

Gender Equality and Fertility Transitions in Africa

By

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Abstract

What role has gender equality played in fertility transitions in Africa? This article addresses this and other questions with a focus on the fertility levels of two selected countries in Africa. Using Demographic and Health Surveys datasets of Nigeria (2008) and Kenya (2008-09), the article examines the relationship between the current level of gender systems and fertility transitions in Africa. The prospects for future decline in fertility levels in the selected countries are also discussed.

Keywords: fertility, gender equality, transition, Africa

Introduction

Fertility, as a component of population change, has received much attention from several researchers (e.g. Eastwood & Lipton, 2011; Ibisomi et al 2011; McClellan et al 2010; Lutz, 2010; Ijaiya et al, 2009; Iliyasu et al 2009, Caldwell and Caldwell 2002; Odimegwu, 1998) . Meanwhile, the problem of low fertility is the primary concern in the developed nations, whereas, high fertility has been the challenge in the developing world. The moot point, however, is that fertility in either direction – high fertility or low fertility – is an issue of concern. However, while fertility has continued to decline in most parts of the developed world, even to the point of below replacement fertility level of 2.1 in some countries (Mason, 2001); having a large number of children is still the norm in some societies in many sub-Saharan African countries (Odimegwu and Zerai, 1996; Izugbara and Eze, 2010). Tsui (2001) noted that all the countries in the sub-Saharan Africa have common problems associated with controlling high population growth rates as well as high fertility. Mason (2001) opined that the timing and onset of fertility transition in any society is influenced by the type of gender and family systems in that society.

However, many countries in Africa are already witnessing demographic changes. Essentially connected to these changes are the declines in mortality rates and modest declines in total

fertility rates from an average of 5.4 children per woman to 3.5 in 1990-95 period (United Nations, 1998). Also, motivations and means to limit the family size have risen. A number of other issues such as socio-economic factors, cultural norms and practices also play significant roles in shaping the demographic processes in the continent.

Specifically, the gender systems in a society play significant roles in fertility transition. Mason (2001) defined gender systems as “a set of beliefs and norms, common practices, and associated sanctions through which the meaning of being male and female and the rights and obligations of males and females of different ages and social statuses are defined.” The author noted that gender systems can significantly influence fertility decline. However, this largely depends on the stage of gender revolution a nation has attained. For instance, historically, in most of the traditional African societies, the husbands control the fertility decision-making process, while the wives are responsible for the care and maintenance of their children (Caldwell and Caldwell, 1988). Male dominance in gender issues is considered to be a major factor militating against the acceptance and use of contraception by women in many African societies. Also, violence against women is an issue closely linked with male dominance.

Considering gender systems revolution in Africa, the effects of inequality for women are manifested in different ways. While women are increasingly becoming autonomous in many societies, women in many African societies are yet to gain the autonomy that would enable them to make decisions on the number of children they want and on other important matters that affect their wellbeing. Decision-making about fertility is often controlled by the husbands, who mostly do not experience the burdens of high fertility. Thus, the relative position of a woman in a family is closely associated with the fertility level of that family. Morgan and Niraula (1995:545) opined that “in strong patriarchal societies, women’s only avenue to status and security may be

motherhood". This assertion is corroborated by Izugbara and Eze's (2010) study which found that women in Northern Nigeria are giving birth to so many children purposely to prevent their husbands from divorcing them or to inhibit the husband's tendency to engage in polygynous marriage. Lower status among the women has been associated with higher fertility; and preference for sons is also regarded as a mechanism associating gender inequality with fertility (Morgan and Niraula, 1995).

Besides, women in many African societies have the perception of being their husbands' property. The payment of dowry and bride price (Anderson 2007, Maitra, 2007) in many African societies strengthened this perception that women are husband's property once the bride price is paid. Their perceived primary role of childbearing is central in fertility transition. In addition, Miettinen et al (2011) noted that inequality in educational attainment between men and women is also crucial in shaping the effect of gender attitudes of men and women regarding fertility intention. Also, the widespread practice of polygyny and the resultant disproportionate bearing of costs of childrearing by the women in many societies also play vital roles in fertility transition process (Mason, 2001). Thus, these factors have constituted impediments to gender systems revolution and consequently slowed down the process of transition to low fertility regime in many sub-Saharan African countries. Mason (2001) again noted that these factors may explain the reasons why the sub-Saharan African countries are about the last to experience the fertility transition.

Nonetheless, there have been considerable improvements in African gender systems and demographic processes in the recent time. The demographic literature is replete with evidence of changes that are taking place in the developing world. These include improvement in female education (Martin, 1995; McDonald, 2000), decrease in family size due to unmet fertility desires

(Ibisomi et al, 2011; Cohen et al, 2003; Garenne and Joseph, 2002), and considerable reductions in childhood mortality (GSS et al, 2009; Black et al, 2003, Jones et al, 2003) , increased female mobility and feminization of migration (Yinger 2011 et al, 2006; Adepoju, 2005; Todaro, 1997). Also, female labour force participation rate is increasing due to increased education and more job opportunities for women (McDonald, 2000). It is reasonable to assume that increased women education and labour force participation has also resulted in improved social status as well as increased control of resources for women.

