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Rural- Urban Differentials in Contraceptive Use among Men in South-West, Nigeria

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Abstract

This study examined contraceptive use and identified the associated factors among men in South-west, Nigeria.The study utilizedthe 2013 Nigerian Demographic and Health Survey (NDHS); data for 2,843 men (urban = 2,204; rural = 639)was extracted from the men recode file. The independent variables are age, place of residence, wealth index, educational attainment and religion; the dependent variable iscurrent use of contraceptive method. Analysis was carried out at the univariate, bivariate and multivariate levels using STATA 14.0. All estimates in this study were weighted appropriately and stratified by place of residence.

The results showed that more than half of men were not using any contraceptives at the time of survey (65.8%) and only 24.8% were using a modern method.Higher proportion of respondents in rural area (76.1%) reported non-use of contraceptives compared to urban area (62.8%).There is a significant association between use of contraceptives and work status only in urban area ($p<0.001$); and with household wealth in the rural area ($p<0.000$). Further analysisshowed education hadminimal effect on contraceptive use in urban area and associated only with higher educational level [AOR:3.44; 1.07-11.11]; in rural area, use of contraceptives increases with educational attainment and associated statistically at all levels. This study showed men in the urban area used contraceptives more than the residents in rural areas across different groups.

In conclusion, this study recommendsthe design and implementation of targeted family planning programmes and interventions aimed at men with a wide reach into rural areas and across the country,so as to achieve a balance in policy goals with respect to contraceptive use and population control.

Keywords: men, contraceptives, rural, urban, Nigeria.

Introduction

High population growth has been associated with scarcity of resources, negative economic development and poverty in many developing countries (Birdsall, Kelley, Sinding, & Sinding, 2001; Osoro, 1991; Turner, 2009). Coupled with high levels of unintended births, many developing countries have been facing the challenge of increasing population size with attendant increased unemployment, social unrest and congestion on available social amenities(Buhaug & Urdal, 2013). At the 1994 Cairo International Conference on Population and Development (Cohen & Richards, 1994), efforts to curb population growth rate in many low-and-middle-income-countries (LMICs) were further deepened. One of the take homes from the Cairo conference for many national leaders, was to encourage the uptake of family planning methods among the population. The adoption of family planning, aside other strategies remained at the forefront to limit population growth and achieve sustainable economicdevelopment.

Globally, contraceptive use has consistently been on the increase although many LMICs still lag behind(Stephenson, Baschieri, Clements, Hennink, & Madise, 2007; Wulifan, Brenner, Jahn, & De Allegri, 2015). A recent report showed 61% of postpartum women in 21 LMICs have unmet need for family planning(Moore *et al.*, 2015). The use of

contraceptives prevents unwanted pregnancies, reduces maternal and infant mortality, promotes the well-being of the family, prevents the transmission of sexually transmitted diseases including HIV/AIDs, and help the economic growth rate of a nation (Shane, 1997; Shelton & Fuchs, 2004; World Health Organization, 2010). Despite the many perceived benefits, very few women use contraceptivesand high unmet need persists in many sub-Saharan African countries(Moore *et al.*, 2015). Limited access to resources and adequate knowledge of contraceptive methods, cultural and political barriers, socio-economic factors, lack of spouse or partners support, poor attitude and misconceptions around contraceptives are all factors associated with the low uptake of family planning among women in many developing countries (Asekun-Olarinmoye *et al.*, 2013; Diamond-Smith, Campbell, & Madan, 2012; Idris, Sambo, & Ibrahim, 2013; Solanke, 2017; Stephenson & Hennink, 2004).

Consistently, studies (Ezeh, 1993; Prata *et al.*, 2017; Sternberg & Hubley, 2004)have shown the role of men in the adoption of contraceptives among women. Women who have the support of husband/partner will most likely use a modern method of family planning. Men's role in fertility behaviour including use of family planning is becoming increasingly important in sub-Saharan Africa including Nigeria (Asekun-Olarinmoye *et al.*, 2013; Ezeanolue *et al.*, 2015; Ugboaja, Blanche, Oranu, & Igwegbe, 2018). There are evidences that general knowledge and attitudes of men concerning the ideal family size, gender preference of children, ideal spacing between child births and contraceptive method greatly influence women's preference and opinions(Mulatu & Mekonnen, 2016; Sternberg & Hubley, 2004). It remained important to engage men in adoption of family planning methods forthemselves or wives/partners.

