ORIGINAL RESEARCH ARTICLE

Rural-urban differences in the predictive influence of sex preference on marital dissolution in Nigeria

Chukwuedozie K Ajaero[1,2]* and Clifford O Odimegwu[1]

Demography and Population Studies Programme, Schools of Public Health and Social Sciences, University of the Witwatersrand, South Africa[1]; Department of Geography, University of Nigeria Nsukka, Nigeria[2]

*For Correspondence: Email: *chukwuedozie.ajaero@unn.edu.ng*; Phone: +2348037511422

Abstract

This study examined the influence of place of residence on sex preference as a predictor of marital dissolution in Nigeria. It also appraised the mediation of socio-demographic factors on the relationship between sex preference and marital dissolution. Data were sourced from the 2018 demographic and health survey of Nigeria. Analyses involved the use of descriptive statistics, Pearson chi-square test and binary logistic regression models. Generally, marital dissolution significantly occurred more in rural than in urban areas. While more respondents had no child sex preference, preference for boys was significantly more among the urban women compared to the rural women. Irrespective of place of residence, sex preference was not a significant predictor of marital dissolution in Nigeria as the unadjusted models of marital dissolution and sex preference indicated that preference for more boys significantly decreased the odds of marital dissolution in the rural (OR=0.84; p=0.05), urban (OR=0.67; p=0.001), and total population (OR=0.77; p=0.001). In addition, preference for more girls significantly decreased the likelihood of marital dissolution in the rural (OR=0.82; p=0.002) and total populations (OR=0.84; p=0.05). Moreover, in the full adjusted model of the total population, preference for more males (OR=0.57; p=0.002) was also significantly associated with decreased odds of marital dissolution. Conversely, other factors that significantly increased the odds of marital dissolution included educational attainment, intimate partner violence, religion, being employed, polygamous unions, and region of residence. Women should achieve higher levels of education and be engaged in income earning occupations as mitigation measures against marital dissolution. Anti-dissolution campaigns should be initiated, especially in rural areas with high levels of intimate partner violence and in regions with relatively high incidences of marital dissolution/p-/p-1. *(Afr J Reprod Health 2021; 25[2]: 138-149).*

Keywords: Marital dissolution, Nigeria, place of residence, sex preference

Résumé

Cette étude a examiné l'influence du lieu de résidence sur la préférence sexuelle en tant que prédicteur de la dissolution du mariage au Nigéria. Il a également évalué la médiation des facteurs sociodémographiques sur la relation entre la préférence sexuelle et la dissolution du mariage. Les données proviennent de l'enquête démographique et sanitaire de 2018 au Nigéria. Les analyses impliquaient l'utilisation de statistiques descriptives, du test du chi carré de Pearson et de modèles de régression logistique binaire. En général, la dissolution du mariage se produit beaucoup plus en milieu rural qu'en milieu urbain. Alors qu'un plus grand nombre de répondants n'avaient pas de préférence sexuelle pour les enfants, la préférence pour les garçons était significativement plus élevée chez les femmes urbaines que chez les femmes rurales. Quel que soit le lieu de résidence, la préférence sexuelle n'était pas un prédicteur significatif de la dissolution du mariage au Nigéria, car les modèles non ajustés de dissolution du mariage et de préférence sexuelle indiquaient que la préférence pour plus de garçons diminuait considérablement les chances de dissolution du mariage en milieu rural (OR = 0,84; p = 0,05), urbaine (OR = 0,67; p = 0,001) et population totale (OR = 0,77; p = 0,001). De plus, la préférence pour un plus grand nombre de filles réduisait considérablement la probabilité de dissolution du mariage dans les populations rurales (OR = 0,82; p = 0,002) et dans l'ensemble (OR = 0,84; p = 0,05). De plus, dans le modèle ajusté complet de la population totale, la préférence pour un plus grand nombre d'hommes (OR = 0,57; p = 0,002) était également associée de manière significative à une diminution des chances de dissolution du mariage. À l'inverse, d'autres facteurs qui augmentaient considérablement les probabilités de dissolution du mariage comprenaient le niveau de scolarité, la violence entre partenaires intimes, la religion, le fait d'avoir un emploi, les unions polygames et la région de résidence. Les femmes devraient atteindre des niveaux d'éducation plus élevés et être engagées dans des professions rémunératrices en tant que mesures d'atténuation contre la dissolution du mariage. Des campagnes anti-dissolution devraient être lancées, en particulier dans les zones rurales où la violence entre partenaires intimes est élevée et dans les régions où l'incidence de la dissolution du mariage est relativement élevée. *(Afr J Reprod Health 2021; 25[2]: 138-149).*

Mots-clés: Dissolution conjugale, Nigéria, Lieu de résidence, Préférence sexuelle