Further, the International Conference on Population and Development (ICPD 1994) Programme of Action (United Nations, 1995) offered key recommendations for the attainment of improved quality of life. The empowerment of women is central in all the recommendations. These include: women empowerment and removal of gender inequalities in education. The programme also specified men's roles in bringing about gender equality through equal participation of men and women in household responsibilities and in society at large. However, to what extent has ICPD programme of Action influenced fertility transition through gender systems revolution in Africa is not known. The relationship between present level of gender equality and fertility transition in Africa is also not known. This paper thus aims to address this knowledge gap by exploring the relationship between gender equality and fertility transition in Africa.

Data Source and Methods

This study draws on 2008 Nigeria Demographic and Health Survey (NDHS) and 2008-09 Kenya Demographic and Health Survey (KDHS). Both surveys were conducted in 2008 (KDHS fieldwork extended to early 2009) to elicit information on demographic and health indicators at the national and regional levels. The primary sampling unit (PSU) which was regarded as a cluster for the 2008 NDHS and 2008-09 KDHS is defined on the basis of Enumeration Areas (EAs). Samples for the two surveys were drawn using stratified two-stage cluster design consisting of 888 clusters in Nigeria (NPC & ICF Macro, 2009); and 400 clusters in Kenya (KNBS and ICF Macro, 2010). Data were gathered from 33,385 women age 15-49 and 15,486 men age 15-59 in Nigeria. Also, a total of 8,444 women age 15-49 and 3465 men age 15-59 were interviewed in the Kenya 2008-09 DHS.

In order to capture the present level of gender system and as it influences fertility transition in Africa, we undertake analysis of datasets of two countries – Kenya and Nigeria – which are at different levels of fertility transition. Thus, while total fertility rate (TFR) has plummeted in Kenya, Nigeria is still lagging behind in the demographic transition process. For instance, levels and trends of fertility in Kenya indicate a continuous decline in total fertility rates (TFR) from 8.1 in 1975-78 period to 5.4 in early 1990s; and later to 4.6 in 2006-08 period (KNBS & ICF Macro, 2010). On the other hand, fertility has only marginally declined in Nigeria from TFR of 5.9 in 1991 to 5.7 in 2003 (NPC & ICF Macro, 2009). Again, between 2003 and 2008, Nigeria fertility level has remained constant at TFR of 5.7.

Further, to assess the important women autonomy characteristics, analysis covered all the women of childbearing age (15-49) irrespective of whether they have given birth or not. The outcome variables in this study include: fertility intention and children ever born (CEB) (for those women who have given birth). The selected explanatory variables are socio-economic variables – education, occupation, religion, wealth index; demographic variables – current age, rural/urban residence, age at marriage. Other important variables of interest include: family structure, women's perception about wife-beating, women decision-making autonomy on: (1) contraceptive use, (2) number of children, (3) control of household resources, (4) health-care services utilization/getting permission to seek care and (5) household purchase.

Three levels of analysis – univariate, bivariate and multivariate are undertaken. First, percentage distribution of respondents' background characteristics is done at the univariate level. Second, chi-square test is employed to examine the relationship between the outcome variables and the selected explanatory variables. Third, at multivariate level, logistic regression analysis is also done to examine the effect of present level of gender systems on fertility level. We use 'children ever born' and 'fertility preference' to measure present and future fertility levels respectively. Also, women's decision-making autonomy variables stated above are used to measure present level of gender systems. Data were analysed using STATA software (version 11.1).

Thus, the questions that were addressed in this study include: (1) what is the present level of gender system in Africa? (2) Is fertility level of women with greater autonomy lower than that of their counterparts with lesser autonomy? (3) To what extent does gender equality explain fertility decline in the continent?

Results

Background Characteristics

The respondents were predominantly young women within the age range 14-24 years (38% in Nigeria and 42% in Kenya). This may be adduced to the fact that sub-Saharan African populations are mainly youthful with a broad-based population pyramid. The age at marriage of the women thus indicates that, in both countries, more than two-thirds had got married before their twentieth birthday. This again confirms the high prevalence of teen marriage and the resultant high rates teenage pregnancy in many countries in the continent (NPC & ICF Macro, 2009). Meanwhile, the results also revealed that illiteracy rate was higher in Nigeria compared to Kenya. As shown in Table 1, about 2 in 5 women had no formal education in Nigeria as against only 14% in Kenya. The findings indicate that universal primary education of girl child was almost achieved in Kenya as the majority of the women had had primary education as against just only 1 in 5 women in Nigeria. However, enrolment and retention of girl child in school was still at the lowest ebb as only 8% of the women had higher education in both countries. The respondents were predominantly Christians in Kenya (82%) and were slightly more than half in Nigeria. Majority of the women in both countries were living in the rural areas. The results also indicate that unemployment rate was high among the respondents as more than 2 in 5 of the women were not working in both countries. Among those who were working, just 6% were engaged in professional/technical/managerial work in Nigeria as against about one-third in Kenya. Meanwhile, women were predominantly petty traders or farmers in both countries. Also, a consideration of wealth index shows that more than 2 in 5 women were living in poverty in Nigeria while a little above one-third were categorized as poor in Kenya.

