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The Influences of Women's Empowerment on Reproductive Health outcomes: A comparative study of Nigeria and Uttar Pradesh State (India).

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ABSTRACT

A large body of research has attempted to explore the relationships between women's empowerment and their reproductive health practices in some developing countries. The objective of this study was to investigate whether women's empowerment in Nigeria and Uttar Pradesh (India) is related with women's reproductive health practices. The study used the Nigerian Demographic Health Survey (NDHS 2008) and Indian National Family Health Survey (NFHS-3). Two dimensions of empowerment were considered in the study. These include household decision making and attitudes towards domestic violence. The study determined if the dimensions of women's empowerment considered had different effects on reproductive health outcomes in the two populations. The study revealed that women's empowerment had a direct and significant influence study on the reproductive health practices of women in the two study populations. The study also showed that lack of participation in household decisions compromise women's health in both populations studied.

Keywords: *Reproductive Health; Family Planning; Women's empowerment; Comparative study; Institutional delivery.*

1. Introduction

Being a woman has implications for health. Fathalla (1997) classified the health needs of women into four categories: health needs related to the sexual and reproductive function; women have an elaborate

reproductive system that is vulnerable to dysfunction or disease even before it is put to function or after it has been put out of function ; women are subject to the same diseases of other body systems that can affect men. The disease

patterns often differ from those of men because of genetic constitution, hormonal environment or gender-evolved lifestyle behaviour. Diseases of other body systems or their treatments may interact with conditions of the reproductive system or function, and because women are women, they are subject to social diseases which impact on their physical, mental or social health. The reproductive system, in function, dysfunction and disease plays a central role in women's health (Corroon .M., et al. 2014).

The concept of reproductive health has recently emerged in response to the fragmentation of the existing health services and their orientation. The broader concept of "reproductive health" offers a comprehensive and integrated approach to the health needs related to reproduction. It puts women at the centre of the process, as subjects and not objects, as ends and not means. It recognizes, respects and responds to the need of the woman behind the mother.

Nigeria being the most populous country in Africa characterised by low use of family planning (FP) and high fertility(HF) leading to eventually high maternal mortality and morbidity (Corroon et al, 2014). In as much as women's empowerment is viewed as an important factor in the development of any nation (Nigeria and India inclusive), few studies have been the association between women's empowerment and the reproductive health practices (FP and maternal health behaviours) particularly in the study populations.

Defining women's empowerment has spanned a wide range of concepts. Kabeer (2001) defines women's empowerment as "the expansion in

people's ability to make strategic life choices in a context where this ability was previously denied them." Most of the existing studies which examined women's empowerment and reproductive health outcomes have been from Asia, where definitions and measures of empowerment have been fully explored. Several studies examining women's empowerment and maternal health in Asia defined empowerment as combined measures of bargaining power, spousal awareness of gender equity and greater decision- making power and found that more empowered women were more likely to make use of maternal health care services than the less empowered women(Corroon et al, 2014).

The International Conference on Population and Development (ICPD) Programme of Action defines reproductive health as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity in all matters relating to the reproductive system and its functions and processes. Reproductive health, therefore, implies that people can have a satisfying and safe sex life and that they possess the capability to reproduce as well as the freedom to decide if, when and how often to do so. In the Constitution of the World Health Organization, health is defined as a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity. This definition, idealistic as it may look, is nowhere as relevant and applicable as in the area of reproductive health. A woman in the distress of carrying an unwanted pregnancy cannot be considered healthy simply because her blood pressure is not elevated, and the foetus is showing a normal biophysical profile. In the context of this

positive definition, reproductive health is a condition in which the reproductive process is accomplished in a state of complete physical, mental and social well-being. It is not merely the absence of disease or disorders of the reproductive process. Reproductive health implies that, apart from the absence of disease or infirmity, people can reproduce, to regulate their fertility and to practice and enjoy sexual relationships. It further implies that reproduction is carried to a successful outcome through infant and child survival, growth and healthy development. It finally implies that women can go safely through pregnancy and childbirth, fertility regulation is achieved without health hazards and people are safe in having sex (Fathalla, 1988).