Introduction

Literature from studies in the United States of America show that parental sex preferences influence marital stability[1], just as it has shown that marriages are less likely to continue after the birth of daughters than sons[2-4]. The existence of more sons than daughters in a marriage has also been found to increase the quality and stability of the parents' relationship as well as their subjective wellbeing and marital satisfaction [5-6]. First-born boys in a marriage also reduces women's perception of likelihood of divorce, and increases the happiness of the husbands by about 75% when compared to first-born girls[7-10]. As such, sex preference among couples which favors male children over the female children have remained a cause of marital dissolution in developing countries, Nigeria inclusive[11]. Literature from Asian countries have shown that the likelihood of marital dissolution is higher for older women with only female children and childless couples while an inverse relationship exist between number of children and risk of divorce, especially in rural areas[12-13]. Recent studies have also shown some variations in the effect of sex preference on marital stability in SSA even as prevalence of son preference exist in 16 out of 28 SSA countries[14].

Studies in African countries of Kenya and South Africa have shown that marriages are associated with high rates of dissolution and remarriage[15-16]. For instance, dissolution rates have been shown to be 9.1% in Zambia, 7.2% in Uganda, and 6.7% in Botswana. While 20% of Ghanaian, Liberian, Namibian and Ugandan women experienced marital dissolution after their first marriages, 7.5% of Nigerians reported marital dissolution[14,17]. The factors which increases the propensity for marital dissolution include age at marriage[18], cohabitation[19], and higher wife's income compared to husband[20]. In addition, urbanization[21], unemployment, and women with low incomes[22-23], richer household wealth index[24], and higher education[25], are positively correlated with divorce. However, other studies show that higher education increases the likelihood of marital stability[26]. Age at first marriage, premarital habitation, less religiosity, have also been positively associated with marital dissolution[27].

In Nigeria, preference for sons are linked to several historical, moral, ethical and economic factors. For instance, barrenness has been identified as a major cause of marital dissolution because having a child, especially a male is germane to establishing a lasting family in any marriage[28-29]. As such, the Nigerian male child is expected to inherit the family wealth and perpetuate family lines[30-31]. Thus, the high premium placed on sons in Nigeria has put married women under intense pressure to give birth to sons so as to satisfy their husbands and consolidate their marriages[32]. Many pregnant women are compelled to know the sex of their unborn children during obstetric ultrasonography and in some cases, sex-selected abortion are carried out whenever the fetal sex is not the type desired by such mothers[31,33-34].

Theoretically, recent researches on family issues have emphasized the importance of contextual factors as determinants of marital dissolution[14]. In this context, spatial regions as well as rural-urban places of residence have been shown to exert influences on the occurrence of marital dissolution. Furthermore, several studies on marital dissolution in Asia and Africa have been hinged of the sociological theory, which posits that the presence and sex of children in a marriage influences the probability of marital dissolution. In addition, the theory noted that differences in sociodemographic status, especially in rural areas and among couples with lower socio-economic status contribute more to marital dissolution[11,14,35,36]. As such, the theory argues that the desire to achieve god welfare for the children, especially the male children serves as a bond to sustain marital stability among couples in sub-Saharan Africa.

Subsequently, it is important to explore the contextual influence of place of residence on sex preferences of children as a predictor of marital dissolution in Nigeria. The need for exploring the influence of place of residence is because the recent changing roles of women in Nigerian rural and urban spaces may have profound effects on women empowerment and subsequently, marital stability. Furthermore, it has been noted that most theories on family dissolution highlight the importance of community effects for family dynamics as demographic processes have been found to be

affected by not only individual characteristics but also by the environmental characteristics in which the individuals reside- in this context, the rural-urban spaces[14].

However, there is dearth of research on the influence of rural-urban residence on marital dissolution in Nigeria. Moreover, nationally representative studies on the influence of sex preference on marital status is lacking in the country. Therefore, the aim of this study is to explore the rural-urban differences in the predictive influence of sex preference on marital dissolution in Nigeria. The specific objectives based on rural-urban differences in Nigeria are to: ascertain the level of sex preference and marital dissolution; examine the predictive influence of sex preference on marital status; and appraise the mediating effects of socioeconomics characteristics on the predictive influence of sex preference on marital dissolution.

Methods

Data source

This study made use of data on individual women from Demographic and Health Surveys (DHS) conducted in 2018 in Nigeria, which was the fourth surveys implemented by the National Population Commission (NPC) of Nigeria and ICF International USA in association with USAID, UKaid, and UNFPA. DHSs are nationally representative household surveys conducted every 5 years in developing countries. As such, the 2018 demographic and health survey of Nigeria was conducted in all the 36 states of Nigeria, and Abuja, the Federal Capital Territory (FCT). Subsequently, a nationally representative sample of 39,733 women aged 15-49 years comprising of 16,192 urban and 23,541 rural respondents was used for this study.

Variables used in the study

The outcome variable for this study is marital dissolution, which was coded as either Yes (1) or No (0). Since no direct question on family dissolution is contained in the DHS datasets, the variable of current marital status by women were used to generate the composite variable of marital dissolution. Based on earlier studies[37-39,] women

whose current marital status was divorced or separated were classified as being currently in marital dissolution while women who have never married were excluded from the study sample.