Table 1: Percentage distribution of respondents according to background characteristics

Characteristics	Nigeria (n=33,385)	Kenya (n=8,444)
Current age		
14-24	38.02	41.58
25-34	32.53	30.83
35+	29.45	27.59
Age at Marriage		
<14	27.67	10.64
15-19	44.80	50.63
20-34	27.13	38.30
35+	0.40	0.44
Level of Education		
None	39.66	14.71
Primary	19.74	52.16
Secondary	32.66	24.68
Higher	7.93	8.46
Religion		
Christianity	51.79	81.59
Islam	46.60	16.21
Traditionalist	1.61	2.20
Place of residence		
Urban	31.42	30.97
Rural	68.58	69.03
Wealth index		
Poor	42.24	35.33
Middle	19.72	17.23
Rich	38.05	47.44
Current working status		
Not working	41.30	46.58
Currently working	58.70	53.42
Occupation		
Professional/tech/managerial	6.09	32.15
Clerical/sales	46.26	13.02
Agric./service/manual worker	47.66	54.82
Total	100.0	100.0

Children ever born (CEB) and fertility intention

Table 2 presents the percentage distribution of respondents by children ever born (CEB) and fertility intention. As shown in the table below, Nigeria data indicate that more than half of the women had ever given birth to 2 children or less. Meanwhile, 30% reported they had ever given birth to 5 or more children in Nigeria as against only 22% with CEB of five or more children in Kenya. This result perhaps indicates an onset of fertility transition in Kenya compared to Nigeria which is still lagging behind in the demographic transition process.

In addition, an examination of respondents' future fertility intention reveals that a very high proportion of women (82% in Nigeria, 61% in Kenya) expressed their willingness to have more children. Again, Kenya data indicate that fertility will continue to decline gradually in the near future with about 2 in 5 women reporting their unwillingness to have another child. Conversely, the Nigeria data show no serious prospects for future fertility decline as less than 1 in 5 women reported their unwillingness to have more children.

Table 2: Percentage distribution of respondents by children ever born (CEB) and fertility intention

Variable/category	Nigeria (n=33,385)	Kenya (n=8,444)
Children ever born (CEB)		
Less than 3 children	50.35	56.08
3-4 children	19.44	21.61
5 or more	30.21	22.31
Fertility intention		
Want no more children	81.65	61.28
Want another child	18.35	38.72
Total	100.0	100.0

Gender equality in contemporary African settings

Table 3 presents the percentage distribution of respondents by women autonomy characteristics. On the question regarding decision-making on contraceptive use, 18 per cent of Nigerian women were relying on their husband's decision on the type of family planning methods to adopt. Another 64 per cent reported that decision about contraceptive use was a joint decision between them and their husbands. Meanwhile, Kenya data indicates greater women autonomy as more than one-quarter could make a personal decision on contraceptive methods to use. Also, on the question of whether a woman can refuse sex, about 2 in 3 women in Nigeria (59%) reported they could refuse their husband's request for sex if they were indisposed as against the remaining 41 per cent who could not. Table 3 also shows that a higher proportion of Nigeria women (47%) than Kenya's (25%) reported that their husbands desired more children than they. This again is an indication that Kenya will apparently continue to experience fertility decline. But, Nigeria's fertility level will either continue to remain constant or even rise beyond the present level considering this finding that Nigeria men remain predominantly pronatalist; and majority of their wives were not sufficiently empowered to make fertility decisions.

Considering the question of who makes decision on women's health and matters relating to health care seeking, Kenya data indicates that more than half of the women reported that decision-making regarding their health and also to seek health care was a joint decision of them and their husband. Conversely, Nigeria data showed a different picture as a very high proportion of respondents (58%) maintained that it was their husbands' role to make sole decision about their own health care needs. Also, women in Nigeria had lesser autonomy than their Kenyan counterparts when it comes to decision-making about household purchases. For instance, about two-thirds of Nigeria women had to reply on their husbands to make decision on the household

purchases. On the other hand, Kenyan women had greater autonomy as more than half of them could jointly make decision with their husband on the household purchases. Further, women in Nigeria do not have much freedom of movement as their counterparts in Kenya; thus laying credence to Lewis' (1998) earlier findings which suggest that women in Northern Nigeria were mainly controlled and supervised by their husbands in a secluded environment. This study reveals that a predominantly high proportion of Nigerian women (63%) relied absolutely on their husbands to make decision for them on where and when to make visits. Meanwhile, only 28% of their Kenyan counterparts relied on their husbands for such visit decisions; and 45% of them could jointly make decision with their husbands on visit decisions.

