	4767	30.8
Respondent and Husband/partner	5730	17.2	4874	31.5
Husband/partner alone	16231	48.6	5389	34.8
Someone else/ Don't know/depends	25	0.1	435	2.8
Other	305	0.9		
SAY ON WHAT TO DO WITH SPOUSE/PARTNER'S INCOME	16657	49.9	4198	27.1
Respondent alone	2080	6.2	1555	10.0
Respondent and Spouse/partner	14371	43.0	9558	61.7
	80	0.2	94	0.6

Spouse/partner alone	28	0.1	11	0.1
Other/ Don't know/depends				
Spouse/partner has no earning	14101	42.2	6008	38.8
LITERACY	6582	19.7	3064	19.8
Can't read	12702	38.0	6414	41.4
reads only parts of sentence				
Able to read whole sentence	10489	31.4	5133	33.1
No card with required language	22896	68.4	10353	66.9
Blind/Visually Impaired				
Wealth Index				
Poor				
Middle				
Rich				
Typr of place of residence				
Urban				
Rural				

Table 3: Attitudes towards Wife beating by Demographic factors

Variables	Attitudes							
	Women				Men			
	N	n	%	p-value	N	n	%	p-value
Age				0.030				0.000
15-19	6134	2738	44.6		2509	941	37.5	
20-29	12220	5652	46.3		4809	1709	35.6	
30-39	8362	3940	47.1		3812	1125	29.5	
40-49	5888	2706	46.0		2586	725	28.0	
50-59					1460	452	27.6	
				0.000				0.000
Literacy								
Can read little or nothing	18427	10048	54.5		5771	2156	37.4	
Can read whole sentences	13983	4894	35.0		9500	2778	29.2	
Education				0.000				0.000
None	12985	7214	55.6		3595	1262	35.1	
Primary	6447	3290	51.0		3232	1171	36.2	
Secondary	10551	3963	37.6		6441	2136	33.2	
Higher	2621	569	21.7		2083	383	18.4	
Place of Residence				0.000				0.000
Urban	10247	3573	34.9		5097	1315	25.8	
Rural	222357	11463	51.3		10254	3637	35.5	
Religion				0.000				0.000
Catholic	3513	1636	46.6		1651	702	42.5	
Other Christian	13295	5101	38.4		6227	1754	28.2	
Islam	15043	7856	52.2		7153	2357	33.0	
Traditional	528	316	59.8		213	115	54.0	
Other	51	24	47.1		61	18	29.5	

Ethnicity				0.000				0.000
Hausa/Fulani	9289	5366	57.8		4237	1217	27.8	
Yoruba	4753	1305	27.5		2423	522	21.5	
Ibo	4509	1906	42.3		1928	687	35.6	
Other	14053	6459	46.0		6628	2526	38.1	
Region				0.000				0.000
North Central	6173	2783	45.1		3007	944	31.4	
North East	6066	3174	52.3		2696	1158	43.0	
North West	7084	4054	57.2		3304	890	26.9	
South east	36000	1697	47.1		1424	597	41.9	
South West	4728	1976	41.8		2363	780	33.0	
South South	4953	1352	27.3		2557	583	22.8	
Wealth Index				0.000				0.000
Poorest	13767	7608	55.3		5925	2295	38.7	
Poor	6414	3265	50.9		3044	1086	35.7	
Least poor	12423	4163	33.5		6382	1571	24.6	
Decision Autonomy				0.000				0.000
Woman/woman and Husband	5231	2207	42.2		1555	362	23.3	
Husband only and/or someone else	18436	9433	51.2		13720	4560	33.2	
Access to Information				0.000				0.000
No	9609	4936	51.4		2550	1074	4 2.1	
Yes	22940	10076	43.9		12778	3875	30.3	
Reading Newspaper/magazine				0.000				0.000
Not at all	25663	12969	50.5		8347	2999	35.9	
Less than once a week	3350	1052	31.4		2737	784	28.6	
At least once a week	2500	716	28.6		2817	795	28.2	

Almost everyday	855	189	22.1	1349	341	25.3	
Listens to radio			0.000				0.000
Not at all	11016	5575	50.6	1795	784	43.7	
Less than once a week	4878	2443	49.1	1391	553	39.8	
At least once a week	7239	3388	46.8	3253	1084	33.3	
Almost everyday	9230	3558	38.5	8856	2520	28.5	
Watches TV			0.000				0.000
Not at all	17326	9168	52.9	5796	2166	37.4	
Less than once a week	3592	1709	47.6	2332	721	30.9	
At least once a week	4504	1863	41.4	2926	942	32.2	
Almost everyday	7032	2219	31.6	2436	1109	26.2	
Physical IPV			0.000				
No	16179	7429	45.9				
Yes	2882	1702	59.1				
Sexual IPV			0.000				
No	18395	8694	47.3				
Yes	655	426	65.0				
Emotional IPV			0.000				
No	14742	6688	45.4				
Yes	4314	2442	56.6				

Table 5: Unadjusted odds ratios for intimate partner violence (IPV) vs. reproductive health outcomes

Variable	Miscarriage/abortion/stillbirth c OR (CI) *p*-value	Contraceptive use c OR (CI) *p* -value	Total births c OR (CI) *p* -value	Wanted last child c OR (CI) *p* -value	Pregnant now c OR (CI) *p* -value	Wanted current pregnancy c OR (CI) *p* -value	At least one dead child c OR (CI) *p* -value
Physical IPV (No vs. Yes)	0.653 (0.587-0.726) 0.000	0.641 (0562-0.732) 0.000	0.853 (0.786-0.925) 0.000	0.508 (0.443-0.582) 0.000	1.155 (1.027-1.298) 0.016	0.447 (0.335-0.595) 0.000	0.879 (0.810-0.953) 0.002
Emotional IPV (No vs. Yes)	0.654 (0.596-0.718) 0.000	0.948 (0.836-1.075) 0.405	0.741 (0.691-0.794) 0.000	0.636(0.561-0.721) 0.000	1.091 (0.989-1.203) 0.082	0.608 (0.466-0.792) 0.000	0.684(0.638-0.733) 0.000
Sexual IPV (No vs. Yes)	0.560 (0.462-0.679) 0.000	0.936 (0.705-1.242) 0.646	0.824 (0.704-0.965) 0.016	0.366 (0.293-0.457) 0.000	1.026 (0.821-1.282) 0.824	0.403 (0.243-0.670) 0.000	0.797 (0.681-0.933) 0.005

cOR=crude odds ratio; CI= 95% confidence interval

Table 6: Adjusted odds ratios physical intimate partner violence (IPV) vs. reproductive health outcomes

Variable	Miscarriage/abortion/stillbirth OR (CI) *p*-value	Contraceptive use OR (CI) *p* -value	Total births OR (CI) *p* -value	Wanted last child OR (CI) *p* -value	Pregnant now OR (CI) *p* -value	Wanted current pregnancy OR (CI) *p* -value	At least one dead child OR (CI) *p* -value
Physical IPV (No vs. Yes)	0.687 (0.785-1.322) 0.000	0.792 (0.687-0.912) 0.001	0.828 (0.742-0.923) 0.001	0.667 (0.576-0.771) 0.000	1.163 (1.027-1.316) 0.017	0.546 (0.401-0.745) 0.000	0.846 (0.771-0.928) 0.000
Emotional IPV (No vs. Yes)	0.702 (0.637-0.774) 0.000	0.852 (0.743-0.977) 0.022	0.799 (0.728-0.878) 0.000	0.647 (0.566-0.740) 0.000	1.090 (0.984-1.208) 0.099	0.630 (0.475-0.834) 0.001	0.755 (0.699-0.819) 0.000
Sexual IPV (No vs. Yes)	0613 (0.502-1.107) 0.000	0.952 (0.708-1.282) 0.748	0.699 (0.565-0.865) 0.001	0.427 (0.337-0.541) 0.000	1.076 (0.854-1.356) 0.536	0.429 (0.250-0.736) 0.002	0.798 (0.670-0.951) 0.011

Adjusting for age, education, religion, ethnicity, place of residency (i.e. urban or rural), and region. CI= 95% confidence interval

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ORIGINAL ARTICLE

Exposure to Intimate Partner Violence Amongst Women of Reproductive Age in Lagos, Nigeria: Prevalence and Predictors

Leah E. Okenwa · Stephen Lawoko · Bjarne Jansson

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Abstract Research on predictors of Intimate Partner Violence (IPV) in Sub-Saharan Africa is contradictory, necessitating further investigation. This study sought the prevalence and predictors of IPV among women in Lagos, Nigeria. Questionnaire data from 934 women visiting an obstetrics and gynecology clinic in Lagos were analyzed using multivariable methods. The 1 year prevalence of IPV was 29%, with significant proportions reporting psychological (23%), physical (9%) and sexual (8%) abuse. In-access to information, women's autonomy and contribution to household expenses independently predicted IPV. The findings provide new incites for IPV prevention in Lagos with implications for further research.

Keywords Intimate partner violence · Women · Nigeria · Prevalence · Risk factors

Introduction

Background

Intimate Partner Violence (IPV) is defined as a pattern of assaultive and coercive behaviors, including physical, sexual and psychological attacks, as well as economic coercion that adults or adolescents use against their intimate partners (Ganley and Schechter 1996). Though intimate partner violence can be seen at all societies, socioeconomic groups, races and sexes, the prevalence may vary depending on these factors (WHO 2002).

Globally, lifetime prevalence rates of IPV among women vary between 10–69%, and population studies indicate that at least one woman in every three has been beaten, coerced into sex, or otherwise abused in her lifetime (WHO 2002; Heise et al. 1999). In developing countries life-time prevalence ranging between 11–52% and yearly prevalence between 4–29% have been reported (Gage 2005; Kishor and Johnson 2004; Jewkes et al. 2002; Ellsberg et al. 1999; Koenig et al. 2003a, b). IPV is documented as the third leading cause of mortality among women aged between 15–44 years and is a major cause of morbidity with health consequences ranging from injuries to reproductive health complications (Lemmey et al. 2001; WHO 2002; Heise 1994; Emenike et al. 2008).

Although studies show that there is not much disparity between prevalence rates in developed and developing countries, developing countries are known to have peculiar risk factors that appear to endorse and perpetuate IPV such as patriarchal social structure (Garcia-Moreno et al. 2005).

Theoretical Framework for Risk Factors of IPV

Several theories have been suggested to explain factors possibly associated with vulnerability and perpetration of IPV. By far the most comprehensive explanation for risk factors of IPV is based on the social ecological framework, where immediate and remote factors associated with IPV perpetration and vulnerability are distinguished at five levels namely individual, relational, organizational, community and policy levels (Little and Kaufman 2002). The first level, intrapersonal or individual, comprises factors,

L. E. Okenwa · S. Lawoko · B. Jansson
Department of Public Health Sciences Stockholm,
Division of Social Medicine, Karolinska Institutet,
Stockholm, Sweden

S. Lawoko (✉)
Department of Public Health Sciences, Karolinska Institutet,
Norrbacka Building,
171 76 Stockholm, Sweden
e-mail: stephen.lawoko@ki.se

such as biological sex, age, social economic status (SES), substance use, and cultural identity. Studies show that there is a higher vulnerability to IPV among women than men, with consequent graver outcomes for women, including physical injury and impaired reproductive health outcomes (Rennison and Welchans 2000; Emenike et al. 2008). Moreover, being of reproductive age (Fairchild et al. 1998) and engagement in health risk behavior such as alcohol and drug abuse (Heise and Garcia-Moreno 2002; Silverman et al. 2001) are factors associated with increased vulnerability for and perpetration of IPV. While there is a consensus that socio-economic status is related to IPV vulnerability, the direction of association remains a subject of contention. Some studies have found high SES among women to be a protective factor against abuse (Jewkes et al. 2002; Lawoko 2006) while others have suggested the contrary (Chakwana 2004; Zimbabwe Demographic and Health Survey 2006 [ZDHS 2006]). A plausible explanation for this discrepancy could be differences in women's normative roles between societies. While in some societies women's structural empowerment (e.g., involvement in income generating activities and education) may be seen to boost family income and therefore reduce risk for poverty-related conflict, in other societies such empowerment may conflict with women's normative roles (e.g., being housewives and domestic workers), thereby increasing the risk for aggression. Divergence from gender roles thus may be important in eliciting IPV.

At the relational level, gender roles and family bonding seem to play a fundamental role in IPV vulnerability and perpetration (Oetzel and Duran 2004). Gender role refers to a set of perceived behavioral norms associated particularly with males or females, in a given social group or system. Subversion from such norms is likely to increase vulnerability to IPV. Family bonding is another factor at the relational level responsible for IPV exposure. Research shows that women are hesitant to leave abusive relationships due to concern for leaving their children behind, or are unsure of survival and coping if they take the children along (Little and Kaufman 2002; Stephens 1999). Also at the relational level, differences between couples with regard to educational achievement, age and carrier development may increase vulnerability to IPV.

The third level of the ecological model, the organisational/institutional level, is significant not only in the identification of institutional factors associated with IPV exposure but also in primary and secondary prevention of the problem. Self reports from women indicate that they are content when healthcare professionals address IPV in healthcare settings (Stenson et al. 2001, 2005). Reciprocating this, healthcare professionals themselves acknowledge that routine screening for IPV in healthcare is likely to improve identification of IPV and with it appropriate referral for prevention (Furniss et al. 2007; Bair-Merritt et al. 2006). Thus, the grade to which relevant organizations are willing to address women's issues may influence the identification and eventual control of IPV in that society.

The fourth level of the ecological model, the community level, purports that IPV vulnerability may result from factors inherent in social relationships at the community level and how such factors may conflict with norms governing intimacy. Certain groups in society, such as ethnic (Chester et al. 1994; Hamby 2000) and religious groups (Levitt and Ware 2006) tend to be more gender restrictive, conditioning women to agree or consent to wife beating. Moreover, patriarchal structure in many societies, particularly in the developing country context, remains a recurrent decimal in the list of known risk factors for IPV (Garcia-Moreno et al. 2005).

The final level of the ecological model, policy, helps to explain how social policies that maintain economic or social inequalities between groups in society could in fact contribute to IPV vulnerability and perpetration. In most developing countries laws protecting victims of IPV are non existent, non-enforced or more lenient than necessary. Moreover, because religious and cultural norms put women in a subordinate position in many societies (Chester et al. 1994; Hamby 2000; Levitt and Ware 2006), there are laws that literally accept punishment of women for deviations from expected religious/cultural gender norms. In Northern Nigeria for example, Section 55 of the Penal Code allows a husband to "discipline" his wife so long as the action does not amount to the "infliction of grievous hurt" (Feminist.com, 2006). Policy thus becomes an important promoter of IPV when it should ideally be used as a remedy against the practice.

IPV in the Sub-Saharan African Context

IPV in Sub-Saharan Africa has been researched from varying perspectives ranging from rights, feminist, cultural and society in transition theories. Few studies have also explored the phenomena from a social or structural empowerment perspective (Okenwa and Lawoko 2009; Lawoko 2006). The role of structural empowerment in vulnerability for IPV, however, remains elusive. Though there is a consensus that structural empowerment factors may be associated with IPV, the direction of association has not been consistently demonstrated. While some studies from the Sub-Saharan African context have supported the notion that poor socioeconomic conditions e.g., less schooling and unemployment (Jewkes et al. 2002; Lawoko 2006) among women may be associated with increased vulnerability; others from the same context have instead indicated increased vulnerability among

socially empowered women such as employed women (Chakwana 2004; Zimbabwe Demographic & Health Survey 2006 [ZDHS 2006]). These discrepancies warrant careful scrutiny of social factors associated with IPV vulnerability in each specific Sub-Saharan African country. Moreover, even within the same country, variations in social (e.g., religion) and cultural conditions may exist (e.g., religious and ethnic belonging) and with it differences in IPV exposure and risk factors. Indeed, examples from other developing societies seem to point in that direction. After stratifying their analysis by two main geographical parts of the Bangladesh that differ culturally (one culture more conservative than the other), Koenig et al. (2003a, b) found that financial empowerment of women was significantly related to greater risk of IPV in the more conservative region but with lower risk in the less conservative region.

In summary, these data suggest that IPV vulnerability in Sub-Saharan Africa may differ depending on differences in women's normative roles and men's expectations of them between the societies. The direction of association between IPV exposure and social factors is thus likely to vary between countries. Moreover, such differences may even exist between different regions within a given country. These differences could have implications for how to shape prevention strategies for IPV specific to a given society. In this paper, we will study the factors associated with IPV vulnerability among women in Lagos, Nigeria, and based on our findings, suggest appropriate intervention to manage IPV in that region.

Aim and Specific Objectives

Basing largely on the ecological framework of IPV, the overall aim of this paper is to study the association between exposure to IPV and individual, relational and societal factors. More specifically the study will scrutinize exposure to IPV among women in Lagos, Nigeria in relation to individual factors (e.g., age, educational achievement and literacy), relational/familial factors (e.g., financial difficulties in the household and power to make household decisions) and societal factors (e.g., ethnicity and religion).