The major independent variable for the study is sex preference. To assess the sex preference, we used two variables in the DHS that asked about (i) ideal number of boys, and (ii) Ideal number of girls needed by couples. Respondents whose ideal number of boys is equal to the ideal number of girls were categorized "no sex preference", those whose ideal number of boys were more than their ideal number of girls were categorized as "male sex preference", while those whose number of girls were more than their ideal number of boys were classified as "female sex preference". Other independent variables used in the study, which were identified from previous literature that established their relationship with marital dissolution[14,39]. These variables included wealth index, husband's education, age of woman, number of living children, sex composition of children, intimate partner violence (IPV) region, type of union, and woman's income relative to the husband.

Data analysis

The data were weighted for under sampling and oversampling errors as per the survey design using the stata svyset command before data analyses. All the analyses were based on rural/urban place of residence. Subsequently, the analysis of the data involved univariate analysis of the characteristics of the study population as well as the marital dissolution, and sex preference variables. In addition, bivariate analyses of all the explanatory variables and marital dissolution were carried out using Pearson chi-square test in order to ascertain if significant differences exist within population groups and marital dissolution. Finally, binary logistic regression models were used to estimate the effect of sex preference and all the other explanatory/independent variables on marital dissolution in Nigeria. The regression coefficients of the independent variables are expressed as Odds Ratio (OR). A variable with Odds Ratio greater than 1.00 implied that the variable increases the likelihood of the outcome (marital dissolution) while it is the opposite when the OR is less than

1.00. Consequently, there are three major regression models for this study which are models A, B, and C. Models A are represent rural areas, models B represent the urban areas, and models C represent the total population. Each of these major models are divided into "I" and "II" eg AI and AII. The "I" models represent only the outcome variable (marital dissolution) and the major independent variable (sex preference) while the "II" models contain the outcome variable and all the independent variables.

Results

Characteristics of the study population

A greater proportion of the respondents had no formal education while 47.2% of the rural women reported not having formal education (Table 1). More than half of the women (64.1%) were employed with 65.7% of the urban women being employed. In addition, 65.3% and 78.4% of the rural and urban women respectively were in monogamous unions.

Univariate results of marital dissolution and sex preference

The results showed that there existed significant differences (at 0.05 level of significance) in marital dissolution and sex preference between the rural and the urban areas (Table 2). Thus, a higher proportion of women experienced marital dissolution among the rural (11.4%), compared to the urban (8.5%), and total (10.3%) populations. In addition, a greater proportion of the urban population (45.6%) compared to 38.3% of the rural population, and 41.3% of the total population preferred to have more male children.

Bivariate results of marital dissolution

The bivariate results of marital dissolution showed significant differences in all the explanatory variables in rural areas with the exception of the variables of intimate partner violence (IPV) and sex of the children (Table 3). In the urban areas, only the variables of intimate partner violence and partner's income related to the woman did not exhibit significant differences with regard to the

occurrence of family dissolution. In addition, all the explanatory variables in the total population with the exception of the variables of intimate partner violence (IPV), sex of children and partner's income relative to the women showed significant differences in the occurrence of marital dissolution. With regard to the rural population, our results showed that greater proportion of the women such as those with no child preference (12.5%), in polygamous union (19.8%), age 35 years and above (52.7%), women who experienced IPV (11.7%), and women with primary education (13.5%) had experienced marital dissolution. In the urban area, the populations with greater proportions of respondents who had experienced marital dissolution included those with no child sex preference (10.3%), those with no formal education (13.4%), those in polygamous union (19.1%), women aged age 35+ years (62.1%), women whose households belonged to the middle wealth index (11.7 %), women whose partner had no formal education (11.5%), and respondents from the Northeast region (11.3%). In the total population, the trend in the proportion of women who had experienced marital dissolution generally remained the same with the rural and urban areas.

Predictors of marital dissolution in Nigeria

The results of the regression analysis in models I (models of marital dissolution and sex preference only) indicated that preference for more boys significantly decreased the odds of marital dissolution in the rural (OR=0.84; p=0.05), urban (OR=0.67; p=0.001), and total population (OR=0.77; p=0.001) (Table 4). Conversely, preference for more girls significantly decreased the likelihood of marital dissolution in the rural (OR=0.82; p=0.002) and total populations (OR=0.84; p=0.05).

