



Research article

Gender differences in the acceptance of wife-beating in Nigeria: evidence from the 2018 Demographic and Health Survey

Tunde A. Alabi^{a,b}, Mark J. Ramsden^{c,*}^a Department of Sociology, Faculty of Social Sciences, University of Lagos, Nigeria^b Department of Sociology, Faculty of Humanities, University of Cape Town, South Africa^c Faculty of Education, University of Cambridge, United Kingdom

ARTICLE INFO

Keywords:

Gender differences in intimate partner violence
 Acceptance of wife-beating
 Extramarital sex
 Use of internet
 Predictors of domestic violence
 Education differences

ABSTRACT

The world over, more than one-third of women have been victims of either physical or sexual violence, or both, most of which are perpetrated by intimate partners. Intimate partner violence (IPV) has negative consequences for women's health, socio-economic and psychological wellbeing. Similarly, acceptance of IPV has negative implications for its spread, sympathy for victims, and utilisation of antenatal and postnatal healthcare services among women. This study investigates the influence of age, education, location, religion, marriage type, employment, wealth level, extramarital sex, smoking, internet use, media exposure and decision making on the justification of IPV, and how the associations vary between men and women. The study utilised the 2018 Nigeria's Demographic and Health Survey. The data analysed was comprised of 8,018 men and 28,888 women who were married or living with a partner. It was found that women are more likely to accept IPV than men (AOR: 1.627). Educational difference between spouses influences women's experience of and acceptance of IPV. Overall, being young, being uneducated, living in the north, being Muslim, being polygamous, being employed, being poor, having extramarital sex, being a smoker, not having access to internet, and not being exposed to the media increased the odds of IPV justification. However, while Muslim women had higher odds of accepting IPV than Christians (AOR: 1.587), Muslim men have lower likelihood of IPV justification than Christian men (AOR: 0.759). Gender differences also exist in the influence of age, marriage type, employment, extra-marital sex, smoking, media exposure and decision making. This study underscores the importance of applying differing intervention programmes to men and women where necessary.

1. Introduction

Domestic violence is pervasive and affects millions of people globally (Oyediran, 2016). In 2017, the World Health Organization (WHO) reported that more than one-third of women globally have experienced one or both of physical and sexual violence, most of which are perpetrated by intimate partners (World Health Organization, 2017). During the coronavirus lockdown, the rate of reported cases of domestic violence increased globally (United Nations, 2020; Godbole, 2020) as women are trapped with their abusive partners. With the global lockdown, people are mandated to remain indoors in order to reduce the spread of COVID-19, and as partners interact and come in contact more frequently, differences may occur which may explain the spike in the rate of IPV as evident in the rise in divorce applications during the lock down (Liu, 2020; Bassel, 2020). By

implication, many women will be violated for the first time, adding them to the list of those who have been abused at least once by their partner. Hence, new waves of data on domestic violence may show an increase in the rate of reported cases instead of the slow declining rate that many countries have experienced. A strategic intervention, which should address both victims and perpetrators, may be required to reduce the rate of IPV. WHO and Pan American Health Organization (2012) described intimate partner violence (IPV) as any behaviours that 'includes physical, sexual, and emotional abuse and controlling behaviours by an intimate partner' (p.1). This suggests that acts that constitute IPV are broad. However, the physical aspect of IPV, which includes hitting, beating, slapping, and kicking (Garcia-Moreno et al., 2012), is otherwise known as wife-beating, and constitutes the major focus of this study. Hence, wife-beating and IPV are used synonymously in this work.

* Corresponding author.

E-mail address: mjr60@cam.ac.uk (M.J. Ramsden).<https://doi.org/10.1016/j.heliyon.2021.e08191>

Received 13 April 2021; Received in revised form 13 October 2021; Accepted 13 October 2021

2405-8440/© 2021 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

While women can also be violent towards men, often in self-defence, men are usually the perpetrators of IPV and women the victims. IPV has negative consequences for the perpetrators and victims, and these include physical injuries and deteriorating reproductive and social health (Menicke and Wilke, 2015; Oyediran, 2016; Nwabunike and Tenkorang, 2017; Dim and Olayinka, 2019). It may also lead to divorce and consequently temporary separation of parent from their wards. Of concern is that the rate of women's acceptance of IPV is higher than the rate of actual experience of IPV among married women [31% for acceptance, and 22% for experience (NPC and ICF, 2019)]. This suggests that there are married women who have never been violated by their partner but believe that the husband can be justified in beating them. This may be connected to the African values system that normalizes the domination of men over women (Darteh et al., 2020). By implication, cases of IPV are not likely to be reported by people who justify it, and they may not have sympathy for the victims. In addition, when people accept IPV, they may legitimise and encourage others to perpetrate and/or perpetuate the act, which might increase the rate of IPV. Consequently, intervention programmes that intend to reduce IPV may need to consider investigating dynamics and factors associated with its acceptance. Justification of wife-beating is inimical and has implications for mother's utilization of professional antenatal and delivery care service (Tareque et al., 2020), and use of skilled health professionals for postnatal care (Khan and Islam, 2018).

In the last 10 years, justification of IPV has been found to be associated with young age, illiteracy, marital status, poverty, place of residence, religion, employment, previous experience of IPV, decision making and infrequent exposure to the media (Kunnuji, 2014; Okenwa-Emegwa et al., 2016; Ahinkorah et al., 2018; Zegenhagen et al., 2019; Darteh et al., 2020; Dickson et al., 2020). However, the influence of others factors such as marriage type, extra-marital sex, internet use and smoking have not been investigated.

Of great concern is the fact that women, who are the potential victims, accept IPV more than men, who are the potential perpetrators in Nigeria-18% and 31% men and women respectively (NPC and ICF, 2019). This underscores the importance of understanding gender variation in the factors associated with justification of wife-beating in Nigeria, so that policy makers faced with the task of reducing IPV will understand the importance of applying differing intervention programmes to men and women where necessary. This study investigates the influence of 12 factors (age, education, location, religion, marriage type, employment, wealth level, extramarital sex, smoking, frequency of internet use, media exposure and decision making) on the perceived justification of wife-beating among married men and women in Nigeria.

This work revolves around the notion of gender socialisation which is defined as the "process whereby individuals develop, refine and learn to 'do' gender through internalizing gender norms and roles as they interact with key agents of socialization, such as their family, social networks and other social institutions" (John et al., 2017. P 6). In Nigeria, to a large extent, boys are raised differently from girls and the societal expectations from each sex vary. The gender socialisation theory (GST) suggests that, while males are expected to be independent, strong, assertive, take risks and always be in control, females are socialised to be submissive, warm, muted and always assisting the men. A typical example is the description of men as 'head' and 'breadwinner' of the family and women as 'caretaker', suggesting that the men should work to provide the financial needs of the family while women should take care of the home. Logically, the differences in the socialisation patterns may influence the behaviour and reactions of each sex to social phenomena including wife-beating.

2. The present study

In the last 10 years, many studies have been published that investigate the experience and acceptance of wife-beating in Nigeria. Some of these studies (Okenwa-Emegwa et al., 2016; Oyediran, 2016; Nwabunike and Tenkorang, 2017; Dim and Olayinka, 2019; Sunmola et al., 2020)

used nationally representative data, while others used a sample selected from a single state (Kunnuji, 2014; Popoola et al., 2019) or region (Alo et al., 2012) in the country.

Many of the recent studies in Nigeria focus on the actual experience of intimate partner violence; Dim and Olayinka (2019) included women's perpetration in their study. Few studies have focused on IPV acceptance/attitude (Okenwa-Emegwa et al., 2016; Oyediran, 2016) while a few have investigated both (Kunnuji, 2014; Nwabunike and Tenkorang, 2017). All of these studies (except Okenwa-Emegwa et al., 2016 who analysed gender differences using the old 2008 DHS) are approached from the women's perspective, probably because the DHS does not cover data on men's experience and/or perpetration of IPV.

Investigations of differences in experience and acceptance of IPV in Nigeria have taken the form of trend analysis using different waves of DHS (Oyediran, 2016; Dim and Olayinka, 2019), ethnic differences (Nwabunike and Tenkorang, 2017), and marital status (Oyediran, 2016). There is little knowledge on gender differences in the country using nationally representative data. However, gender comparisons have been investigated in Ghana using 2014 DHS (Dickson et al., 2020) and Uganda using 2011 DHS (Zegenhagen et al., 2019) but with few predictor variables. Most of the studies that used the DHS have focused on the entire population including both married and never-married.

However, there is evidence that the views, attitudes and perception of domestic violence vary between married and unmarried people (Oyediran, 2016; Meinhardt et al., 2020). Hence, responses from unmarried people about a behaviour they are not in position to experience may not portray reality. Earlier studies on acceptance of wife-beating in Nigeria have investigated demographic factors, decision making and media exposure on the acceptance of wife-beating. However, little is known of the influence of extra-marital sex, smoking, internet use and marriage type, and how such association differs between men and women. Furthermore, the knowledge on the influence of educational difference between spouses on women's acceptance and experience of IPV is scarce. Earlier studies used the previous waves of the DHS, the present study analyses the latest 2018 NDHS.

3. Methods

3.1. Data

In this study data from the 2018 Nigeria's Demographic and Health Survey (NDHS) is analysed. The survey is the latest and the sixth one to be conducted on the health status and demographics of Nigerians. Two data sets are used in this study-one for each gender. The first data set is composed of 8018 men within the ages of 15 and 59, and married/living with partner, while the second comprises 28,888 married/living with partner women within the reproductive age of 15-49. We focus on married people because those who have never married may have little experience of intimate relationships and may not have an in-depth understanding of the happiness and frustrations that come with being married/living together with a partner. In addition, extramarital affairs and household decision making, which are key variables in this study, apply to only married people.

3.2. Ethical considerations

The DHS programme office upon reviewing our request (<https://dhsprogram.com/data/new-user-registration.cfm>) granted us permission to use the data. The DHS programme office has abided by the necessary ethical guidelines during and before data collection.