1.1 Women Empowerment

Several studies have attempted to explore the relationship between women's empowerment and their reproductive health practices in the developing countries, but the evidence is still inconclusive due to numerous challenges faced in this area of study. Despite the consistent findings from researchers that showed broad Socio- economic and demographic characteristics such as education and economic status have a significant impact on reproductive health services uptake, the relationship between women's decision-making power and their use of reproductive health services seems to be unclear. For example, in India there appears to be no relationship between women's freedom of movement and decision-making power and their use of reproductive health services (Bhatia and Cleland 1995; Bloom, Wypij, et al. 2001). Similarly, Nepal,

Matsumura and Gubhaju (2001) report that the decision-making power has a mixed impact on maternal health services utilization. Survey data from Pakistan also show a weak or no relationship between women's reproductive health services uptake and measures of their autonomy (Sathar and Kazi 1997; Fikree, Khan, et al. 2001; Mumtaz and Salway 2005).

However, few number of studies from sub-Saharan Africa were identified so far that builds on their studies were built on the empowerment measures developed in Asia. For instance, Ahmed et al. (2010) carried out a Meta-analysis study of 31 countries in sub-Saharan Africa and defined women's empowerment as women's ability to make a decision related to her personal health choices, ability to make household purchases, visit family/relatives and decide on other key activities. Their study revealed that : higher level of women's empowerment was associated with modern contraceptive use, attending four or more antenatal visits and having a skilled attendant at birth. A study based on the Demographic Health survey data (DHS) from eight countries in sub-Saharan Africa, examined measures of women's status including household and financial decision-making and attitudes towards gender equity in relation to maternal and child health outcomes and found that gender-related factors have effect on health outcomes. Similarly, a multi-country analysis of DHS data in four African countries used a definition of empowerment which included: economic independence, household decision-making, control over marriage, fertility, health care seeking behaviour, negotiation of sexual activity and

perceptions of domestic violence. The result from this study revealed a positive association between women's empowerment and family planning method use in all the countries considered.

Unfortunately, only few studies have examined women's empowerment in Nigeria in a comparative context with an Asian country. Kitz and Makinwa (2001) conducted a study in five states in Nigeria that examined the association between gender empowerment and reproductive behaviours. The duo measured women's empowerment at the household and interpersonal levels and included decision-making roles. Their findings revealed that more empowered women were more likely to use family planning method. Similarly, in another study using eight states in Nigeria examined the impact of women's income generation on household decision-making. The study showed that women living in poor households were less likely to have a say in household decision-making compared to women living in wealthy households.

1.2 Reproductive Health and Women's Decision Making in Nigeria and UP

Reproductive health in Nigeria

Although much effort is placed on increasing reproductive health in Nigeria, the uptake of services is still far from optimal, even in settings where services are more and easily accessible. Low contraceptive use also contributes to high rates of induced abortion (Rana 1992). A shortage of skilled health professionals, particularly female skilled health professionals (Ashraf 1996) and low rates of tetanus toxoid (TT) vaccination also contribute to the high maternal mortality rate in Pakistan (Rizvi

and Nishtar 2008). The infant and maternal mortality rates in Nigeria are still very high (Rizvi and Nishtar ,2008). Several factors are thought to contribute to the high level of maternal mortality in Pakistan. Women in Pakistan marry at a relatively young age, and they tend to have their first child very soon after marriage.

1.3 Reproductive health in Uttar Pradesh (India)

With a population of over 154 million, Uttar Pradesh is the most populous state in India (IIPS ,2000). Relative to other Indian states, Uttar Pradesh is poor in terms of demographic indicators. For example, in recent findings, fertility and mortality rates are higher in Uttar Pradesh than in many other states in India. Also, it has a total fertility rate (TFR) of four births per woman of reproductive age compared to the TFR of 2.9 for all of India and an infant mortality rate of 87 deaths per 1,000 live births (Bloom et al. 1999; IIPS 2000). In an attempt to improve the indicators of reproductive health in the nation, the government of India established the Reproductive and Child Health (RCH) Program in 1997 (Ramarao et al. 2001). It has achieved greater success in encouraging the use of antenatal services even though women rely mostly on home delivery (Griffiths and Stephenson ,2001). However, in Uttar Pradesh, maternal health is characterized by low uptake of both antenatal and delivery services. Reproductive health indicators in Uttar Pradesh exist mostly in environments with low literacy rate, restricted female autonomy and inadequate quality of and access to health service. Dyson and Moore (1983) in a study found that the kinship structure of North