In the full models (Models II), the preference for more male children (OR=0.53; p=0.002) significantly decreased the odds of marital dissolution in the rural areas. On the other hand, women aged 35+ years (OR=4.04; p=0.001), women who experienced IPV (OR=1.62; p=0.05), women in polygamous unions (OR= 2.47; p=0.001), women who earn more than their partner (OR=3.54; p=0.05) and North West residents (OR=2.24; p=0.05) were significantly associated

Table 1: Characteristics of the study population

Variables Education	Rural Freq. (%)	Urban Freq. (%)	Total Freq. (%)
None	11,113(47.2)	2,550(15.8)	13,663(34.4)
Primary	3,738(15.9)	2,187(13.5)	5,925(14.9)
Post primary	8,690(36.9)	11,455(70.7)	20,145(50.7)
Age (Years)			
15-24	8,936(38.0)	5,813(35.9)	14,749(37.1)
25-34	7,328(31.1)	5,194(32.1)	12,522(31.5)
35+	7,277(30.9)	5,185(32.0)	12,462(31.4)
Employed			
No	8,704(37.0)	5,557(34.3)	14,261(35.9)
Yes	14,837(63.0)	10,635(65.7)	25,472(64.1)
Religion			
Christianity	10,371(44.1)	9,079(56.1)	19,450(49.0)
Islam	12,926(54.9)	7,009(43.3)	19,935(50.2)
Traditional	244(1.04)	104(0.6)	348(0.8)
IPV			
No	3,946(78.8)	2,656(78.9)	6,602(78.8)
Yes	1,065(21.2)	711(21.1)	1,776(21.2)
Union Type			
Monogamy	11,325(65.3)	7,663(78.4)	18,988(70.0)
Polygamy	6,021(34.7)	2,108(21.6)	8,129(30.0)
Wealth Index			
Poor	13,335(56.7)	1,943(12.0)	15,278(38.5)
Middle	5,227(22.2)	3,167(19.6)	8,394(21.1)
Rich	4,979(21.1)	11,082(68.4)	16,061(40.4)
Region			
North Central	4,884(20.8)	2,461(15.2)	7,345(18.5)
North East	5,394(22.9)	1,768(10.9)	7,162(18.0)
North West	6,889(29.2)	2,955(18.3)	9,844(24.8)
South East	1,876(8.0)	3,494(21.6)	5,370(13.5)
South South	3,078(13.1)	1,736(10.7)	4,814(12.1)
South West	1,420(6.0)	3,778(23.3)	5,198(13.1)

Table 2: Univariate results of marital dissolution and sex preference (%)

Variables	Rural	Urban	Total	P-value
Marital dissolution				**0.000**
No	88.6	91.5	98.7	
Yes	11.4	8.5	10.3	
Mean [95% CI]	0.11[.10-.12]	0.09[.08-.10]	0.10[.09-.11]	
Sex preference				**0.000**
None	37.3	29.2	34.0	
More boys	38.3	45.6	41.3	
More girls	24.4	25.2	24.7	
Mean [95% CI]	0.87[.85-.88]	0.96[.94-.98]	0.91[.89-.92]	

with increased the odds of marital dissolution in the rural area. For the urban area, women aged 34+ years (OR=3.07; p=0.05) and women in polygamous union (OR=3.74; p=0.001) were significantly associated with increased odds of marital dissolution. In the total population, preference for more males (OR=0.57; p=0.002) was significantly associated with decreased odds of marital dissolution. Conversely, the variables which

significantly increased odds of marital dissolution in the total population were women aged 35 years and above (OR=3.34; p=0.001) and women in polygamous union (OR=2.86; p=0.001).

Discussion

The results of this study showed that women in rural areas significantly experienced higher marital