3.3. Operationalisation of variables

3.3.1. Outcome variable

The dependent variable of this study is acceptance/justification of wife-beating and is constructed from NDHS data. The NDHS collects data

on acceptance of intimate partner violence rendering some hypothetical situations under which men and women think that wife-beating may be justified. Both men and women were asked if the man is justified for beating his wife if she: (a) goes out without telling him; (b) she neglects the children; (c) argues with him (the husband); (d) refuses to have sex with him; (e) burns the food.

The questions had three responses '0 = No', '1 = Yes' and 'Don't know'. The last option (i.e 'don't know') was excluded from the analysis. We summed respondents' answer to the questions (resulting in scores ranging from 0 to 5) and coded 0 as 'disapproval of wife-beating'. Those who had scores of 1–5 were treated as having accepted wife-beating and coded as '1'. This was done to simplify the data and is consistent with previous studies (Kunnuji, 2014; Doku and Asante, 2015; Oyediran, 2016; Dickson et al., 2020). Regarding actual experience of spousal violence among married women (there is no such data for men), women were asked if they have ever experienced physical and sexual violence acts (of pushing, slapping, punching, kicking, strangling, threatening with objects, arm twisting, and two forced sexual acts etc) from their husband. The response outcomes were 'never', 'often', 'sometimes', and 'yes, but not in the last 12 months'. We computed results for responses to the ten questions and reduced the outcomes to two. Those who responded 'never' to all the ten questions were treated as 'never experienced spousal violence', while others were categorised as having experienced at least one form of domestic violence (Dim and Olayinka, 2019).

3.3.2. Independent variables

We considered twelve independent variables: age, education, location, religion, marriage type, employment, wealth level, extramarital sex, smoking, internet use, media exposure, and decision making. The NDHS data records the age, in years, of survey respondents. In order to avoid many categories, we collapsed categories into two age groups: 'less than 30' and '30 years and above'. Level of education was captured at four levels in line with the formal education system in Nigeria: '0 = no education', '1 = primary education', '2 = secondary education' and '3 = higher/tertiary education'. Women were asked about the level of education of their partner, the men were not. In order to test for the influence of educational difference between partners, we deducted the partner's level of education from the wife's and created seven categories ranging from -3 to 3. The outcome would be -3 if the wife is three levels more educated than the husband (i.e the wife has tertiary education while the husband is an illiterate) and would be 3 if the reverse was the case. The outcome would be '0' if both partners have similar level of education. For marriage type, the men were asked to state the actual number of wives of live-in partner they had. The women were asked 'including yourself, in total, how many wives or live-in partners does he have?' For both sexes, those who stated '1' were treated as being in monogamous marriage, while those who stated more than 1 were regarded as polygamous. For location, the NDHS captured the six geo-political zones-covering the 36 states in the country and the Federal Capital Territory. The NDHS had five outcomes for religion: Catholic, other Christian, Muslims, Traditional and Others. We reduced the categories to four by merging Catholics and other Christians. NDHS contains information on wealth level based on a respondents' ownership of consumer goods (such as bicycle/car, television) and household characteristics like flooring materials, source of drinking water and toilet facilities (NPC and ICF, 2019). The outcomes were five: 'poorest', 'poorer', 'middle', 'wealthy' and 'wealthiest'. To account for employment status, respondents were asked if they were currently working, with 'no' and 'yes' categories. Regarding smoking, respondents were asked whether they currently smoke tobacco with 'no' and 'yes' categories. For extramarital sex, respondents were asked to state how many sexual partners they have had, excluding their spouse, in the 12 months preceding the survey. We categorised the responses into two. Those who had one or more sex partners were treated as having had extramarital marital sex (Coma, 2013). Regarding internet use, respondents were asked how frequent they use the internet in the month preceding the survey with four outcomes (0 = not at all; 1 = less than once a week; 2 = at least once a

week; 3 = almost every day). With respect to decision making, respondents were asked a series of questions related to household decision maker(s). These three questions were asked to both men and women and include (a) 'who usually decides how the money you earn will be used?' (b) 'Who usually makes decisions about health care for yourself?' (c) 'Who usually makes decisions about making major household purchases?' All the questions have five response options 'respondent alone', 'respondent and partner jointly', 'partner alone', 'someone else' and 'other'. For media exposure, respondents were asked how frequently they read the newspaper, listen to radio and watch television with three response options (1 = not at all; 2 = less than once a week; 3 = at least once a week).

3.4. Data analysis

The Statistical Package for Social Sciences (version 22) was used for data analysis. We begin our data analysis with some simple exploration of the prevalence of domestic violence, the reasons why some respondents justified the use of violence, and bring in some bivariate analysis where we use the Chi-square to test the influence of educational difference-between women and their spouse-on acceptance of wife-beating and actual experience of intimate partner violence. We presented the result in a multiple column chart in Figure 2. Later we develop a multivariate binary logistic regression model for all the respondents (both men and women together) to investigate 13 factors (including gender) that might influence the justification of wife beating and presented the result in Table 2. Educational difference between partners was not included in the regression models because the information on spousal education was only retrieved from women. After establishing that gender has a significant influence on the acceptance of wife-beating, we proceeded to develop two regression models (one for each sex) to show gender differences in the influence of the 12 factors on acceptance of wife-beating. Before running the logistic regression (LR) models we tested for multicollinearity by running a correlation matrix to detect strong correlations between pairs of covariates. We find no evidence of multicollinearity. To further show the chances that a married man or woman in Nigeria accept wife-beating, we compute the predicted probability for the respondents. We then use the Analysis of Variance (ANOVA) test to show the mean differences across groups in each of the independent variables. The LR models and mean differences were tested at 95% level of significance.

4. Results

4.1. Demographic characteristics and other variables

The table on demographic characteristics is not presented in order to save space. It was found that 44% of the women do not have any formal education, compared to 25.6% of the men. More than one-third (38.5%) of the men have secondary education and 18.1% furthered to tertiary level. For women, less than one-third (30.3%) have secondary education, and less than 10% have a tertiary degree. This may be as a result of gendered socialisation theory (GST) which suggests that a woman will end up in the kitchen no matter how educated she might be, and this makes parents choose to prefer male children in cases where they cannot afford to educate all their children to school. Approximately half of the men are Christians; 49.3% of them are Muslims. For women, more than half (56.8%) are Muslims while 42.4% are Christians. Regarding wealth level, 37% of the men are poor, compared with 43.8% of the women. About two-thirds of men are rich compared with 35.9% of the women. Differentials in wealth may be as a result of the gaps in the level of unemployment of both sexes-1.9% of men; 29.9% of women-which is explained by the differences in socialisation and roles assigned to each sex by the society.

Regarding extra-marital sex, 7.8% of men report engagement in the act compared with 0.7% of women. Similarly, more men (7.5%) smoke tobacco than women (0.2%), and this shows that men are raised to engage in risky behaviours than women. About 9 in 10 women do not use the internet at all in the month that preceded the survey; meanwhile, 12.8% of

men use internet almost every. With respect to decision making, 63.7% of married men decide alone on how their earnings are spent, compared with 69.6% of women. Regarding health care, the majority (56.8%) of men make decision on their own health alone, while most of the women (55.8%) had their partner decide for them and this may be explained by the socialisation process that assigns the responsibility of financial provision to the men. Since access to healthcare is not free in the larger part of Nigeria -depending on the health issues-, women have to rely on their husband regarding where and how to seek healthcare services.

A little above one one-quarter (26.7%) of men report joint decision with their spouse, while 33.7% of women report same. Similarly, men decide large household purchases than women. As for media exposure, the majority (88%) of women of women have never read the newspaper, while more than one-third of men read sometimes. More than one-third (45.6%) of men listen to radio every day, while most of the women (46.4%) do not listen to radio at all. More than half (55.3%) of the women do not watch the television, while more than half (58%) of men watch. About 9 in 10 of women do not access the internet at all in the month preceding the study; while more than a quarter (25.9%) of men did use the internet in the month before the survey.

We find differences between men and women in acceptance of wife beating (18% vs 31% for men and women respectively). Figure 1 shows the reasons for justifying wife-beating. The most common reason given for accepting wife-beating among married men is the wife arguing with the husband (10.7%), while the most accepted reason among women is the wife going out without the telling the husband. The least justified reason for both sexes is burning of food (5.4% for men and 16.1% for women). More women justify each of the reasons than did men. Some 22% of women had experienced at least one form of domestic violence from her husband. A comparison of the proportion of women who had experienced domestic violence and those who accepted wife-beating suggests that more women accept domestic violence than experience it. These differences may be connected to the socialisation process in Nigeria where women are expected to be submissive to their husband in order to reap the benefits of marriage and escape divorce. In fact, in northern Nigeria where 78.7% of the study sample was drawn, the penal code allows the husband to use beating to correct his wife in as much that there is no serious physical injury.

4.2. Research question 1: how does educational difference between intimate partners influence women's experience of, and acceptance of, IPV?

In Figure 2, we show how difference in education between spouses influences women's experience of domestic violence and acceptance of it.

We find that the level of acceptance of wife-beating among women is lowest when they are 3 steps more educated than their husband (15%), and increases to 29.8% when the husband is 1 step more educated, and reaches the peak (38.8%) when the husband is 3 steps more education ($X^2: 130.119, p < 0.001$). In all, the level of acceptance when the woman is at least 1 step more educated than the husband is 20.9%, and increases to 31.7% when both partners are equally educated, then to more than one-third (34.7%) when the husband is at least 1 step more educated than the wife. With respect to actual experience of domestic violence, the lowest level of domestic violence experience was observed when the wife is 3 steps more educated than the husband (14.3%), while the highest of 27% was recorded when the wife is a step more educated than the husband ($X^2: 15.982; p < 0.05$). Overall, actual experience of domestic violence is 19.2% when the wife is at least 1 step more educated than the husband, reaches 21.6% when both partners are equally educated, and declines to 20.8% when the husband is at least 1 step more educated than the wife. Difference in spousal education is associated with both acceptance and experience of domestic violence, but in a more consistent way with the former.

