

Correlates of Single Motherhood in sub-Saharan Africa Region

Nyasha Chadoka-Mutanda, Chidimma M Mbanefo

Demography and Population Studies Programme, Schools of Public Health and Social Sciences,
University of Witwatersrand, Johannesburg, South Africa

For correspondence: *Email: nchadoka@gmail.com; Phone: +27 73 302 4360; Address: Witwatersrand University Corner
Building 6th floor, room 620, corner Bertha and Jorissen street, Braamfontein Johannesburg*

Abstract

Despite the increase in the number of single mother families in sub-Saharan Africa as a result of family breakdown and increasing premarital child bearing little is known about the correlates of single motherhood in this region. Using the latest Demographic and Health Surveys data of four sub-Saharan Africa countries; Congo Brazzaville (2011), Gabon (2012), Namibia (2013) and Swaziland (2006-7) this study examines the correlates of single motherhood in the selected countries. The population of interest was women aged between 15 and 49 years who were either married or single and had at least one dependent child (<18 years) at the time of the survey. Multivariate binary logistic regression model was used for the identification of correlates of single motherhood in the selected countries. The results showed that the proportion of single mothers ranged between 27% in Congo Brazzaville and 53% in Namibia. Premarital child bearing was found to be the major cause of single motherhood in Gabon, Namibia and Swaziland whilst in Congo Brazzaville separation was the main reported cause of single motherhood. Age at first birth and number of living children emerged as the correlates of single motherhood across the four countries. Also factors such as religion, level of education, wealth index and place of residence were found to be significantly associated with single motherhood in some countries. This shows that single motherhood is prevalent and correlates vary across the region though some similarities can be observed in this region. Policies, programs and interventions should therefore focus on empowering single mothers and their children as a way of alleviating poverty and other negative health outcomes associated with this family structure. Also there is need for promoting protective behavior especially among adolescents to prevent unwanted pregnancies which often occur outside marriage.

Introduction

Globally, there has been an increase in the number of single parent families and approximately three quarters of these families are single mother families compared to single father families (González 2005). In Western countries the proportion of children who live in single mother families ranges between 1.5% in Belgium and 16.2% in America while in Sub-Saharan Africa the proportion of children who live in mother only families ranges between 10% in Nigeria and 34% in South Africa (Dlamini 2006). These families have emerged as result of the increase in two parent family breakdown due to divorce/separation or death of a spouse and other factors like non-marital childbearing, migration and personal choice(Allan, Hawker et al. 2001, Bigombe and Khadiagala 2003, Cherlin 2005, Moyo and Kawewe 2009, Dintwat 2010, Clark and Hamplová 2013). Clark and Hamplová (2013), pointed out that childbearing before marriage and marriage dissolution as a result of death/separation/death are the two major pathways which result in the formation of single mother families. Other studies have however shown that single motherhood is also emerging as result of individual choice where women choose to adopt or have children without marrying through insemination (Mannis 1999, Golombok and Badger 2010).

In sub-Saharan Africa region data on the prevalence of single motherhood is not readily available. However a recent study by Clark and Hamplová (2013) showed that the probability of becoming a single mother by the age of 45 as a result of out of wedlock childbearing or marriage dissolution ranged between 30% in Ethiopia and 60% plus in countries like Kenya, Malawi and Zimbabwe. About 50% of women in sub-Saharan Africa are a more likely to become single mothers as a result of marriage dissolution through divorce or death of a spouse (Clark and Hamplová 2013). The prevalence of HIV/AIDS related deaths among adults could be the

explanation of the high chances of becoming a single mother as a result of death of a spouse in sub-Saharan region (Moyo and Kawewe 2009).

Findings from other studies in sub-Saharan Africa have also indicated that single motherhood is common and an increasing family structure in some sub-Saharan Africa countries (Calvès 1999, Moyo and Kawewe 2009, Jordal, Wijewardena et al. 2013). Increasing divorce rates in some countries like Ghana (Takyi 2001, Kpoor 2013) Togo (Locoh and Thiriart 1995) and Malawi (Reniers 2003) is also evidence that single mother families are increasing in this region since in many cases women are always given the custodian of children. Studies on marriage patterns have also shown that marriage rates and the proportion of those in marriage are declining (Kalule-Sabiti, Palamuleni et al. 2007, Mhongo and Budlender 2013, Pazvakawambwa, Indongo et al. 2013). Premarital fertility is also high in this region though it varies from country to country (Garenne, Tollman et al. 2000, Garenne and Zwang 2006, Palamuleni and Adebawale 2014) and this usually results in single motherhood. In countries like South Africa about half of all live births by women aged between 12 and 26 years were contributed by never married women (Garenne, Tollman et al. 2000). Increase in age at marriage (Palamuleni 2010), increased economic opportunities for women, labour migration (Bigombe and Khadiagala 2003) have also been found to be associated with increased risk of single motherhood.