Men's involvement could assume a prominent role in the individual couple's family planning effort. Based on studies (Fotso, Higgins-Steele & Mohanty, 2015; Kabagenyi *et al.*, 2014; Prata *et al.*, 2017), an argument could be made that family planning programmes that attempt to reach women would have a higher probability of success if they also involve their husbands or at least encourage such involvement. These assertions are reported in many studies that men's negative attitude is a major reason why their wives fail to practice family planning, even when the latter are motivated to do so(Islam, 2013; Kabagenyi *et al.*, 2014; Sternberg & Hubley, 2004).

The importance of the male attitude in determining sexual and social behaviours among women in patriarchal societies and the need to involve men in family planning programming is established in literature (Adanikin, McGrath, & Padmadas, 2017; Ezeh, 1993; Prata *et al.*, 2017). Studies in Nigeria have also reported men's awareness and support for modern contraceptives increased the use among female partners (Ezeanolue *et al.*, 2015; Ugboaja *et al.*, 2018).Yet, fewer studies on fertility and family planning research have centered on men compared to women.

While many studies have reported factors associated with contraceptive use among women, few others have been conducted among men regarding uptake of contraceptives (Adanikin *et al.*, 2017; Mulatu & Mekonnen, 2016; Okigbo, Speizer, Corroon, & Gueye, 2015). It is needful to understand what drives the use of contraceptives for the design of targeted programmes aimed to ensure its increase especially in many sub-Saharan African countries, especially in Nigeria where the uptake is prevailing low.According to the 2013 Nigerian Demographic Health Survey (NDHS), high proportion ofwomen (72%) and men(90%) reported knowing at least one method of contraception (National Population Commission & ICF Macro International, 2014). Despite, the high knowledge, very low proportion of those aged 15-49, ever used a method of contraception at some point for women (29 %) and men (41%).

Limited use of contraceptives is a major contributor to the high rates of unintended pregnancies and abortion among young women with poorer health outcomes among those in rural settings than in urban areas(Chandra-Mouli, Camacho, & Michaud, 2013). In the same vein, contraceptive use is reportedly higher in urbanareas than in rural areas among women. Women in urban areas are three times more likely to use any modern contraceptives compared to women in rural areas, and that of men does not differ much from this pattern(National Population Commission & ICF Macro International, 2014). While the variations among women in urban versus those in rural areas have been widely examined, limited information exists on the use of contraceptives among men and the factors associated with the use. This study thereforeseeks to answer the research question: are there differentials in the uptake of contraceptives

among men resident in rural and urban areas in South-west, Nigeria?

Study Methods

Data Source

This study used a secondary and nationally representative data of the 2013 NDHS which was conducted with the support of the National Population Commission (NPC). The NDHS provides information on key health and economic indicators in the country. The survey covers issues on fertility, mortality, sexual and reproductive health, maternal and child health and violence.The 2013 NDHS is a follow-up to the 2008 and 2003 NDHS. All estimates are provided for rural and urban areas and the six geo-political zones covering thecountry's thirty-six states and the Federal Capital Territory (FCT). The men recode file (NGMR6AFL) was accessed and only data of the South-west region was extracted for this study. This datasetis publicly made available and could be accessed upon request from the DHS Program website of the United States Agency for International Development (USAID).

Sample Design and Sample Size

This 2013 NDHS obtained its sampling frame from the 2006 Population and Housing Census provided by the National Population Commission (NPC). The study sample was selected using stratified two-stage cluster design consisting of888 clusters, 286 in the urban and 602 in the rural areas. Men age 15-59 were interviewed in every second household selected for the woman's interview, and a total of 17,359 men successfully completed their interviews across the six regions. The total weighted sample analyzed in this study involved2,843 men stratified by place of residence: urban = 2,204 and rural = 639.

Definition of Variables

The independent variables in this study includeage, place of residence, wealth index, educational attainment and religion. The variables all retained the DHS measurement and categories(National Population Commission & ICF Macro International, 2014). The age group is categorized into:15-19, 20-24, 25-29..., and 45-49. Educational attainment is categorized into: no education, primary, secondary and higher education. Religion: Christian, Islam, Traditional, others.Wealth Index is grouped into five categories: poorest, poorer, middle, richer; and, richest and place of residence:rural, urban.The dependent variable in this study is: current use of contraceptive method. This is measured as: no; yes. Those men who reported no method were grouped underno, while men who reported current use of folkloric method, traditional method and modern method were grouped underyes.