India permits women little autonomy. The exogamy marriage rules compel women to marry into other families not related to them either by kinship, place of birth or residence, and hence such women are often seen as a threat and are made to hold the lowest position in the family structure. Health-care decisions are often made by the mother-in-laws or other senior family members and the low status of the woman in such family setting makes it difficult for her to challenge or partake in any decision concerning health care (Griffiths et al. 2001). The prevailing purdah system, which encourages the segregation of the sexes, provides an additional barrier to seeking health care, restricting women's mobility and use of health-care services that involve male providers or are located where many men may be present. Thus, women's health-care-seeking behaviour in Uttar Pradesh is restricted not only by socioeconomic barriers and a lack of high-quality health-care facilities, but also by cultural norms that limit women's role in making decisions regarding healthcare and impede their freedom to use available services.

1.4 The reproductive health package

Reproductive health is an integrated package (Fathalla, 1996). Women cannot be healthy if they have one element and miss another. Moreover, the various elements of reproductive health are strongly inter-related. Improvements of one element can result in potential improvements of other elements. Similarly, lack of improvement in one element can hinder progress in other elements.

The objective of this study was to examine whether women's empowerment in two geographical settings (Nigeria and India) was associated with reproductive health outcomes. In addition, the study also examined whether the empowerment dimensions have different effects on reproductive health in the two populations.

2. Methodology

The study used two national survey data - the Nigeria Demographic and Health Survey (NDHS) conducted in 2008 and the India National Family Health Survey (NFHS-3) conducted in 2005/2006.

The NDHS is a nationally representative survey. The survey was conducted by the Nigerian National Population Commission (NPC). A sample of about 34,070 household was used, made up of: 33,385 women aged 15 – 49; 15, 486 men of age 15 – 59 and 28,647 children. A sample of 23,954 currently married women of age 15 – 49 were used for this study.

In the same vein, the NFHS–3 is a nationwide survey conducted with a representative sample of households throughout India. The Ministry of Health and Family Welfare (MOHFW), Government of India (GOI) initiated the NFHS surveys to provide high-quality data on population and health indicators. Samples of 8,973 currently married women from Uttar Pradesh State in India were used. In addition, the sample used in the work varied slightly by the dependent variable of interest selected. For example, the analysis on family planning we made use of samples of currently married women who were not pregnant at the time of the survey, and for the analysis on reproductive

health outcomes, the selection of samples were limited to currently married women who have had at least one live birth in the past three years.

2.1 Dependent and Independent Variables used.

The dependent variables used for the analysis in this study are; family planning/contraceptive method (modern or other methods), presence of a skilled attendant at the time of delivery in the last three years (skilled or non-skilled attendant) and place of delivery (institutional or non-institutional) at last birth in the last three years. Each of these dependent variables was dichotomized for the purpose of analysis as follows: For the use of modern family planning/contraceptive method is coded one if a woman says she uses the modern FP/contraceptive method and 0 if she uses traditional or no method of FP/contraceptive. For the presence of skilled attendant at time of delivery, women who responded that they were assisted at the time of their last delivery by a doctor/clinical officer, nurse/ midwife or other health workers were considered to have had an assisted delivery by a skilled attendant and were coded 1 while all other women's responses were coded 0. Finally, for institutional delivery, all the deliveries in the past three years at the time of the survey reported having taken place in a health facility were considered institutional birth and coded as 1 while all deliveries done outside any health facility were termed as non-institutional births and coded as 0. A number of measures were used in this study to capture the various dimensions of women's empowerment. Three independent variables were used in the study, viz: Decision making ability, attitude to wife beating, and attitude

to refusing sexual intercourse. Five questions on women's decision making ability were raised to determine who had a greater say in various aspects of household decision making (ie on use of contraceptive, health-care, major household purchases, purchases for daily household use and visit to family/relatives). The choice options are: the husband/spouse, the respondent, both husband and respondent, respondent and someone else, and others. Women who responded having a say in decision-making either alone or jointly with husband or someone were coded 1, while all other responses were coded 0.