Table 3: Bivariate analysis results of marital dissolution

Variables	Rural Freq (%)	Chi-square	Urban Freq (%)	Chi-square	Total Freq (%)	Chi-square
Sex preference		8.1*		15.9***		20.4***
None	502(12.5)		199(10.3)		701(11.8)	
More boys	403(10.9)		181(7.0)		548(9.3)	
More girls	236(10.4)		125(9.3)		361(10.2)	
Type of union		692.5***		491.7***		1.24***
Monogamy	745(6.6)		377(4.9)		1,122(5.9)	
Polygamy	1,192(19.8)		418(19.1)		1,610(19.8)	
Education		198.6***		174.3***		421.2***
No education	1,376(13.4)		311(13.4)		1,687(13.4)	
Primary	424(13.5)		234(12.5)		658(13.1)	
Secondary and higher	300(5.9)		381(5.7)		681(5.8)	
Age		333.4***		116.5***		401.5***
15-24	211(10.1)		59(6.4)		270(8.9)	
25-34	782(37.2)		292(31.5)		1,074(35.5)	
35+	1.107(52.7)		575(62.1)		1,682(55.6)	
Employed		10.2**		5.4*		10.3**
Yes	626(10.3)		193(7.4)		819(9.45)	
No	1,471(11.9)		733(8.9)		2,207(10.69)	
Religion		140.4***		111.9***		276.9***
Christianity	560(7.9)		344(5.9)		904(7.0)	
Islam	1,526(13.6)		580(11.6)		2,106(12.9)	
Traditional	14(7.7)		2(2.9)		16(6.4)	
Sex of children		3.1		0.1		1.7
Male	1,015(113)		464(8.8)		1,479(10.4)	
Female	994(12.2)		429(8.7)		1,423(10.9)	
IPV		1.1		0.8		1.9
No	418(10.6)		219(8.25)		637(9.65)	
Yes	125(11.7)		66(9.3)		191(10.8)	
Husband income		11.5**		11.7**		11.9
Same as wife's income	65(8.5)		54(7.8)		119(8.2)	
Less than wife's income	59(11.6)		57(12.8)		116(12.1)	
More than wife's income	1,040(12.6)		480(8.18)		1,520(10.8)	
Partner education		84.9***		39.3***		171.9***
None	1,049(13.3)		178(11.5)		1,227(12.9)	
Primary	313(11.7)		142(9.6)		455(10.9)	
Secondary	575(8.5)		475(7.0)		1,050(7.8)	
Wealth index		79.1***		62.2***		192.4***
Poor	1,437(12.8)		163(11.2)		1,600(12.6)	
Middle	416(10.7)		256(11.7)		672(11.1)	
Rich	247(7.3)		507(7.0)		754(7.13)	
Living Child		121.3***		64.5***		191.7***
None	119(7.6)		45(6.4)		164(7.2)	
1--3	777(9.3)		372(6.8)		1,149(8.2)	
4--6	887(13.8)		391(10.8)		1,278(12.7)	
7+	317(14.9)		118(11.9)		13.9(13.96)	
Region		177.3***		123.6***		341.6***
North Central	346(9.5)		148(8.9)		494(9.3)	
North East	626(14.2)		136(11.3)		762(13.6)	
North West	813(13.4)		253(12.1)		1,066(13.1)	
South East	43(3.4)		77(3.5)		120(3.5)	
South south	159(7.8)		74(6.9)		233(7.5)	
South West	113(10.97)		238(9.2)		351(9.7)	

*$p<0.05$; **$p<0.002$; ***$p<0.001$*

dissolution rates compared to their urban counterparts. This finding supports earlier research with showed that the rural environment increased the propensity of marital dissolution[35,36]. This may be because the rural dwellers are more involved in certain traditional beliefs and practices, which make it easier for the men to divorce their wives and marry more than one wife. Some of these traditional practices revolve on how they resolve issues of infertility, accusation of infidelity, and inability of women to bear male children who will perpetuate the family lineage. Furthermore, the rural areas significantly had more respondents with no child sex preference while preference for sons was more pronounced in the urban areas. While the results contradicts previous research[11], which posited that rural population value sons more than their urban counterparts, it also agree with the study which indicated that recent studies have shown the existence of a generally balanced sex preference in sub-Saharan Africa[14]. This state of affairs may be because more rural men had more tendency of having more than one wife and these wives could have given birth to more male children, which make their preference for more male children to decline. On the other hand, more of the men in urban areas with western education and culture marry only one wife and this increases their quest for male children from their monogamous family, who are expected to carry on with their family name after their demise. Furthermore, community factors have been shown to influence individual variables that affect marital dissolution[14]. In our study, the community variable of rural-urban residence agrees with the above findings as variations existed in the manner religion, wealth index, sex composition of children, and sex preference predicted the occurrence of marital dissolution. For instance, the findings of this study showed that generally, the existence of more girls than boys increased odds of marital dissolution. As noted earlier, more premium is usually placed on male children in Nigeria as they seen as vehicles of perpetuation of the family name and lineage. In addition, the variations in culture between rural and urban areas determine and influence the tendency and practice of marital dissolution. In this context, most men in urban areas who have one wife may find it more difficult to divorce their wives as against the rural men who can

marry more than one wives and could find it relatively easier to divorce any of them and marry another.

From the results of this study, older women were more associated with increased likelihood of dissolution in both the rural and urban areas and this supports previous researches that found that older women face greater risks of marital dissolution[12-13]. This is because, the affection men have for them when they were much younger may start to wane as the women gets older. In addition, if a woman gets older and do not have children or have children which the husband do not prefer, the husband will likely get a younger woman to bear him children and this may contribute to marital dissolution among older women. Intimate partner violence has been identified as a predictor of marital dissolution[14,39]. Our findings also agree with these earlier studies as women who experienced intimate partner violence had increased odds of marital dissolution in our study area. This may be attributed to the fact that the women will be scared of such violence and may look for way to stay safe and alive. As such, some may go to the extent of terminating the union for their own safety especially when the IPV threatens their health and lives. Polygamous unions and decrease in the number of living children in a family, have been identified as causes of marital dissolution[14] and our results supports these assertions as women in polygamous union showed greater propensity of experiencing marital dissolution. In this context, since the men have more than one wife, they may not hesitate to send out any of the wives who they think has become troublesome as they still have other women in the union they can fall back on and who will take care of them. In addition, our results showed that increase in the number of living children decreased the odds of marital dissolution. As the number of living children decreases, it may also lead to the death of preferred children. When this is coupled with the fact that the women may have gotten older or reached menopause, the men will more likely divorce the older women and marry younger women who could bear them more children to replace the lost children. Our results showed variations in the way regions of residence predict marital dissolution. While for instance, the North East region was consistently associated with