Methods

Study Design and Setting

This study was conducted at the obstetrics and gynaecology department of the Lagos University Teaching Hospital (LUTH), Nigeria utilizing a cross section of the women attending the clinic.

Sampling Procedure and Participants

Systematic sampling was used to select a sample of women totaling 934, aged 15–49 years visiting the O&G clinic of LUTH. The sample size necessary was established using a power analysis, assuming a binomial distribution. A sample size of about 900, statistical significance level of alpha = 0.05, and an estimated average yearly probability of IPV occurring in developing countries of 0.125, based on data from several countries would be appropriate to secure a statistical power of over 0.90 considered as very good. Participating woman under the guidance of trained personal responded to a questionnaire comprising of previously validated questions.

Questionnaire

A structured questionnaire covering demographic and health issues was administered to the eligible women. The questionnaire covered; women and husband's background, reproductive history, utility of family planning methods, fertility preferences, child mortality, awareness of and precaution against sexually transmitted diseases, marriage and sexual behavior, attitudes towards IPV, disclosure of IPV, psychosocial health outcomes, demographic and social status indicators, and domestic violence. For the current paper, the questions of primary interest were those on domestic violence, demographics and social indicators.

Measures Used in Current Study

Dependent Variable

The dependent variable in this study was Intimate Partner Violence (IPV), which was assessed using a modified version of the Conflict Tactic Scale (CTS) (Straus and Gelles 1990). The CTS assesses whether participants have experienced physical, psychological and sexual abuse perpetrated by the current husband/partner during the latest year or ever. For this study, experience of IPV latest year was of primary interest to study the predictors of IPV. Physical abuse was operationalized as being slapped, pushed, punched, choked, burnt on purpose, kicked and assaults using knife, or other weapons. Psychological abuse included being insulted, made to feel bad about self, belittled in front of other people, scared or intimidated, threatened with violence or threats of violence directed towards someone you care about. Sexual abuse included being physically forced to have sexual intercourse when she did not want to; having intercourse out of fear or forced to do sexual degrading or humiliating sexual act. In this study, a victim of IPV was a woman who has experienced at least one of the forms of abuse described above. In the logistic

regressions analyses, exposure to IPV during the latest year was used as the dependent variable.

Independent Variables

Independent variables used included the following for which response alternatives are presented in brackets: *age*; *literacy* (1 = can read little or nothing, 2 = can read whole sentences); *religion* (1 = Catholic, 2 = Protestant, 3 = Muslim, 4 = others); *ethnicity* (1 = Yoruba, 2 = Ibo, 3 = others); *employment* (1 = yes, 2 = no); *working at home* (1 = yes, 2 = no) *access to information* i.e. reads paper, listens to radio, watches TV (1 = almost everyday, 2 = at least once weekly, 3 = less than once weekly, 4 = almost never/not at all); *respondent's and partners use of alcohol*; *smoking habits*; (1 = yes, 2 = no); *husband practices polygamy* (1 = yes, 2 = no); *participation in decision making* i.e. say on money use, health care, household purchase etc (1 = complete say, 2 = partial say, 3 = no say); *financial participation* i.e. contribution to household purchase *financial difficulties* i.e. problems making ends meet and problems managing monthly expenditures (1 = yes, 2 = no).

Ethical Considerations

Ethical approval for the study was granted by the Nigerian Institute of Medical Research, NIMR after due protocol. Moreover, local clearance to administer the questionnaire was sought and received at the department of obstetrics and gynaecology.

The domestic violence module used was adapted from the Demographic and Health Surveys module and the WHO questionnaire on violence often used for developing countries. These surveys strictly adhere to the standards for ethical and safety recommendations for research on domestic violence set by the World Health Organization (WHO). The recommendations aim to ensure women's safety and at the same time maximizing disclosure of actual violence, promoted among other things by offering adequate training and support to field workers together with informed consent and guarantee of privacy to respondents (WHO 2001).

Statistical Analyses

The SPSS program version 15.0 was used for imputing and analysis of data. In the univariate analyses, chi-square test was used to assess associations between IPV exposure and the independent variables. Logistic regression was used in the multivariable analysis to assess the independent contribution of the explanatory variables while adjusting for possible confounding. The direction and magnitude of associations were expressed as adjusted odds ratio. The significance level was set at $p<0.05$ for all statistical analysis.

Results

One Year Prevalence of IPV

The 1 year prevalence of IPV was high with significant proportions reporting exposure to any form of abuse (29.1%; any form implies at least one of physical, psychological or sexual abuse), physical abuse (8.6%), psychological abuse (22.8%) and sexual abuse (8.3%).

Univariate Associations Between IPV Exposure and Demographics, Financial Difficulties, Decision/ Financial Participation, Access to Information and Behavioral Variables

As shown in Table 1, demographic variables were associated with vulnerability to IPV. The proportion exposed to physical violence reduced with increasing education ($\chi^2(2)=10.1$; $p<0.01$) and literacy ($\chi^2(1)=5.3$; $p<0.05$). Religion was associated with sexual abuse ($\chi^2(3)=14.2$; $p<0.01$) and any form of abuse ($\chi^2(3)=14.6$; $p<0.01$), with the highest proportions of abused women among catholic. Women having at least one child were more likely to report exposure to psychological abuse (χ^2 (1)=5.6; $p<0.05$) and any abuse (χ^2 (1)=5.8; $p<0.05$). Polygamy appeared to be a relevant factor in exposure as respondents in polygamous relationships were more likely to report exposure to physical abuse (χ^2 (1)=18.1; $p<0.001$). While unemployment increased vulnerability to physical abuse (χ^2 (1)=4.2; $p<0.05$), working from home was associated with an increased likelihood of experiencing physical abuse (χ^2 (1)=4.1; $p<0.05$) and any kind of violence (χ^2 (1)=4.1; $p<0.05$).

Financial difficulties were associated with IPV exposure. Problems making ends meet was associated with an increased likelihood for physical (χ^2 (1)=5.1; $p<0.05$), psychological (χ^2 (1)=12.8; $p<0.001$), sexual (χ^2 (1)=6.4, $p<0.05$) and any form of IPV (χ^2 (1)=11.0, $p<0.01$). Likewise, problems managing monthly expenditures was associated with an increased likelihood for physical abuse (χ^2 (1)=7.9; $p<0.01$), psychological abuse (χ^2 (1)=7.5; $p<0.01$) and the risk for any form of violence (χ^2 (1)=4.4; $p<0.05$).

Table 1 also shows that decision participation was related with IPV exposure. Having a say on money use in the household was associated with an increased likelihood for physical (χ^2 (2)=10.3; $p<0.01$) and sexual abuse (χ^2 (2)=15.8; $p<0.001$). In addition, having a say on household purchases increased likelihood of psychological abuse (χ^2 (2)=6.1; $p<0.05$). Women with complete say with regard to

Table 1 One-year prevalence of exposure to IPV by demographics, financial difficulties, decision and financial participation, behavioural factors and access to information indicators

Variable Demographics	Physical abuse			Psychological abuse			Sexual abuse			Any Abuse		
	N	%	P- value	N	%	P- value	N	%	P- value	N	%	P- value
Age			0.931			0.315			0.522			0.801
15–24	102	9.8		102	15.7		102	9.8		102	26.5	
25–34 yrs	562	8.7		562	24.2		562	8.0		562	30.2	
35–44 yrs	222	8.6		222	23.0		222	9.5		222	28.4	
45–49 yrs	17	11.8		17	23.5		17	0.0		17	23.5	
Education			0.006			0.565			0.633			0.229
Primary	39	17.9		39	23.1		39	10.3		39	30.8	
Secondary	195	12.3		195	25.6		195	9.7		195	33.8	
Post secondary	664	6.9		664	22.0		664	7.8		664	27.6	
Literacy			0.021			0.997			0.866			0.603
Can read little /Nothing	68	62.2		68	23.5		68	8.8		68	32.4	
Able to read fully	753	8.0		753	23.4		753	8.2		753	29.3	
Religion			0.121			0.079			0.003			0.002
Catholic	290	11.7		290	27.9		290	13.4		290	37.2	
Protestant	392	7.7		392	20.7		392	6.4		392	26.5	
Muslim	78	6.4		78	17.9		78	3.8		78	21.8	
Others	136	5.6		136	20.6		136	6.6		136	23.5	
Ethnicity			0.733			0.497			0.440			0.428
Yoruba	399	8.3		399	21.8		399	8.5		399	28.1	
Ibo	372	9.4		372	25.0		372	9.4		372	31.7	
Others	123	7.3		123	21.1		123	5.7		123	26.8	
Have child/children			0.123			0.018			0.110			0.016
Yes	505	10.1		505	26.3		505	9.9		505	33.1	
No	379	7.9		379	19.5		379	6.9		379	25.6	
Partner has another wife/wives			0.001			0.171			0.518			0.110
Yes	36	27.8		36	33.3		36	11.1		36	41.7	
No	706	7.5		706	23.4		706	8.1		706	29.2	
Respondent working			0.048			0.815			0.389			0.643
Yes	536	7.3		536	24.1		536	9.5		536	30.8	
No	321	11.2		321	23.4		321	7.8		321	29.3	
Working at home			0.031			0.298			0.177			0.042
Yes	153	13.1		153	27.5		153	11.1		153	37.9	
No	510	7.5		510	23.3		510	7.6		510	29.2	
Financial difficulties												
Problems making ends meet			0.025			0.001			0.012			0.001
Yes	376	11.2		376	29.3		376	11.2		376	35.6	
No	408	6.6		408	18.4		408	6.1		408	24.8	
Problems managing monthly expenditures			0.005			0.006			0.799			0.035
Yes	177	14.1		177	31.1		177	9.0		177	36.2	
No	605	7.3		605	21.2		605	8.4		605	27.9	
Decision and financial participation												
Say on money use			0.006			0.524			0.001			0.198
Complete say	401	11.2		401	25.7		401	12.5		401	34.2	
Partial say	223	4.5		223	22.4		223	4.0		223	27.4	
No say	67	14.9		67	28.4		67	3.0		67	34.3	
Say on healthcare			0.877			0.793			0.080			0.449
Complete say	258	9.7		258	25.2		258	10.9		258	33.7	
Partial say	319	8.5		319	24.5		319	8.5		319	29.5	

Table 1 (continued)

Variable Demographics	Physical abuse			Psychological abuse			Sexual abuse			Any Abuse		
	N	%	P- value	N	%	P- value	N	%	P- value	N	%	P- value
No say	200	9.0		200	22.5		200	5.0		200	29.0	
Say on household purchases			0.517			0.047			0.706			0.167
Complete say	106	7.5		106	21.7		106	10.4		106	27.4	
Partial say	259	7.7		259	29.0		259	7.7		259	34.4	
No say	409	10.0		409	20.8		409	8.3		409	27.9	
Say on visiting relatives/friends			0.001			0.030			0.006			0.003
Complete say	180	8.3		180	26.1		180	10.6		180	32.2	
Partial say	452	6.9		452	20.6		452	6.0		452	26.3	
No say	143	17.5		143	30.8		143	14.0		143	41.3	
Say on number of children to have			0.001			0.061			0.001			0.0001
Complete say	50	22.0		50	36.0		50	22.0		50	56.0	
Partial say	558	6.5		558	21.9		558	6.8		558	27.4	
No say	103	13.6		103	26.2		103	9.7		103	32.0	
Contribution to household expenses			0.960			0.444			0.019			0.226
None	185	9.2		185	24.9		185	4.3		184	30.8	
About Half	367	8.7		367	23.4		367	9.5		367	30.2	
More than or all	94	9.6		94	29.8		94	13.8		94	39.4	
Behavioural factors												
Respondent uses alcohol			0.020			0.093			0.005			0.018
Yes	129	14.0		129	28.7		129	14.7		129	38.0	
No	774	7.8		774	22.0		774	7.4		774	27.8	
Husband uses alcohol			0.014			0.074			0.013			0.016
Yes	248	12.9		248	27.8		248	12.5		248	36.3	
No	585	7.5		585	22.1		585	7.2		585	27.9	
Husband smokes			0.001			0.145			0.016			0.002
Yes	43	27.9		43	32.6		43	18.6		43	51.2	
No	773	7.9		773	22.9		773	8.0		773	28.7	
Access to information												
Read newspaper												
Almost everyday			0.001			0.136			0.478			0.014
At least once weekly	265	5.3		265	20.8		265	7.2		265	24.5	
Less than once weekly	339	7.4		339	20.4		339	8.0		339	26.8	
Almost never/never	103	4.9		103	27.2		103	7.8		103	33.0	
	199	17.1		199	27.6		199	11.1		199	37.2	
Listen to radio			0.183			0.115			0.287			0.068
Almost everyday	546	7.0		546	22.2		546	8.6		546	28.0	
At least once weekly	184	10.9		184	20.1		184	5.4		184	27.7	
Less than once weekly	64	12.5		64	34.4		64	12.5		64	43.8	
Almost never/never	114	10.5		114	24.6		114	9.6		114	28.9	
Watches TV			0.073			0.594			0.414			0.615
Almost everyday	802	8.0		802	22.4		802	8.1		802	28.6	
At least once weekly	55	18.2		55	23.6		55	12.7		55	36.4	
Less than once weekly	27	7.4		27	33.3		27	7.4		27	33.3	
Almost never/never	15	6.7		15	26.7		15	0.0		15	26.7	

N = number responding within each category; % = percentage of N that are abused; p-value = significance level

visiting family/friends were more often than colleagues without such autonomy exposed to physical (χ^2 (2)=14.9; $p<0.001$), psychological (χ^2 (2)=6.9; $p<0.05$), sexual; (χ^2 (2)=10.2; $p<0.01$) and any form of abuse (χ^2 (2)=11.8; $p<0.01$). In addition, women having full autonomy over the number of children to have and when to have them where more likely to report physical violence; (χ2 (2)=18.0; $p<0.001$); sexual violence; (χ^2 (2)=14.2; $p<0.001$) and all kinds of violence combined in the past year (χ^2 (2)=18.0, $p<0.001$).

Behavioral factors were associated with IPV exposure. Alcohol consumption among women increased exposure to physical (χ^2 (1)=5.4; $p<0.05$), sexual (χ^2 (1)=7.8; $p<0.01$) and any form of abuse (χ^2 (1)=5.6; $p<0.05$). The same trend was observed among women whose husbands consumed alcohol. Women whose husbands consume alcohol were more likely to experience physical (χ^2 (1)=6.1; $p<0.05$), sexual (χ^2 (1)=6.2; $p<0.05$) and any form of abuse (χ^2 (1)=5.8, $p<0.05$) than peers whose husbands did not drink. In the same vein, women with smoker husbands were more likely to experience physical (χ^2 (1)=20.0; $p<0.001$), sexual (χ^2 (1)=5.8; $p<0.05$) and any form of violence (χ^2 (1)=9.8; $p<0.01$).

As also shown on Table 1, access to information was related with IPV exposure. Reading newspapers was associated with physical abuse (χ^2(3)=24.4; $p<0.001$) and any form of abuse (χ^2(3)=10.6; $p<0.05$), with the highest proportions of abused women observed among those who seldom/never read newspapers.

Logistic Regression of IPV Exposure Using Demographics, Financial Difficulties, Decision/Financial Participation, Behavioral Variables and Access to Information as Independent Variables

As indicated (see below) in Table 2, demographic variables such as age and having children remained significantly associated with IPV after adjusting for possible confounding with other study independent variables. Contrasting with peers 25–44 years of age, women aged 15–24 years were more likely to experience physical abuse, sexual abuse, and any abuse. Having a child increased likelihood of experiencing psychological abuse and any form of abuse. All other variables in Table 2 did not impact significantly on likelihood of IPV when possible confounding was adjusted for.

From Table 3, it can be seen that financial difficulties i.e. problems managing monthly expenditure remained significantly associated with IPV after adjusting for possible confounding with other study independent variables. Having such problems increased likelihood of experiencing physical abuse. All other variables in Table 3 did not impact significantly on likelihood of IPV when possible confounding was adjusted for.

Decision and financial participation variables i.e. say on money use, say on visiting and contribution to household expenses remained significantly associated with IPV after adjusting for possible confounding with other study independent variables (Table 4). Having full autonomy on decisions regarding spending household money increased likelihood of sexual abuse. Contribution to household expenditure increased likelihood of physical, psychological, sexual and any form of abuse. All other variables in Table 4 did not impact significantly on likelihood of IPV when possible confounding was adjusted.

As indicated in Table 5, none of the behavioral variables impacted significantly on likelihood of IPV when possible confounding was adjusted for.

As indicated in Table 6, access to information (i.e., reading newspaper and watching TV) remained significantly associated with IPV after adjusting for possible confounding with other study independent variables. Inability to read newspaper increased likelihood of physical abuse, while limited access to TV increased likelihood of psychological and sexual abuse. All other variables in Table 6 did not impact significantly on likelihood of IPV when possible confounding was adjusted for.