Similarly, five questions were asked based on the women's attitudes toward domestic violence that is whether a husband is justified in beating his wife under certain conditions such as if she goes out without husband's permission, if she argues with him, if she neglect the children, if she refuses to have sex with husband, and if she does not cook properly. For each item, women who responded 'no' were coded 0 and women who responded "yes" or "don't know" were coded 1.

Finally, on the attitudes of women towards refusing sexual intercourse with husband, questions on the respondent's opinion as to whether a woman is justified in refusing to have sexual relation with her husband in the following situations: If she knows that the husband has sexually transmitted disease (STD), If she knows that the husband has intercourse with other women, If she is tired, or not in the mood. For each of the questions, a response that says yes a woman is justified to refuse sex is coded 1, while those who said a woman is not justified to refuse sex with husband were coded 0.

In order to identify the relationship between the measures of women's empowerment, exploratory factor analyses were carried out on the 13 items measuring women's empowerment (i.e. five decision-making variables, five variables on attitude towards domestic violence, as well as three variables on attitude to refusing sexual intercourse). Factor analysis is a data reduction technique that allows one to examine the linear relationships between a large numbers of variables so as to identify a smaller number of factors which can be used to represent the multiple variables. The identified factors are called latent variables, and are labelled based on the variables that contribute the most.

3. Results and Discussion

Table 1 show the percentage distribution of the socio-economic and demographic characteristics of the sample of currently married women who are in their reproductive age 15–49 years in Nigeria and Uttar Pradesh. The result revealed that majority of the women in the sampled analysis from both populations are young (less than 35years), married within the age of 15 – 34 years, with age at first birth below 35 years, have between 3 - 5 children in Nigeria and Uttar Pradesh. More than 50% of the sampled women considered in both populations (Nigeria and Uttar Pradesh) live in rural areas, and more than half of the sample from the two populations have no education (Nigeria, 51.3%), while in(UP, 57.3%) and only 27.4 for Nigeria and 31.4 for UP have secondary or higher education. The result in Table 1 also reveals that about 49.1% of sample women in Nigeria were from poor wealth

status and 32.1% are from rich status, while, in Uttar Pradesh, 39.5% were from poor wealth status and 43% are from rich status. The results on work status of women revealed that higher percentage of women (65.3%) in Nigeria were working in the last 12 months, and less percentage (26.8%) can be observed for Uttar Pradesh in the last 12 months.

Table 2 presents the distribution of women's empowerment indicators for all three variables used to measure women's empowerment. Results in the table revealed that in Nigeria, women's participation in household decision-making was highest (53.8%) for a visit to family/relatives, followed by decision on making small HH purchases (47.8%) while the least percentage is recorded for contraceptive use (11.4%). However, in the case of Uttar Pradesh, women's participation is highest (67.3%) in making decision on own health care and lowest (46.7%) on contraceptive use. The table also shows for variables under domestic violence; that a larger percentage of women from the two populations strongly disagree ("said no") on the issue of wife beating by husband for any of the reasons stated. Similar results can be observed in the justification of women towards refusing sexual intercourse with husbands based on the three reasons given, while greater proportion of women said 'yes' it is justified for a woman to refuse sex if the husband is having STD or if he goes out with other women or she is not in the mood, and only few said 'no'.

Table 3 present results on the distribution of reproductive health outcomes and the selected indicators of women's empowerment. The results revealed that in both populations, women who

participate in household decision making; that do not justified wife beating but have justified women refusal of sexual intercourse based on the stated reasons, were more likely to use modern method of contraceptive, have an institutional delivery and have been assisted by a skilled attendant during their most recent birth. The chi-square values show that there is a significant relationship existing between the indicators of women's empowerment and their reproductive health outcomes, except that in Uttar Pradesh, women's participation in decision making has no significant relationship with being assisted by skilled attendant during their most recent delivery.