4.3. Research question 2: what factors predict acceptance of wife-beating among married people in Nigeria?

In Table 1, we show the influence of the 13 covariates including gender on acceptance of wife-beating. It was found that women have an odds of 1.6 greater than men's odds of accepting wife-beating (B: 0.487; $p < 0.001$). Married people aged 30 or older are less likely (OR: 0.904) to accept wife-beating than those who are less than 30 (B: -0.101, $p < 0.01$). There is some evidence to suggest education is a significant predictor of acceptance. Those who had tertiary education are significantly less likely to accept wife-beating than those with no education at all (OR: 0.690, $p < 0.001$). The evidence suggests there is significant regional variation in the acceptance of wife beating. When compared to the reference category (North Central), married people in the North East are most likely to accept wife-beating (OR: 2.448, $p < 0.001$), while those from the South West were the least likely to report acceptance of wife-beating (OR: 0.679, $p < 0.001$). It appears then that respondents from the North were more likely to accept wife-beating (mean OR: 1.573) than those from the South (mean OR: 1.073).

Christians (reference category) are least likely to accept wife-beating compared with Muslims (OR: 1.346, $p < 0.001$) and Traditionalists (OR: 2.257, $p < 0.001$). The odds of accepting wife-beating for those in a polygamous marriage is approximately 1.2 times greater than for those in monogamous marriage (B: 0.150, $p < 0.001$). The odds for those

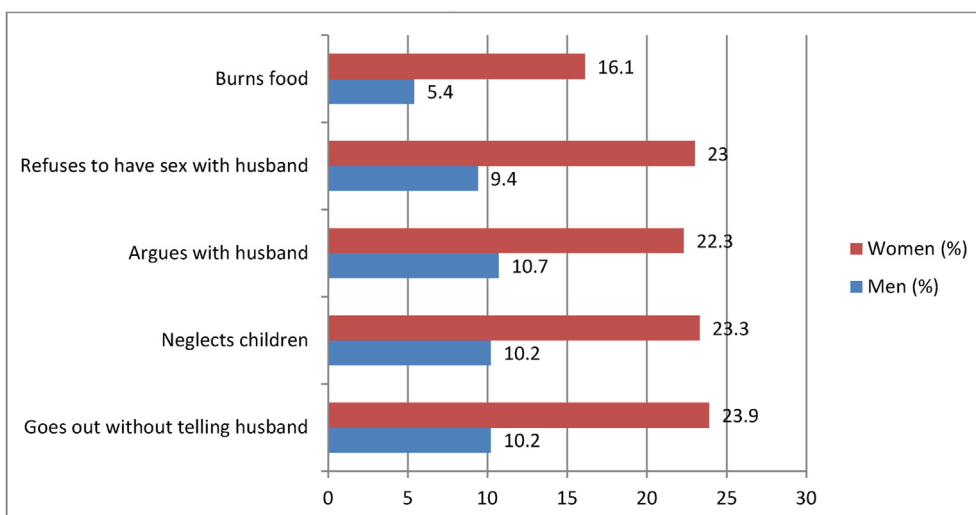


Figure 1. Reasons for justifying wife beating.

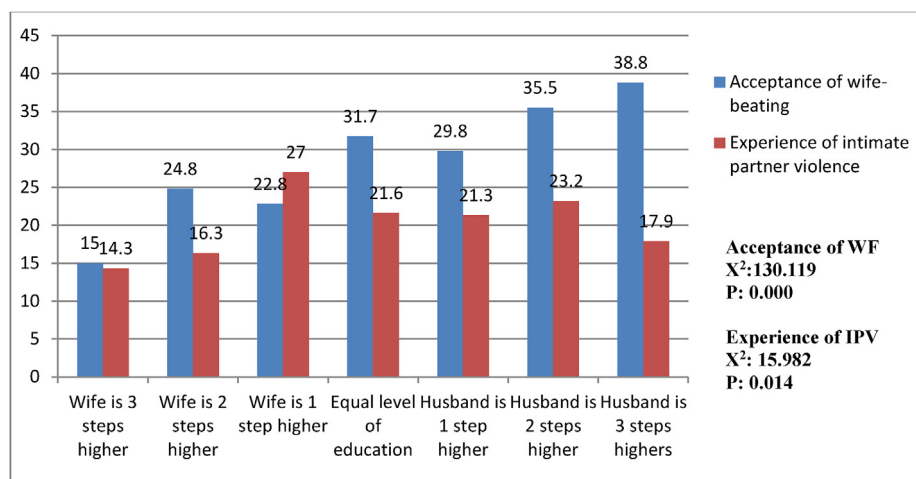


Figure 2. Experience of IPV and acceptance of wife by educational difference.

currently working are 1.9 times greater than for the unemployed (B: 0.635, $p < 0.001$). Regarding, wealth level, the poorest population (reference category) are the most likely to accept wife-beating. The odds decreases consistently as the wealth level increases, suggesting the wealthier a person, the less likely they are to accept wife beating. The wealthiest have the lowest odds (OR: 0.414 $p < 0.001$). The odds of accepting wife-beating among married people who had extra-marital sex are 2.2 times the odds those who did not have extra-marital sex (B: 0.801, $p < 0.001$); respondents who smoked have similar odds to those who do not smoke (B: 0.795, $p < 0.001$). Married people who use the internet more often are less likely to accept wife-beating than those who do not use it at all (OR: 0.635 for 'at least once a week'; OR: 0.555 for 'almost every day'). Frequency of exposure to the three media platforms, newspapers, radio and TV, is associated with greater acceptance of wife-beating. Those who read a newspaper at least once a week were less likely to accept wife-beating (OR: 0.818, $p < 0.05$); those who listened to radio often also have less likelihood of acceptance ($p < 0.01$); those who watched television at least once a week had 0.889 likelihood of acceptance (B: -0.117, $p < 0.05$). The decision on how a respondent's income is spent does not appear to be significantly associated with acceptance of wife-beating, but notable differences exists between lone decision and the joint one with the latter having low likelihood of IPV acceptance (OR: 0.897, $p < 0.05$). Regarding respondent's health care, the odds of IPV acceptance is significantly higher when the spouse decides alone (OR: 1.479, $p < 0.001$) compared to when a respondent decides which is not statistically significant. Regarding household purchases, the odds ratio is highest when the respondent decides alone (1.0), declines to 0.859 ($p < 0.05$) when the decision is jointly made, and lowest when the partner decides alone (OR: 0.759, $p < 0.001$).

4.4. Research question 3: are there gender differences in the possible predictors of acceptance of wife-beating?

Our evidence presented in Table 1 indicates that the likelihood of accepting wife-beating is different for men compared to women. We now explore gender differences by running a logistic regression on data for men and women separately. Table 2 shows that there is a difference in age as a predictor-age is a significant predictor for men but not among women. Older men were less likely to accept wife-beating than younger men (OR: 0.749; B: -0.289; $p < 0.01$). Overall, education is a significant predictor of wife-beating among men ($p < 0.001$) compared to women (p : 0.242). Variation also depends on the different levels of education. For men, those with primary education have an odds ratio of 1.2 in terms of IPV acceptance compared to men with no formal qualifications (reference category $p < 0.05$), while for women with primary education

the equivalent odds ratio is 0.979 but the estimated coefficient is not statistically significant ($p = 0.706$). For both sexes, tertiary education makes a difference (Men: OR: 0.652, $p < 0.01$; Women: OR: 0.798, $p < 0.05$). Location is a significant predictor for both sexes but with differences in the direction of association. For both sexes, respondents from North East have the largest odds ratio of accepting wife-beating in relation to the reference region, North Central (3.7 for men and 2.3 for women). But while men from the North West have an increased odds of accepting wife-beating (OR: 3.205, $p < 0.001$) than the reference category (North Central), women from North East have a decreased odds (OR: 0.967, p not significant). While there is no significant difference between the odds of men from South East and those from the North Central, women from South East have an odds are 1.3 times greater than their counterparts from the North Central of accepting wife-beating B: 0.233, $p < 0.01$). Another difference was observed in the South West where the odds ratio for men is 1.3 times the odds of men from the North Central of accepting wife-beating ($p = 0.071$), but women have a decreased odds of acceptance than those of the reference category (OR:0.550, $p < 0.001$).

Religion is also a significant predictor for both sexes, but also with considerable differences. For both sexes, Traditionalists are most likely to accept wife-beating (odds ratio of 1.4 for men, p not significant; odds ratio of 2.8 for women, $p < 0.001$). While Muslim men were less likely to accept wife-beating than Christian men (OR: 0.759, $p < 0.01$), Muslim women have an odds ratio of 1.6 in relation to Christian women ($p < 0.001$). There is no significant difference between polygamous and monogamous men, but women in polygamous marriage are significantly more likely to accept wife-beating (OR: 1.2, $p < 0.001$). Employment does not have a significant influence on acceptance of wife-beating for men but it does for women-employed women have an odds of accepting wife-beating that is almost double the odds of unemployed women (B: 0.692, $p < 0.001$). Regarding wealth level, poor, middle and wealthy men have similar odds of accepting wife-beating to the poorest income groups (the reference category). But the wealthiest have significantly less odds of acceptance and this is statistically significant (OR: 0.573, $p < 0.001$). For women, the odds decrease consistently as wealth level increases. Being at the middle level, wealthy and wealthiest are associated with significantly lower odds in accepting wife-beating than poorest women (reference category). The odds of men who engage in extra-marital sex in accepting wife-beating are 2.1 times greater than those who did not engage in extra-marital sex ($p < 0.001$). The odds of acceptance for women who had extra-marital sex is 1.5 but this is only statistically significant with a 92% level of confidence ($p = 0.077$). The odds of men who smoke accepting wife beating is approximately double those who do not smoke, while smoking is not a significant factor for women.