Table 4: Predictors of marital dissolution in Nigeria

Variables	Rural Pop. Model AI Odds[95% CI]	Rural Pop. Model AII Odds[95% CI]	Urban Pop. Model B1 Odds[95% CI]	Urban Pop. Model BII Odds[95% CI]	Total Pop. Model CI Odds[95% CI]	Total Pop. Model CII Odds[95% CI]
Prefer: None	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**
More boys	0.84[.74-.98]*	0.53[.34-.83]**	0.67[.53-.82]***	0.62[.37-1.1]	0.77[.68-.86]***	0.57[.41-.80]**
More girls	0.82[.69-.96]**	0.92[.59-1.4]	0.94[.74-1.2]	1.26[.74-2.1]	0.84[.74-.97]*	1.06[.76-1.4]
Education: None		**1.00**		**1.00**		**1.00**
Primary		1.62[.97-2.7]		0.71[.33-1.5]		1.28[.84-1.9]
Post primary		0.69[.34-1.4]		0.83[.39-1.8]		0.87[.54-1.4]
Age (Years):15-24		**1.00**		**1.00**		**1.00**
25-34		1.94[.97-3.9]		1.84[.64-5.3]		1.75[.99-3.1]
35+		4.04[1.9-8.4]***		3.07[1.0-9.0]*		3.34[1.8-6.0]***
Intimate partner violence: No		**1.00**		**1.00**		**1.00**
Yes		1.62[1.1-2.5]*		0.90[.52-1.5]		1.26[.90-1.8]
Employed : No		**1.00**		**1.00**		**1.00**
Yes		0.80[.39-1.2]		1.17[.34-4.1]		0.85[.47-1.5]
Religion: Christianity		**1.00**		**1.00**		**1.00**
Islam		1.16[.63-2.1]		1.72[.98-3.0]		1.48[.99-2.2]
Traditional		0.50[.06-4.5]		3.27[.26-40.8]		1.01[.21-4.9]
Husband income: same as wife's		**1.00**		**1.00**		**1.00**
Less than wife's		3.54[1.2-10.1]*		1.27[.42-3.8]		2.02[.95-4.3]
More than wife's		1.85[.77-4.5]		1.13[.52-2.5]		1.49[.84-2.6]
Husband's education: None		**1.00**		**1.00**		**1.00**
Primary		0.69[.40-1.2]		1.43[.63-3.2]		0.89[.57-1.4]
Post primary		1.03[.62-1.7]		1.06[.50-2.3]		0.99[.66-1.5]
Marriage type: Monogamy		**1.00**		**1.00**		**1.00**
Polygamy		2.47[1.7-3.6]***		3.74[2.4-5.9]***		2.86[2.2-3.8]***
Sex of children: Male		**1.00**		**1.00**		**1.00**
Female		0.95[;66-1.3]		1.24[.81-1.9]		1.03[.79-1.4]
Wealth Index: Poor		**1.00**		**1.00**		**1.00**
Middle		0.56[.34-.91]*		0.95[.46-1.9]		0.67[.46-.98]*
Rich		0.90[.49-1.7]		0.51[.24-1.0]		0.59[.38-.91]*
No of living children: 1-3		**1.00**		**1.00**		**1.00**

4-6 children	1.26[.15-10.6]	0.26[.03-2.7]	0.75[.16-3.5]
7+ Children	1.23[.14-10.7]	0.22[.02-2.5]	0.67[.14-3.2]
Region: North Central	**1.00**	**1.00**	**1.00**
North East	1.11[.57-2.2]	0.50[.20-1.3]	0.80[.48-1.3]
North West	2.24[1.2-4.2]*	0.41[.18-.92]*	1.22[.77-1.9]
South East	0.50[.13-1.8]	0.27[.10-.71]**	0.37[.17-.78]**
South South	1.06[.48-2.3]	0.99[.40-2.5]	1.05[.59-1.9]
South West	1.07[.50-2.3]	0.86[.47-1.6]	1.08[.68-1.7]
Residence: Urban			**1.00**
Rural			0.84[.60-1.2]

*p<0.05; **p<0.002; ***p<0.001

increased odds of marital dissolution in both the rural and urban areas, the South East region was consistently associated with decreased odds of marital dissolution in both the rural and urban areas. These results are also in agreement with earlier studies which highlighted the influence of locational factors on marital dissolution[14,35,36]. The reason for this could also be due to differences in the socio-cultural and environmental practices and factors existing in different regions. These varying factors could lead to differences in the culture and traditions, as well as the socioeconomic status of the population, all of which usually have profound influence in people's way of life and marital stability.