Table 4 presents the odds ratios and confidence interval from the logistic regression results. The analysis uses the women's reproductive health outcome (i.e modern method of family planning/contraceptive use, assistance by a skilled attendant during last delivery and institutional place of delivery) as the dependent variables, and the indicators of women's empowerment (decision-making, domestic violence against women and women's attitudes to refusing sexual intercourse) as independent variables. It can be observed from the table that women who were not pregnant at the time of survey and who participated in household decision-making were 4 times more likely to use modern methods of contraception in Uttar Pradesh with Odds ratio (CI) = 4.244*(3.744 - 4.183)), than those who do not participate in decision making. In Nigeria however, the Odds (CI) is 1.829*(1.769 - 1.892). However, women's participation in household decision making has a significant relationship with getting skilled assistance during

delivery in Nigeria with the odd ratio (CI) =1.421*(1.394 - 1.448), but an insignificant relationship is observed in Uttar Pradesh (Odds (CI): 0.970(0.848 - 1.110)). The table also revealed that women who participated in household decision making in both populations were likely to give birth in a health facility more than women who do not participate. This result is significant in Nigeria but not significant in Uttar Pradesh. Table 4 further revealed that in the two populations considered, women who agreed with the notion of violence against women (wife beating) were less likely to use modern methods of contraceptive, assisted by a skilled attendant during delivery and have an institutional delivery at most recent birth than the women who do not support violence against women. This is revealed by the low odds ratio and 95% confidence interval values (below 1) recorded. Looking at the results of the odds ratios (CI) for women's attitude to refusing sexual intercourse, it can be observed that these values are slightly higher for Uttar Pradesh than for Nigeria. This indicates that currently married women who support women's attitudes to refusing sexual intercourse were more likely to use modern methods of family planning, assisted by skilled attendant during most recent birth and have an institutional delivery in Uttar Pradesh more compared to Nigeria. However, the odds and confidence interval values for the association between women's decision making with institutional delivery as well as assistance by skilled attendance shows non significance for Uttar Pradesh, but significant for Nigeria.

The results in Table 5 show the odds of women's empowerment indicators by their background

characteristics. The results indicates that in Nigeria women's age, education, place of residence, wealth status and work status are important and significant determinants of women's decision making autonomy in their households. In Uttar Pradesh (India) however, additional determinants of women's decision making autonomy were revealed; age at marriage, age at first birth, parity in addition to those listed under Nigeria are also significant determinants of women's decision making. The results show that in both populations women with higher age at first birth (35-49) years were less likely to take decisions at home than those with lower age at marriage (15-34) years.

The results in Table 5 clearly shows that most of the background characteristics of women in Nigeria seems to have no significant contributions to violence against women (wife beating), except for education, place of residence and wealth status. In addition to these characteristics of women, parity, especially higher one is a good determinant of domestic violence in Uttar Pradesh (India). The results depict that women in the higher age group (35-49) years were less likely to experience wife beating than those in the lower age group (15-34) years in both populations. Similarly, women with secondary or higher education and those in the richer wealth status were less likely to report experiencing wife beating, while rural women were 82% more likely to experience wife beating in both populations. Refusal of sexual intercourse under the stated conditions is another measure of women's

empowerment. The result revealed a significant relationship between women's education, residence, wealth status as well as work status exist among the Nigeria women. While the results of Uttar Pradesh in India shows a significant relationship between women's refusing sexual intercourse with age at first birth, residence, wealth status and work status.

Table 6 shows the odds and confidence interval values of some selected indicators of reproductive health with women's background characteristics. From the Table, it is revealed that women's age and age at first marriage has no significant contributions to their use of modern family planning method in Nigeria, while in UP (India), it is only the age of women that shows non-significant relationship with modern contraceptive method. The odds (CI) obtained for Nigeria [0.332*(0.114, 0.967)] and that of UP [0.37*** (0.307, 0.447)] depicts that women with higher age at first birth (35-49) were less likely to use modern method of contraceptive than women of lower age at first birth (15-34). Use of modern method of contraceptive increases with increase in parity in Nigeria but same is seen to decreases with increase in parity in Uttar Pradesh. This is possibly because of the high fertility rate in Nigeria (5.7) than in UP (). The Table shows that women's age, parity, education, residence, wealth status and work status are significant determinants of institutional place of delivery and attendance by a skilled worker at the time of most recent delivery of women in both populations considered.