A consideration of how husbands' income is spent shows that more than half of Kenyan women (52%) were sufficiently empowered to make joint decision with their husbands on how to spend husbands' income. But, Nigeria data indicates a greater gender inequality regarding husbands' income with only one-quarter reporting that they were involved in joint decision with their husbands regarding how husband's money is spent. This finding again shows an abysmal scenario of the present level of gender system in Nigeria as majority of women were less empowered to be at par with their husbands.

Thus, literature has shown that women who have positive perception of being their husbands' property once their dowry is paid will likely suffer greater gender inequality. Considering such perceptions, the results of this study again showed that greater inequality was found among Nigerian women in all respects. For instance, the findings showed that 35% of Nigerian women as against 31% in Kenya reported that a man is justified to beat his wife if the wife goes out without husband's permission. Another 18% of women in Nigeria and 13% in Kenya reported that a man could beat his wife if she burns the food. In addition, the same proportion of Nigeria and Kenyan women (30% each) reported that husbands could beat their wife if she dares argue

with him on any issue. Further results show that high proportions of women, in both countries, are in support of husbands beating the wife if she neglects the children or if the wife refuses to have sex with the husband. These findings indicate that there still exist very wide gender disparities in the contemporary African settings; and evidence of greater gender inequality was found in Nigeria relative to Kenya. Worse still, wives are still seen as husbands' property, not only by men but also even by the wives themselves.

Table 3: Percentage distribution of respondents by women autonomy characteristics

Characteristics	Nigeria	Kenya
Decision maker for using contraceptives		
	(%)	
Mainly respondent decision	18.15	25.81
Mainly husband decision	17.78	13.25
Joint decision	64.08	60.94
Can the respondent refuse sex?		
No	41.06	Na
Yes	58.94	Na
Desire for children		
Both want same	49.07	67.53
Husband wants more	46.83	24.63
Husband wants fewer	4.11	7.84
Who decides how to spend money?		
Respondent alone	65.41	43.14
Respondent and husband jointly	20.13	49.21
Husband alone	14.47	7.65
Final say on own health care		
Respondent has final say	8.69	26.40
Respondent and husband joint decision	33.76	45.15
Husband has final say	57.55	28.45
Final say on making large household purchases		
Respondent has final say	5.42	13.36
Respondent and husband joint decision	32.04	52.09
Husband has final say	62.54	34.54
Final say on visits to family or relatives		
Respondent has final say	10.35	23.36
Respondent and husband joint decision	43.79	50.61
Husband has final say	45.86	26.03
Final say on deciding what to do with money husband earns		
Respondent has final say	6.23	7.64
Respondent and husband joint decision	24.47	51.57
Husband has final say	14.47	40.79
Wife beating justified if she goes out without telling him		
No	64.79	69.40
Yes	35.21	30.60
Wife beating justified if she neglects the children		
No	66.81	60.13
Yes	33.19	39.87
Wife beating justified if she argues with him		
No	70.60	69.66
Yes	29.40	30.34
Wife beating justified if she refuses to have sex with him		
No	71.81	76.41
Yes	28.19	23.59
Wife beating justified if she burns the food		
No	82.10	87.47
Yes	17.90	12.53
Earns more money than husband/partner		
Earns more than husband	4.67	12.85
Less than husband	89.46	69.53
About the same	5.87	17.62

Na – not available

Gender equality and number of children ever born

Table 4 below presents the bivariate relationship between gender systems characteristics and the number of children ever born (CEB). As shown in the table, more than 2 in 5 of Nigerian women who could not make contraceptives decisions on their own had CEB of 5 or more. But Kenya data showed that one-third of this category of women had CEB of 5 or greater ($p < 0.05$). Findings also indicate a significant relationship between women's ability to refuse sex and number of CEB. A high proportion of women who were not sufficiently empowered to refuse sex were women of parity 5 or higher ($p < 0.01$).

A consideration of the relationship between the desire for children and number of CEB revealed that about half of Nigeria women and 39% of their Kenyan counterparts who lacked the decision-making power on the number of children to have also were women of high parity ($p < 0.01$). Analysis also revealed that, of the women who were not adequately empowered to make decision on how family income is spent, more than 2 in 5 of them had CEB of 5 or more in both countries ($p < 0.01$). Also, an examination of the relationship between CEB and household decision-making on a number of issues indicates very wide gender disparities between the husbands and the wives. Majority of women whom husbands make decision for, on their health related issues, belong to a very high parity group of having CEB of 5 children or more ($p < 0.01$). Also, both Nigeria and Kenya data showed that women who lacked the freedom of making personal decisions to visit families and friends tend to be high parity women.