Table 1. Logistic regression model of acceptance of wife-beating.

Predictors	B	P	AOR	95% C.I.forEXP(B)	
				Lower	Upper
Gender					
Female	.487	<0.001	1.627	1.463	1.809
Age					
30 years or above	-.101	.006	.904	.841	.972
Education					
Primary	-.005	.913	.995	.903	1.096
Secondary	-.089	.095	.915	.825	1.016
Tertiary	-.372	<0.001	.690	.580	.820
Location/Region					
North East	.895	<0.001	2.448	2.184	2.743
North West	.241	<0.001	1.272	1.137	1.424
South East	.135	.070	1.145	.989	1.325
South South	.333	<0.001	1.395	1.212	1.606
South West	-.387	<0.001	.679	.591	.781
Religion					
Islam	.297	<0.001	1.346	1.213	1.495
Traditional	.814	<0.001	2.257	1.545	3.297
Marriage type					
Polygamy	.150	<0.001	1.162	1.079	1.252
Current employment status					
Employed	.635	<0.001	1.887	1.572	2.264
Wealth level					
Poorer	-.110	.022	.896	.816	.984
Middle	-.197	<0.001	.821	.742	.909
Wealthy	-.344	<0.001	.709	.630	.799
Wealthiest	-.882	<0.001	.414	.354	.484
Extra-marital sex					
Yes	.801	<0.001	2.228	1.838	2.700
Smoking					
Yes	.795	<0.001	2.214	1.798	2.725
Frequency of internet use					
Less than once a week	.199	.084	1.220	.974	1.528
At least once a week	-.455	<0.001	.635	.509	.791
Almost every day	-.590	<0.001	.555	.443	.694
	B	P	OR	Lower	Upper
Reading newspaper					
Less than once a week	.160	.011	1.174	1.038	1.328
At least once a week	-.201	.042	.818	.674	.993
Listening to radio					
Less than once a week	-.138	.002	.871	.798	.951
At least once a week	-.122	.007	.885	.811	.966
Watching TV					
Less than once a week	.018	.721	1.018	.924	1.122
At least once a week	-.117	.032	.889	.799	.990
Decision on respondent's earning					
Respondent and partner	-.109	.044	.897	.807	.997
Partner alone	-.010	.862	.990	.887	1.106
Decision on respondent's healthcare					
Respondent and partner	-.071	.283	.931	.817	1.061
Partner alone	.391	<0.001	1.479	1.311	1.668
Decision on large household purchases					
Respondent and partner	-.152	.027	.859	.751	.983
Partner alone	-.276	<0.001	.759	.666	.865
Constant	-.970	<0.001	.379		

Reference category: Male; Less than 30 years old; No formal education; North Central; Christianity; Monogamy; Unemployed; Poorest; Not engaged in extra-marital affairs; Do not smoke.

Reference category: Not at all; Respondent alone.

Frequency of internet use is a significant factor for both sexes but more serious for women (p: 0.003 vs p: 0.000). Men who use the internet almost every day have odds of 0.665 (p < 0.01) compared with women in the same group (OR: 0.374, p < 0.001). With respect to media exposure, reading a newspaper is a significant factor for men (those who read almost every day are significantly less likely to accept wife-beating compared to those who did not read at all) but not for women. In contrast, listening to radio has significant negative influence on the acceptance of wife-beating for women but not for men. Women who listened to radio has significantly less likelihood to accept wife-beating than those who do not listen to radio at all. Watching TV is not a significant factor for either sex.

Regarding decision making on a respondent's earning, when a wife alone makes the decision on a husband's earning, men are less likely to accept wife-beating (OR: 0.502, p < 0.001). But when the husband alone makes the decision on a wife's earning, the odds of women accepting wife-beating is 1.3 times larger (p < 0.001) but their odds reduces when such decision is jointly made (OR: 0.823; p: 0.001). Decision on health care is not a significant factor for men but it is for women. The odds of women's acceptance of wife-beating increased when the husband alone decides their health care. When both partners jointly make the decision on large household purchases, the odds of men's acceptance of wife-beating are reduced to 0.553 (p < 0.001) compared with when the husband decides alone. For women, the difference in the odds is not significant.

4.5. Analysis of differences in the mean predicted probabilities of accepting wife-beating according to covariates

To assist interpretation of the findings of our logistic regression models we calculate the mean predicted probabilities associated with a number of significant covariates. Table 3 shows that overall, married women have a 25.4% likelihood of accepting wife-beating compared with 17.9% for men (p < 0.001). For both sexes, people less than age 30 have significantly higher probability of accepting wife-beating (25.3% for men and 28.5% for women). For the two groups, the probability of acceptance decrease as the level of education increases (p < 0.001 in both cases). The decrease is very sharp, when comparing respondents with secondary education to those with tertiary level: 17.3% compared to 8.4% for men; and 16.5% compared to 8.5% for women. With respect to regional differences, respondents from the north have higher tendency to justify wife-beating than those from the south (p < 0.001)- 21.5% of northern men accept wife-beating compared with 13.7% of their southern counterparts; while the likelihood of northern women accepting wife-beating is 34.6% compared with 13.6% of those from the south. Adherents of traditional religions have the highest tendency for both sexes (29% for males and 49.2% for females), followed by Muslims (20.8% vs 24.8%) and Christians (14.9% vs 15.1%).

For both sexes, respondents in polygamous marriage have significantly higher probability of accepting wife-beating (p < 0.001). The reverse is the case for employment, however. Men who are unemployed have a 25.9% probability of accepting wife-beating compared with 17.9% for employed men (p < 0.001). In contrast, unemployed women have a 20.6% likelihood compared with 25.6% for those in employment (p < 0.001). This shows, surprisingly, that unemployed men are more likely to find wife-beating acceptable than employed men. For both sexes, the level of acceptance decreases significantly and consistently as the wealth level increases. There is evidence that being at the wealthiest level makes a great deal of difference. While men who have extra-marital sex have higher likelihood than those who did not (29.1% vs 17%, p < 0.001), women who had extra-marital sex have lower likelihood of accepting wife beating than their counterparts who did not have extra-marital sex (25.4% vs 22.1%, p < 0.05). There was a significant difference between the tendency of acceptance between male smokers and male non-smokers (31.6% and 16.9% respectively). The difference however is not significant for women. Frequency of internet use shows a

Table 2. Binary logistic regression model showing differences in the predictors of wife-beating.

Predictors	Men					Women				
	B	P	AOR	95% C.I. for EXP(B)		B	P	AOR	95% C.I. for EXP(B)	
				Lower	Upper				Lower	Upper
Age										
30 years or above	-.289	.002	.749	.624	.899	-.044	.275	.957	.883	1.036
Education										
		<0.001					.242			
Primary	.211	.040	1.235	1.009	1.512	-.022	.706	.979	.875	1.095
Secondary	.035	.731	1.036	.847	1.267	-.061	.343	.941	.830	1.067
Tertiary	-.427	.005	.652	.484	.879	-.225	.043	.798	.642	.993
Location/Region										
		<0.001					<0.001			
North East	1.316	<0.001	3.729	2.887	4.818	.813	<0.001	2.255	1.975	2.574
North West	1.165	<0.001	3.205	2.484	4.135	-.034	.609	.967	.849	1.100
South East	-.004	.982	.996	.718	1.383	.233	.006	1.263	1.069	1.492
South South	.640	<0.001	1.896	1.414	2.541	.249	.003	1.282	1.087	1.512
South West	.266	.071	1.305	.978	1.741	-.598	<0.001	.550	.467	.648
Religion										
		.012					<0.001			
Islam	-.275	.008	.759	.619	.932	.462	<0.001	1.587	1.401	1.797
Traditional	.349	.265	1.418	.767	2.623	1.034	<0.001	2.813	1.685	4.699
Marriage type										
Polygamy	.050	.588	1.051	.877	1.260	.172	<0.001	1.188	1.093	1.291
Current employment status										
Employed	-.263	.462	.769	.381	1.550	.692	<0.001	1.997	1.651	2.417
Wealth level										
		<0.001					<0.001			
Poorer	-.091	.374	.913	.748	1.115	-.096	.083	.908	.815	1.013
Middle	-.047	.671	.954	.769	1.185	-.243	<0.001	.784	.698	.882
Wealthy	.065	.610	1.067	.832	1.367	-.462	<0.001	.630	.549	.723
Wealthiest	-.556	.001	.573	.417	.788	-.924	<0.001	.397	.331	.476
	B	P	OR	Lower	Upper	B	P	OR	Lower	Upper
Extra-marital sex										
Yes	.736	<0.001	2.087	1.673	2.603	.405	.077	1.500	.956	2.352
Smoking										
Yes	.725	<0.001	2.066	1.664	2.564	.107	.841	1.113	.390	3.177
Internet use										
		.003					<0.001			
Less than once a week	.153	.314	1.165	.865	1.569	-.048	.797	.953	.661	1.374
At least once a week	-.388	.010	.679	.506	.910	-.738	<0.001	.478	.336	.681
Almost every day	-.407	.009	.665	.490	.903	-.983	<0.001	.374	.262	.534
Reading newspaper										
		<0.001					.830			
Less than once a week	.231	.023	1.260	1.032	1.539	.016	.853	1.016	.862	1.197
At least once a week	-.431	.004	.650	.485	.871	-.074	.586	.929	.712	1.212
Listening to radio										
		.488					.005			
Less than once a week	-.011	.912	.989	.815	1.201	-.155	.003	.857	.775	.948
At least once a week	-.102	.301	.903	.744	1.096	-.123	.016	.884	.799	.978
Watching TV										
		.201					.156			
Less than once a week	.156	.115	1.169	.963	1.419	-.022	.704	.978	.872	1.097
At least once a week	.013	.909	1.013	.806	1.274	-.117	.062	.889	.786	1.006
Respondent's earning										
		<0.001					<0.001			
Respondent and partner	.258	.078	1.294	.971	1.723	-.194	.001	.823	.731	.928
Partner alone	-.690	<0.001	.502	.351	.717	.266	<0.001	1.304	1.155	1.473
Respondent's healthcare										
		.784					<0.001			
Respondent and partner	-.097	.491	.908	.690	1.195	-.007	.938	.993	.843	1.171
Partner alone	.006	.969	1.006	.735	1.378	.481	<0.001	1.617	1.393	1.877
Large household purchases										
		<0.001					.038			
Respondent and partner	-.592	<0.001	.553	.440	.695	.138	.171	1.148	.942	1.398
Partner alone	-.159	.266	.853	.644	1.129	-.014	.886	.986	.817	1.190
Constant	-1.036	<0.001	.355			-1.489	<0.001	.226		

Reference category: Less than 30 years old; No formal education; North Central; Christianity; Monogamy; Unemployed; Poorest.
 Reference category: Not engaged in extramarital affairs; Do not smoke; Not at all; Respondent alone.