Table 1: Percentage distribution of socio and demographic characteristics of currently married women age (15 - 49) in Nigeria and U.P (India)

Characteristics		Nigeria (N = 23954)		Uttar Pradesh (N = 8973)	
		Frequency	Percentage	Frequency	Percentage
Age of respondent	15 - 34 years	15121	63.1	5736	63.9
	35 - 49 years	8833	36.9	3237	36.1
Age at first marriage	15 - 34 years	17173	71.7	7438	82.9
	35 - 49 years	107	0.4	1535	17.1
Age at first birth	15 - 34 years	19500	81.4	7786	86.8
	35 - 49 years	96	0.4	1187	13.2
Parity	0 - 2 children	5112	21.3	3496	39.0
	3 - 5 children	11915	49.7	3684	41.1
	more than 5 children	6927	28.9	1793	20.0
Residence	Urban	6586	27.5	3557	39.6
	Rural	17368	72.5	5416	60.4
Educational status	No education	12288	51.3	5142	57.3
	Primary	5110	21.3	1010	11.3
	Secondary/Higher	6556	27.4	2821	31.4
Wealth status	Poor	11754	49.1	3540	39.5
	Middle	4506	18.8	1571	17.5
	Rich	7694	32.1	3862	43.0
Work status	Not working	8256	34.5	6554	73.2
	Working	15647	65.3	2401	26.8

Table 2: Women's empowerment characteristics in Nigeria and Uttar Pradesh (India)

Determinants	Nigeria (N=23,954)		UP (India) N=8973	
	No	Yes	No	Yes
Women's participation in household decision-making				
Contraceptive use	88.6	11.4	53.3	46.7
Own Health care	57.8	42.2	32.7	67.3
Making large HH purchases	62.8	37.2	42.6	57.4
Making small HH purchases	52.2	47.8	39.6	60.4
Visit to family/relatives	46.2	53.8	44.0	56.0
Justification for wife beating (Attitudes towards Domestic Violence)				
If she goes out without permission	62.7	37.3	77.7	22.3
If she neglect the house/children	65.8	34.2	75.2	24.8
If she argues with him	69.0	31.0	75.3	24.7
If she refuse to have sexual relation with him	68.8	31.2	92.2	7.8
If she does not cook properly	81.2	18.8	84.6	15.4
Justification to refusing sexual intercourse				
If husband has sexually transmitted disease (STD)	17.8	82.2	13.6	86.4
If husband has other women	38.9	61.1	10.7	89.3
If she is not in the mood	38.9	61.1	9.8	90.2

Table 3. Reproductive Health Outcome by the selected indicators of Women's Empowerment in Nigeria and Uttar Pradesh (India)

Indicators	Nigeria						Uttar Pradesh (India)					
	Modern method of contraceptive use (Yes)		Institutional place of delivery(Yes)		Assistance by a skilled attendant at time of delivery (yes)		Use of modern method of contraceptive (Yes)		Institutional place of delivery(Yes)		Assistance by a skilled attendant at time of delivery (yes)	
	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency
Participation in HH decision making												
No	3.5	415	68.7	8210	22.4	1939	14.2	338	84.6	2020	33.6	474
Yes	13.8	1655	82.8	9937	50.6	4172	41.5	2731	86.3	5687	33.5	1068
Chi square values	807.41***		648.55***		1460***		580.51***		4.30*		0.005	
Justified Wife beating												
No	9.9	1661	78.1	13078	40.4	4700	36.3	2414	87.0	5779	37.5	1260
Yes	5.7	409	70.3	5069	26.6	1411	28.1	655	82.7	1928	22.8	282
Chi square values	115.16***		166.98***		299.63***		60.00***		7.48**		88.03***	
Justified Refuse sexual intercourse												
No	6.6	457	72.1	5005	25.8	1263	22.6	205	82.9	751	23.2	114
Yes	9.5	1613	77.3	13142	40.3	4848	35.5	2864	86.2	6956	34.8	1428
Chi square values	52.52***		71.73***		317.37***		52.12***		26.27***		26.39***	

Note: *** = significant at 0.001; ** = significant at 0.01; * = significant at 0.05; = not significant

Table 4: Logistic regression with odds ratio and Confidence Interval for Reproductive Health Outcomes for Nigeria and Uttar Pradesh (India)