Discussion

This study aimed primarily at estimating the 1 year prevalence and scrutinizing risk factors for Intimate Partner Violence (IPV) against women in Lagos, Nigeria. Potential risk factors investigated were categorized under demographics, financial difficulties, financial participation, decision participation, behavioral factors and access to information. Results revealed a yearly prevalence of IPV ranging between 8–29%, corroborating results from other Sub-Saharan African countries (Jewkes et al. 2002; Koenig et al. 2003a, b). Consistent with previous observations (Obi and Ozumba 2007; Ezechi et al. 2004), the most common form of violence in this sample was psychological abuse (22.8%). The high yearly prevalence of IPV among women in this clinical sample demonstrates the need for screening for IPV in healthcare settings with the aim of making appropriate referral for IPV victims. Indeed, research emerging from the developed countries suggests that female clients (Stenson et al. 2001, 2005) and their healthcare providers (Furniss et al. 2007; Bair-Merritt et al. 2006) endorse screening for IPV in healthcare as a remedy for its eventual management.

The study of risk factors for IPV has received considerable attention in the literature and the current data adds to the growing literature indicating that demographic factors such as low age and having children are independently associated with increased vulnerability to IPV. That having

Table 2 Adjusted odds-ratios for demographic variables as predictors of IPV: adjusted for behavioural variables, access to information, financial difficulties, decision and financial participation

Variable	Physical violence in the past year			Psychological violence in the past year			Sexual violence in the past year			Any violence in the past year		
	Adjusted OR	(CI for OR)	P-value	Adjusted OR	(CI for OR)	P-value	Adjusted OR	(CI for OR)	P-value	Adjusted OR	(CI for OR)	P-value
Age												
15–24	1.00			1.00			1.00			1.00		
25–34 yrs	0.154	(0.333–0.712)	0.017	0.917	(0.236–3.572)	0.901	0.068	(0.007–0.636)	0.018	0.333	(0.091–1.215)	0.096
35–44 yrs	0.151	(0.280–0.820)	0.049	0.696	(0.167–2.893)	0.618	0.098	(0.010–0.944)	0.044	0.173	(0.043–0.692)	0.013
45–49 yrs	0.858	(0.970–7.557)	0.890	1.287	(0.188–8.824)	0.979	0.0001	(0.0002–0.0001)	0.999	0.362	(0.047–2.807)	0.331
Education												
Primary	1.000			1.00			1.00			1.00		
Secondary	0.486	(0.087–2.705)	0.410	0.952	(0.276–3.285)	0.938	0.675	(0.038–11.946)	0.789	1.685	(0.435–6.524)	0.450
Post secondary	0.247	(0.047–1.283)	0.096	0.606	(0.183–2.008)	0.412	0.235	(0.013–4.267)	0.327	1.073	(0.274–4.200)	0.919
Literacy												
Can read little /Nothing	1.000			1.00			1.00			1.00		
Able to read whole sentence	1.715	(0.355–8.290)	0.502	2.038	(0.703–5.910)	0.190	2.205	(0.216–22.516)	0.505	3.277	(1.067–10.062)	0.038
Religion												
Catholic	1.00			1.00			1.00			1.00		
Protestant	0.539	(0.210–1.389)	0.502	0.736	(0.417–1.298)	0.289	0.439	(0.107–1.810)	0.255	0.606	(0.324–1.135)	0.118
Muslim	0.244	(0.025–2.354)	0.222	0.438	(0.145–1.324)	0.143	0.264	(0.021–3.308)	0.302	0.462	(0.150–1.427)	0.180
Others	0.691	(0.166–2.874)	0.611	0.721	(0.317–1.643)	0.437	0.016	(0.001–0.529)	0.021	0.720	(0.295–1.755)	0.470
Ethnicity												
Yoruba	1.00			1.00			1.00			1.00		
Ibo	1.103	(0.432–2.815)	0.837	1.070	(0.606–1.889)	0.816	0.595	(0.156–2.270)	0.447	0.857	(0.468–1.568)	0.616
Others	0.721	(0.178–2.926)	0.647	1.107	(0.523–2.346)	0.790	1.094	(0.107–11.176)	0.940	0.656	(0.287–1.501)	0.318
Have at least one child												
Yes	1.00			1.00			1.00			1.00		
No	0.512	(0.188–1.398)	0.192	0.523	(0.298–0.918)	0.024	0.371	(0.098–1.398)	0.143	0.561	(0.315–0.997)	0.049
Respondent working												
Yes	1.00			1.00			1.00			1.00		
No	2.04	(0.815–5.108)	0.128	0.898	(0.482–1.674)	0.736	0.701	(0.144–3.405)	0.660	0.843	(0.423–1.679)	0.627
Working at home												
Yes	1.00			1.00			1.00			1.00		
No	0.441	(0.177–1.100)	0.079	0.773	(0.423–1.412)	0.402	0.432	(0.110–1.703)	0.231	0.570	(0.301–1.079)	0.084

Table 3 Adjusted odds-ratios for financial difficulties as predictors of IPV: adjusted for demographic variables, access to information, behavioural factors and decision and financial participation

Variable	Physical violence in the past year			Psychological violence in the past year			Sexual violence in the past year			Any violence in the past year		
	Adjusted OR	(CI for OR)	P-value	Adjusted OR	(CI for OR)	P-value	Adjusted OR	(CI for OR)	P-value	Adjusted OR	(CI for OR)	P-value
Problems making ends meet												
Yes	1.00			1.00			1.00			1.00		
No	1.120	(0.370–3.393)	0.841	0.686	(0.384–1.226)	0.203	0.388	(0.105–1.441)	0.157	0.701	(0.403–1.219)	0.208
Problems managing monthly expenditures												
Yes	1.00			1.00			1.00			1.00		
No	0.215	(0.061–0.757)	0.017	0.710	(0.365–1.381)	0.313	6.276	(0.989–39.821)	0.051	0.822	(0.430–1.572)	0.554

children increases IPV vulnerability could be explained by the social bonding theory. Some authors (Little and Kaufman 2002; Romans et al. 2006) have observed that family bonding is significant in women's choice to remain in abusive relationships. In the Sub-Saharan African context where the husband remains the breadwinner, this problem is particularly cumbersome as women worry about their children's welfare when considering separation.

Women's behaviors (i.e., alcohol consumption) increased vulnerability to IPV. Moreover, women whose partners used alcohol or smoked were more likely to experience abuse. These findings are in line with previous work in the field (Silverman et al. 2001). The multivariate analysis could not however confirm these factors as independent risk factors of IPV, suggesting that possible confounding with other study variables may have been an issue. Future research in the field may need to consider careful analysis of variables possibly confounding or mediating the relationship between IPV exposure and behavioral factors.

The role of social and structural empowerment indicators in eliciting of IPV remains an area of controversy when viewed in general in the Sub-Saharan African context. Our results provide evidence suggesting that empowerment indicators, such as education, literacy, employment, and family financial stability, may be a protective factor against IPV, corroborating some data from the Sub-Saharan African context (Jewkes et al. 2002; Lawoko 2006; Lawoko et al. 2007) but contradicting others (Chakwana 2004; Zimbabwe Demographic and Health Survey 2006 [ZDHS 2006]). However, the multivariate analysis could not confirm education, literacy, employment as independent risk factors for IPV. This suggests that further investigation of possible confounding variables in future research may provide deeper insight on the relationship between IPV and these empowerment indicators. On the other hand, other empowerment indicators such as participation in household decisions and contribution to household expenses increased women's vulnerability to IPV even after adjustment for possible confounding in the multivariate analyses, inconsistent with some previous findings (Aimakhu et al. 2004; Obi and Ozumba 2007) but supporting others (e.g., Koenig et al. 2003a, b). These results may be a reflection of circumstances where women's involvement in domestic affairs that are traditionally seen as men's roles in some societies (e.g., decision making and breadwinning) is likely to cause spousal conflicts, reflected here in the form of domestic violence. Overall, these findings suggest that the relationship between IPV and social and structural empowerment indicators is complex. For these reasons, each empowerment indicator and their role in IPV deserve an assessment on their own right in each unique society. With regard to the Lagos, Nigerian context, it seems that while

Table 4 Adjusted odds-ratios for polygamy, decision and financial participation as predictors of IPV: adjusted for demographic variables, access to information, behavioural factors and financial difficulties

Variable	Physical violence in the past year			Psychological violence in the past year			Sexual violence in the past year			Any violence in the past year		
	Adjusted OR	(CI for OR)	P-value	Adjusted OR	(CI for OR)	P-value	Adjusted OR	(CI for OR)	P-value	Adjusted OR	(CI for OR)	P-value
Partner has other wife/wives												
Yes	1.00			1.00			1.00			1.00		
No	0.341	(0.050–2.329)	0.272	0.625	(0.180–2.167)	0.459	103.270	(0.384–27742.119)	0.104	1.190	(0.317–4.471)	0.797
Say on money use												
Complete say	1.00			1.00			1.00			1.00		
Partial say	1.161	(0.347–3.886)	0.809	1.662	(0.893–3.090)	0.109	0.228	(0.055–0.940)	0.041	1.708	(0.938–3.113)	0.080
No say	1.178	(0.200–6.928)	0.330	1.004	(0.349–2.892)	0.994	0.0001	(0.0001–0.009)	0.999	1.220	(0.429–3.473)	0.709
Say on healthcare												
Complete say	1.00			1.00			1.00			1.00		
Partial say	0.360	(0.105–1.235)	0.104	0.721	(0.366–1.419)	0.344	2.647	(0.723–9.692)	0.141	0.581	(0.302–1.117)	0.104
No say	0.247	(0.053–1.153)	0.075	0.912	(0.393–2.114)	0.830	0.0001	(0.0001–0.009)	0.994	0.497	(0.218–1.129)	0.095
Say on household purchases												
Complete say	1.00			1.00			1.00			1.00		
Partial say	3.513	(0.442–27.934)	0.235	1.293	(0.522–3.202)	0.578	0.269	(0.050–1.437)	0.125	1.368	(0.565–3.315)	0.487
No say	6.135	(0.767–47.847)	0.083	0.972	(0.384–2.459)	0.952	0.430	(0.062–2.973)	0.393	1.397	(0.569–3.426)	0.465
Say on visiting friends/relatives												
Complete say	1.00			1.00			1.00			1.00		
Partial say	2.778	(0.611–12.637)	0.186	0.749	(0.370–1.515)	0.421	0.267	(0.072–0.982)	0.047	0.934	(0.468–1.863)	0.846
No say	2.136	(0.373–12.239)	0.394	1.210	(0.457–3.205)	0.701	3.404	(0.433–26.779)	0.244	2.167	(0.827–5.679)	0.116
Say on number of children to have												
Complete say	1.00			1.00			1.00			1.00		
Partial say	0.497	(0.091–2.700)	0.418	0.534	(0.187–1.523)	0.241	1.278	(0.127–12.872)	0.835	0.409	(0.151–1.105)	0.078
No say	1.631	(0.219–12.164)	0.633	0.418	(0.115–1.517)	0.185	2.582	(0.119–56.237)	0.546	0.316	(0.091–1.093)	0.069
Contribution to household expenses												
None	1.00			1.00			1.00			1.00		
About Half	1.639	(0.437–6.154)	0.464	1.044	(0.516–2.112)	0.904	7.727	(0.771–77.427)	0.082	1.125	(0.583–2.171)	0.725
More than half or all	8.545	(1.367–53.412)	0.022	3.139	(1.236–7.973)	0.016	24.905	(1.846–335.993)	0.015	3.848	(1.575–9.399)	0.003

Table 5 Adjusted odds-ratios for behavioural factors as predictors of IPV: adjusted for demographic variables, access to information, financial difficulties, decision and financial participation

Variable	Physical violence in the past year			Psychological violence in the past year			Sexual violence in the past year			Any violence in the past year		
	Adjusted OR	(CI for OR)	P-value	Adjusted OR	(CI for OR)	P-value	Adjusted OR	(CI for OR)	P-value	Adjusted OR	(CI for OR)	P-value
Respondent uses alcohol												
Yes	1.00			1.00			1.00			1.00		
No	0.667	(0.196–2.270)	0.517	0.539	(0.241–1.203)	0.131	2.411	(0.336–17.302)	0.381	0.931	(0.390–2.225)	0.873
Husband uses alcohol												
Yes	1.00			1.00			1.00			1.00		
No	0.598	(0.194–1.848)	0.372	0.697	(0.359–1.352)	0.285	0.498	(0.138–1.796)	0.287	0.584	(0.293–1.116)	0.127
Husband smokes												
Yes	1.00			1.00			1.00			1.00		
No	0.265	(0.051–1.382)	0.115	3.041	(0.579–15.968)	0.189	0.0009	(0.00009–0.0001)	0.998	1.216	(0.260–5.677)	0.803

social empowerment of women outside the home (e.g., education and employment) may provide protection against IPV, empowerment in the domestic arena (i.e. participation in domestic decisions and participation in domestic expenses) may increase IPV vulnerability.

There is a consensus in the literature that access to information via mass media is likely to reduce vulnerability to IPV (Okenwa and Lawoko 2009) and the current data seems to point in that direction, as exposure to newspapers and television reduced vulnerability to IPV. Whether it is exposure to mass media per se or whether the mass media addresses issues relating to women's empowerment however has so far been an area of peripheral discussion. Future research on the content of information channeled via mass media may provide further insight in understanding the mechanism linking limited mass media exposure to IPV vulnerability.

The current results have important implications for prevention of IPV in Lagos and similar socio-cultural context. Enlightening women through education and mass media exposure may come a long way in reducing IPV. It appears that women-focused interventions on their own may not be appropriate in some cases. Interventions directed toward empowering of women in their autonomy and participation in the domestic arena need to consider a re-orientation towards the women's partners. A concerted campaign to change men's attitudes towards women's domestic participation is warranted. Such campaign could emphasis the benefits of women's involvement and participation in empowering the family unit as a whole. The women themselves need to review their own attitudes toward abuse. Comparative studies between men and women have suggested that women tend to endorse wife beating to a higher degree than the men themselves.

The study also has important implications for research. As the multivariate analysis could not firmly confirm the association between IPV on the one hand and education, literacy, employment and alcohol consumption on the other, it follows that further research assessing possible confounders or mediators linking these variables to IPV exposure is warranted.

The strength of this study lies in its careful methodology, strict adherence to ethical issues regarding data collection on IPV in accordance with WHO recommendations and careful interpretation of the finding reported herein. The weaknesses of the study however deserve to be acknowledged on their own right. First, the study only inquired if women had been abused and did not incorporate women's own use of violence. Whether the respondent had been abused in retaliation to violence from the respondent herself is not known. Future research needs to distinguish between female victims only and female victims and who may also be perpetrators. Second, our study was based on clinical

Table 6 Adjusted odds-ratios for access to information variables as predictors of IPV: adjusted for demographics, behavioural variables, decision and financial difficulties

Variable	Physical violence in the past year			Psychological violence in the past year			Sexual violence in the past year			Any violence in the past year		
	Adjusted OR	(CI for OR)	P-value	Adjusted OR	(CI for OR)	P-value	Adjusted OR	(CI for OR)	P-value	Adjusted OR	(CI for OR)	P-value
Reads newspaper												
Almost everyday	1.00			1.00			1.00			1.00		
At least once weekly	1.007	(0.279–3.634)	0.991	0.849	(0.450–1.602)	0.614	1.283	(0.240–6.854)	0.770	0.887	(0.462–1.701)	0.717
Less than once weekly	1.721	(0.343–8.639)	0.509	1.111	(0.439–2.813)	0.825	1.360	(0.226–8.184)	0.737	1.513	(0.600–3.814)	0.380
Almost never/not at all	4.178	(1.082–16.123)	0.038	1.121	(0.506–2.486)	0.778	1.506	(0.229–9.896)	0.670	1.806	(0.799–4.080)	0.155
Listen to radio												
Almost everyday	1.00			1.00			1.00			1.00		
At least once weekly	1.381	(0.420–4.541)	0.595	0.790	(0.396–1.577)	0.505	2.087	(0.450–9.672)	0.347	0.906	(0.452–1.816)	0.781
Less than once weekly	2.460	(0.500–12.105)	0.268	0.544	(0.157–1.886)	0.337	8.617	(0.812–91.451)	0.074	1.385	(0.465–4.126)	0.558
Almost never/not at all	1.238	(0.377–4.059)	0.725	1.193	(0.558–2.550)	0.649	1.231	(0.250–6.045)	0.798	0.927	(0.417–2.063)	0.853
Watches TV												
Almost everyday	1.00			1.00			1.00			1.00		
At least once weekly	3.329	(0.760–14.588)	0.111	2.216	(0.816–6.017)	0.119	71.264	(3.988–1273.338)	0.004	2.734	(0.935–7.994)	0.066
Less than once weekly	1.269	(0.120–13.431)	0.843	4.768	(1.101–20.648)	0.037	0.0001	(0.0001–0.009)	0.999	3.665	(0.801–16.763)	0.094
Almost never/not at all	0.0001	(0.0001–0.009)	0.999	1.921	(0.218–13.108)	0.505	0.0001	(0.0001–0.009)	0.999	1.145	(0.159–8.259)	0.893

samples. Even though the findings seem congruent with research from non-clinical samples, generalization to and comparisons with non-clinical samples needs to be done with caution. Moreover, all women who participated in the study happened to have at least a primary education, suggesting some form of selection bias. It seems that women with no education at all may be grossly underrepresented as attendants of the LUTH clinic. Considering that Nigeria has an adult urban literacy rate of about 71%, we would have expected to capture some cases of non-educated women in our data. The findings of this study should therefore be interpreted to represent women presenting at an urban university hospital. In addition, the religion and ethnicity variables have an option "others" which clumps together all other religions (i.e., apart from Protestants, Catholics and Muslims) and all other tribes (apart from Yoruba and Ibo). As there were few from the smaller tribes, this was a strategy to increase the statistical power of the analysis with regard to these variables. The level of homogeneity in the option "other" can thus be questioned and may have affected the results with regards to these variables. For these reasons, we have refrained from deep interpretation and discussion of these two variables. Finally, the cross-sectional design of this study does not allow for causal interpretation. Studies with a more powerful design (e.g., longitudinal studies) are warranted to confirm causal links. All in all, as most of our results are in line with previous research in the field, the study carries a good grade of validity despite the weaknesses outlined herein.