Data Analysis

The analysis in this study was conducted at univariate, bivariate and multivariate levels. The percentage distribution of respondents by place of residence was presented at the univariate level, the bivariate shows the cross-tabulation of explanatory and outcome variable while binary logistic regression was used at the multivariate level. The statistical significance level was estimated at $p<0.00$, $p<0.01$ and $p<0.05$. Data analysis was carried out using STATA 14.0 (Stata Corporation, Texas, USA). All estimates in this study wereweighted appropriately and stratified by place of residence.

Results

Selected background characteristics of men were presented [see Table 1] by the distribution of respondents in both rural and urban areas of South-west Nigeria. Out of 2843 weighted sum of respondents, 2204 reside in the urban area and 639 in the rural area. The mean age of respondents is 29.49 years. Respondents aged 15-19 years have the highest proportion in both urban and rural areas (19.6% and 20.1% respectively), followed by those aged 30-34 years in urban (15.9%), and 20-24 years in rural (16.0%). Men aged between 45-49 years have the lowest proportion in urban area (9.2%), while those between ages 40-44 years have lowest proportion in rural area (11.5%).

There are differentials in level of education among men in urban and rural areas. More than half of the total respondents 63.63% in the urban reported to have secondary education and 46.80% in the rural area. Only 1.56% of respondents in urban area have never been to school compared to 18.2% in rural area. There is a substantial difference among urban and rural respondents with respect to higher education: 22.2% in the urban area and 10.4% in the rural area. About 8 of every ten respondents in both urban and rural areas reported to be working at the time of survey.

Table 1: Socio-demographic characteristics of men by place of residence

Characteristics	**Urban**	**Rural**	**Total = 2,843**
	2,204 (100.0)	639 (100.0)	2,843(100.0)
Age mean age = 29.49 years			
15-19	433 (19.6)	128 (20.1)	561 (19.7)
20-24	341 (15.5)	102 (16.0)	443 (15.6)
25-29	309 (14.0)	94 (14.7)	403 (14.2)
30-34	350 (15.9)	77 (12.0)	427 (15.0)
35-39	318 (14.4)	75 (11.7)	393 (13.8)
40-44	251 (11.4)	74 (11.5)	325 (11.4)
45-49	202 (9.2)	90 (14.0)	291 (10.3)
Educational level			
No education	34 (1.6)	117 (18.2)	151 (5.3)
Primary	277 (12.6)	1567 (24.6)	434 (15.3)
Secondary	1,403 (63.6)	299 (46.8)	1,702 (59.9)
Higher	490 (22.2)	66 (10.4)	556 (19.6)
Currently working			
No	506 (23.0)	129 (20.1)	635 (22.3)
Yes	1,698 (77.0)	510 (79.9)	2,208 (77.7)
Religion			
Christians	1,324 (60.1)	416 (65.2)	1,740 (61.2)
Islam	852 (38.7)	210 (32.8)	1,062 (37.3)
Others	28 (1.2)	13 (2.0)	41 (1.5)
Household wealth index			
Poorest	0 (--)	43 (6.7)	43 (1.5)
Poorer	8 (0.3)	146 (22.8)	153 (5.4)
Middle	93 (4.2)	211 (33.2)	305 (10.7)
Richer	624 (28.3)	171 (26.7)	795 (28.0)
Richest	1,479 (67.1)	68 (10.6)	1,547 (54.4)
Current use of contraceptives			
No	1,385 (62.8)	486 (76.2)	1,872 (65.8)
Yes	819 (37.2)	153 (23.8)	972 (34.2)
Method of contraceptives used			
None	1,385 (62.8)	486 (76.2)	1,872 (65.8)
Folkloric	7 (0.2)	1 (0.2)	8 (0.3)
Traditional	218 (9.1)	41 (6.3)	259 (9.1)
Modern	594 (26.9)	111 (17.3)	704 (24.8)

More respondents reportedly were Christians in both urban (60.1%) and rural (65.2%) areas than Muslims or other religion. As evident from Table 1, above half (67.1%) of the total respondents in urban area are from the richest household compared with that of the rural area (10.6%). The percentage of the poorest among respondents in the rural area is 6.7% higher than the urban area. Only one-third of respondents (34.2%) reported to use contraceptives while out of this, 24.8% reportedly use a modern method of contraception. Higher proportion of respondents in rural area (76.1%) reported non-use of contraceptives compared to the urban area (62.8%).