Determinants	Nigeria			Uttar Pradesh		
	Modern method of contraceptive use(N=23954)	Assistance by a skilled attendant at time of delivery(N=16922)	Institutional place of delivery(N=23954)	Modern method of contraceptive use(N=8973)	Assistance by a skilled attendant at time of delivery(N=4594)	Institutional place of delivery(8973)
	Odds ratio (CI)	Odds ratio (CI)	Odds ratio (CI)	Odds ratio (CI)	Odds ratio (CI)	Odds ratio (CI)
Participation in HH Decision-making	1.829*(1.769,1.892)	1.421*(1.394,1.448)	1.258*(1.258,1.280)	4.244*(3.744,4.183)	0.970(0.848-1.110)	1.125(0.986,1.284)
Attitude to domestic violence against women	0.9173*(0.892,0.944)	0.867*(0.850,0.883)	0.918*(0.904,0.933)	0.716*(0.643,0.796)	0.493*(0.424,0.573)	0.722*(0.634,0.821)
Attitude to refusing sexual intercourse	1.046*(0.997,1.098)	1.272*(1.230,1.316)	.1.082*(1.051,1.114)	1.857*(1.572,2.194)	1.746*(1.400,2.177)	1.272*(1.058,1.531)

Table 5. Odds of empowerment indicators with background characteristics of currently married women of reproductive age (15 - 49) years.

Characteristics	Nigeria			Uttar Pradesh (India)		
	Decision making	Wife Beating	Refusing sexual intercourse	Decision making	Wife Beating	Refusing sexual intercourse
	Odds ratio(CI)	Odds ratio(CI)	Odds ratio(CI)	Odds ratio(CI)	Odds ratio(CI)	Odds ratio(CI)
Respondent Age 15 - 34 years(REF)						
35 - 49 years	1.478***[1.356,1.611]	0.853***[0.780,0.932]	1.067[0.975, 1.167]	1.973***[1,712,2.274]	0.958[0.849,1.08]	0.966[0.811,1.150]
Age at first marriage 15 - 34 years(REF)						
35 - 49 years	1.246[0.692,2.243]	0.821[0.422,1.596]	0.642[0.364, 1.133]	1.276**[1.102,1.477]	0.888[0.780,1.01]	0.892[0.747,1.065]
Age at first birth 15 - 34 years(REF)						
35 - 49 years	0.644[0.391,1.060]	0.683[0.372, 1.254]	1.186[0.689, 2.042]	0.482***[0.416,0.55]	1.054[0.904,1.22]	0.782*[0.639,0.958]
Parity 0 - 2 children(REF)						
3 - 5 children	1.049[0.941,1.169]	0.932[0.831,1.045]	1.037[0.926, 1.162]	3.092***[2.718,3.517]	1.078[0.951,1.22]	1.173[0.979,1.405]
Above 5 children	1.052[0.959,1.155]	1.065[0.958,1.173]	1.079[0.979, 1.188]	3.698***[3.072,4.450]	1.284**[1.094,1.507]	0.888[0.711,1.110]
Educational status No education(REF)						
Primary	2.639***[2.409,2.892]	0.983[0.896, 1.079]	1.365***[1.238,1.505]	1.163[0.979, 1.382]	0.992[0.848, 1.160]	1.049[0.837, 1.315]
Secondary/Higher	3.702***[3.351,4.091]	0.531***[0.528,0.654]	1.619***[1.455,1.801]	1.449***[1.256, 1.671]	0.585***[0.507, 0.675]	0.973[0.440, 2.153]
Residence Urban(REF)						
Rural	0.568***[0.536,0.602]	1.815***[1.698, 1.940]	0.704***[0.660,0.752]	0.267***[0.231, 0.309]	1.824***[1.595, 2.085]	0.707**[0.565, 0.86]
Wealth status Poor(REF)						
Middle	1.443***[1.311,1.588]	0.883*[0.802, 0.973]	1.201***[1.087, .328]	0.833*[0.719, 0.966]	0.994[0.870, 1.135]	1.090[0.901, 1.318]
Rich	1.545***[1.406,1.697]	0.531***[0.480, 0.973]	1.492***[1.348,1.651]	0.814*[0.693, 0.955]	0.638***[0.549, 0.742]	1.434**[1.151, 1.787]
Work status Not working(REF)						
Working	2.203***[2.039, 2.380]	1.065[0.968, 1.143]	1.362***[1.257,1.475]	1.365***[1.202, 1.550]	1.106[0.990, 1.235]	1.387***[1.175, 1.636]

Note: OR = Odds ratio, CI = Confidence Interval, *** p<0.001, ** p< 0.01, * p< 0.05, empty = not significant

Table 6. Odds of some measures of reproductive health with background characteristics of currently married women of reproductive age (15-49) years.