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II

Original Article

Factors Associated with Disclosure of Intimate Partner Violence among Women in Lagos, Nigeria

Leah Okenwa,[a] Stephen Lawoko,[a,*] Bjarne Jansson [a]

[a] Karolinska Institutet, Department of Public Health Sciences Stockholm, Division of Social Medicine, Sweden.

KEY WORDS

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Abstract:

Background: Though the prevalence of Intimate Partner Violence (IPV) remains high in less developed countries, data suggest that these figures may represent an underestimation considering that many women are unwilling to disclose abuse. This paper aims to determine women's willingness to report abuse, factors determining willingness to disclose IPV, and to whom such disclosure is made.

Methods: A total of 911 women visiting reproductive health facility responded to the questionnaire, and the collected data was analyzed using multivariate analysis.

Results: About 54% (n=443) of the participating women reported that would not disclose IPV. Among those willing to disclose abuse, 68% (n=221) would opt to disclose to close relatives in contrast to 37% (n=103) who would disclose to some form of institutions (i.e. religious leaders, law enforcement officers). Ethnicity, woman's own use of alcohol and autonomy in decision making such as having a say on household purchases, money use and visitation, independently predicted willingness to disclose IPV.

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***Corresponding Author at:**
Leah Okenwa, *Karolinska Institutet, Department of Public Health Sciences, Norrbacka plan 2, 171 76 Stockholm Sweden, Tel: +46 707 40 2585, E-mail: Leah.Okenwa@ki.se* ***(L. Okenwa).***

Introduction

Despite the inaction of laws and regulations against Intimate Partner Violence (IPV), the prevalence of IPV remains alarmingly high. Globally, the one-year prevalence ranges between 15 – 71%,[1,2] with variations depending on factors such cultural norm, laws and other local conditions that favor/disfavor gender inequity. Yet, these figures may represent an under-estimation considering that significant proportions of women are unwilling to disclose abuse[3,4] Disclosure of abuse is a vital step in the process of finding a lasting solution and breaking the abuse chain. Thus, unless victims are willing to disclose abuse and make use of available resources, screening for and eventual management of IPV may be heavily constrained.

Intimate Partner Violence is defined as a pattern of assaultive and coercive behaviors, including physical, sexual and psychological attacks, as well as economic coercion that adults or adolescents use against their intimate partners.[5] Though women believe that screening gives victims support and information they need, they acknowledge that they have never disclosed disclose abuse in health care setting [6,7,8] The reasons for this discrepancy remain unclear but a likely explanation is that healthcare providers may lack adequate skills in promoting disclosure of abuse.[8] In family planning and antenatal clinics three categories of women have been identified; women who will disclose abuse or fear of it; women who will not openly disclose abuse, but present with abuse-related physical symptoms (e.g. bruises) as well as reproductive health complications (e.g. lacerations and history

of unexplained pregnancy complications); and finally women who live in an abusive relationship but do not report or show any signs associated with the abuse.[9] These distinctions raise questions as to why some women disclose abuse while others do not.

A number of factors both at the organizational, household and individual level have been identified to explain why women may choose not to disclose abuse. Within the clinical setting constraints to disclosure reported by women interviewed, are the perceptions that clinicians lack interest in IPV and a lack of trust in the health care provider. This is further compounded by threats of more violence in retaliation from the partner and embarrassment.[10] At the household level, women refrain from reporting abuse depending on the economic alternatives they have in the event of having to leave an abusive relationship. Lack of alternative economic resources may prevent women from reporting abuse.[11] Moreover, potential for child abuse may hinder women from reporting abuse,[12,13] suggesting that disclosure of abuse may fuel the intergenerational circle of violence from intimate partner violence to child abuse. At the individual level, there is evidence that women's ability and willingness to disclose abuse is influenced by; her emotional strengths, her level of adherence to gender roles, decision-making autonomy, being asked about it, social empowerment and her perception of available social support [8,10,14] It is however likely that these individual level factors are fueled by gender and social inequities at the societal level. Corroborating this argument, it is noted that factors such as ethnicity, culture, gender role definitions, kin and friendship networks may influence a woman's perception of her options, the help she seeks, as well as the nature and scope of violence she experiences in an intimate relationship.[15] Ethnicity and culture on their part have significant impact on women's attitude to IPV such that an ethnic group that is more gender restrictive is more likely to condition women to agree or consent to wife beating.[16] Normalization of IPV plays out significantly in Sub-Saharan African context. Recent data suggest that over 75% of the women believed that wife beating was justified when a woman does not leave up to her traditional normative roles (e.g. cooking and taking care of children).[2,17,18]

Societal, cultural and religious factors are not only important in determining whether women will report abuse or not, but also to whom such abuse will be reported. In many parts of Sub-Sahara Africa, marriage is considered a family and community affair rather than a private one. The role of the extended family therefore includes arbitrating in marital conflicts and finding ways to resolve them. Disclosure of abuse to some institutions such as law enforcement agencies is viewed as disrespect for the family. Indeed, authorities such as the police themselves condone such activity as women who dare to report are usually advised to go and settle with their husbands, denying women the opportunity to press charges and ultimately reducing their interest in seeking justice.[11,19,20] Despite evidence that the major religions practiced in Nigeria i.e. Christianity, Islam and traditional religion all have teachings of female submission and obedience to the man as the head, findings reveal that some women are willing to disclose to religious leaders.[11] However, distinctions between the categories of women who would make such reports are not yet clear.

Few studies coming from the African context have systematically examined the extent, nature and determinants of IPV disclosure. The objective of this study is: 1) to determine how willing women visiting an out-patient clinic in Lagos, Nigeria are to disclose abuse; 2) to whom such disclosure would be made; and 3) to determine factors which influence both willingness to disclose and the choice of to whom disclosure is made.

Methods

Study design and setting

This cross-sectional study was conducted on woman attending out-patient clinic of the Obstetrics and Gynecology department of the Lagos University Teaching Hospital (LUTH), Nigeria. The hospital, as its name implies, is a teaching hospital affiliated with the Lagos University which is one of the oldest and largest institution in Nigeria. The hospital is a fee-paying federal government owned tertiary institution known for conducting quality research.

Sampling procedure and participants

A convenient sample of 934 women aged 15-49 years was obtained while they were visiting the Obstetrics and Gynecology clinic of LUTH. Women were included in the study if they were 15-49 years of age. The sample size needed for the study was established using a power analysis, assuming a binomial distribution. To obtain a statistical power over 90% which is considered as very good, a sample size of about 900 was necessary based on a statistical significance level of alpha=0.05, and an estimated average yearly probability of IPV occurring in developing countries of 0.125.[1] Each participant responded to a questionnaire comprising of previously validated questions under the guidance of trained personal.

Questionnaire

A structured questionnaire covering demographic and health issues was administered verbally to the eligible women by trained field workers and voluntary participation emphasized. Study questionnaire was adapted from those commonly used by the World health organization and the demographic and health surveys and translated into the three major Nigerian languages, i.e. Hausa, Igbo and Yoruba. It was later back translated for validity. It covered women and their spouse's background (such as education, use of alcohol), their reproductive history, utility of family planning methods, fertility preferences, child mortality, awareness of and precaution against sexually transmitted diseases, marriage and sexual behaviour, attitudes towards IPV, disclosure of IPV, psychosocial health outcomes, demographic, social and empowerment indicators as well as exposure to domestic violence. For the current paper, the questions of primary interest were those on attitudes towards IPV, exposure to IPV, demographic, social and empowerment indicators and willingness to disclose IPV.

Measures

Dependent variable

Disclosure of IPV: participants responded to a hypothetical question posed as "would you disclose abuse?" The response options were "yes", "no", "don't know". Those responding "yes" to this question were probed further to find out to whom they would report. The response options to this follow-up question were: woman's family only, husband's family and close friends only, both families, religious leaders, the police and other types of social institutions. Subsequently, responses to this questions were dichotomized into two broader categories: 1) families and close friends (comprising those who would report to the woman's family only, husband's family and close friends only and those who would report to both families); and 2) the institutions (comprising of religious leaders, the police and other types of social institutions).

Independent variables

Attitudes to IPV was assessed using commonly used questions assessing IPV attitudes in the African context.[20, 21, 22] The questions assess whether participants would justify wife beating in five hypothetical situations: if the wife goes out with another man, neglects the children, argues with her partner, refuses to have sex with partner or cooks bad food/or food is served late. Answer options were "yes", "no" or "don't know". An affirmative response to one or several of these questions was considered having a tolerant attitude towards IPV, while a "no" response on all five situations denoted a non tolerant attitude.

Exposure to IPV was assessed using a modified version of the Conflict Tactic Scale (CTS).[23] Physical abuse was operationalized as being slapped, pushed, punched, choked, burnt on purpose, kicked and assaulted using knife or other weapons. Psychological abuse included being insulted, made to feel bad about self, belittled in front of other people, done things to scare or intimidate, and threatened to hurt respondent or someone she cares about. Sexual abuse included being physically forced to have sexual intercourse when she did not want to; having intercourse out of fear or forced to do sexually degrading or humiliating act. In this study, a victim of IPV was a woman who has experienced at least one of the forms of abuse described above.

Socio-demographic variables included: age; literacy (1=can read little or nothing, 2= can read whole sentences); religion (1=Catholic, 2=Protestant, 3=Muslim, 4=others); ethnicity (1=Yoruba, 2=Ibo, 3=others); earning income (1=yes, 2=no).

Empowerment indicators included

Access to information, assessed using frequency of reading newspaper, listening to radio, and watching TV all with response alternatives (1=almost everyday, 2=at least once weekly, 3=less than once weekly, 4=almost never/not at all); Decision autonomy, assessed by asking respondents whether they had a say on household expenditure, health care and household purchases with the following response options (1=complete say, 2=partial say, 3=no say). Women's and households economic position, assessed by inquiring whether the woman contributes to household purchase, whether the household has problems making ends meet, or problems managing monthly expenditures with the following response options (1=yes, 2= no).

Behavioural variables included

respondent's and partners use of alcohol and smoking habits (1=yes, 2=no) and polygamy.

Ethical considerations

National and local ethical clearance was granted by the Nigerian Institute of Medical Research, NIMR and the department of obstetrics and gynecology, LUTH before the questionnaire were administered. Ethical and safety recommendations set by the World Health Organization (WHO), which include training of and support to field workers, obtaining informed consent from participants, emphasis on voluntary participation as well as securing of anonymity were strictly followed.[25] Moreover, the Institutional

Review Board of the Nigeria Institute Medical Research approved the procedures, methodology and questionnaire content.

Statistical analyses

Data from the questionnaire were first entered into Microsoft excel and later transferred to SPSS program version 15.0, where analysis was done. Chi-square test was used to assess associations between willingness to disclose IPV and the independent variables. The significance level was set at $p<0.05$ for all statistical analysis. Logistics regressions analyses were used in the multivariable analysis to assess the independent contribution of the explanatory variables while adjusting for possible confounding. The direction and magnitude of associations were expressed as odds ratio. The significance level was set at $p<0.05$ for all statistical analysis.

Results

Willingness to disclose abuse and to whom

The majority of women in the study (54%) were unwilling to disclose IPV (Table 1). Of those willing to report abuse, barely 1% indicated willingness to report to the police compared with over 28% willing to report to the man's family, and 26% to religious leaders. In general, about 32% were willing to report to institutions contrasting with 68% willing to report to families and close friends (Table 1)."

Table 1: Frequency distribution of willingness to disclose and who disclosure is made to.

	Frequency	Percentage
Willingness to disclose		
Yes	377	46.0
No	443	54.0
Disclosure Preference		
Husband's family	93	28.7
Woman's own family	46	14.2
Both families	63	19.4
Pastor /Imam	86	26.5
Husband's friends	19	5.9
Police	3	0.9
other (specify)	14	4.3
Families and close friends	221	68.2
Institutions	103	31.7

Socio-demographic and behavioral factors vs. willingness to disclose abuse and to whom

As exhibited in Table 2, religion impacted significantly with willingness to disclose abuse with women of Catholic and "other" denomination most willing to disclose abuse ($x^2(3) = 7.9$; $p<0.05$). Willingness to report abuse was more common among women who used alcohol ($x^2(1)= 16.5$; $p<0.001$) and those whose partners used alcohol ($x^2(1)= 5.1$; $p<0.05$) in contrast with their peers who did not or whose partners did not use alcohol (Table 2).

Regarding women's preferences for disclosure, illiterate women were more willing to disclose to families in general ($x^2(1) = 5.9$; $p<0.05$), but least willing to report to institutions ($x^2(1)= 3.9$; $p<0.05$) (Table 2). Catholic and Muslim women were less willing to disclose IPV to institutions ($x^2(3)= 14.4$; $p<0.01$) than Protestant and women of "Other" denominations (table 2). Likewise, ethnic Yoruba women were less willing to disclose to the institutions than women of Ibo and "other" ethnic groups ($x^2(2)= 6.2$; $p<0.05$) (Table 2).

Empowerment indicators vs. willingness to disclose abuse and to whom

With regards to autonomy in decision concerning domestic life, women who had a say on household expenditure ($x^2(2)=19.2$; $p<0.001$), say on household purchase ($x^2(2)=15.5$; $p<0.001$), say on visiting family & friends ($x^2(2)= 15.2$; $p<0.001$); say on number of children to have and when to have children ($x^2(2)= 8.2$; $p<0.05$) were more willing to disclose abuse than their counterpart with "no say" in these respects (Table 3). Regarding women's preferences for disclosure, women who "rarely" or "never" watch TV were less willing to disclose IPV to families ($x^2(3)= 16.7$; $p<0.001$) or to institutions ($x^2(3)= 20.3$; $p<0.001$) (Table 3).

Attitudes towards and exposure to IPV vs. willingness to disclosure abuse and to whom:

Women who had ever experienced physical ($x^2(1) = 9.3$; $p<0.01$), psychological ($x^2(1) = 3.7$; $p=0.052$) and sexual IPV ($x^2(1) = 11.7$; $p<0.01$) were more willing to disclose abuse (Table 4). A similar trend was observed for experience of violence in the latest year. No association was found between having tolerant attitude to IPV and willingness to report abuse or to whom abuse would be reported (Table4).

