Intimate Partner Violence and Contraceptive use among married women in Nigeria: A Multilevel analysis.

Extended abstract

Introduction

Modern contraceptive is one of the most important means of reducing unwanted pregnancies, abortions and maternal mortality. It also serves as a good strategy for women to achieve their fertility intentions and improve their socio-economic status (Adedini, Odimegwu, Imasiku, & Ononokpono, 2015; Akinyemi, Adedini, & Hounton, 2015). Despite the numerous benefits of contraception, studies have shown that modern contraceptive prevalence rate (mCPR) remains low at 18% in Nigeria (NPC & ICF International, 2019). Nigeria's mCPR is by far lower than that of many sub-Saharan African countries like Malawi, Rwanda, and South Africa, which have mCPR that ranges above 50% (ref). Recent analysis that used three consecutive Nigeria DHS datasets revealed that in 2003 (91.8%), 2008 (90.6%) and 2013 (88.6%) most women of reproductive age were not using contraceptives and unmet needs for family planning fluctuate between 14% and 20% in the past 15 years (Wang & Cao, 2019). As a result of this, total fertility rate (TFR) remains high at 5.5 children per woman, with a higher sub-national TFR across regions (National Population Commission, 2019).

The decision to use modern contraceptives by married women in developing countries, particularly those in abusive relationship, is a complex one. For instance, payment of bride price reinforces the belief that a woman is required to provide sexual satisfaction for her partner and also bear children. On the other hand, literature has established that men often express anxiety and belief that link sexual infidelity to the practice of modern contraception among women. Such beliefs can serve as precursor for gender-based violence. There is some significant evidence in the literature that family planning and contraceptive use may exacerbate tension in gender relations (Bawah *et al*, 2003). In many societies where culture and religion are predominantly adhered to, women are subjected to seeking spousal or partner consents on their sexual and reproductive health decision. This has resulted to patriarchal control which is one of the important underlying barriers for family planning program in developing countries (Nwachukwu & Obasi, 2008; Omideyi et al., 2011). The decision to use contraceptives have been found to be better where couples agree (Safarinejad, 2007., Guzzo, 2014; Oche et al., 2018; Williams & Sobieszczyk, 2018). Further, the consensus on decision to use contraceptives might not be easily reached in cases where fertility desire of either the husband or wife are yet to be met, this could lead to disagreement or even intimate partner violence.

Further, women who were exposed to sexual and emotional violence are most likely to be denied access to emergency contraceptives (Bergmann & Stockman, 2015; Maxwell, Devries, Zionts & Alhusen, 2015). It is very important to emphasize that intimate partner violence worsens women's decision-making capacity for herself (Ahinkorah et al., 2018) and her children particularly due to lack of control over socioeconomic resources (WHO, 2013). Despite the tremendous harmful effects of intimate partner violence on women and children which ranges from physical abuse to psychological trauma (GOV.UK, 2013), research, policy and practice have yet to well address the menace. Although many studies have explored the influence of intimate partner violence on contraceptive use, the relationship between the two phenomena remains unclear, with some studies

establishing positive association while others established inverse relationship. Besides, there is little systematic evidence on how community structure affects the relationship between intimate partner violence and modern contraceptive use. Hence, this paper examined the influence of intimate partner violence (net of individual- and community-level characteristics) on contraceptive use among married women in Nigeria.

Data and Method

The study employed secondary data extracted from the individual recode file of 2013 Nigeria Demographic and Health Survey (NDHS). The survey used as a sampling frame the list of enumeration areas (EAs) prepared for the 2006 population census of the Federal Republic of Nigeria, provided by the National Population Commission. The sample, was selected using a stratified three-stage cluster design consisting of 904 clusters—372 in urban areas and 532 in rural areas. A sample of 40,680 households was selected for the survey, with a minimum target of 943 completed interviews per state. Individual recode file contained information on women ages 15 to 49 years. The study focused on currently married women, but those who never had sex or were pregnant at the time of the survey were excluded from the analysis. A weighted sample of 22613 women in the individual recode file was used as analytic sample for this study.

Variables measurements

Outcome variable

The outcome variable for this study was contraceptive use. This was defined as current use of modern method of contraception at the time of the survey by married women aged 15-49 years. The variable was categorized into two: (i) currently using at least one modern method of contraception, categorized as '1', and (ii) not using any modern method, categorized as '0'.