Table 3. Analysis of Variance showing differences in the mean predicted probabilities of accepting wife-beating according to covariates.

Covariates	Overall (LR model used for Table 1) PP	Men (LR model used in Table 2) PP	Women (LR model used in Table 2) PP
Gender	P < 0.001	–	–
Male	.1796659	–	–
Female	.2542573	–	–
Age	P < 0.001	P < 0.001	P < 0.001
Less than 30	.2812268	.2530281	.2853140
30 and above	.2143797	.1696718	.2381925
Education	P < 0.001	P < 0.001	P < 0.001
No education	.3585248	.2391789	.3907216
Primary	.2422391	.2163031	.2521447
Secondary	.1678903	.1737024	.1654757
Higher	.0843958	.0835092	.0849894
Location	P < 0.001	P < 0.001	P < 0.001
North	.3089131	.2146599	.3455594
South	.1359812	.1373031	.1356882
Religion	P < 0.001	P < 0.001	P < 0.001
Christianity	.1507333	.1494548	.1514389
Islam	.3099380	.2086264	.3487587
Traditional	.3939812	.2903226	.4925886
Marriage type	P < 0.001	P < 0.001	P < 0.001
Monogamy	.1997134	.1727097	.2129690
Polygamy	.3303011	.2227858	.3511416
Employment	P < 0.001	P < 0.001	P < 0.001
Unemployed	.2099496	.2593445	.2068189
Employed	.2338148	.1794113	.2563721
Wealth level	P < 0.001	P < 0.001	P < 0.001
Poorest	.3815194	.2635340	.4278672
Poorer	.3148118	.2173095	.3516995
Middle	.2493372	.1993835	.2686176
Wealthy	.1812436	.1774011	.1830745
Wealthiest	.0784334	.0728916	.0808875
Extramarital sex	P < 0.001	P < 0.001	P < 0.05
No	.2317205	.1702699	.2544978
Yes	.2785329	.2914253	.2206338
Smoking	P < 0.001	P < 0.001	Not significant
No	.2312052	.1692354	.2542124
Yes	.3147102	.3155585	.2822082
Frequency of internet use	P < 0.001	P < 0.001	P < 0.001
Not at all	.2614031	.2079571	.2787039
Less than once a week	.1626892	.2124941	.1116120
At least once a week	.0809789	.1078120	.0555556
Almost every day	.0570226	.0721331	.0414274
Reading newspaper	P < 0.001	P < 0.001	P < 0.001
Not at all	.2626852	.2144064	.2768758
Less than once a week	.1471107	.1702734	.1297650
At least once a week	.0786712	.0648467	.0995842
Listening to radio	P < 0.001	P < 0.001	P < 0.001
Not at all	.3182111	.2272417	.3431446
Less than once a week	.2048200	.2098738	.2032753
At least once a week	.1725827	.1360450	.1925782
Watching TV	P < 0.001	P < 0.001	P < 0.001
Not at all	.3227348	.2236892	.3562060
Less than once a week	.1987131	.2016264	.1976544

(continued on next page)

Table 3 (continued)

Covariates	Overall (LR model used for Table 1) PP	Men (LR model used in Table 2) PP	Women (LR model used in Table 2) PP
At least once a week	.1312678	.1115122	.1395741
Decision on respondent's earning	P < 0.001	P < 0.001	P < 0.001
Respondent alone	.2557045	.2118209	.2718071
Respondent and partner	.1473728	.1251484	.1569695
Partner alone	.2608175	.1221730	.3418560
Decision on respondent's health care	P < 0.001	P < 0.001	P < 0.001
Respondent alone	.1998697	.2234286	.1595822
Respondent and partner	.1606638	.1192931	.1716719
Partner alone	.3256337	.1412898	.3536795
Decision on large household purchases	P < 0.001	P < 0.001	P < 0.001
Respondent alone	.2112710	.2294120	.1618618
Respondent and partner	.1731410	.1213275	.1878832
Partner alone	.3008485	.1434359	.3243903

difference in the tendency of acceptance for both sexes. The likelihood of acceptance of wife-beating is largest for respondents who do not use the internet (26.0%). For those who use it at least once a week the likelihood is 8% compared with those who used it less than once a week (21.2% vs 10.8% for men; 11.1% vs 0.6% for women). For both sexes, the tendency to justify wife-beating decreases with increase in the frequency of reading newspaper (p < 0.001). The same findings hold for listening to radio and watching television. The difference for men is sharper (more than 50% in each of the three categories) when they are exposed to the media at least once a week. Regarding decision making, variation exists between sexes depending on the type of decision. For respondent's earning, men have the least likelihood (12.2%) when their wife decides on how their own (husband) income is spent, but women have the highest likelihood (34.1%) when the husband decides how the wife earnings are spent (p < 0.001). The least likelihood for women occurs when the decision is jointly made. Regarding the decision on respondent's health care and large household purchases, men have the least likelihood of accepting wife-beating when they make joint decisions with their spouse, while women have the least likelihood when they make the decisions alone on their own. Men have the highest tendency of acceptance when they make the decisions alone, while women were at their highest odds of accepting wife-beating when their husband made the decisions alone.

5. Discussion

This study investigates possible gender differences in factors that may be associated with married people's acceptance of wife-beating. Specifically, we investigated 12 factors, namely; age, education, location/region, religion, marriage type, employment, wealth level, extramarital affairs, smoking, internet use, media exposure and household decision-making.

5.1. Reasons for supporting IPV

The commonest reasons for justifying wife-beating are the same for both sexes but in different orders. The three most common reasons for accepting wife-beating among females are, in this order, going out without telling the husband, neglecting the children, and arguing with the husband. For men, the reasons given for justification are arguing with

husband, neglecting the children, and going out without telling the husband, in that order. It is not surprising that neglecting the children ranked the second most common reason for accepting wife-beating. In many cultures in Nigeria, children are seen as the primary rewards and blessings of marriage. Since the gender socialisation assigns the mother as the domestic care-giver, she is expected to look after the children at all times and any neglect suggests dysfunctional motherhood. It is therefore not surprising that both sexes may see the neglect of children as a reason for a woman to be beaten. The cultural and hierarchical gender roles inherent in the GST may explain why men believe that a wife arguing with her husband is the most justifiable reason for wife-beating. Across many African countries, the traditional gender roles put men in a superior position and women are expected to obey (Darteh et al., 2020). Hence, arguing with one's husband is seen as disobedience and violation of the traditional roles. Regarding women's justification of going out without telling the husband, adultery among women comes with serious stigmatization and punishment in African culture. Going out without telling the husband raises suspicion that the woman is having an extramarital affair (Kunnuji, 2014). It is a norm for women to inform their husband of their movement at all times. The GST suggests that, in the context of women's subordinate position relative to men, refusal to do so is perceived as a challenge to male dominance and a justifiable reason for wife-beating.

5.2. Gender and acceptance of wife-beating

The study shows that women are more likely to accept wife-beating than men. This may be explained, on the one hand, by the gender socialisation which expects men to be assertive and physically dominating, and on the other hand by the penal code of northern Nigeria wherein section 55 (1) permits the husband to use beating which does not inflict physical injury to correct his wife. Apparently, the penal code is largely rooted in the notion of gender socialisation, and leaves women with no choice but accept that their husband is justified in beating them. This study repeats the findings of Okenwa-Emegwa et al. (2016) who reported from an earlier wave of DHS that women accept IPV more than men. Similarly, a recent study by Meinhart et al. (2020) supported our finding as they also found that female adolescents and young adults in Nigeria and Tanzania accepted intimate partner violence more than their fellow males. The higher rate of acceptance of intimate partner violence among married women than men may also be connected to the cultural stigmatisation that comes with divorce for women. In Nigeria, divorced women are rejected and stigmatized (Smith, 2010), and are often regarded as 'second hand materials' which reduces their chances of remarriage compared with men (Lazarus et al., 2017). In addition, the expression of gender socialisation via the continued preaching of submissiveness of a wife to her husband by dominant religions, fear of losing it all due to lack of adequate legal enforcement and provision for alimony put women at great economic disadvantage after divorce (Imam-Tamim et al., 2016; Lazarus et al., 2017). Consequently, women are left with little or no choice but to accept intimate partner violence.

5.3. Age and justification of IPV

This study shows that for men, young people (less than 30) are significantly more likely than older people to accept IPV. In the case of women, using a multivariate model we find no significant association between acceptance of wife beating and age. Less likelihood of acceptance of IPV among older people has been reported by previous studies within the last decade (Okenwa-Emegwa et al., 2016; Oyediran, 2016; Gurmu and Endale, 2017; Darteh et al., 2020). This is associated with a life-cycle, or aging, effect - as a couple age, they tend to reduce their display of violent behaviour in the presence of their growing children. Acting against this negative association however is another life-cycle effect: the level of understanding of the dyadic relationship in marriage may increase with age (Oyediran, 2016). Consequently, a couple tend to

understand and accept the excesses of their partner as they grow and resort to negotiation when differences set in rather than violence. In addition, older people are generally less aggressive than young people, and as the latter age, testosterone-which has been debated to be related to aggressive behaviour (Zirkin and Tenover, 2012) - declines thereby reducing the tendency of aggressiveness (Darteh et al., 2020).