Characteristics	Nigeria			Uttar Pradesh (India)		
	Modern method of contraceptive	Institutional place of delivery	Skilled attendant during most recent birth	Modern method of contraceptive	Institutional place of delivery	Skilled attendant during most recent birth
Respondent Age	Odds ratio(CI)	Odds ratio(CI)	Odds ratio(CI)	Odds ratio(CI)	Odds ratio(CI)	Odds ratio(CI)
15 - 34 years(REF)						
35 - 49 years	0.988[0.872,1.119]	4.616***[4.156,5.126]	1.386***[1.226,1.569]	1.076[0.962,1.203]	10.899***[8.699,13.655]	1.320*[1.015,1.716]
Age at first marriage						
15 - 34 years(REF)						
35 - 49 years	0.814[0.326,2.029]	0.560[0.271,1.154]	0.554[0.237,1.292]	1.242**[1.082,1.425]	1.101[0.917,1.322]	0.987[0.783,1.244]
Age at first birth						
15 - 34 years(REF)						
35 - 49 years	0.332*[0.114,0.967]	0.524[0.244,1.126]	1.011[0.486,2.104]	0.370***[0.307,0.447]	3.026***[2.291,3.998]	1.155[0.745,1.792]
Parity						
0 - 2 children(REF)						
3 - 5 children	1.405***[1.192,1.656]	0.351***[0.308,0.400]	0.834*[0.726,0.957]	2.958***[2.615,3.347]	0.379***[0.320,0.449]	0.545***[0.463,0.641]
Above 5 children	1.917***[1.661,2.214]	0.237***[0.212,0.265]	0.674***[0.596,0.761]	2.256***[1.909,2.666]	0.165***[0.132,0.207]	0.409***[0.313,0.535]
Educational status						
No education(REF)						
Primary	3.180***[2.645,3.824]	1.439***[1.297,1.596]	3.115***[2.769,3.505]	1.214*[1.034,1.425]	1.359**[1.083,1.704]	1.267*[1.006,1.594]
Secondary/Higher	4.601***[3.831,5.527]	3.247***[2.850,3.700]	7.228***[6.401,8.161]	1.890***[1.662,2.150]	1.847***[1.509,2.260]	2.754***[2.312,3.280]
Residence						
Urban(REF)						
Rural	0.734***[0.651,0.829]	0.893[0.793,1.006]	0.632***[0.565,0.707]	0.636***[0.564,0.717]	0.968[0.803,1.166]	0.648***[0.543,0.773]
Wealth status						
Poor(REF)						
Middle	1.574***[1.305,1.898]	1.385***[1.242,1.545]	2.122***[1.879,2.397]	1.262**[1.089,1.461]	1.251*[1.041,1.503]	1.468***[1.192,1.810]
Rich	2.536***[2.124,3.027]	2.801***[2.446,3.208]	5.872***[5.171,6.667]	2.435***[2.102,2.820]	2.237***[1.804,2.775]	3.766***[3.057,4.640]
Work status						
Not working(REF)						
Working	1.411***[1.231,1.617]	1.313***[1.200,1.437]	1.643***[1.481,1.823]	1.429***[1.280,1.596]	1.626***[1.379,1.916]	1.058[0.883,1.268]

Note: OR = Odds ratio, CI = Confidence Interval, *** p<0.001, ** p< 001, * p< 0.05, empty = not significant

4. Conclusion

Our study examined the influence of some indicators of women's empowerment on their reproductive health outcomes of a sample of currently married women in Nigeria and Uttar Pradesh. Findings from the study revealed that women's decision making autonomy and their attitudes towards domestic violence in the household appear to be very important determinants to their reproductive health. This is so because the results showed that women's decision making autonomy as well as attitudes towards wife beating has a direct and significant influence on the reproductive health practices. In addition to this, the results also revealed that there is a significant relationship between the indicators of women's empowerment, measures of reproductive health and women's background characteristics.

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