Explanatory variables

The key explanatory variable for this study was intimate partner violence, defined as having experienced any form of violence (physical, emotional or sexual violence) from intimate partner, and categorized as '0' (i.e. experienced no form of violence) and '1' (i.e. had experienced any form of violence). Other explanatory variables controlled for in this analysis were selected with guidance of the reviewed literature. These included individual level characteristics—age, level of education, children ever born, religion, ethnicity, age at marriage, occupation and wealth status; as well as community level variables, including— region of residence, place of residence (rural/urban residence), ethnic diversity (the extent of diversity in the community where respondents live in terms of ethnic composition), community level of education (proportion of women who had at least secondary education in the community), community media access (proportion of women who had access to newspaper/magazine, radio and television) and community poverty level (proportion of women with low income level).

Statistical analysis

The three level of analysis was conducted for the study. The study employed appropriate descriptive and inferential statistics at the univariate, bivariate and multivariable levels of analysis. At the multivariable level, the study employed binary multilevel logistic regression because of the binary nature of the outcome variable. Four models were fitted in all. Model 0 is the empty model. Model 1 examined the effect of intimate partner violence on use of modern contraceptive. Model

2 examined the effects of intimate partner violence and individual-level variables on use of modern contraceptive. Lastly, Model 3 is the full model which incorporated intimate partner violence and individual- and community-level characteristics into the multilevel analysis. The random effects which were regarded as measures of variations in intimate partner violence and contraceptive use across communities were expressed as intra-class correlation (ICC) (or variance partition coefficient (VPC)), and proportional change in variance (PCV). To determine the goodness of fit of the consecutive models, regression diagnostic was done using Akaike Information Criteria (AIC). Boco (2010) noted that the lower value of AIC indicates a better fit.

Summary of key findings

At the multivariable level of analysis, the study indicated a significant variation in contraceptive use (Model 0) with variances ranging from 2.93 to 14.19 across individual level, and 2.53 to 12.33 across community level; thereby justifying the use of multilevel modelling in this paper. The results from Model 1 indicated that the between communities variance (expressed as variance partition coefficient – VPC or intra-class correlation coefficient – ICC) in use of modern contraceptive was larger than the between communities variance estimated for Model 0, 2 and 3.

Incorporating experience of intimate partner violence into Model 1 resulted in a significant relationship between intimate partner violence and contraceptive use, and also did yield significant variance across individual-level (with variance ranging from 4.39 to 16.67) and across community-level (with variance ranging from 3.69 to 13.77). The proportional change in variance (PCV) in Model 1 indicated that 11% of the variance associated with the use of modern contraceptive were explained by intimate partner violence variable. In model 2, incorporating individual level variables into the analysis yielded a significant variance across individual-level (with variance ranging from 1.92 to 7.83) and across community-level (with variance ranging from 0.27 to 1.22). The proportional change in variance (PCV) in Model 2 indicated that 90.1% of the variances associated with the use of modern contraceptives were explained by individual-level variables. Model 3 which is the full model indicated that included all the selected variables into the analysis resulted in insignificant relationship between intimate partner violence and contraceptive use. Models with smaller values of an information criterion are considered preferable and the full model presented the best goodness of fit.

Across the individual level characteristics, those aged 25-34 were 49% more likely than those aged 15-24 to use modern contraceptives while those who were older than 34 years were 16% more likely than those in the reference category. Age had significant effects on the use of modern contraceptives. All the community variables considered had a significant relationship with the use of modern contraceptives except community media access. For instance, respondents who resided in community with high proportion of women with at least secondary level of education were 18% more likely to use modern contraceptives than those in communities with low proportion of women with at least secondary level of education.

Discussion and conclusion

This paper examined the influence of intimate partner violence (net of individual- and community-level characteristics) on contraceptive use among married women in Nigeria. The study established a significant relationship between intimate partner violence and modern contraceptive use,

however, this association became insignificant after adjusting for community-level characteristics. This study provides some evidence that there are significant neighbourhood effects on modern contraceptive use, and therefore suggests the need to go beyond addressing only the individual-level characteristics in the bids to achieve increase in modern contraceptives and decline in fertility in Nigeria.

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