Table 4: Percentage distribution of respondents by number of children ever born and according to selected women autonomy characteristics

Characteristics	Nigeria		Kenya	
	<5 children	5+	<5 children	5+
Decision maker for using contraceptives				
Mainly respondent decision	56.0	44.0	70.2	29.8
Mainly husband decision	58.1*	41.9*	66.3*	33.7*
Joint decision			75.2	24.8
Can the respondent refuse sex?				
No	71.7**	28.3**	Na	Na
Yes	62.4	37.6	Na	Na
Desire for children				
Both want same	66.7	33.3	77.2	22.8
Husband wants more	55.3**	44.7**	61.3**	38.7**
Husband wants fewer	63.4	36.6	70.1	29.9
Who decides how to spend money?				
Respondent alone	55.5	44.5	66.0	34.0
Respondent and husband jointly	61.0	39.0	74.4	25.6
Husband alone	58.7**	41.3**	56.7**	43.3**
Final say on own health care				
Respondent has final say	59.4	40.6	65.8	34.2
Respondent and husband joint decision	62.1	37.9	71.8	28.2
Husband has final say	59.6*	40.4*	67.2**	32.8**
Final say on visits to family or relatives				
Respondent has final say	59.4	40.6	64.0	36.0
Respondent and husband joint decision	61.0	39.0	71.3	28.7
Husband has final say	60.1	39.9	68.3**	31.7**
Earns more money than husband/partner				
Earns more than husband	53.9	46.1	65.4	34.6
Less than husband	57.4	42.6	70.9	29.1
About the same	56.6	43.5	70.9	29.1

*Significant at 5% level, **significant at 1% level, Na –not available

Gender Equality and Fertility Preference

Gender equality has been linked with fertility levels by many researchers (e.g. McDonald, 2000; Mason, 2001; Miettinen et al, 2011). Accordingly, the greater the gender equality the lower would be the expected fertility levels. Fertility preference thus measures the respondents' future fertility intention; that is, the desire either to have or not to have more children. Meanwhile, fertility intention of women or couples will determine to a very large extent the future fertility level of a country, and particular if the unmet fertility desires remain very low. The findings of this study however revealed that, 59% of Nigerian women whose husbands made sole decision on contraceptives use reported that they wanted more children as against the remaining 41% who wanted no more children. But, Kenya data depicts an opposite scenario as 59% wanted no more children as against the remaining 41% who desired more children.

Also, as shown in Table 5, of all the respondents who could not refuse sexual advances from husbands/partners, 4 in 5 reported that they wanted more children as against only 20% who did not desire more children ($p < 0.01$). An examination of the relationship between husband's desire for children and wife's fertility preference indicates that a very high proportion of Nigerian women (80%) whose husbands solely make decisions about number of children to have reported that they also wanted more children ($p < 0.01$). Kenyan data thus showed a lower proportion of women in such category compared to their Nigerian counterparts. This finding shows that women who mainly bear the burden of childbearing and childrearing were less empowered in Nigeria to decide on the number of children they would have capacity for. This finding also indicates that future fertility levels would be higher in Nigeria relative to Kenya.

In addition, a consideration of the relationship between respondents' decision-making autonomy and fertility preference also indicates that, among Nigerian women, 79% of those whose husbands solely make decision on how money is spent reported their desires for more children ($p < 0.01$). Further, studies have established that women and children require greater health needs than other categories of the population. Yet, this study established that overwhelmingly high proportion of women in Nigeria (84%) and in Kenya (66%) reported that their husbands have the final say on their health related matter. Worse still, women's desire for more children is significantly related to husbands' decision-making power on matters affecting the health care of their wives. Even in the core Islamic settings in Northern Nigeria, a wife in child labour dares not take decision on seeking medical assistance for baby delivery if the husband is not available to grant her permission. This scenario has been documented elsewhere (Lewis, 1998). Results further revealed a significant relationship between women's freedom and desire for more children ($p < 0.01$). Also, findings indicate that three-quarters of Nigerian women who earned less income than their husbands reported that they wanted more children ($p < 0.01$). This again may not be unconnected to women's desires to secure their homes by way of giving birth to so many children.

Table 5: Percentage distribution of respondents by fertility preference and according to selected women autonomy characteristics