5.4. Education and acceptance of wife-beating

Education-and differences between spouses-is a key factor in this study. Our study shows that married people with tertiary education have the lowest likelihood of accepting IPV than those in other categories. This is consistent with the findings of MacQuarrie et al. (2015), Oyediran (2016) and Dim and Olayinka (2019) who reported that experience of, and acceptance of, negative health behaviour declines as the level of education increases. This is expected because tertiary institutions give recipients the opportunity to self-explore, reflect on their rights as human beings, improve on themselves and make the society a better place (Nwankwo and Ifejirofor, 2015). It is therefore not surprising that human self-worth is realised at this stage and many life-changing decisions are made based on knowledge and worldview acquired at that point. Consequently, acquiring tertiary education may bring about modernism, egalitarianism, respect for self and others and decline in violent tendencies. Moreover, higher education may lead to improved negotiation and conflict resolution skills (Dim and Olayinka, 2019). Hence, those who have acquired tertiary education have lesser likelihood to approve of wife-beating.

Regarding educational differences between spouses, our study shows that women reject IPV the most when they are 3 steps more educated than their husband, but accept it the most when their husband is 3 steps more educated than they are. This shows that education of women may help to challenge the gender socialisation which puts women at disadvantage. However, the same consistency and direction did not hold for actual experience of IPV as women experience most IPV (27%) when they are a step more educated than their husband. The finding on acceptance may be explained by the saying that 'education/knowledge is power'. Women being 3 steps ahead of their husband in education suggests that they have tertiary education while their husband has no formal education. As we have argued earlier, tertiary education instills human right values into recipients, and in reality, the difference-in terms of exposure, behaviour and worldview. Therefore, it might be expected that a wife who has tertiary education rejects domestic violence from an uneducated husband. Regarding the actual experience of IPV, the wife having 1 step more education means that she may exhibit modernism and egalitarian values, all of which challenge the gender socialisation and cultural norm that portray the husband as the head and controller of the family. This perceived challenge of his natural right and authority may trigger violence in the husband and consequently lead to violation of the wife. But as the wife furthers in her education and become 2 and 3 steps ahead of the husband, the gap between both partners becomes wider, and the woman acquires more knowledge of human rights, negotiation and conflict resolution skills, how to report domestic violence, and economic empowerment, the husband may be afraid to inflict violence in order to avoid legal sanction.

5.5. Location and justification of IPV

This study finds that regional location is a predictor of acceptance of wife-beating and there is a considerable difference between and within regions and between sexes. Generally, Northerners have a higher tendency to accept IPV than Southerners, and this is the case for both sexes. This may be explained by the fact that gendered socialisation is more pronounced in the north as evident in the penal code, but reducing in the south due to increase in western education for women. This study is consistent with the findings of Tenkorang et al. (2013), Odero et al. (2014), Rashid et al. (2014) and that of Doku and Asante (2015) who

reported that location is a factor in the acceptance and experience of a wife as those who live in typically rural areas associated with the North are more likely to accept IPV than their counterparts in the urban centres. Another possible but similar explanation is rooted in the cosmopolitan-success and conservative-failure hypothesis, which suggests that liberal values and policies to reduce IPV will succeed more and faster in the urban and cosmopolitan south than in the rural and conservative North (Kunnuji et al., 2017). Hence, the North is expected to more easily justify wife-beating than the South at any given time, *ceteris paribus*. It is surprising that men in the South-East are as likely as those in the North-Central to accept wife-beating, while women in the South-East are significantly more likely to accept wife-beating than those in North-Central. One would expect men in South-East to have the highest tendency of accepting wife-beating in the Southern region considering that it is in the region where men pay the high bride price. Although, the high bride's wealth, which suggests loss of rights and transfer of power to the groom is rooted in gender socialisation and may explain why women in the region accept wife-beating (Tenkorang et al., 2013; Oyediran 2016), and an earlier study does show that Igbo women (popularly found in the South-East) were more likely to report experience of IPV than their Yoruba (South-West) and Hausa/Fulani counterparts (North) [Nwabunike and Tenkorang, 2017].

5.6. Religion and acceptance of wife-beating

Our study shows that for both sexes, adherents of traditional religions are more likely to accept wife-beating than Muslims and Christians. This is expected considering that the default values across many societies globally gives more power to men than women, and since traditional religions uphold the conventional and traditional values, their adherents may uphold gendered socialisation and retain the perennial values of male dominance to justify wife-beating. Findings by Obeid et al. (2010), Doku and Asante (2015), Oyediran (2016) and Dickson et al. (2020) report that Muslims have a higher tendency of accepting wife-beating than Christians. Indeed our analysis (Model 1) found evidence to support this.

However, after estimating models 2 and 3, we find instead that, Muslim men have lower odds, than Christians, of accepting wife-beating. There is no consensus among the earlier studies that tried to explain the stance of Islam on wife-beating. Eidhamar (2018) made reference to several passages in the Qur'an, some of which are woman-friendly and pampering, while others gave superiority status to the men. Hence, interpretation of these verses varies across countries and human beings (Indonesians interpret Islamic norms and texts as endorsing male leadership and wife-beating while Norwegians interpret them as upholding gender equality) [Eidhamar, 2018]. The way each person interprets these verses determine how they react to wife-beating, and their interpretation may be largely influenced by their socialisation process (i.e whether or not their socialisation process encourage gender inequality) and education. By implication, being socialised to believe that men and women are different and the former is superior to the latter may create the impression that wife-beating is a 'demonstration of a husband's authority and love for his wife' (Sunmola et al., 2020, p. 17).

5.7. Marriage type, extramarital sex, smoking, internet use and justification of wife beating

When investigated alone without the influence of other covariates, both male and female polygamists tend to accept wife-beating more than monogamists. Studies on the influence of marriage type on experience/perpetration and acceptance of IPV in Nigeria are scarce. In other African countries, however, similar finding have been reported by Jansen and Agadjanian (2020) who reported that women in polygynous marriage experience IPV more than others in Mozambique and Amo-Adjei and Tuoyire (2016) who found that polygynous men justify wife-beating more than monogamous men. The explanation provided by Jansen and

Agadjanian was that it is difficult for a polygynous man to treat his wives equally, and the youngest wife is usually given preferential treatment over the senior wife. But as soon as the husband takes another wife, the preferential treatment is transferred to the new wife. Thus, the neglected senior wives exhibit their grievances toward the husband, and are often abused by the husband for the doing so. In addition, senior wives due to old age and physical unattractiveness caused by acute domestic stress may not be able to satisfy the husband satisfaction sexually, which may result in domestic violence. An earlier study has established a connection between experience of IPV and acceptance of it (Kunnuji, 2014). A similar explanation, which was rendered by Amo-Adjei and colleague, is that women in polygynous marriage have poor socioeconomic status, and ailing physical and psychological health outcomes-in fact, the devastating health conditions of a woman may be a reason why the husband takes another wife-, consequently, they have no choice than to accept wife-beating in order to secure the continuation of their marriage. Another plausible explanation is that, human beings, by nature, engage in upward and downward social comparisons. Insensitive polygynous men may intimidate other wives by comparing them with the most preferred one, which may lead to reduced happiness and feelings of worthlessness in the less preferred wives, and consequently cause them to accept IPV.

Related to polygyny is extra-marital sex. We found that while men who engage in extra-marital sex accept wife-beating more than men who do not, women who have extra-marital sex reject IPV more than women who do not engage in same. Studies on this are scarce. However, a related study in Malawi by Conroy (2014) found that, among a sample of 422 married couples, perception of partner's infidelity was associated with the risk of IPV for both partners. Similarly, Bhatta (2014) reported that involvement in extra-marital sex reduces communication between spouses, and this suggests less cordial union, which has implication for IPV. That men who have extra-marital sex accept wife-beating may be explained by the two reasons. First, the wife could have suspected and deny him sex as a punishment for having extra-marital affairs, which may lead to exercise of power by the man and consequently IPV. Two, the extra-marital partners, who are often single women, may pressure the man to dismiss his wife in order for her (extra-marital partner) to move in and become the new wife-this happens in cases where the man is wealthy and the cheating partner is desperate to do all it takes to marry him. With constant pressure from the cheating partner, the husband may begin to show disaffection with the wife, and upon suspecting the husband's move to dismiss her, she will accept IPV to secure her marriage. In Nigeria, it is more difficult for successful men to conceal infidelity than women. The single women they cheat may flaunt their activities on social media to show their status of dating a rich 'sugar daddy', and the desperate ones even send evidence of sexual intercourse with the cheating husband to the wives in order to infuriate them and crush their marriage so they can become the new wife. Extra-marital affairs among women could be a payback for the husband's infidelity, or may be caused by the husband's inability to provide basic needs for the family. Whichever of the two is the cause of a woman's infidelity, the husband is perceived to be partly responsible for their cheating. Hence, women who cheat may reject IPV coming from such an 'irresponsible' husband even though the latter may actually perpetrate domestic violence.

Smoking men are more likely to accept wife-beating than men who do not smoke, but the association does not hold for women. This is consistent with the findings of Lewis et al. (2016) who reported that cigarette smokers report self-directed violence compared to non-smokers. Mishra et al. (2018) reported inversely that women who experience IPV resort to smoking in order to forget their sorrow. It is not clear whether tobacco contains intoxicants that change the mental/psychological configuration of smokers. But it is logical to assume that smokers may be more likely to indulge in alcoholism than non-smokers, and alcoholism has been established to be associated with violent behaviour (Beck and Heinz, 2013). However, the activity of smoking may be an indication of a

woman's independence and autonomy. Taking up smoking may be a practice positively associated with women who feel more liberated and free to make a decision over her leisure activities.