Independent predictors of willingness to disclose IPV:

As expressed by the odds ratios in Table 5, ethnicity, alcohol use and some measures of autonomy remained significantly associated with willingness to report IPV when

Table 2: Factors influencing disclosure: Demographic Factors vs. Disclosure

Variables	Willingness to disclose				Families only				Institutions only			
	N	n	%	P-value	N	n	%	P-value	N	n	%	P-value
AGE				**0.215**				**0.092**				**0.559**
15-24	81	45	55.6		39	28	71.8		39	11	28.2	
25- 34yrs	520	240	46.2		207	131	63.3		207	66	31.9	
35 – 44yrs	198	84	42.4		71	40	56.3		71	23	32.4	
45 – 49yrs	16	6	37.5		5	1	20.0		5	3	60.0	
EDUCATION				**0.572**				**0.134**				**0.098**
Primary	36	14	38.9		12	8	66.7		12	4	33.3	
Secondary	170	75	44.1		60	44	73.3		60	12	20.0	
Post secondary	605	277	46.8		247	147	59.9		247	85	34.4	
LITERACY				**0.336**				**0.015**				**0.049**
Can't read /reads parts of sentence	61	24	39.3		22	19	86.4		22	3	13.6	
Able to read whole sentence	682	312	45.7		264	159	60.2		264	90	34.1	
RELIGION				**0.049**				**0.498**				**0.002**
Catholic	269	139	51.7		121	81	66.9		121	25	20.7	
Protestant	346	142	41.0		117	69	59.0		117	47	40.2	
Muslim	76	33	43.4		30	20	66.7		30	7	23.3	
Others	118	59	50.0		52	30	57.7		52	22	42.3	
ETHNICITY				**0.110**				**0.313**				**0.044**
Yoruba	357	163	45.7		143	95	66.4		143	36	25.2	
Ibo	339	146	43.1		123	75	61.0		123	42	34.1	
Others	110	60	54.5		51	28	54.9		51	22	43.1	
ALCOHOL				**0.000**				**0.287**				**0.372**
Yes	117	74	63.2		63	43	68.3		63	17	27.0	
No	700	301	43.0		259	158	61.0		259	85	32.8	
HUSBAND'S ALCOHOL INTAKE				**0.023**				**0.181**				**0.075**
Yes	232	119	51.3		105	72	68.6		105	25	23.8	
No	542	230	42.4		199	121	60.8		199	67	33.7	

adjusted for possible confounding variables in the logistic regression. Ibo ethnic group was less willing to report IPV than other ethnic groups. Women using alcohol, women who had say on household purchases, and say on visiting friends/relatives were more willing to disclose IPV than their peers who did not use alcohol and had no say on household purchases or visiting friends/relatives. All other variables did not reach statistical significance when possible confounding was adjusted for.

Discussion

This study examined willingness to disclose IPV among women aged 15-49 years in Lagos, Nigeria and identified factors associated with such disclosure as well as preferences regarding to whom disclosure would be made. The results revealed that majority of the interviewed women (54%), would choose not to disclose IPV. This figure seems higher than those reported previously where between 37% and 42% choose not to disclose violence.[3,26] These studies however addressed actual disclosure of abuse among abused women while our study addressed willingness to disclose abuse even among women never abused. Considering that willingness to disclose abuse may not directly translate to actual disclosure on the event of abuse, the higher figure observed in our study may have been expected. Among women willing to disclose abuse, almost twice as many opted for disclosure to close relatives (68%) in contrasted with disclosure to the institutions (37%), where only a modest 1% were willing to disclose to the police. These findings are in agreement with other

Table 3: Factors influencing disclosure: Social empowerment vs. disclosure

Variables	Willingness to disclose				Families only				Institutions only			
	N	n	%	P-value	N	n	%	P-value	N	n	%	P-value
READS NEWSPAPAPER				**0.647**				**0.699**				**0.377**
Almost everyday	239	117	49.0		106	67	63.2		106	33	31.1	
At least once weekly	308	134	43.5		111	65	58.6		111	41	36.9	
Less than once weekly	85	39	45.9		34	21	61.8		34	11	32.4	
Almost never/not at all	186	87	46.8		73	49	67.1		73	18	24.7	
LISTENS TO RADIO				**0.179**				**0.776**				**0.602**
Almost everyday	482	208	43.2		179	112	62.6		179	54	30.2	
At least once weekly	174	90	51.7		74	47	63.5		74	24	32.4	
Less than once weekly	61	32	52.5		28	15	53.6		28	12	42.9	
Almost never/not at all	103	47	45.6		43	28	65.1		43	13	30.2	
WATCHES TV				**0.161**				**0.001**				**0.0001**
Almost everyday	726	327	45.0		281	176	62.6		281	88	31.3	
At least once weekly	51	29	56.9		24	17	70.8		24	5	20.8	
Less than once weekly	26	11	42.3		10	1	10.0		10	9	90.0	
Almost never/not at all	10	7	70.0		7	7	100		7	0	0.0	
SAY ON MONEY USE				**0.0001**				**0.182**				**0.147**
Complete say	383	200	52.2		182	117	64.3		182	130	71.4	
Partial say	215	74	34.4		60	32	53.3		60	35	58.3	
No say	64	24	37.5		19	14	73.7		19	14	73.7	
SAY ON HEALTH CARE				**0.332**				**0.981**				**0.243**
Complete say	241	114	47.3		98	61	62.2		98	66	67.3	
Partial say	311	142	45.7		124	74	62.1		124	90	72.6	
No say	193	78	40.4		69	42	60.9		69	42	60.9	
SAY ON HOUSEHOLD				**0.0001**				**0.318**				**0.509**
Complete say	101	49	48.5		44	31	70.5		44	32	72.7	
Partial say	250	134	53.6		115	66	57.4		115	80	69.6	
No say	396	151	38.1		132	81	61.4		132	85	65.4	
SAY ON VISITING FAMILY & FRIENDS				**0.0001**				**0.760**				**0.358**
Complete say	167	82	49.1		75	47	62.7		75	54	72.0	
Partial say	440	212	48.2		179	112	62.6		179	123	68.7	
No say	139	42	30.2		39	22	56.4		39	23	59.0	
SAY ON NUMBER & WHEN TO HAVE CHILDREN				**0.017**				**0.707**				**0.655**
Complete say	48	27	56.3		25	17	68.0		25	18	72.0	
Partial say	546	252	46.2		222	135	60.8		222	151	68.0	
No say	99	33	33.3		28	16	57.1		28	17	60.7	

research conducted within African context.[11,27,28] These results further substantiate the role of the extended family in arbitrating marital conflicts, including violence, and suggest a divergence from capitalizing on established institutions purported to protect women from abuse. It is suggested that women perceive marital problems as their own[29] thus

Table 4: Factors influencing disclosure: Attitudes and exposure to IPV vs. Exposure

Variables	Willingness to disclose				Families only				Institutions only			
	N	n	%	P-value	N	n	%	P-value	N	n	%	P-value
Attitudes to IPV				**0.228**				**0.822**				**0.197**
Non-tolerant	506	241	47.6		207	130	62.8		207	71	34.4	
Tolerant	314	136	43.3		117	72	61.5		117	32	27.4	
Ever experienced physical IPV				**0.002**				**0.913**				**0.550**
No	643	278	43.2		237	149	62.9		237	76	32.1	
Yes	145	83	57.2		74	46	62.2		74	21	28.4	
Ever experienced psychological IPV				**0.052**				**0.090**				**0.218**
No	490	211	43.1		182	121	66.5		182	52	28.6	
Yes	297	149	50.2		128	73	57.0		128	45	35.2	
Ever experienced sexual IPV				**0.001**				**0.223**				**0.102**
No	662	285	43.1		246	150	61.0		246	82	33.3	
Yes	120	72	60.0		62	43	69.4		62	14	22.6	
Experienced physical IPV within the past year				**0.007**				**0.809**				**0.884**
No	748	333	44.5		285	177	62.1		285	91	31.9	
Yes	72	44	61.1		39	25	64.1		39	12	30.8	
Experienced psychological IPV within the past year				**0.018**				**0.061**				**0.128**
No	627	274	43.7		232	152	65.5		232	68	29.3	
Yes	193	103	53.4		92	50	54.3		92	35	38.0	
Experienced sexual IPV within past year				**0.027**				**0.290**				**0.300**
No	750	336	44.8		287	176	61.3		287	94	32.8	
Yes	70	41	58.6		37	26	70.3		37	9	24.3	
Ever experienced any type of IPV				**0.006**				**0.953**				**0.780**
No	410	169	41.2		146	91	62.3		146	47	32.2	
Yes	38	194	50.9		166	104	62.7		166	51	30.7	
Experienced any type of IPV within the past year				**0.002**				**0.801**				**0.767**
No	574	244	42.5		207	128	61.8		207	67	32.4	
Yes	246	133	54.1		117	74	63.2		117	36	30.8	

N=Number within category, n= number within category that is willing to disclose, % = N/n * 100 (i.e. proportion willing to disclose within category, p is the significance level for associations between independent variables and willingness to disclose

constituting internal barriers. On the other hand, women refraining from disclosing IPV to the institutions could also be an indication that they lack trust in such institutions or that such institutions lack interest in domestic problems. Data from developed and other non-African context suggest that this may be the case.[3,30,31] Further researches are warranted to investigate institutional readiness to assist abused women within African culture in Nigeria.

A number of the demographic variables were significantly associated with willingness to disclose abuse. Catholic women were most willing to disclose abuse when compared with other denominations, though they were, together with Muslim women, less willing to disclose to the institutions when compared with Protestants. Though these findings add to the literature suggesting that ethnicity and religion may affect women's choices in terms of disclosure and acceptability of

Table 5: Odds ratios indicating independent predictors of willingness to disclose IPV

Independent variables	Adjusted a OR	(CI for OR)	P-value
Block 1	**Willingness to disclose abuse**		
AGE			
15-24	2.695	(0.500 –14.535)	0.249
25- 34yrs	3.108	(0.690 –13.995)	0.140
35 – 44yrs	2.156	(0.467 -9.946)	0.325
45 – 49yrs	1.00		
EDUCATION			
Primary	0.984	(0.326 –2.969)	0.978
Secondary	1.188	(0.667 –2.116)	0.558
Post secondary	1.00		
LITERACY			
Can read little /Nothing	1.096	(0.475 –2.531)	0.829
Able to read whole sentence	1.00		
RELIGION			
Catholic	1.103	(0.557 –2.187)	0.778
Protestant	0.832	(0.445 –1.554)	0.564
Muslim	0.760	(0.306 –1.889)	0.554
Others	1.00		
ETHNICITY			
Yoruba	0.814	(0.423 – 1.568)	0.538
Ibo	0.506	(0.259 – 0.987)	0.046
Others	1.00		
ALCOHOL			
Yes	2.202	(1.123 – 4.318)	0.022
No	1.00		
HUSBAND'S ALCOHOL INTAKE			
Yes	0.959	(0.560 – 1.642)	0.880
No	1.00		

Continue of Table 5: Odds ratios indicating independent predictors of willingness to disclose IPV

Independent variables	Adjusted a OR	(CI for OR)	P-value
Block 2	**Willingness to disclose abuse**		
READS NEWSPAPAPER			
Almost everyday	1.168	(0.603 – 2.265)	0.645
At least once weekly	1.057	(0.574 – 1.948)	0.859
Less than once weekly	1.117	(0.505 – 2.471)	0.785
Almost never/not at all	1.00		0.967
LISTENS TO RADIO			
Almost everyday	0.543	(0.274 – 1.075)	0.080
At least once weekly	0.682	(0.324 – 1.439)	0.316
Less than once weekly	0.892	(0.353 – 2.251)	0.809
Almost never/not at all	1.00		
WATCHES TV			
Almost everyday	0.580	(0.078 – 4.296)	0.594
At least once weekly	0.724	(0.082 – 6.366)	0.771
Less than once weekly	0.271	(0.028 – 2.635)	0.261
Almost never/not at all	1.00		
SAY ON MONEY USE			
Complete say	0.986	(0.471 – 2.054)	0.970
Partial say	0.453	(0.204 – 1.008)	0.052
No say	1.00		
SAY ON HEALTH CARE			
Complete say	0.727	(0.391 – 1.351)	0.313
Partial say	0.607	(0.327 – 1.126)	0.114
No say	1.00		
SAY ON HOUSEHOLD PURCHASE			
Complete say	1.166	(0.598 – 2.273)	0.653
Partial say	1.858	(1.155 – 2.989)	0.011
No say	1.00		
SAY ON VISITING FAMILY & FRIENDS			
Complete say	2.581	(1.198 – 5.561)	0.015
Partial say	3.065	(1.491 – 6.300)	0.002
No say	1.00		

IPV,[14,15,32,33,34] they may also be suggestive that institutional readiness to assist abused women may vary depending on their religious and ethnic affiliations. Further research is warranted to test the later hypothesis.

Our findings show that after the ethnic Igbo women, ethnic Yoruba women were more likely than women from "other" ethnic groups to disclose to families, (although this did not reach statistical significance). The reason for this might be that among the Yoruba, women enjoyed high status as mothers, sisters and daughters within the family. Like men, they hold leadership positions and authority within these matrilineages,

Continue of Table 5: Odds ratios indicating independent predictors of willingness to disclose IPV

Independent variables	Adjusted a OR	(CI for OR)	P-value
SAY ON NUMBER & WHEN TO HAVE CHILDREN			
Complete say	2.114	(0.781 – 5.721)	0.140
Partial say	1.386	(0.699 – 2.750)	0.350
No say	1.00		
BLOCK 3			
Attitudes towards IPV			
Yes	1.414	(0.920 – 2.172)	0.114
No			
Physical IPV in past year			
Yes	1.095	(0.510 – 2.352)	0.817
No			
Psychological IPV past year			
Yes	0.701	(0.433 – 1.133)	0.147
No			

but do not enjoy the same benefits as wives.[32,33] It can thus be concluded that Yoruba women tend to report more to families bearing in mind their higher status as sisters and daughters.

Women having some form of autonomy in household decisions (i.e. say on expenditure, purchases, number of children to have and visiting friends) were more willing to disclose abuse than their peers lacking such autonomy. These results were confirmed in the multivariable analysis. It is suggested that women's social and economic empowerment is likely to lessen her dependence on her partner.[35] This independence is often reflected in her ability to speak out. Our findings are in line with other studies indicating the role of education in the empowerment of women to denounce intimate partner violence.[36,37,29] Empowering factors such as education and access to information were also significant factors in our study regarding IPV disclosure. Women with little or no education preferred reporting to families and were less willing to disclose to institutions. A likely explanation is that education enlightens women on their options and thus empowering them to challenge traditional norms on gender inequality. Lack of access to information may also be another reason why women remain bound to tradition. Our findings seem to point in this direction as women without access to radio or television preferred to disclose to families more so than to institutions.

One of the factors influencing willingness to report IPV in our study is the experience of IPV in itself. Women who have experienced physical, psychological and sexual violence in general were more willing to report abuse when contrasted with non-abused peers, corroborating previous work where actual disclosure other than willingness to disclose have been studied.[29,38] These findings could not however be confirmed in the regressions analysis suggesting a possible confounding effect warranting further investigation. Contrary to our expectations, women with tolerant attitudes towards IPV in our study did not differ from their peers with intolerant attitudes to IPV regarding willingness to disclose. This appears contradictory to theories linking exposure to intimate partner violence with tolerant attitudes towards violence itself among women.[39] Capitalizing on these previous works, we had expected to observe higher willingness to disclose IPV among women with intolerant attitudes to IPV. Thus, the role of attitudes in disclosure of IPV deserves further investigation before firm conclusions can be drawn.

In practice, the implications for intervention/prevention program are enormous. The extended family remains a respected authority in resolving marital issues in the Nigerian culture. Prevention programs can capitalize on this by empowering the family unit by providing IPV related educational workshops, and improving their access to IPV prevention information, including information related to gender role issues. The importance of involving family in IPV prevention cannot be overemphasized. It is indeed suggested that lack of family support could be a barrier for victims of IPV, preventing them from taking steps towards ending their ordeal.[11]

Lack of willingness of women to disclose IPV to the institutions also has important implications for training of law enforcement as well as religious leaders to become more proactive in handling and dealing with reports of IPV. Studies also point to the important role of health providers in screening for IPV and suggest that women are more likely to disclose IPV if probed by their health care providers.[40, 41]

To the best of our knowledge, this is the first time that data on underlying factors determining women choice to disclose IPV to family/relatives or various institutions is being presented. However, more research is warranted to validate this finding. There are few limitations to this study that should be noted. The cross sectional design does not allow for causal interpretation of the results. It is also important to note that willingness to disclose abuse does not directly translate to actual disclosure on the event of abuse. Caution is therefore warranted in interpretation of our findings. Furthermore, this study was conducted in one site using convenient sampling

which limits the generalizability of the findings to other hospital settings or ethnic communities in Nigeria. Larger study is needed to assess determinants of IPV disclosure among women using a random sample that is representative of multiethnic, multicultural and multi-religious society like Nigeria. It is also important to add that though our study has identified a number of factors that may affect IPV disclosure, other prominent factors such as threat of increased violence in retaliation of a report have not been included in the analysis. Future research may need to incorporate such measures. Another limitation of the findings has to do with the lack of sample power to assess the independent role of spouse, family members, friends, and institutions, as a separate entity, in associations with IPV disclosures. Finally, the study sample was self-selected in that only women willing to participate were included until the required sample size was reached. Even though the interviewers reported that there were only a few women opting not to participate, the characteristics of these women remain unknown. Whether this non-response was systematic or not remains therefore unclear.

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III

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Contraception, reproductive health and pregnancy outcomes among women exposed to intimate partner violence in Nigeria

Leah Okenwa, Stephen Lawoko and Bjarne Jansson

Division of Social Medicine, Department of Public Health Sciences, Karolinska Institutet, Stockholm, Sweden

ABSTRACT **Objectives** To examine the association between reproductive health practices/outcomes and exposure to intimate partner violence (IPV) among women in Nigeria. More specifically, the association between IPV and use of contraception; miscarriages, induced abortions, stillbirths, and infant mortality; and having many children, was assessed.