In Table 2, men aged 25-29 years in urban area have higher rate reported for the use of contraceptives (20.7%) followed by those men aged 35-39 years (16.6%). Whereas, in the rural area, current use of contraceptives was reportedly more among men aged 25-29 years (25.7%) followed by those aged 20-24 years (20.7%). There is a statistically significant association between age of men and current use of contraceptives in urban ($p<0.001$) and rural areas ($p<0.001$). Among current users of contraceptives, men with secondary education reported higher rate in urban (59.2%) and rural areas (53.7%). Respondents with primary education in rural area currently use contraceptives (21.4%) more than their counterparts in urban area (10.3%). The use of contraceptives is significantly associated with educational attainment of respondents.

Table 2: Current use of contraceptives among men by selected individual characteristics and by place of residence

Variables	**Urban (current use)**			**Rural (current use)**		
	No(1,385)	Yes(819)	p-value	No (486)	Yes (153)	p-value
Age						
15-19	28.0	5.5		24.3	6.8	
20-24	15.5	15.5		14.5	20.7	
25-29	10.0	20.7	p<0.001***	11.2	25.7	p<0.001***
30-34	15.9	15.9		10.7	16.1	
35-39	13.2	16.6		12.6	8.7	
40-44	10.3	13.3		12.7	7.8	
45-49	7.2	12.4		14.0	14.2	
Educational level						
No education	1.9	1.0		22.4	4.9	
Primary	13.9	10.3	p<0.001***	25.6	21.4	p<0.001***
Secondary	66.3	59.2		44.7	53.7	
Higher	17.9	29.6		7.4	20.0	
Currently working						
No	28.4	13.7		21.9	14.6	
Yes	71.6	86.3	p<0.001***	78.1	85.4	p = 0.229
Religion						
Christians	58.9	62.0		64.0	69.1	
Islam	39.7	37.0	p = 0.342	33.4	30.9	p = 0.394
Others	1.5	1.0		2.7	--	
Household wealth index						
Poorest	---	---		8.4	1.4	
Poorer	0.4	0.2		25.5	14.4	
Middle	4.9	3.2	p = 0.320	31.5	38.3	p<0.001***
Richer	28.9	27.3		27.2	25.1	
Richest	65.8	69.3		7.4	20.8	

**** = p<0.05; ** = p<0.01;*** = p<0.001***

Further, eight of every ten men who are working reported to usecontraceptives in both urban and rural areas. There is a significant association between work status of men and use of contraceptives in urban area (p<0.001) but not in the rural area. Whereas men from the richest households in urban area reported higher current use of contraceptives (69.3%), it was those from middle household wealth category in rural area (38.3%). There is a statistically significant association between household wealth and reported use of contraceptives only in the rural area (p<0.001).

According to Table 3 below, the result from the binary logistic regression of current use of contraceptives among men in both urban and rural areas showed the age of men is significantly associated with current use of contraceptives. While across all ages in urban area, there is a statistically significant association, however, this pattern was not seen in the rural area. Only ages 15-19, 20-24, 30-34 and 45-49 were seen to be associated with contraceptive use in the rural area. Relative to the reference category (ages 15-19 years), men aged 45-49 years were nine times more likely to use contraceptives in urban area [AOR:9.19; 4.75-17.76], andfour times more likely in rural area (AOR: 3.78; 1.32-10.77).

Table 3: Association between current contraceptive use and selected individual characteristics by place of residence.

Variables	Urban Area		Rural Area	
	Adjusted Odds Ratio	95% CI	Adjusted Odds Ratio	95% CI
Age				
15-19	ref	ref	ref	ref
20-24	4.90***	2.95 – 8.11	5.35**	1.81 – 15.82
25-29	9.83***	5.64 – 17.13	8.47***	2.79 – 25.68
30-34	5.09***	2.97 – 8.71	5.87***	2.09 – 16.42
35-39	6.78***	3.87 – 11.86	2.34	0.90 – 6.07
40-44	6.80***	3.88 – 11.90	2.54	0.66 – 9.70
45-49	9.19***	4.75 – 17.76	3.78**	1.32 – 10.77
Educational level				
No education	ref	ref	ref	ref
Primary	1.57	0.46 – 5.30	4.13**	1.38 – 12.36
Secondary	2.69	0.86 – 8.40	6.13**	2.03 – 18.50
Higher	3.44*	1.07 – 11.11	8.90***	2.67 – 29.71
Currently working				
No	ref	ref	ref	ref
Yes	1.03	0.70 – 1.52	1.13	0.57 – 2.23
Religion				
Christians	ref	ref	ref	ref
Islam	0.94	0.75 – 1.18	1.62*	1.04 – 2.51
Others	0.63	0.25 – 1.57	---	---
Household wealth index				
Poorest	ref	ref	ref	ref
Poorer	---	---	1.28	0.33 – 5.02
Middle	1.34	0.18 – 9.75	2.37	0.64 – 8.78
Richer	1.46	0.24 – 8.77	1.53	0.37 – 6.29
Richest	1.34	0.23 – 7.70	3.29	0.78 – 13.86