Conclusion and Recommendations

The findings of this study show that in Nigeria there existed significant differences in marital dissolution between urban and rural areas. Thus, the study found that marital dissolution occurred significantly more in the rural than in the urban areas. In addition, rural-urban differences in place of residence and sex preference significantly affected marital dissolution. More respondents also indicated no child sex preference while preference for male children were found more in the urban areas compared to the rural areas. Place of residence (rural/urban) also influenced the predictors of marital dissolution while sex preference generally increased the odds of marital dissolution. Generally, the study also found out older women, women who had experienced IPV, household with more female children, polygamous unions, women who had only primary education, and some regions of residence increased the likelihood of marital dissolution. Based on the outcome of this study, anti-dissolution enlightenment programmes and strategies that reduce incidence of IPV should be pursued, especially in urban areas and in regions with relatively high levels of marital dissolution. Efforts should be made to ensure that women achieve higher levels of education as a mitigate measure against marital dissolution as women with post-primary education showed less likelihood of

experiencing marital dissolution. Furthermore, enlightenment campaign highlighting that female children are as useful as male children should be implemented. Finally, since religiosity exerts influence on marital dissolution, religious leaders should use the religious medium to dissuade couples from marital dissolution.

Limitation

The dataset lacks data on the number of marital dissolution experienced by the women, which could have made it possible to compare how sex preference affect the number of marital dissolution.

Acknowledgements

Ethics approval and consent to participate

This study is a secondary data analysis of the NDHS, which is publicly available, approval was sought
from MEASURE DHS/ ICF International and permission was granted for this use. The original DHS data
were collected in conformity with international and national ethical guidelines. Written consent was obtained from mothers/caregivers and data were recorded anonymously at the time of data collection. More details regarding DHS data and ethical standards are available at: http://dhsprogram.com/data/available-datasets.cfm

Consent for publication

Not applicable

Availability of data and materials

Data for this study were sourced from Demographic and Health surveys (DHS) and available here: http://dhsprogram.com/data/available-datasets.cfm.

Competing interests

The authors declare that they have no competing interests.

Funding

The funding for this research was from the Demography and Population Studies Programme, Schools of Public Health and Social Sciences, University of the Witwatersrand, South Africa.

Authors' contributions

COO conceived the study. COO and CKA were involved in the study design and data analysis. CKA reviewed the literature and prepared the first draft of the manuscript. All authors read and approved the final manuscript.

References

1. Bedard K and Deschênes O. Sex preferences, marital dissolution, and the economic status of women. Journal of Human Resources 2005, 15, 411–434.
2. Katzev AR, Warner RL, and Acock AC. Girls or boys? Relationship of child gender to marital instability. Journal of Marriage and the Family 1994, 56, 89–100.
3. Dahl GB and Moretti E. The demand for sons. Review of Economic Studies 2008, 75, 1085–1120
4. Ananat EO and Michaels G. The effect of marital breakup on the income distribution of women with children. Journal of Human Resources 2008, 18, 612–629
5. Lungberg S. The Division of Labour by New Parents: Does Child Gender Matter? Working Paper 2005.
6. Barnett RC and Baruch GK. Determinants of Fathers' Participation in Family Work. Journal of Marriage and the Family 2006, 49: 29–40.
7. Belkin L. Motherlode: Do daughters cause divorce? 2010 [Web log]. Retrieved from http://parenting.blogs.nytimes.com/2010/09/07/do-daughters-cause-divorce/
8. Clark-Flory T. More daughters, more divorce. Salon, 2010. Retrieved from http://www.salon.com/2010/09/07/daughters_divorce/
9. Hutchison C. Couples with daughters more likely to divorce. ABC News, 2010. Retrieved from http://abcnews.go.com/Health/Wellness/daughters-breed-divorce-boys-blessing-daughters curse/story?id=11804444
10. Kelly AE. Psychology today insight: Why parents of girls divorce more: Is it really better to have a boy? Psychology Today, 2010. Retrieved from http://www.psychologytoday.com/blog/insight/2010 08/why-parents-girls-divorce-more
11. Agbor IM and Gyong JE. Male Preference and Marital Stability in Cross River State, South South Nigeria. IOSR Journal of Humanities and Social Science (IOSR-JHSS), 2014, 19 (10): 17-24
12. Bose S and South SJ. Sex composition of children and marital disruption in India. Journal of Marriage and Family 2003, 65(4): 996–1006.
13. Xu Q, Yu J and Qiu Z. The impact of children on divorce risk. The Journal of Chinese Sociology *2015,* 2(1), 1–20. DOI:10.1186/s40711-015-0003-0.
14. Odimegwu CO, Somefun OD and De Wet N. Contextual determinants of family dissolution in sub-Saharan Africa. Development Southern Africa 2017 , 34(6): 721-737. DOI:10.1080/0376835X.2017.1310029
15. Goldberg RE. Family instability and early initiation of sexual activity in Western Kenya. Demography 2013a, 50(2), 725–50. DOI:10.1007/s13524-012-0150-8
16. Goldberg RE. Family instability and pathways to adulthood in Cape Town, South Africa. Population and Development Review 2013b, 39(2), 231–56.
17. Therborn G (Ed.). African families in a global context. Nordic Africa Institute, Gothenburg, 2004.
18. Teachman J. Stability across cohorts in divorce risk factors. Demography 2002, 39(2): 331-352. DOI:10.1353/dem.2002.0019.
19. Wu L and Musick K. Stability of Marital and Cohabiting Unions Following a First Birth. Population Research and Policy Review 2008, 27(6): 713-727. DOI:10.1007/s11113-008-9093-6.
20. Rogers SJ. Dollars, dependency, and divorce: Four perspectives on the role of wives' income. Journal of Marriage and the Family 2004, *66*(1): 59-74. DOI:10.1111/j.1741 3737.2004.00005. x.
21. Bocquier P, Madise NJ and Zulu EM. Is there an urban advantage in child survival in sub-Saharan Africa? Evidence from 18 countries in the 1990s. Demography 2011, 48(2): 531- 558.
22. Beaujouan E and Bhrolcháin M. Cohabitation and Marriage in Britain since the 1970s. Population Trends 2011, 145:35-59
23. Sentse M, Ormel J, Veenstra R, Verhulst FC and Oldehinkel AJ. Temperament moderates the impact of parental separation on adolescent's mental health. Journal of Family Psychology 2011, 25:97-106.
24. Bocquier P, Madise NJ and Zulu EM. Is there an urban advantage in child survival in sub-Saharan Africa? Evidence from 18 countries in the 1990s. Demography 2011, 48(2): 531- 558.