Methods Data on studied variables were retrieved from the Demographic and Health Surveys of Nigeria 2008, a nationally representative sample of 33,385 women of reproductive age. IPV was defined as exposure to physical, sexual or emotional abuse. The association between contraception use, pregnancy outcomes and infant mortality, and exposure to IPV was assessed using the chi-square test for unadjusted analyses. To control for potential confounding, socio-demographic variables were adjusted for using multiple logistic regression.

Results Compared with women not exposed to IPV, those who were, exhibited a higher likelihood of using modern forms of contraception; having a history of miscarriages, induced abortions, stillbirths, or infant mortality; and having many children. The aforementioned observations still stood after adjustment for potential confounders (e.g., demographic and socioeconomic factors).

Conclusion Though causal inference cannot be drawn due to the cross-sectional design, the study has important implications for incorporation of IPV detection and management in initiatives aimed at improving women's reproductive health.

KEYWORDS Intimate partner violence, Contraception, Reproductive health outcomes, Nigeria

INTRODUCTION

Background

Intimate Partner Violence (IPV) is defined as a pattern of assaultive and coercive behaviours including physical, sexual and psychological attacks as well as economic coercion that adults or adolescents use against their intimate partners[1]. IPV against women has been linked to negative health outcomes,

Correspondence: Leah Okenwa, Karolinska Institutet, Department of Public Health Sciences, Norrbacka plan 2, 171 76 Stockholm, Sweden. Tel: +46 707 40 2585. E-mail: Leah.Okenwa@ki.se

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including physical injury, psychosocial morbidity and adverse reproductive health[2–7].

In 2000, a set of Millennium Development Goals (MDGs) to be achieved by 2015 were adopted by leading world organisations including the World Health Organisation (WHO). Two of these MDGs focus on improving maternal and child health[8]. One of the strategies proposed to improve maternal health is the prevention of unwanted pregnancies through the use of contraception and access to safe abortion[9–11]. But data on male partners' reactions to and perceptions on the use of contraception by women are contradictory. While in some settings contraception use has been associated with a likelihood of IPV[12–14], in others the opposite has been observed (i.e., a lower likelihood of aggression directed towards women using contraception in contrast to peers not applying contraception)[15]. Other studies show a lower likelihood of contraceptive use among women exposed to IPV[16]. These findings suggest that perceptions and reactions to contraception and the latter's implication for women's safety thus vary depending on the culture, warranting investigation in each unique setting.

IPV has also been linked to negative reproductive health outcomes such as unintended pregnancies, miscarriages, induced abortions, stillbirths, poor attendance of prenatal care, infant mortality, low utilisation of family planning (FP) methods, and HIV/AIDS[17–19]. Discrepancies depending on the societal/cultural contexts were not studied. However, limited data from Sub-Saharan Africa in this regard are on record. The lifetime IPV prevalence of between 25% and 48%, adds to African women's high risk of poor reproductive health outcomes due to the low quality of reproductive healthcare[19,20–25]. In this study, the association between IPV exposure and reproductive health outcomes is assessed among women in Nigeria.

Reproductive health practices, outcomes, and beliefs in Nigeria

According to recent statistics, there is a widespread knowledge of contraceptive methods among men (90%) and women (72%) in Nigeria. About 29% of all women have used contraception at some time, with a higher proportion of modern methods having been used than of traditional methods. The total fertility rate (TFR) is 5.7 births per woman[26]. However, rural areas have a much higher TFR (6.3) than urban areas (4.7). With regard to child spacing, 8% of births are less than eighteen months apart and 24% have an interval of less than two years. This may be due in part to the culture of having many children, especially boys, for the purpose of succession and carrying on the family name. This belief in the male child is further strengthened by the breadwinner system and inheritance rights which cuts out or limits daughters' rights to inherit parents' properties[27,28].

Although causality cannot be ascertained due to the design of previous studies, their results show a possible link between IPV and cultural practices and beliefs in Nigeria[28,29]. The relationship between IPV and reproductive health outcomes in Nigeria deserves further recognition considering the current prevalence rate of 29–31%[25,29] and the fact that wife-beating is endorsed[30]. The implementation of the MDG's related to maternal and child health will most likely benefit from incorporating an understanding of the association between reproductive health practices and outcomes on the one hand and IPV on the other.

The current study investigates the association between exposure to IPV and:

- reproductive health outcomes; and
- the use of modern and traditional methods of contraception.

MATERIALS AND METHODS

Study design

This study is based on the Nigerian Demographic and Health Survey (NDHS) of 2008[26]. The NDHS covers a nationally representative sample of more than 36,000 households based on the 2006 Population and Housing Census of the Federal Republic of Nigeria. A stratified two-stage sampling design was used to select the NDHS 2008 sample which consists of 888 clusters, 286 in urban, and 602 in rural areas. Thereafter an average of 41 households was selected in each cluster, by equal probability systematic sampling. A detailed description of the sampling method is reported in the 2008 NDHS final report.

Participants

All women aged 15–49 years, including permanent residents of the households or visitors present in the

households on the night before the survey, were eligible to be interviewed. The domestic violence module was administered to a subsample of 34,596 women, made up of one randomly selected eligible woman in each household. A response rate of 96.5% was obtained, corresponding to 33,385 interviewed women.

Questionnaire

A comprehensive questionnaire, covering demographic and health issues, was administered to each eligible woman after a written informed consent had been obtained. The aspects covered included the women's background, reproductive health, access to reproductive health facilities, fertility preferences, child care and nutrition, child mortality, awareness of and precaution against sexually transmitted infections, marriage, sexual behaviour, and domestic violence. The questions on reproductive health and domestic violence are the main interest for this study.

Measures

Dependent variables

Pregnancy was assessed by asking participants whether they were currently pregnant. *Pregnancy wish* was determined by asking pregnant women if their current pregnancy was desired or if they had desired to wait until later. The *total number of births* was determined by asking how many births the participating women had ever had. *Desire for the last child* was determined by probing participants about whether the last child was desired then or later. *Infant mortality* was assessed by asking respondents if they had ever had a child who died before age one. Data on *miscarriages, induced abortions, and stillbirths* were obtained by probing participants on whether they had ever experienced a pregnancy that miscarried, was aborted or ended in a stillbirth. *Contraceptive use* was assessed by probing participants on usage of various contraceptives including folk, traditional (i.e., withdrawal, rhythm and lactational amenorrhoea) or modern methods (i.e., intrauterine devices, pills, male and female condoms, spermicides, and injectables). Many of these variables had dichotomous response alternatives (i.e., 'yes' or 'no' responses).

Independent variables

Exposure to IPV was determined using a modified version of the Conflict Tactic Scale (CTS)[31], which inquires whether participants have, since the age of 15 years and during the past twelve months, experienced abuse perpetrated by the current husband/partner. Experience of IPV in the past twelve months was of primary interest for this study. *Exposure to physical IPV (in the past year)* was defined as being slapped, kicked, bitten, pushed, punched, choked, burnt on purpose, or assaulted using a knife or other weapons. *Exposure to sexual IPV (in the past year)* was defined as having been physically forced to have sexual intercourse when not wanting to; degrading or humiliating sexual acts, or engaging in sexual intercourse out of fear. *Exposure to emotional IPV (in the past year)* was determined as having been exposed to verbal abuse or insults; made to feel bad about oneself; belittled in front of other people; scared or intimidated; threatened with violence or confronted with threats that loved ones would be harmed. The response alternatives for the IPV measures where dichotomous (i.e., 1 = no; 2 = yes).

Socio-demographic variables collected included (response alternatives are presented in parentheses): age; education (1 = none, 2 = primary, 3 = secondary, 4 = higher); religion (1 = Catholic, 2 = other Christian, 3 = Moslem, 4 = other); ethnicity (1 = Hausa/Fulani, 2 = Yoruba, 3 = Ibo, 4 = other); place of residence (1 = urban, 2 = rural); region (1 = north central, 2 = north east, 3 = north west, 4 = south east, 5 = south west, 6 = south).

Statistical analyses

Data input and analysis were done using the SPSS programme version 15.0. The chi-square test was used to test for associations between IPV and the independent variables in the univariate analyses. The independent association between IPV exposure and the dependent variables (after control for potential confounding) was determined using logistic regression. Direction and magnitude of the associations were expressed as adjusted odds ratio (AOR). The significance level for all tests was set at $p < 0.05$.

Ethical aspects

Approval for conducting the 2008 NDHS was granted by the Institutional Review Board of Macro International. This US institution is responsible for ethical scrutiny and providing technical assistance for conducting demographic and health surveys. Permission to use the NDHS data was granted by MEASURES DHS while ethical approval for the study was granted by the Nigerian Institute of Medical Research (NIMR).

RESULTS

The results of this study show IPV is linked to miscarriages, abortion, stillbirths, having more children, and infant mortality. Concerning their desire for the current and previous pregnancies, women exposed to violence were more likely to report that they would have preferred to stop having children or to wait till a later time. The results also show that women using modern forms of contraception are more exposed to physical IPV than those not using contraception at all or using traditional and folk methods.

Table 1 shows the total proportion of women exposed to IPV in the past year, by reproductive health indicators. Higher proportions of women who had undergone induced abortions, or had miscarriages and/or stillbirths than among those who had had no such pregnancy outcomes reported having experienced physical (20% vs. 14%), sexual (6% vs. 3%) or emotional abuse (30% vs. 22%). Also, more women using modern contraceptives than non-users and women applying traditional contraceptive methods stated they had experienced physical IPV (21% vs. 15%). There were no significant associations between using modern contraceptives and either sexual or emotional IPV.

Table 1 Reproductive health outcomes among women exposed to intimate partner violence (IPV) in Nigeria

	Physical IPV				*Sexual IPV*				*Emotional IPV*			
Variables	*N*	*n*	*%*	*p-value*	*N*	*n*	*%*	*p-value*	*N*	*n*	*%*	*p-value*
Miscarriages/ stillbirths/abortions				0.000				0.000				0.000
No	16,678	2379	14.3		16,669	522	3.1		16,674	358	21.5	
Yes	2532	514	20.3		2530	138	5.5		2532	747	29.5	
Contraceptive use				0.000				0.646				0.405
None/traditional/folk	17,760	2585	14.6		17,750	607	3.4		17,755	3990	22.5	
Modern Methods	1482	311	21.0		481	54	3.6		482	347	23.3	
Total births				0.000				0.016				0.000
0–4 children	12,232	1749	14.3		12,226	391	3.2		2,228	2519	20.6	
5 children or more	7010	1147	16.4		7005	270	3.9		7009	1818	25.9	
Wanted last child				0.000				0.000				0.000
Wanted then	12,221	1761	14.4		12,216	392	3.2		2,216	2739	22.4	
Later/not at all	1289	321	24.9		288	107	8.3		1290	403	31.2	
Pregnant now				0.016				0.824				0.082
No/not sure	16,478	2522	15.3		16,468	568	3.4		16,472	3749	22.8	
Yes	2764	374	13.5		2763	93	3.4		2765	588	21.3	
Wanted current pregnancy				0.000				0.000				0.000
Wanted then	2307	289	12.5		2306	65	2.8		2306	451	19.6	
Later/not at all	313	76	24.3		313	21	6.7		315	90	28.6	
At least one dead child				0.002				0.005				0.000
No	12,293	1776	14.4		12,287	388	3.2		12,288	2469	20.1	
Yes	6949	1120	16.1		6944	273	3.9		6949	1868	26.9	

Similarly women who had wished to have their last child later were more likely to have reported physical, sexual and emotional violence than those who had desired their last child then. Women with five or more children reported physical, sexual and emotional abuse to a higher extent than peers with at most four children. Pregnant women where less likely to have experienced physical violence during the past twelve months than women who were not pregnant or were not sure of their pregnancy status. Finally, a history of infant mortality was more common among women who reported having been physically, sexually or emotionally abused than not abused peers.

Table 2 shows the unadjusted odds ratios of IPV and reproductive health outcomes depicting a greater likelihood of poor reproductive health outcomes among women exposed to physical, sexual or emotional IPV.

As shown in Table 3, even after adjusting for socio-demographic factors (i.e., age, education, religion, ethnicity, place of residence, and region), exposure to IPV remained significantly associated with adverse reproductive health outcomes, except for the associations between emotional violence and pregnancy status; sexual violence and contraceptive use; and sexual violence and pregnancy status.

DISCUSSION

The study sought to investigate the association between IPV and some aspects of reproductive health practices and outcomes, foremost pregnancy outcomes and contraceptive use. There was a greater likelihood of contraceptives use among victims of IPV corroborating results of some previous studies[12–14], but not of others indicating either a lower likelihood of contraceptives use among IPV victims[15,16,21] or the absence of significant associations[32]. The discrepancy in findings likely reflects differences in society perceptions of reproductive health practices. There thus is a need for assessing in each unique societal setting prevailing views on contraception and how these may be related to IPV. This is important in order to avoid unwarranted duplication of interventions, as a successful intervention in one setting, may not necessarily yield similar results in another. The reasons why Nigerian women's use of contraception is related to an increased likelihood of IPV exposure could stem from the patriarchal nature of the society. Studies from

Table 2 Unadjusted odds ratios for intimate partner violence (IPV) vs. reproductive health outcomes

	Miscarriage/ abortion/stillbirth		*Contraceptive use*		*Total births*		*Wanted last child*		*Pregnant now*		*Wanted current pregnancy*		*At least one dead child*	
	c OR (CI)		*c OR (CI)*		*c OR (CI)*		*c OR (CI)*		*c OR (CI)*		*c OR (CI)*		*c OR (CI)*	
Variable	*p-value*		*p-value*		*p-value*		*p-value*		*p-value*		*p-value*		*p-value*	
Physical IPV	0.653		0.641		0.853		0.508		1.155		0.447		0.879	
	(0.587–0.726)		(0.562–0.732)		(0.786–0.925)		(0.443–0.582)		(1.027–1.298)		(0.335–0.595)		(0.810–0.953)	
(No vs. Yes)	0.000		0.000		0.000		0.000		0.016		0.000		0.002	
Emotional IPV	0.654		0.948		0.741		0.636		1.091		0.608		0.684	
	(0.596–0.718)		(0.836–1.075)		(0.691–0.794)		(0.561–0.721)		(0.989–1.203)		(0.466–0.792)		(0.638–0.733)	
(No vs. Yes)	0.000		0.405		0.000		0.000		0.082		0.000		0.000	
Sexual IPV	0.560		0.936		0.824		0.366		1.026		0.403		0.797	
	(0.462–0.679)		(0.705–1.242)		(0.704–0.965)		(0.293–0.457)		(0.821–1.282)		(0.243–0.670)		(0.681–0.933)	
(No vs. Yes)	0.000		0.646		0.016		0.000		0.824		0.000		0.005	

cOR = crude odds ratio; CI = 95% confidence interval

Table 3 Adjusted odds ratios physical intimate partner violence (IPV) vs. reproductive health outcomes

	Miscarriage/abortion/ stillbirth		*Contraceptive use*		*Total births*		*Wanted last child*		*Pregnant now*		*Wanted current pregnancy*		*At least one dead child*	
Variable	*OR (CI)*	*p-value*	*OR (CI)*	*p-value*	*OR (CI)*	*p-value*	*OR (CI)*	*p-value*	*OR (CI)*	*p-value*	*OR (CI)*	*p-value*	*OR (CI)*	*p-value*
Physical IPV	0.687	0.792		0.828		0.667		1.163		0.546		0.846		
	(0.785–1.322)	(0.687–0.912)		(0.742–0.923)		(0.576–0.771)		(1.027–1.316)		(0.401–0.745)		(0.771–0.928)		
(No vs. Yes)	0.000	0.001		0.001		0.000		0.017		0.000		0.000		
Emotional IPV	0.702	0.852		0.799 (0.728–0.878)		0.647		1.090		0.630		0.755		
	(0.637–0.774)	(0.743–0.977)				(0.566–0.740)		(0.984–1.208)		(0.475–0.834)		(0.699–0.819)		
(No vs. Yes)	.000	0.022		0.000		0.000		0.099		0.001		0.000		
Sexual IPV	0613	0.952		0.699		0.427		1.076		0.429		0.798		
	(0.502–1.107)	(0.708–1.282)		(0.565–0.865)		(0.337–0.541)		(0.854–1.356)		(0.250–0.736)		(0.670–0.951)		
(No vs. Yes)	0.000	0.748		0.001		0.000		0.536		0.002		0.011		

Adjusting for age, education, religion, ethnicity, place of residency (i.e., urban or rural), and region. CI = 95% confidence interval

other patriarchal societies have suggested that contraception is viewed by men as an attempt by the female partner to take a more active role in sexual decisions, consequently conferring to her autonomy over decisions that are seen in such societies as being a masculine prerogative[33–36]. This attempt at emancipation may thus be countered by aggressions by the partner. However, the study designs used in this and previous surveys do not allow for causal conclusions to be drawn. Whether contraception use preceded IPV or was a consequence of IPV exposure remains elusive. Whatever the case, such data indicate the need for incorporating IPV sensitive policies in the management and improvement of women's reproductive health. One of the strategies proposed to improve maternal health consists in allowing women to prevent unwanted pregnancies, which invariably implies the use of contraception. Yet, our findings and others highlighting a link between contraception use and IPV exposure reveal dilemmas with regard to applying this strategy. Therefore, any agenda to improve the reproductive health practices and outcomes in Nigeria must incorporate a policy on managing IPV. Also, the nature, scope and eventual success of any sensitisation initiatives to manage women's reproductive health will benefit from the involvement of the male partners, being the potential perpetrators of IPV. Currently, most programmes (e.g., FP programmes) focus mainly on sensitisation of women, necessitating re-adaptation to suit both partners.