**** = p<0.05; ** = p<0.01;*** = p<0.001***

Education is seen to have minimal effect on contraceptive use in urban area and only significantly associated with higher educational level [AOR:3.44; 1.07-11.11]; while in rural area, the higher the level of education, the higher the likelihood to use contraceptive. There is a significant association between contraceptive use and primary education [AOR: 4.13; 1.38-12.36]; secondary education [AOR: 6.13; 2.03-18.50] and higher education [AOR: 8.90; 2.67-29.71] all in rural area. Respondents practicing Islam and resident in rural area have 62% increased likelihood to use a contraceptive compared to the reference category [AOR: 1.62; 1.04 – 2.51].

Discussion

This study examined the rural-urban differentials in uptake of contraceptives among men in South-west, Nigeria.The association between selected individual characteristics and current use of contraceptives were examined. The study shows that about one-third of men currently use contraceptives, out of which lesser proportion reportedly use a modern method of contraception. A similar study on household decision making, contraceptive use and fertility behaviour among ever-married men in Nigeria showed 17.1% ever use contraceptive and 10.2% use a modern method.

The study findings showed, there is marked difference in the uptake of contraceptives among men resident in urban and rural areas. Studies in Nigeria (Mberu & Reed, 2014; Ushie, Ogaboh, Olumodeji, & Attah, 2011) have similarly showed residence is significantly related to current use of contraceptives, with higher use in the urban than in the rural area. Men residing in urban areas would most likely have high level of knowledge on modern contraceptives through improved access to sexual and reproductive health services and exposure to family planning messages compared to their counterparts in rural areas(Ochako, Temmerman, Mbondo, & Askew, 2017; Okigbo et al., 2015).

This study found age of men is associated with current use of contraceptives in both urban and rural areas. Compared to the reference group (15-19 years), men who are older use contraceptives more with the highest proportion among those aged 25-29 years and 45-49 years. This study finding corroborated an earlier study among sexually active men in Kenya whereby age of men was found to be significantly associated with the use of contraceptives including the type used(Ochako *et al*., 2017).

Further, the use of contraceptives increases with an increase in the level of education among men residents in urban and rural areas. An earlier study in Kenya also showed men with higher education were more likely to use a modern contraception compared to traditional method (Ochako *et al*., 2017). Another study found education to be significantly related to current use of contraceptive among women in the urban and rural areas (Ushie *et al*., 2011). Men who are educated would most likely have increased access and understanding of mass media messages on family planning methods as well as read about family planning in newspapers (Okigbo *et al*., 2015; Ugboaja *et al*., 2018). Education would affect contraceptive use through spread of information and development of knowledge towards different methods.

Also, this study shows a weak association between men's use of contraceptive and religion. An earlier study in Nigeria shows religion played a major role in method used and choice of contraceptives(Olugbenga-Bello, Abodunrin, & Adeomi, 2011). An Indonesian study reported Islam was strongly correlated with the probability of choosing injectable type of contraceptive compared to other modern methods for women(Molyneaux, Lerman, Pandi, & Wibisono, 1990).

In order to achieve sustainable development goals, economic growth, poverty eradication, an improved maternal and child health outcome, reduced unintended pregnancies, it is important to be all gender inclusive in the creation of awareness and promotion of contraceptive use. Programme should strive to clarify misconceptions about family planning both in rural and urban areasfor an improved uptake.

Conclusion

This study has advanced knowledge in the area of men's uptake of contraceptives and the factors associated with it. This study showed men in the urban area accessed contraceptives more than the residents in rural areas. Targeted family planning programmes and interventions aimed at promoting uptake of modern contraceptives among men should be designed and implemented.

Family planning programmes and interventions should extend a wide reach into rural areas in the country to achieve a balance in policy goals with respect to contraceptive use and population control. Infrastructural development should aim also at the rural area to improve the economic status of rural men. Lastly, this study recommends future research into exploring perspectives of men towards contraceptive methods for a holistic understanding of the study focus and to assist in the design of targeted programmes.

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