25. *Wilson BH and Smallwood S. The proportion of marriages ending in divorce." **Population Trends 2008, 131: 28-36.***

26. Grant MJ and Soler-Hampejsek E. HIV risk perceptions, the transition to marriage, and divorce in southern Malawi. Studies in Family Planning 2014. 45(3): 315-337. PMC4285452

27. Tach L and Edin K. The Compositional and Institutional Sources of Union Dissolution for Married and Unmarried Parents in the United States. Demography 2013, 50:1789–1818. DOI 10.1007/s13524-013-0203-7

28. Salami SO and Bakare FO. Effect of childlessness and marital stability on Nigerian attitude towards work. African Journal of Labour Studies 2001, 3(1): 29-41

29. Adegoke TG. Socio-cultural Factors as Determinants of Divorce Rates among Women of Reproductive Age in Ibadan Metropolis, Nigeria. Studies of Tribes and Tribals 2010, 8(2): 107-114, DOI: 10.1080/0972639X.2010.11886617

30. Ushie AM, Enang EE and Ushie CA. Implications of Sex Preference for Population Growth and Maternal Health in Obudu and Obanliku, CRS, Nigeria. Academic Research International 2013, 3: 492-501

31. Fayehun OA, Omololu OO and Isiugo-Abanihe UC. Sex of Preceding Child and Birth Spacing among Nigerian Ethnic Groups. African Journal of Reproductive Health 2011, 2:79-90

32. Inyang-Etoh EC and Ekanem AM. Child-sex preference and factors that influenced such choices among Women in an obstetric population in Nigeria. Open Access Library Journal 2016, Vol. 3: e3005. http://dx.doi.org/10.4236/oalib.1103005

33. Ohagwu CC, Eze CC, Eze JC, Odo MC, Abu PO and Ohagwu CI. Perception of Male Gender Preference among Pregnant Igbo Women. Annals of Medical and Health Sciences Research 2014, 4: 173-178. http://dx.doi.org/10.4103/2141-9248.129027

34. Rai P, Pandel IS, Ghimire A, Pokharel PK, Rijal R and Niraula SR. Effect of Gender Preference on Fertility: Cross Sectional Study among Women of Tharu Community from Rural Area of Eastern Region of Nepal. Reproductive Health 2014, 11, 11-15.http://dx.doi.org/10.1186/1742-4755-11-15

35. Xu Q, Yu J, and Qiu Z. The impact of children on divorce risk. The Journal of Chinese Sociology 2015, 2(1): 1–20. DOI:10.1186/s40711-015-0003-0

36. Odimegwu CO, Akinyemi JO, and De Wet N. Premarital birth, children's sex composition and marital instability among women in sub-Saharan Africa. Journal of Population Research 2017, 34(4): 327-346

37. Lyngstad TH. Does community context have an important impact on divorce risk? A fixed effects study of twenty Norwegian first-marriage cohorts. European Journal of Population / Revue européenne de Démographie, 2011 27(1), 57–77. DOI:10.1007/s10680-010-9226-6

38. Thiombiano BG, LeGrand TK. and Kobiané J-F (2013). Effects of parental union dissolution on child mortality and child Schooling in Burkina Faso. Demographic Research 2013, 29: 797–816.

39. Akinyemi JO, Odimegwu CO and Banjo OO. Dynamics of maternal union dissolution and childhood mortality in sub-Saharan Africa. Development Southern Africa 2017, 34(6): 752-770. DOI: 10.1080/0376835X.2017.1351871.