In line with previous research in the field[14,17–19], this study found strong associations between exposure to IPV in all its forms (physical, sexual and emotional) and adverse reproductive health outcomes such as stillbirths and infant mortality, again strengthening the case for adopting policies and strategies incorporating domestic violence when confronting issues pertaining to maternal and child health. In addition, the strong link between IPV and undesired pregnancy together with the lower likelihood of IPV among pregnant compared to non-pregnant respondents found in our study is a plausible indication of societal preferences among men of their desire to have children. Any interruption of the child bearing process (e.g., through induced abortion or failure to conceive), may elicit IPV as is implicated by our findings and those of others[37].

The strength of this study lies in its methodology. A considerable number of women, representative of the

Nigerian population, were carefully sampled providing a base for generalisation of the findings to that context. Secondly, the execution of the analyses allowed for measurable confounders to be controlled for. Thus, any associations observed are free of contamination by other factors known to be related both to IPV and to reproductive health outcomes. A potential shortcoming of this study lies in its design. It is difficult to explicitly or otherwise assign causality with cross-sectional data. For instance, while IPV may have been a reaction to contraception use, it is as likely that contraception use was a consequence of abuse. Likewise, it is not possible to determine whether outcomes such as miscarriages and stillbirths resulted from IPV exposure, or whether IPV exposure was a consequence of such outcome. The findings should therefore be viewed as associations with limited implications of causality.

In conclusion, our study provides important baseline data linking exposure to IPV to modern reproductive health practices and adverse reproductive health outcomes in Nigeria. Though causal inference cannot be drawn due to the cross-sectional design, the study has important implications for policy and education concerning the management of women's reproductive health. Such initiatives should acknowledge, detect and manage IPV; they may benefit from involving the male partner, the usual perpetrator of such assaults. Studies of longitudinal design are warranted to establish whether there is a causal relationship between IPV and reproductive health practices and outcomes.

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IV

Attitudes towards wife beating: a comparison of predictors among men and women in Nigeria

Leah Okenwa*, Stephen Lawoko, Bjarne Jansson

Division of Social Medicine, Department of Public Health Sciences,
Karolinska Institutet, Stockholm, Sweden.

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Key words: Attitudes, Wife beating, predictors, Nigeria

* **Correspondence:** Leah Okenwa, Karolinska Institutet, Department of Public Health Sciences, Norrbacka plan 2, 171 76 Stockholm, Sweden. E-mail: Leah. Tel: +46 707 40 2585. E-mail: Okenwa@ki.se,

ABSTRACT

Aim: We scrutinized the extent of and factors associated with women and men's attitudes towards wife beating in Nigeria.

Methods: Data was retrieved from the demographic and health surveys of Nigeria 2008. A representative sample of over 30,000 women and 15,000 men responded to a series of questions including their attitudes towards wife beating, exposure to Intimate partner violence, socio-demographic indicators and structural empowerment indicators. Data was analyzed using chi-square test and multiple logistic regression.

Results: Justification of abuse was found to be high among both men and women. However, women tended to justify wife beating to a higher degree than men. For both men and women, justification of wife beating was associated with low education, rural residency and ethnicity. Access to information was associated with justification of abuse, sometimes in the unexpected manner. While in-access to newspaper was associated with an increased likelihood of justifying abuse among women, in-access to radio/tv decreased the likelihood of endorsing wife abuse among the women. The direct opposite was observed among men. Finally, having a shared autonomy in household decisions was associated with a reduced likelihood of justifying wife abuse among both women and men.

Conclusions: Wife beating is widely justified in Nigeria, and more so among women. The association between endorsement of wife abuse and demographic factors, autonomy and access to information provide new insights on possible determinants of wife beating specific to men and women.

INTRODUCTION

The occurrence of intimate partner violence (IPV) is a phenomenon that continues to generate increased research. Multi-country studies undertaken by World Health Organization (WHO) showed the prevalence of IPV against women to vary from 70% in Ethiopia to 18% in Japan. In addition, many of the studied women justified wife abuse for several reasons that varied between the 15 studied countries. For instance, 78% of women in Ethiopia justified wife abuse for disobedience of her husband, compared with 39% in Bangledesh and 1% in Serbia Montenegro (WHO, 2005). More recently analyses of 17 Sub-Saharan African countries showed the endorsement of wife beating to vary between 8-68% among men and 28-74% among women (Uthman, Lawoko and Moradi 2009; Lawoko 2006; Oyediran and Isiugo-Abanihe 2005) providing further evidence of the global magnitude of the problem. Considering the strong association between IPV justification and exposure (Hanson, Cadsky, Harris, & Lalonde, 1997), further understanding of attitudes towards IPV is called for. For instance there is a gap in the research regarding the determinants of such attitudes among men and a contrast of such determinants between men and women. Although IPV is justified by both men and women, data suggest that women justify IPV and other gender-based harmful traditional practices against them to a higher degree than men (Rani & Diop-Sidibe 2004, Ilika and Ilika 2005, uthman et al, 2009). The reasons for this discrepancy are not so clear and deserve further understanding in future research.

A number of social and gender related theories could account for the high justification of wife beating in some societies. Gender and gender roles as a social construct could explain how attitudes towards women in certain societies are formed. Gender is 'socially constructed' in that ideas about what women and men are and what roles the play in a society is produced by the society in which they live. Gender is thus an achieved status, constructed through psychological, cultural, and social means (West and Zimmermann, 1987). The maintenance of gender inequities in patriarchal societies characterized by male dominance therefore gives legitimacy to intimate partner abuse within those societies (Russo & Pirlott, 2006; Taft, 2009). In such societies, men are viewed as economically,

socially and culturally superior. Women's subordination and submission is considered to be normal, expected and in some cases, attractive to men (Russo & Pirlott, 2006). The women themselves learn to accept and abide by such conditions imposed on them by the society. The Social learning theory postulates that individuals learn how to behave by observing and re-enacting the behaviour of role models. Social norms and gender roles in a patriarchal society are learned within a social group and transmitted from generation to generation (Berry 1980). Under such conditions therefore, the foundation for IPV justification and exposure is set. Gender and socio-cultural norms thus may be seen to shape most individual's attitudes towards IPV (Hindin,2003; Watts, Keogh et al. 1998).

Data from several sources have attempted to uncover some of the social expectations of women that may predispose them to IPV on the event of a perceived transgression from such expectations. Women's transgression from such roles/expectations as care of children, obedience and respect for her husband and his relatives, preparing food, seeking husband's or other family member's permission before leaving the home, not arguing with husband, and meeting the sexual needs of the husband put women at risk of IPV exposure in certain societies, with both men and women justifying punishment for transgression in these regards (Haj-Yahia 2003; Rani, Bonu & Diop-Sidibe,2004; Koenig et al 2003; Hindin 2003; Rani, Bonu & Diope-Sidibe 2004; Oyediran & Isiugo-Abanihe 2005). Specific to Nigeria, the study context for this work, women are conditioned by society to accept additional harmful gender based traditions such as drinking bath water from the husband's corpse to prove her innocence in his death; wearing black and remaining indoors for a one year period following her husband's death etc. (Ilika and Ilika 2005; Fawole, Aderonmu &Fawole 2005; Ilika 2005).

The high prevalence of justification of abuse in many settings has prompted increased empirical research to understand its risk and eliciting factors. Low education, weak decision autonomy and in-access to information are some of the previously established correlates at the individual level (Lawoko, 2007; 2008, Uthman et al., 2009). The contribution of social, economic and gender inequalities at the household, community and country levels in explaining Attitudes towards IPV are recent contributions to the literature

in this regard, i.e. living in poor households, neighborhoods, and societies is associated with increased acceptability of IPV (Uthman, Lawoko, Moradi, 2009; 2010; Faramarzi, Esmailzadeh & Mosavi, 2005).

Though some studies in Sub-Saharan Africa have attempted to understand factors associated with justification of wife beating among women, the factors associated with such justification among men, the main perpetrators of IPV, have not received equivocal attention in the research. Comparing the risk factors for IPV justification between men and women may prove vital in designing intervention that focus on attitudinal change for both the perpetrator and victim of wife abuse. As of date, most primary interventions aim at changing the women consequently leaving out the potential perpetrator in initiatives to reduce abuse of women. Secondly, although it is now well established that the normalization and justification of IPV, as well as the occurrence of IPV itself is more apparent in patriarchal and gender restrictive societies (Kritz and Makinwa-Adebusoye, 1997; Oyediran, 2005), the rapid social, cultural and economic transition in Nigeria (e.g. changing patterns of life, liberalization, urbanization and globalization) warrant an update on current views on wife beating among Nigerian men and women.

The objective of this study therefore is to determine the magnitude of justification of wife beating and its predictors among women and men in Nigeria. A second objective is to study the relationship between exposure to IPV and attitudes to wife beating among women.

Methods

Demographic and health survey (DHS)

The DHS is a United State Agency for International Development (USAID) funded survey carried out in many developing countries. These surveys are done on a five yearly basis with the purpose of monitoring demographic and health situation of the countries. The sampling design guarantees a nationally representative sample. Ethical approval for the instruments and survey procedure is granted by the Institutional review board of the opinion research corporation Macro International. The 2008 Nigerian DHS was done in conjunction with the Nigerian National Population Commission (NPC).

Sample Design

This study is based on the Nigerian Demographic and health survey of 2008 (NDHS 2008). It covers a nationally representative sample of more than 36,000 households based on the 2006 Population and Housing Census of the Federal Republic of Nigeria.

Administratively, Nigeria is divided into states. Each state is subdivided into local government areas (LGAs), and each LGA is divided into localities. In addition to these administrative units, during the 2006 Population Census, each locality was subdivided into convenient areas called census enumeration areas (EAs). The primary sampling unit (PSU), referred to as a cluster for the 2008 NDHS, is defined on the basis of EAs from the 2006 EA census frame. The 2008 NDHS sample was selected using a stratified two-stage cluster design consisting of 888 clusters, 286 in the urban and 602 in the rural areas. A representative sample of 36,800 households was selected for the 2008 NDHS survey, with a minimum target of 950 completed interviews per state. In each state, the number of households was distributed proportionately among its urban and rural areas. A complete listing of households and a mapping exercise were carried out for each cluster, with the resulting lists of households serving as the sampling frame for the selection of households in the second stage.

In the second stage of selection, an average of 41 households was selected in each cluster, by equal probability systematic sampling. All women age 15-49 who were either permanent residents of the households in the 2008 NDHS sample or visitors present in the households on the night before the survey were eligible to be interviewed. In a sub-sample of half of the households, all men age 15-59 who were either permanent residents of the households in the 2008 NDHS sample or visitors present in the households on the night before the survey were eligible to be interviewed (NDHS, 2008).

In addition, a subsample of one eligible woman in each household was randomly selected to be asked additional questions about exposure to domestic violence. The data on Intimate Partner violence is based on this sub-set, while data on attitudes toward IPV is based on the original sample.

Participants

All women aged 15-49 including permanent residents of the households or visitors present in the households on the night before the survey were eligible to be interviewed. A total of 33,385 women were successfully interviewed, corresponding to a response rate of 97%. The domestic violence module was administered on a subsample made up of one randomly selected eligible woman in each household. The questionnaire was administered in strict compliance of the World Health Organization (WHO) ethical and safety recommendation for research on domestic violence.

In a sub-sample of half of the households, all men aged 15-59 who were either permanent residents of the households in the 2008 NDHS sample or visitors present in the households on the night before the survey were eligible to be interviewed. A total of 15,486 men took part in the DHS study (response rate of 93%).

Questionnaire

To each sampled woman, a comprehensive questionnaire covering demographic and health issues was administered. The aspects covered include women's background, reproductive health, access to reproductive health facilities, fertility preferences, child care and nutrition, child mortality, awareness of and precaution against sexually transmitted diseases, marriage and sexual behavior, empowerment factors (e.g. autonomy in the household and access to information) and domestic violence. For this study, the questions on domestic violence and attitudes to wife beating were of primary interest.

The sampled man responded to similar questions as the women, with the exception of reproductive health issues and children's care and nutrition.

Measures

Attitudes to wife beating, the dependent variable in this study, was assessed using responses to five hypothetical situations. These questions are commonly used in Africa in this field of research (Kenyan DHS 2003; Nigerian DHS 2003, Zambian DHS 2003), and probe whether justification of wife beating is warranted in the following scenarios: if the wife goes out without informing husband, neglects the children, argues with her partner, refuses to have sex with partner or cooks bad food/or food is served late. Answer options were yes, no or don't know). An affirmative response to one or several of these questions was

considered having a tolerant attitude towards wife beating, while a "no" response on all five situations denoted a non-tolerant attitude. This categorization is in line with recent discussion of achieving "zero-tolerance" of violence against women (Kitzinger and Hunt, 1994).

Exposure to Intimate partner violence (IPV), one of the independent variables used in the women's analysis, was assessed using a modified version of the Conflict Tactic Scale (CTS) (Strauss, 1990), which assesses whether participants have, since the age of 15 years and during the past twelve months, experienced abuse perpetrated by the current husband/partner. Experience of IPV in the past twelve months was of primary interest for this study. *Exposure to Physical IPV in the past year* was operationalized as being slapped, kicked, bitten, pushed, punched, choked, burnt on purpose, or assaulted using a knife or other weapons during the past year (coded as 1=No, 2=yes). *Exposure to Sexual IPV in the past year* was operationalized as having been physically forced to have sexual intercourse when she did not want to; degrading or humiliating sexual acts, or engaging in sexual intercourse out of fear in the past year (coded as 1=No, 2=yes). *Exposure to Psychological IPV in the past year* was operationalized as having been exposed to verbal abuse, insults, made to feel bad about oneself, belittled in front of other people, scared or intimidated, threatened with violence or threats to harm loved ones etc in the past year (coded as 1=No, 2=yes). In the analysis exposure to at least one scenario under each categorization (i.e. physical, psychological or sexual) was considered as exposure to IPV under that scenario, in line with recent discussion of achieving "zero-tolerance" of violence against women (Kitzinger and Hunt, 1994).

Socio-demographic variables (used as independent variables in the analyses) included: age , literacy (1=can read little or nothing, 2= can read whole sentences); religion (1=Catholic, 2=other Christian, 3=Muslim, 4=Traditional, 5=other); ethnicity (1=Hausa/Fulani, 2=Yoruba, 3=Ibo, 4=others); wealth index (1=poorest, 2=poor, 3=least poor), region (1=north central, 2=north east, 3=north west, 4=south east, 5=south west, 6=south). Place of residence (1=urban, 2=rural).

Empowerment indicators included (used as independent variables in the analyses): *Access to information*, assessed by inquiries about the frequency of reading newspapers, listening to radio or watching TV; response (coded as 1=No at all, 2=less than once a week, 3=at least once a week, 4=almost every day). *Decision autonomy*, assessed by asking respondents who in the household had the final say on household expenditures, health care and household purchase with the following response options (coded as 1=woman only/woman and her husband, 2=Husband/ or husband and someone else).

Wealth index constructed from the household facilities (coded as 1=poorest, 2=poor, 3=least poor), is used as a proxy for economic status. Asset information was collected in the 2008 NDHS on household ownership of a number of consumer items, such as television, bicycle or car. Information about dwelling characteristics such as source of drinking water, type of sanitation facilities and type of material used in flooring were collected. Each household was assigned a score from each asset, and the scores were summed for each household; individuals were ranked according to the total score of the household in which they resided. The sample was then divided into quintiles, from one to five. The level of wealth index ranges from the first to the fifth quintile, corresponding to the least and most well-off respectively. For this study the first 2 quartiles were merged to form one group, poorest, the middle quartile formed the group "poor" while the last 2 quartiles were merged to form one group, least poor.

Statistical analyses

Data impute and analysis was done using the SPSS program version 15.0. Some individual data on the studied variables where lost due to non-response. As the data set was large and such missing data relatively little, no measures were taken to substitute missing variables (e.g. with national or sample average). Missing data was thus treated as missing in the analysis. Chi-square test was used to assess for crude associations between dependent and independent variables. The independent contribution of the explanatory variable in explaining attitudes towards wife beating was assessed using multiple logistic regressions as a measure to control for potential confounders. Direction and magnitude of associations were expressed as adjusted odds ratios and the contribution of each set of variables (i.e.

socio-demographic, empowerment indicators and IPV exposure) in explaining the dependent variable expressed in terms of r-square. For the logistic regression for women, the sub-sample that responded to the domestic violence module was used, as exposure to IPV was included as an independent variable in the analysis. The significance level was set at $p<0.05$ for all statistical analysis.