Characteristics	Nigeria		Kenya	
	Want another	Want No more children	Want another	Want no more children
Decision maker for using contraceptives				
Mainly respondent decision	59.2	40.8	40.8	59.2
Mainly husband decision	58.5	41.5	39.8	60.3
Joint decision	58.6	41.4	42.7	57.3
Can the respondent refuse sex?				
No	80.2**	19.8**	Na	Na
Yes	84.0	16.0	Na	Na
Husband desire for children				
Both want same	75.6	24.4	50.0	50.0
Husband wants more	80.1**	19.9**	51.9	48.1
Husband wants fewer	69.9	30.1	48.0	52.0
Who decides how to spend money?				
Respondent alone	75.5	24.5	43.2	56.8
Respondent and husband jointly	68.0	32.0	47.6	52.4
Husband alone	78.9**	21.1**	42.4	57.6
Final say on own health care				
Respondent has final say	62.6	37.4	43.2	56.8
Respondent and husband joint decision	72.3	27.7	50.0	50.0
Husband has final say	84.3**	15.7**	65.5**	34.5**
Final say on visits to family or relatives				
Respondent has final say	64.7	35.3	46.4	53.6
Respondent and husband joint decision	74.3	25.8	51.0	49.0
Husband has final say	85.4**	14.6**	61.1**	38.9**
Earns more money than husband/partner				
Earns more than husband	62.7	37.3	43.4	56.6
Less than husband	75.9**	24.1**	46.9	53.1
About the same	62.2	37.8	39.9	60.1

*Significant at 5% level, **significant at 1% level, Na –not available

Multivariate analysis

Table 6 presents the results of logistic regression analysis assessing the relationship between the respondents' background characteristics and the number of children ever born (CEB). The results revealed that, in both countries, a significant positive relationship exists between educational attainment and the number CEB. Women with at least secondary education were less likely to have CEB of more than 4 children compared to their counterparts with primary or no education ($p < 0.01$). This finding is consistent with theoretical expectation because educated women are expected to marry late and start childbearing very late due to greater part of their life already spent in school.

Also, both Nigeria and Kenya data indicate that rural women had greater odds of giving birth to more children compared to their counterparts in the urban centres. It is thus confirmed that rural women suffer wider gender disparities compared to women in the urban centres. This is because urban women have access to quality education and resources which could sufficiently empower them to negotiate with their husbands on fertility decisions and other matters affecting their wellbeing. Further, Nigeria data again indicates that women who were economically engaged at the time of the survey were more likely to be higher parity women ($p < 0.01$). Conversely, economically engaged women in Kenya were less likely to have higher number of CEB relative to their counterparts who were not working at the time of the survey.

In addition, the odds of having more than four children decrease with increasing level of wealth index among Kenyan women. While women in the middle income category were less likely to have higher number of CEB in Kenya (odds: 0.51, $p < 0.05$); Nigerian women in middle income category were more likely to have higher parity (odds: 1.12, $p < 0.01$) compared to those in the

reference category (i.e. the poor). Also, respondents' current age and age at marriage were both significant predictors of number of CEB in both countries. Besides, odds of having more than four children decrease consistently as age at marriage increases. Women who married after their twentieth birthday were more likely to have fewer children compared to their counterparts who married earlier.

Table 6: Odds ratio from logistic regression showing the relationships between background variables and CEB

Variables	Nigeria	Kenya
Educational level		
Primary or none	1.00	1.00
Secondary or higher	0.51**	0.47**
Working status		
Not working	1.00	1.00
Currently working	1.20**	0.96
Place of residence		
Urban	1.00	1.00
Rural	1.12*	1.42**
Wealth index		
Poor	1.00	1.00
Middle	1.12*	0.51**
Rich	0.80**	0.29**
Religion		
Christianity	1.00	1.00
Islam	1.01	1.06
Traditionalist	1.12	1.02
Current age		
14-24	1.00	1.00
25-34	36.75**	24.55**
35+	263.5*	177.3**
Age at marriage		
15-19	1.00	1.00
20-24	0.54**	0.44**
25-34	0.17**	0.13**
35+	0.06**	0.93

*Significant at 5% level, **significant at 1% level

In addition, Table 7 presents the relationship between fertility intention and selected background characteristics of respondents. Findings showed that women who were currently working were less likely to desire more children in Nigeria (odds: 0.69, $p < 0.01$) and in Kenya (odds: 0.77, $p < 0.01$). This is expected as women who are economically engaged often play tripartite roles of being a mother, a wife and also a worker. Women in such category share their time in playing these three roles and ended up having fewer children compared to the unemployed women. This finding supports McDonald's (2000) assertion that women make stark choices between children and employment, and this eventually leads to some women having fewer children than they would ordinarily like to have. Another finding indicates that while rural women in Nigeria were more likely to desire more children ($p < 0.01$), women in rural Kenya were less likely to desire more children compared to those in the urban areas.

Considering household wealth index, in both countries, women in rich category were less likely to desire more children compared to those women in poor category. In addition, while the odds of the desire for more children decrease as respondents age decreases, the odds increase with increase in age at marriage. Further, the analysis showed that religion is a significant predictor of the desire for more children. For instance, in Nigeria, adherents of Islamic faith were about 3 times more likely to desire more children ($p < 0.01$). Also in Kenya, the Muslim respondents were more than 7 times more likely to desire more children compared to their Christian counterparts in the reference category ($p < 0.01$).