Our novel findings suggest that using the internet almost every day reduces the odds of accepting wife-beating, and could be explained by education and greater social and cultural awareness. Use of the internet can be viewed as giving a window beyond the everyday 'local' experience of the user. In effect the internet can give insight into different worlds, cultures, lifestyles and morals including ones where women's status is more equal to men and where attitudes to IPV are perceived to be negative. Education is significantly associated with the frequent use of internet ($p < 0.001$ for both sexes), and more than two-thirds of those who use it almost every day have tertiary education. Consequently, the same explanation for why people with tertiary education reject wife-beating may apply.

5.8. Employment, wealth level and acceptance of wife-beating

Our study shows that unemployed men have a higher tendency than the employed ones to accept violence, but employed women have higher odds of accepting it than unemployed women. For both sexes, however, the wealthiest class are least likely to justifying the use of IPV. This is in contrast with previous studies of [Gennari et al. \(2017\)](#) and [Darteh et al. \(2020\)](#) which reported that employed men were more likely to justify IPV than the unemployed, suggesting that employed men felt more justified via their economic dominance over their wife. Our finding that unemployed men are more likely to justify wife-beating is not surprising and finds support from the DHS and GST. The finding that poor people justify acceptance of wife-beating than the rich ones supports our current finding on men's employment and acceptance of wife-beating since one will expect that the unemployed will be poorer than the employed. Our finding is supported by the saying that 'a hungry man is an angry man', and 'money answereth all things', which suggest that unemployment and poverty are worse for a man than a woman because the gender socialisation that assign the financial responsibility to the man. Hence, inability to secure a job means that such responsibility cannot be met, and a consequence of which frustration and aggression.

Perhaps, what is more surprising is the finding that employed women are more likely to justify IPV than unemployed women, contradicting the finding of [Linos et al. \(2010\)](#) and [Rashid et al. \(2014\)](#) who find the reverse. Going by gendered socialisation, a woman's employment status may be perceived by her husband as a threat since the former is expected to be a 'care-taker'. The husband may see his wife as taking over his responsibility of financial provision which may undermine his ability to exercise authority over her ([Alo et al., 2012](#)). Consequently, the husband may resort to violence to show that he is still the head of the family ([Dim and Olayinka, 2019](#)), and once IPV has been experienced, there is a tendency for women to accept fate and justify wife-beating ([Kunnuji, 2014](#)). Another possible explanation is that, being employed comes with a busy schedule especially in the private sector. Hence, employed women may have little time to perform the culturally imposed responsibilities of taking care of the home and pleasing the husband sexually. An aggrieved husband may exhibit violence to show his displeasure to the wife's neglect of the children and home. It is also possible that employed women accept IPV for the sake of their children and marriage considering that divorce from an abusive partner may attract stigmatisation ([Smith, 2010](#)) and separation from some or all of their children.

5.9. Media exposure and justification of wife-beating

For both men and women, reading a newspaper, listening to radio and watching television at least once a week consistently reduces the tendency of accepting wife-beating when the predictor variables are treated separately without the influence of other covariates. Earlier studies by [Oyediran \(2016\)](#) in Nigeria and [Bhattacharya \(2016\)](#) in India have reported similarly that regular exposure to least one of the three media

outfits significantly reduces acceptance of wife-beating. However, both studies found that regular exposure to television has undesirable effects on acceptance of wife-beating as men and women who watched TV at least once a week reported higher acceptance of IPV than others. This is possibly due to the effect of other covariates in earlier studies. Both studies reported the results of regression models that have other factors that could have altered the direction of the association between watching TV and acceptance of wife-beating as we also experienced in our regression models. But when treated individually in chi-square analysis or show differences in the mean predicted probability across groups as the current study did, one will see that consistently, the higher the frequency of media exposure, the lower the likelihood of accepting IPV for all three media outfits including television. The cross-tabulation table of [Oyediran \(2016, p. 15\)](#) did show that those who watched television at least once a week had lower acceptance of wife-beating. The finding that regular media exposure reduces the likelihood of acceptance of wife-beating suggests two things. One, the media is functional and their contents teach readers about dangers of domestic violence, and human rights steps to avoid perpetration and victimization. Two, education could have been a proxy factor. The current data show that majority of those who are exposed to any of three medias at least once a week are the ones who have tertiary education. Hence, it is logical to surmise that having tertiary education exposes people to frequent use of the media and consequently reduce their violence tendency.

5.10. Decision making and acceptance of IPV

Interestingly, our study shows that men have the least likelihood of justifying IPV when their wife makes a decision on the husband's earnings, but women have the highest probability of accepting wife-beating when the husband decides on the wife's earnings. Although decisions on health care are not associated with acceptance of IPV among men, for women, justification is at its peak when the husband is the decision maker. For large household purchases, men have the least justification of IPV when they make a joint decision with their partner, while women have the highest probability of acceptance when their husband makes the decision alone. In summary, when treated alone without the influence of other covariates, women have the highest likelihood of acceptance when the husband alone makes decision across the three domains, and the least when they make decision alone in two of the domains (health care and household purchases). But men justify IPV the most when they are the sole decision maker, and least when decisions are jointly made or made by the wife alone. Our finding is partly supported by that of [Zegehnagen et al. \(2019\)](#) who reported that decision making is associated with men's acceptance of IPV but the same does not hold for women because men's perception of women's decision making challenges their masculinity. Hence, men may resort to violence to claim their authority. A similar explanation applies in the study of [Ahinkorah et al. \(2018\)](#) who found that women with decision-making capacity experienced actual IPV more than those who do not make decisions. Studies that do not find any association between women's decision making and acceptance of IPV argue that women agree to make joint decisions with their husband to avoid marital conflict and not necessarily because of love and partnership ([Kwagala et al., 2013](#); [Zegehnagen et al., 2019](#)). However, these explanations may not totally hold for our study considering that women justify IPV less only when they have decision making capacity. Perhaps, a plausible explanation for this is that, women are the caretakers of home, and the issues of health care and household purchases are entirely home affairs which many believe should be in custody of the caretaker. Hence, women feel comfortable in exercising their power to make homemaking decisions. However, the former explanation may apply in terms of the decisions on earning as women justify IPV less when their earnings are jointly decided by both partners.

A clear and consistent finding is that, when men make decision alone, the rate of acceptance of violence is highest for both men and women's

perspectives. Men reject IPV when their wife is the decision maker. This may be explained by resource theory which stipulates that availability of resources to women reduces their dependency on men, but when the latter is the only person with the family resources, the wife has no choice than to depend on the husband and accept all terms in order to secure her marriage (Doku and Asante, 2015). Similarly, the sole ownership of resources gives the man much power and control over the wife, and may lead to him demonstrating his power through IPV.

6. Conclusion and limitations of the study

This study has shown that there is a gender difference in the justification of intimate partner violence in Nigeria. More women than men believe that a husband is justified in beating his wife due to gender socialisation that approves submission of women to men, and restrict women's activities to taking care of the home and nurturing the children but encourages men to work and be financially independent. One way through which women can break this barrier is education up to tertiary level. With tertiary education, women will have increased chances of financial independence and exposure to foreign culture-via the internet-that encourages women's freedom. It is equally important that men are educated and re-oriented to see women as being equal with men. With re-orientation of men, having an educated and employed wife will not be seen as a threat but an opportunity to live better life. Unemployment among married men may lead to frustration and intimate partner violence. It is therefore important that job opportunities are emphasised for married people. The currently employed ones are advised to diversify and invest in the informal sector considering the uncertainty and job loss in the formal economy.

This study has a few limitations. One, the possible factors associated with acceptance of wife-beating are inexhaustible and this study has considered only a few. Two, the study is based on self-reported data which are subject to under-reporting when the behavior is socially undesirable, as well as forgetting and recall. Three, the study is unable to include educational difference in the regression model because the information was only available for women, such that comparison between models is not feasible.

Declarations

Author contribution statement

Tunde A. Alabi: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper.

Mark J. Ramsden: Conceived and designed the experiments; Performed the experiments; Contributed reagents, materials, analysis tools or data; Wrote the paper.

Funding statement

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Data availability statement

The authors do not have permission to share data.

Competing interest statement

The authors declare no conflict of interest.

Additional information

No additional information is available for this paper.