Results:

Justification of wife beating by gender

As shown in table 1, significantly more women than men would justify wife beating in all the scenarios indicated. Similarly, more women that men justified abuse for at least one of the stated reason. The observed difference between men and women reached statistical significance of at least $p<0.05$. For both men and women, the most likely scenario for which wife abuse is justified was if the wife went out without telling her husband or if she neglected the children.

Insert table 1 here

Proportions of women and men justifying wife beating by socio-demographic factors, access to information, autonomy and exposure to IPV

As indicated in table 2, proportions of women and men endorsing wife beating varied according to demographic factors, access to information and autonomy indicators. For both women and men, a higher number endorsed wife beating among the illiterate, low educated, rural residents and those of traditional religions. Among women, the endorsement of wife beating was most prevalent in the Hausa/Fulani ethnic group and women living in the North Western region. Among men, such endorsement appeared most prevalent in the Ibo/other ethnic groups and men residing in the North eastern region. Men and women living in households where women lacked autonomy in domestic decisions were more likely to endorse wife beating than peers living in households with shared autonomy. Among both men and women, the proportion endorsing IPV reduced with increasing wealth and access to information. Finally, endorsement of IPV was more prevalent among women exposed to IPV than un-exposed peers.

Insert table 2 here

Factors associated with Attitudes towards wife beating: adjusted estimates

Block 1: Social demographic Indicators

As indicated in table 3, the likelihood of endorsing wife abuse tended to decrease with increasing age and level of education for both men and women, when possible confounding was adjusted for in a multivariate logistic regression. Urban settlement, and belonging to the least poor group reduced the likelihood of endorsing wife abuse among both men and women. Belonging to ethnic Yoruba or Ibo groups reduced the likelihood of justifying wife abuse when compared with other ethnic groups. Contrasting with peers from the south western region, men and women from the north eastern, south eastern and south regions exhibited a higher likelihood of justifying abuse. Religion did not impact significantly on the likelihood of justifying abuse among both women and men. Socio-demographic indicators accounted for 9% respectively 10% of the variation in justification of IPV among women and men respectively.

Block 2: Access to information and Autonomy in Decision making

While in-access to newspaper was associated with an increased likelihood of justifying abuse among women, in-access to radio/tv decreased the likelihood of abuse among the women. The direct opposite was observed among men with regard to access to information. Men and women living in households where husband had full autonomy in domestic decisions reported a higher likelihood of justifying abuse than peers living in household with shared autonomy or household with women having full autonomy. Access to information and autonomy indicators accounted for about 10% respectively 12% of the variation in justification of IPV among women and men respectively (table 3).

Block 3: Exposure to IPV

Exposure to physical and sexual IPV among women was associated with an increased likelihood of justifying wife abuse. Exposure to IPV accounted for about 11% of the variation in justification of IPV among women (table 3).

Insert table 3 here

Discussion

We scrutinized the extent to which women and men in Nigeria endorse wife beating, and predictors of such justification.

Consistent with data from Sub-Saharan Africa and other context, justification of abuse was high and more so among women than men (Uthman et al 2009, Rani et al. 2004; WHO 2005). The reasons why the potential victims justify abuse to a higher grade than potential perpetrators is not clear. Women remain dependent on their husbands who often are the breadwinners in the household (Haj-Yhia, 2002). Our findings thus could be reflecting circumstances where women are conditioned to justify abuse for economic security, not only for themselves but also for their child. Also, the social learning theory implies that gender roles in a patriarchal society are learned within a social group and transmitted from generation to generation (Berry 1980). Our findings showing that over 30% among men and women in a nationally representative sample justify wife beating provides evidence of existing patriarchal practices in the Nigerian context.

Demographic factors stood out as important factors associated with the justification of wife beating. Among both men and women, education and urban residency reduced the likelihood of justifying abuse, as did literacy among men, corroborating previous findings from Kenya (Lawoko 2008) and others showing a social gradient in attitudes towards wife beating (Gonzales-Brenes 2004). Considering the large number of illiterate and low educated participants in this nationally representative sample, these findings provide promise that universal education may work to modify attitudes towards IPV in Nigeria. Ethnic Yoruba and Ibo participants had a lower likelihood of endorsing wife abuse supporting the notion that some ethnic groups, because of their cultural values, may be more gender restrictive than others and therefore endorse punishment of subversion from gender norms to a higher degree than others. Overall, these findings have implications for increased leverage of education to the general population and enhancing better opportunities for adult education for women and men with little or no education. Also in

specific groups (e.g. ethnic groups) there may be a need for further sensitization aimed at modifying societal expectations of women in those ethnic groups.

The association between indicators of access to information and endorsement of wife abuse were in some cases contradictory. In the case of newspaper reading, the finding is in the expected direction i.e. women who do not read newspapers were more likely to justify abuse. On the other hand, with increasing frequency of listening to radio, there was an increased tendency to justify wife beating among women, but a reduced tendency among men. While the latter could be expected when viewed from a western context, the former findings among women are difficult to reconcile, though speculation from a Nigerian context may be warranted. Although, radio and TV are media through which women are informed and empowered in the western countries, the program content can be debated seen from a Nigerian context. In Nigeria most of the indigenous dramas and soap operas emphasize traditional beliefs and reinforce existing gender inequalities. These programs are often packaged in a manner intended for women to learn lessons about the consequences of not conforming to such norms. The discrepancy in the content and quality of print and electronic media as well as visual media probably explains to some degree our findings on association between attitudes towards wife beating and access to information in Nigeria. Further research of qualitative nature however is required to confirm or reject this notion.

Among women, the current study also assessed the association between exposure to IPV and attitudes towards wife beating. Women experiencing physical and sexual abuse exhibited a higher likelihood of endorsing abuse, supporting the social learning theory discussed previously (Berry 1980). Another plausible explanation could stem from a psychological perspective. Repeated abuse may diminish a woman's self-esteem and thereby increase her propensity to blame herself for whatever reason is triggering the abuse (e.g. burning the food in this context). At that point, the foundation has been set to justify any action to "punish" transgression from her normative roles. The psychosocial impact of conditioned abuse and how this may impact on attitudes towards abuse deserves attention in the research.

The strength of this study lies in its large, nationally representative data sets based on good sampling procedures. These have been gathered in strict adherence to ethical standards for domestic violence research ensuring women's safety (WHO 2001). One limitation is that measure of attitudes to IPV captures only women's normative roles in the domestic arena. Other plausible motivating factors for IPV such as women's participation in income generating activity, education, husband's drunkenness, to mention but a few, are not incorporated in the measurement of attitudes to IPV (Lawoko 2006). Broader measures including the above mentioned variables are necessary considering their role in explaining IPV exposure (Hoffman, Demo & Edwards, 1994; Krishna 2005; Malcoe, Duran & Montgomery 2004). Another limitation comes from face-to-face interviews. Participants may tend to underreport attitudes when contrasted with responses from self administered questionnaires. This however may have been improved by the use of trained personal and the guarantee of anonymity which are part of ethical issues surrounding research in this field.

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Table 1: Proportions of Nigerian Women and Men Justifying Wife Beating by Specific reason for justification

Variables	Women justifying abuse		Men justifying abuse	
	n	%	n	%
Wife beating				

Appendix

justified if wife:				
Goes out without telling him	11398	34.1	3167	20.5
Child neglect	10717	32.1	3241	20.9
Argues with him	9449	28.3	2740	17.7
Refuses to have sex with him	8952	26.8	2030	13.1
Burns food	5755	17.2	1540	9.9
Justified for at least one of the above	15036	45.0	5617	36.3

% Represents the proportion of women respectively men who would justify abuse among total responding women respectively men to particular scenario.

Table 2: Attitudes towards Wife beating by Demographic factors

Variables	Attitudes							
	Women				Men			
	N	n	%	p-value	N	n	%	p-value
Age				0.030				0.000
15-19	6134	2738	44.6		2509	941	37.5	
20-29	12220	5652	46.3		4809	1709	35.6	
30-39	8362	3940	47.1		3812	1125	29.5	
40-49	5888	2706	46.0		2586	725	28.0	
50-59					1460	452	27.6	
				0.000				0.000
Literacy								
Can read little or nothing	18427	10048	54.5		5771	2156	37.4	
Can read whole sentences	13983	4894	35.0		9500	2778	29.2	
Education				0.000				0.000
None	12985	7214	55.6		3595	1262	35.1	
Primary	6447	3290	51.0		3232	1171	36.2	
Secondary	10551	3963	37.6		6441	2136	33.2	
Higher	2621	569	21.7		2083	383	18.4	
Place of Residence				0.000				0.000
Urban	10247	3573	34.9		5097	1315	25.8	
Rural	222357	11463	51.3		10254	3637	35.5	
Religion				0.000				0.000
Catholic	3513	1636	46.6		1651	702	42.5	
Other Christian	13295	5101	38.4		6227	1754	28.2	
Islam	15043	7856	52.2		7153	2357	33.0	
Traditional	528	316	59.8		213	115	54.0	
Other	51	24	47.1		61	18	29.5	
Ethnicity				0.000				0.000
Hausa/Fulani	9289	5366	57.8		4237	1217	27.8	
Yoruba	4753	1305	27.5		2423	522	21.5	
Ibo	4509	1906	42.3		1928	687	35.6	
Other	14053	6459	46.0		6628	2526	38.1	
Region				0.000				0.000
North Central	6173	2783	45.1		3007	944	31.4	
North East	6066	3174	52.3		2696	1158	43.0	
North West	7084	4054	57.2		3304	890	26.9	
South east	36000	1697	47.1		1424	597	41.9	
South West	4728	1976	41.8		2363	780	33.0	
South South	4953	1352	27.3		2557	583	22.8	
Wealth Index				0.000				0.000
Poorest	13767	7608	55.3		5925	2295	38.7	
Poor	6414	3265	50.9		3044	1086	35.7	
Least poor	12423	4163	33.5		6382	1571	24.6	
Decision Autonomy				0.000				0.000
Woman/woman and Husband	5231	2207	42.2		1555	362	23.3	
Husband only and/or someone else	18436	9433	51.2		13720	4560	33.2	
Access to Information				0.000				0.000
No	9609	4936	51.4		2550	1074	4 2.1	
Yes	22940	10076	43.9		12778	3875	30.3	
Reading Newspaper/magazine				0.000				0.000
Not at all	25663	12969	50.5		8347	2999	35.9	
Less than once a week	3350	1052	31.4		2737	784	28.6	
At least once a week	2500	716	28.6		2817	795	28.2	
Almost everyday	855	189	22.1		1349	341	25.3	
Listens to radio				0.000				0.000

Not at all	11016	5575	50.6		1795	784	43.7	
Less than once a week	4878	2443	49.1		1391	553	39.8	
At least once a week	7239	3388	46.8		3253	1084	33.3	
Almost everyday	9230	3558	38.5		8856	2520	28.5	
Watches TV				0.000				0.000
Not at all	17326	9168	52.9		5796	2166	37.4	
Less than once a week	3592	1709	47.6		2332	721	30.9	
At least once a week	4504	1863	41.4		2926	942	32.2	
Almost everyday	7032	2219	31.6		2436	1109	26.2	
Physical IPV								
No				0.000				
Yes	16179	7429	45.9					
	2882	1702	59.1					
Sexual IPV				0.000				
No	18395	8694	47.3					
Yes	655	426	65.0					
Emotional IPV				0.000				
No	14742	6688	45.4					
Yes	4314	2442	56.6					

Table 3 (Block regressions): Factors associated with Attitudes towards IPV among men and women in Nigeria: adjusted estimates

Independent variable	Women: adjusted Odds Ratio (Confidence Interval) p-value	Men: Adjusted Odds Ratio (Confidence Interval)p-value
Block 1: (Socio-demographic Indicators)	Block $r^2 = 0.095$	Block $r^2 = 0.106$
Age		
15-19	1.370 (1.205-1.559) 0.000	1.430 (1.214 - 1.685) 0.000
20-29	1.278 (1.169-1.396) 0.000	1.456 (1.278 - 1.658) 0.000
30-39	1.180 (1.078-1.292) 0.000	1.109 (0.986 – 1.248) 0.084
40-49	1.000	1.918 (0.955 – 1.308) 0.166
50-59[1]		1.000
Education		
None	1.502 (1.147-1.968) 0.003	1.155 (0.892 – 1.495) 0.275
Primary	1.668 (1.303-2.137) 0.000	1.382 (1.108 – 1.723) 0.004
Secondary	1.339 (1.130-1.586) 0.001	1.795 (1.552 – 2.075) 0.000
Higher	1.000	1.000
Place of residence		
Urban	0.869 (0.798-0.947) 0.001	0.877 (0.793- 0.969) 0.010
Rural	1.000	1.000
Type of marriage		
Monogamy	0.805 (0.747-0.867) 0.000	1.030 (0.923 – 1.151) 0.596
Polygamy	1.000	1.000

Religion		
Catholic	0.691 (0.295-1.618) 0.394	1.234 (0.674 – 2.261) 0.496
Other Christian	0.616 (0.264-1.434) 0.261	0.783 (0.431 – 1.422) 0.422
Islam	0.696 (0.298-1.626) 0.403	1.391 (0.760 – 2.546) 0.284
Traditional	0.928 (0.387-2.226) 0.867	1.415 (0.714 – 2.804) 0.320
Other	1.000	1.000
Ethnicity		
Hausa/Fulani	1.218 (1.094-1.355) 0.000	0.383 (0.333 – 0.441) 0.000
Yoruba	0.841 (0.720-0.984) 0.030	0.574 (0.478- 0.690) 0.000
Igbo	0.706 (0.570-0.874) 0.001	0.612 (0.491 – 0.764) 0.000
Other	1.000	1.000
Literacy		
Can read little/nothing	1.099 (0.896-1.348) 0.365	1.593 (1.318 – 1.925) 0.000
Can read whole sentences	1.000	1.000
Wealth Index		
Poorest	1.503 (1.334-1.692) 0.000	1.689 (1.483 - 1.922) 0.000
Poor	1.443 (1.292-1.611) 0.000	1.556 (1.382 – 1.752) 0.000
Least poor	1.000	1.000
Region		
North Central	1.343 (1.150-1.568) 0.000	0.944 (0.788 – 1.130) 0.528
North East	1.417 (1.191-1.686) 0.000	1.428 (1.169 – 1.745) 0.000
North West	1.582 (1.322-1.892) 0.000	1.003 (0.810 – 1.241) 0.981
South East	2.249 (1.752-2.888) 0.000	2.612 (2.007 – 3.400) 0.000
South	1.199 (1.007-1428) 0.042	1.293 (1.0631 – 1.572) 0.010
South West	1.000	1.000
Block 2: Access to information and Autonomy in Decision making	Block $r^2 = 0.103$	Block $r^2 = 0.119$
Reading Newspaper/magazine		
Not at all	1.467 (1.104-1.950) 0.008	0.759 (0.635 – 0.907) 0.002
Less than once a week	1.054 (0.785-1.414) 0.727	0.687 (0.574 – 0.821) 0.000
At least once a week	0.942 (0.695-1.277) 0.701	0.803 (0.677 – 0.952) 0.012
Almost everyday	1.000	1.000
Listens to radio		
Not at all	0.864 (0.787-0.949) 0.002	1.338 (1.172 – 1.527) 0.000
Less than once a week	1.094 (0.981-1.220) 0.106	1.394 (1.217- 1.597) 0.000
At least once a week	1.130 (1.026-1.244) 0.013	1.085 (0.983 - 1.198) 0.104
Almost everyday	1.000	1.000

Watches TV		
Not at all	0.875 (0.768-0.998) 0.046	0.946 (0.823 – 1.087) 0.431
Less than once a week	1.015 (0.880-1.171) 0.840	0.782 (0.680 – 0.899) 0.001
At least once a week	1.030 (0.907-1.170) 0.652	0.989 (0.876 – 1.117) 0.861
Almost everyday	1.000	1.000
Autonomy in decision making		
Woman/Husband and woman	0.899 (0.831-0.973) 0.008	0.545 (0.473 – 0.627) 0.000
Husband only	1.000	1.000
Block 3: Exposure to IPV	Block $r^2 = 0.119$	
Physical IPV[2]		
No	0.637 (0.557-0.728) 0.000	
Yes	1.000	
Sexual IPV[2]		
No	0.702 (0.581-0.849) 0.000	
Yes	1.000	
Emotional IPV[2]		
No	0.952 (0.812-1.116) 0.543	
Yes	1.000	

[1] Applicable only for men. [2] Applicable only for women

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