Table 7: Odds ratio showing the relationships between background variables and fertility intention

Variables	Nigeria	Kenya
Educational level		
Primary or none	1.00	1.00
Secondary or higher	1.10	1.10
Working status		
Not working	1.00	1.00
Currently working	0.69**	0.77**
Place of residence		
Urban	1.00	1.00
Rural	1.22**	0.87
Wealth index		
Poor	1.00	1.00
Middle	0.73**	0.75*
Rich	0.58**	0.86
Religion		
Christianity	1.00	1.00
Islam	2.65**	7.58**
Traditionalist	1.79**	2.7**
Current age		
14-24	1.00	1.00
25-34	0.14**	0.25**
35+	0.02**	0.49**
Age at marriage		
15-19	1.00	1.00
20-24	1.27**	1.29*
25-34	2.59**	2.22**
35+	9.32**	8.02

**Significant at 5% level, **significant at 1% level*

Discussions

Our results showed that women's contraceptive decision-making autonomy is significantly linked with the number of CEB and fertility intention. This finding is consistent with earlier findings by Hossain and others (2007) which established a significant association between fertility preferences and use of family planning method. Our findings thus revealed that the stronger the women's autonomy or ability to make contraceptive choices of their own the fewer the children ever born. This finding again supports Morgan and Niraula's (1995) observation that women with greater autonomy would act in the ways that benefit them and their level of autonomy will determine their choices of contraceptive use when they want no more children. Also, women who were appropriately positioned to refuse sex were found having fewer children relative to those who accept husband's sex advances at all time. Also significantly connected to parity level is the women's ability to make decisions on the number of children to have. Thus, unequal decision-making power between partners as earlier noted by Varga (2003) is established in this study as the bane of high fertility regime in many sub-Saharan African countries. Women who mainly carry the burden of childbearing are often ill-equipped to personally make fertility related decisions that will be to their advantage. Mason (2001) again established it that the disproportionate bearing of costs of childrearing by the women in many societies plays vital roles in fertility transition process.

Further, findings revealed that women are relegated on issues bordering decision-making on health needs and how family income is spent. Majority of these women whom husbands make decision for, on their health related needs, sadly belong to a very high parity group. Another important finding revealed that women in Nigeria do not have freedom of movement as their Kenyan counterparts. According to NPC & ICF Macro (2009), these women are predominantly

high parity women mostly found in the North-western zone of Nigeria; and they had the highest TFR (i.e.7.3) in the country. Such women have restricted movements, mainly live in purdah or seclusion and suffer the worst health challenges, thus corroborating Antai (2011) and Lewis' (1998) observations about the experiences of women in Northern Nigeria.

Worse still, majority of women whose husbands solely make decisions on how household income is spent reported that they wanted more children. This finding thus lends credence to earlier findings by Morgan and Niraula (1995); and Izugbara and Eze (2010) which suggest that womanhood and having many children would continue to be a source of security for the less empowered women in order to secure their homes. Our findings also showed that women with at least secondary education had fewer children compared to those with primary or no education. As earlier pointed out, educated women tend to spend many years in schools and tend to have delayed marriage as earlier observed by Odimegwu and Zerai (1996). Selvaratnam (1988) also noted that higher education among the women tends to postpone marriage and childbearing and consequently increases women's domestic power. Also, Miettinen et al (2011) recently observed that inequality in educational attainment between men and women is crucial in shaping the effect of gender attitudes of men and women regarding fertility intention. Hossain and colleagues (2007) also argued in support of our findings that husbands' preference for additional children wanes as wives' level of education increases. Another significant finding also showed that rural women were predominantly of high parity and majority of them desired more children. However, considering both the high rates of illiteracy in many sub-Saharan African countries and the fact that African population is predominantly rural (UNFPA, 2004); future fertility level will remain very high in most parts of the continent.

Gender Systems revolution and fertility transitions in Africa

The findings of this study suggest that Kenya has started to experience gender systems revolution and the unequal decision-making power relation between men and women is fast disappearing in the country. Many women are now better equipped to make informed choices and wise decisions regarding their health needs, fertility preference, number of children they want, household purchases, and on other matters affecting their wellbeing. Besides, many now possess freedom of movements to make personal visits to families and friends. As earlier noted, greater autonomy enables women to act in the ways that benefit them (Morgan and Niraula, 1995).