References

- Ahinkorah, B.O., Dickson, K.S., Seidu, A.A., 2018. Women decision-making capacity and intimate partner violence among women in sub-Saharan Africa. *Arch. Publ. Health* 76 (1), 5.
- Alo, O.A., Odusina, E.K., Babatunde, G., 2012. Spousal violence in southwest Nigeria: prevalence and correlates. *J. Women's Health Care* 1, 110.
- Amo-Adjei, J., Tuoyire, D.A., 2016. Do ethnicity and polygyny contribute to justification of men beating women in Ghana? *Women Health* 56 (1), 48–64.
- Bassel, B., 2020. Divorce Rates Increase in Saudi Arabia amid COVID-19. Available at: <https://www.aa.com.tr/en/middle-east/divorce-rates-increase-in-saudi-arabia-amid-covid-19/1866563>. (Accessed 2 June 2020).
- Beck, A., Heinz, A., 2013. Alcohol-related aggression—social and neurobiological factors. *Deutsches Ärzteblatt Int.* 110 (42), 711.
- Bhatta, D.N., 2014. Shadow of domestic violence and extramarital sex cohesive with spousal communication among males in Nepal. *Reprod. Health* 11 (1), 44.
- Bhattacharya, H., 2016. Mass media exposure and attitude towards spousal violence in India. *Soc. Sci. J.* 53 (4), 398–416.
- Conroy, A.A., 2014. Marital infidelity and intimate partner violence in rural Malawi: a dyadic investigation. *Arch. Sex. Behav.* 43 (7), 1303–1314.
- Coma, J.C., 2013. When the group encourages extramarital sex: difficulties in HIV/AIDS prevention in rural Malawi. *Demogr. Res.* 28, 849–880.
- Darteh, E.K.M., Dickson, K.S., Rominski, S.D., Moyer, C.A., 2020. Justification of physical intimate partner violence among men in sub-Saharan Africa: a multinational analysis of demographic and health survey data. *J. Publ. Health* 1–9.
- Dickson, K.S., Ameyaw, E.K., Darteh, E.K.M., 2020. Understanding the endorsement of wife beating in Ghana: evidence of the 2014 Ghana demographic and health survey. *BMC Wom. Health* 20 (1), 25.
- Dim, E.E., Olayinka, Z., 2019. Perpetration and experience of spousal violence among Nigerian women: an analysis of the 2008 and 2013 NDHS. *J. Interpers. Violence.*
- Doku, D.T., Asante, K.O., 2015. Women's approval of domestic physical violence against wives: analysis of the Ghana demographic and health survey. *BMC Wom. Health* 15 (1), 120.
- Eidhamar, L.G., 2018. 'My husband is my key to paradise.' Attitudes of Muslims in Indonesia and Norway to spousal roles and wife-beating. *Islam Christian-Muslim Relat.* 29 (2), 241–264.
- Garcia-Moreno, C., Guedes, A., Knerr, W., 2012. Understanding and Addressing Violence against Women. Retrieved from: http://apps.who.int/iris/bitstream/10665/77432/1/WHO_RHR_12.36_eng.pdf. (Accessed 2 June 2020).
- Gennari, M., Giuliani, C., Accordini, M., 2017. Muslim immigrant men's and women's attitudes towards intimate partner violence. *Eur. J. Psychol.* 13 (4), 688.
- Godbole, G., 2020. Surviving A 'Shadow' Pandemic: Domestic Abuse in the Time of Covid-19. Available at: <https://www.cps.iitb.ac.in/surviving-a-shadow-pandemic-domestic-abuse-in-the-time-of-covid-19/>. (Accessed 2 June 2020).
- Gurmu, E., Endale, S., 2017. Wife beating refusal among women of reproductive age in urban and rural Ethiopia. *BMC Int. Health Hum. Right* 17 (1), 1–12.
- Imam-Tamim, M.K., MohdZin, N., Ibrahim, N., CheSohYusoff, R., 2016. Impact of globalisation on domestic family law: multi-tiered marriage in Nigeria as a case study. *J. Leg. Pluralism Unoff. Law* 1–17.
- Jansen, N., Agadjanian, V., 2020. Polygyny and intimate partner violence in Mozambique. *J. Fam. Issues* 41 (3), 338–358.
- John, N.A., Stoebena, K., Ritter, S., Edmeades, J., Balvin, N., 2017. Gender Socialization during Adolescence in Low and Middle Income Countries: Conceptualization, Influences and Outcomes. Innocenti Discussion Paper 2017-01. UNICEF Office of Research – Innocenti, Florence.
- Khan, M.N., Islam, M.M., 2018. Women's attitude towards wife-beating and its relationship with reproductive healthcare seeking behavior: a countrywide population survey in Bangladesh. *PLoS One* 13 (6), e0198833.
- Kunnuji, M.O.N., 2014. Experience of domestic violence and acceptance of intimate partner violence among out-of-school adolescent girls in iwaya community, lagos state. *J. Interpers. Viol.* 30 (4), 543–564.
- Kunnuji, M.O., Robinson, R.S., Shawar, Y.R., Shiffman, J., 2017. Variable implementation of sexuality education in three Nigerian states. *Stud. Fam. Plann.* 48 (4), 359–376.
- Kwagala, B., Wandera, S.O., Ndugga, P., Kabagenyi, A., 2013. Empowerment, partner's behaviours and intimate partner physical violence among married women in Uganda. *BMC Publ. Health* 13 (1), 1112.
- Lazarus, S.I., Rush, M., Dibiana, E.T., Monks, C.P., 2017. Gendered penalties of divorce on remarriage in Nigeria: a qualitative study. *J. Comp. Fam. Stud.* 48 (3), 351–366.
- Lewis, A.S., Oberleitner, L.M., Morgan, P.T., Picciotto, M.R., McKee, S.A., 2016. Association of cigarette smoking with interpersonal and self-directed violence in a large community-based sample. *Nicotine Tob. Res.* 18 (6), 1456–1462.
- Linos, N., Khawaja, M., Al-Nsour, M., 2010. Women's autonomy and support for wife beating: findings from a population-based survey in Jordan. *Violence Vict.* 25 (3), 409–419.
- Liu, Y., 2020. As many Countries Around the World Begin to Emerge from Lockdown, what Can We Learn from How People's Relationships and Friendships Have Fared in China, where Coronavirus Began? Available at: <https://www.bbc.com/future/article/20200601-how-is-covid-19-is-affecting-relationships>. (Accessed 2 June 2020).
- MacQuarrie, K.L.D., Edmeades, J., Steinhaus, M., Head, S.K., 2015. *Men and Contraception: Trends in Attitudes and Use*. DHS Analytical Studies No. 49. ICF International, Rockville, Maryland, USA.
- Meinhart, M., Seff, I., Darmstadt, G.L., Weber, A.M., Stark, L., 2020. Attitudinal acceptance of intimate partner violence among adolescents and young adults in Nigeria and Tanzania: an exploration into target reference groups. *J. Adolesc. Health* 66 (1), S3–S8.

- Menicke, A., Wilke, D.J., 2015. Predicting bidirectional intimate partner violence: demographic and historical factors that influence initiating threats or use of violence by IPV victims. *J. Aggress. Maltreat. Trauma* 24, 1002–1021.
- Mishra, G.D., Chung, H.F., Gelaw, Y.A., Loxton, D., 2018. The role of smoking in the relationship between intimate partner violence and age at natural menopause: a mediation analysis. *Women's Midlife Heal.* 4 (1), 1.
- National Population Commission (NPC) [Nigeria] and ICF, 2019. Nigeria Demographic and Health Survey 2018. Abuja, Nigeria, and Rockville, Maryland, USA. NPC and ICF.
- Nwabunike, C., Tenkorang, E.Y., 2017. Domestic and marital violence among three ethnic groups in Nigeria. *J. Interpers Violence* 32 (18), 2751–2776.
- Nwankwo, C.A., Ifejiolor, A.P., 2015. The role of tertiary education on the behaviour of Nigerian consumers. *Int. J. Econ. Comm. Manag. United Kingdom* 3 (2).
- Obeid, N., Chang, D.F., Ginges, J., 2010. Beliefs about wife beating: an exploratory study with Lebanese students. *Violence Against Women* 16, 691–712.
- Odero, M., Hatcher, A.M., Bryant, C., Onono, M., Romito, P., Bukusi, E.A., Turan, J.M., 2014. Responses to and resources for intimate partner violence: qualitative findings from women, men, and service providers in rural Kenya. *J. Interpers Violence* 29 (5), 783–805.
- Okenwa-Emegwa, L., Lawoko, S., Jansson, B., 2016. Attitudes toward physical intimate partner violence against women in Nigeria. *Sage Open* 6 (4), 2158244016667993.
- Oyediran, K.A., 2016. Explaining trends and patterns in attitudes towards wife-beating among women in Nigeria: analysis of 2003, 2008, and 2013 Demographic and Health Survey data. *Genus* 72 (1), 11.
- Popoola, B.O., Popoola, A.O., Awolola, F.O., Shoyombo, A.E., Chan, H.C.O., 2019. Engaging with people experiencing domestic violence; unresolved problem in Ilorin. *Cogent Soc. Sci.* 5 (1), 1710984.
- Rashid, M., Kader, M., Perera, N.K., Sharma, A., 2014. Wife beating: a population-based study in Bangladesh. *Violence Gend.* 1 (4), 170–175.
- Smith, D.J., 2010. Promiscuous girls, good wives, and cheating husbands: gender inequality, transitions to marriage, and infidelity in southeastern Nigeria. *Anthropol. Q.* 83 (1).
- Sunmola, A.M., Mayungbo, O.A., Ashefor, G.A., Morakinyo, L.A., 2020. Does relation between women's justification of wife beating and intimate partner violence differ in context of husband's controlling attitudes in Nigeria? *J. Fam. Issues* 41 (1), 85–108.
- Tareque, M.I., Alam, M.S., Peet, E.D., Rahman, M.M., Rahman, K.M., 2020. Justification of wife beating and utilization of antenatal and delivery care in Bangladesh. *J. Interpers Violence*, 0886260519898444.
- Tenkorang, E.Y., Yeboah, E.H., Owusu, Y.A., Bannerman, R., 2013. Factors influencing domestic and marital violence against women in Ghana. *J. Fam. Violence* 28 (8), 771–781.
- United Nations, 2020. UN Supporting 'trapped' Domestic Violence Victims during COVID-19 Pandemic. Available at: <https://www.un.org/en/coronavirus/un-supporting-%E2%80%98trapped%E2%80%99-domestic-violence-victims-during-covid-19-pandemic>. (Accessed 2 June 2020).
- World Health Organisation, 2017. Violence against Women. Available online at: <https://www.who.int/news-room/fact-sheets/detail/violence-against-women>. (Accessed 3 June 2020).
- World Health Organization & Pan American Health Organization, 2012. Understanding and Addressing Violence against Women: Intimate Partner Violence. Paper No. WHO/RHR/12.36). World Health Organization, Geneva.
- Zegenhagen, S., Ranganathan, M., Buller, A.M., 2019. Household decision-making and its association with intimate partner violence: examining differences in men's and women's perceptions in Uganda. *SSM-Popul. Heal.* 8, 100442.
- Zirkin, B.R., Tenover, J.L., 2012. Aging and declining testosterone: past, present, and hopes for the future. *J. Androl.* 33 (6), 1111–1118.