Thus, it can be reasonably argued that the onset of the so-called gender systems revolution in Kenya has also aided and hastened the era of demographic transition which had commenced in the country since early 1990s; thus supporting Mason's (2001) claim that gender systems revolution in a society greatly determines the timing of onset of fertility decline of such society. This study has established that the on-going gender systems revolution in Kenya plays a significant role in the Kenya's transition from a high fertility regime to an era of moderate fertility level. As earlier pointed out, Kenya's total fertility rate (TFR) has almost been halved from a TFR of 8.1 in 1975-78 period to 4.6 in 2006-08 period. Our results further established that most Kenyan women now have greater autonomy to make personal decisions on their reproductive health and sexual matters. For instance, findings showed that more women in Kenya can make decision on their contraceptive choices; they are better positioned to make fertility decisions on the number of children to have; they are sufficiently empowered to make informed decision about their health needs. In addition, our findings indicate that gender disparities between husband and wife are fast disappearing. More Kenyan women are now sufficiently empowered and have greater autonomy to make important household decisions such

as household purchases and decision on how money is spent in the household. Further results also indicate that because many Kenyan women now possess the decision-making power on the number of children to have, more women are now found in the low parity level of three or fewer children. If the on-going gender systems revolution is sustained in Kenya, it is certain that future fertility levels will continue to decline in the country and also in other African countries with similar experiences with Kenya.

On the other hand, a wide gender disparity still exists between men and women in Nigeria on virtually all aspects of reproductive health, sexual health and household matters. For instance, our findings indicate that majority of women in Nigeria lacked freedom and could not make personal decisions to visit families and friends. This finding corroborates Lewis' (1998) earlier findings which established that women, particularly those in Northern Nigeria, are often controlled and supervised by their husbands in a secluded environment. Besides, majority of women in Nigeria lacked the autonomy to make fertility related decisions. As earlier observed by Van de Walle and Meekers (1992), decision-making about fertility is often controlled by men who really do not experience the burdens of high fertility. Our findings established that most Nigerian women are less empowered to make decision on the number of children they would have capacity to bear. Also, most Nigerian women could not make decision on contraceptives use; rather, they often rely on their husbands' decisions. In addition, Nigerian women have lesser autonomy and there exists unequal power relation between them and their husbands. Majority of them are victims of domestic violence emanating from such unequal power relations as observed by (Okemgbo, et al, 2002); and many of them could not refuse husband's sexual advances even if they are indisposed. Varga (2003:160) rightly puts it that "gender ideals are grounded in traits that reinforce poor sexual negotiation dynamics".

Further, majority of women in Nigeria still lacked autonomy on a number of other issues such as: decision-making on household purchases and decision-making on how money is spent. Again, our findings revealed that majority of women in Nigeri have positive perceptions of being their husbands' property and consequently suffer a great deal of unequal power relation. A very high proportion of the women held the perception that a man is justified to beat his wife if the wife goes out without husband's permission, if she burns the food, if she neglects the children, if the wife refuses to have sex with the husband or if the wife argues with her husband. As earlier noted, many women still perceive themselves of being their husbands' property. This shows that a lot still has to be done to realize the ICPD's programmes of action in Nigeria and in many other sub-Saharan African countries with similar gender situations.

However, our findings also established a significant relationship between low status of women and high level of fertility, thus confirming Morgan and Niraula's (1995) findings which established a significant association between lower status among the women and higher fertility level. Women with primary or no education were significantly found in high parity group, thereby corroborating Hannum's (2005) study which found that high fertility rates correlates significantly with increase in illiteracy rates. Thus, considering that female education correlates significantly with better use of birth control and greater gender equality; and because women illiteracy rate still stood at 38% in Nigeria (NPC, 2006) future fertility level is expected to remain high in the country. Also, findings showed that rural women had higher odds of having many children compared to their counterparts in the urban centres. Again, considering that more than 60% of women in Nigeria reside in the rural areas (NPC & ICF Macro, 2009) and mainly suffer greater gender discriminations and disparities relative to those in the urban centres, there is indeed no serious prospect for fertility decline in the near future; not only in Nigeria but also in other sub-Saharan African countries with predominantly rural populations.

In addition, our findings indicate that Nigerian women found in the middle and poor income categories were significantly high parity women (i.e. had 5 or more children). Thus, with about 70% of Nigerians living below the poverty line (NPC, 2004), and considering our finding that high parity is significantly linked with low income women, the implication is that Nigeria's future fertility levels will continue to remain high. Other important findings such as early marriage among the women, high proportion of unemployed women as well as high proportion of Moslem women all have serious implications for Nigeria's future fertility levels. The future fertility levels would continue to remain high, not only in Nigeria but also in other sub-Saharan African countries that are profoundly gender stratified.

Conclusion

In conclusion, the implication of the findings of this study is that future fertility levels would continue to remain high, not only in Nigeria but also in other sub-Saharan African countries which are yet to attain such level of gender equality which Kenya has attained. Thus, 17 years after the conference was held in Cairo, Nigeria and many other sub-Saharan African countries have not really been successful in the implementation of the ICPD programmes of action. However, drawing from the experiences of the two countries selected for this study (Kenya and Nigeria) and which are at different levels of gender systems and fertility transitions, this study has demonstrated that by implementing the ICPD programmes of action (i.e. improving women's autonomy and status, removing gender inequalities in education and household decision-making, as well as improving reproductive and sexual health), several countries which are still held up in high fertility regime would be on their way to transit to low fertility era and those countries would indeed complete the stages of demographic transitions far quicker than anticipated.

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