Despite the evidence from scientific research that single motherhood has become a global phenomenon very few studies have been done on the correlates of single motherhood in sub-Saharan Africa. A review by Adams (2004) showed that there has been an imbalance in family research as many studies have been conducted in Western countries compared to African countries. The review further revealed that very few comparative studies have been done in family research (Adams 2004).

The rise in single mother families in the sub-Saharan region is of concern because existing literature has documented that single motherhood negatively affects the wellbeing of the mother and the children as well as the society at large. Single mother families have been found to be vulnerable families compared to two parent families. Also, promotion of the health and wellbeing of women and children forms part of the key areas of most population policies that were developed after the 1994 International Conference on Population and Development.

Studies have shown that single mothers are more likely to be young mothers uneducated, unemployed or employed in low paying jobs and poor (Lipman, Offord et al. 1997, Dlamini 2006, Esteve, García-Román et al. 2012, Jordal, Wijewardena et al. 2013). It has however been noted that single mothers are not a homogenous group but a heterogeneous group as some studies have shown that this family structure is also common among educated and professional women and these are usually single mothers by choice (Berg-Cross, Scholz et al. 2004).

Furthermore, single motherhood has been found to be a predictor of morbidity and mortality among women and children. Single mothers are more likely to suffer from cardiovascular diseases and diabetes (Young, Cunningham et al. 2005), mental health problems such as depression and anxiety disorders (Brown and Moran 1997, Lipman, Offord et al. 1997, Hernández, Aranda et al. 2009) compared to partnered mothers. Children of single mothers are more likely to die before reaching the age of five (Clark and Hamplová 2013), to be malnourished/stunted (Gage, Sommerfelt et al. 1997, Gurmú and Etana 2013), have low school grades/ to drop out of school (McLanahan and Sandefur 1994, Steele, Sigle-Rushton et al. 2009). At adolescent level, teen pregnancy and delinquency behaviour has been found to be high among children from single mother families compared to those who are from two parent families (Ellwood and Jencks 2004). However single mothers who are financially stable and economically

independent have the capacity to take good care of their children and this result in positive outcomes (Mannis 1999).

Sub-Saharan Africa is a region where poverty, teen/adolescent pregnancy, non-marital child bearing, malnutrition/under nutrition and under-five mortality levels are still high. Poverty rates tend to be high among women compared to men in many societies (Casper, McLanahan et al. 1994). The existence of a relationship between the above factors and single motherhood further strengthens the need for understanding the correlates of single motherhood in this region as this will shed light on the characteristics of this family structure.

Sub-Saharan Africa region is also a region where divorce and separation rates are also increasing (Takyi 2001). Adult mortality is also high as a result of the HIV/AIDS pandemic and studies have shown that women are more likely to be single as a result of death of a spouse (Moyo and Kawewe 2009, Clark and Hamplová 2013). Labour migration has also resulted in family breakdown as men tend to migrate and leave their wives and children behind (Adepoju 2000, Bigombe and Khadiagala 2003). This is an indication that single motherhood could be high in this region therefore the need to understand the patterns and correlates.

In Namibia a study by Palamuleni and Adebawale (2014) revealed that premarital child bearing is still high and common among uneducated women in this country. The prevalence of premarital child bearing among female youths was estimated to be 25.5% which was the highest out of all the six countries that were selected for that study (Palamuleni and Adebawale 2014). A study by Garenne and Zwang (2006) showed a 42.7% prevalence of premarital fertility among women in Namibia. Pazvakawambwa, Indongo et al. (2013) study revealed a decline in the proportion of those women getting married whilst the proportion of those never married women is increasing

and dominant in this country. In Swaziland the percentage single mothers is estimated to have increased by 14% between 1986 and 2006 (SWAMSO, 2006). A study by Dlamini (2006) showed that Swaziland was one of the countries that had the highest percentage of children who lived with their mother only of about 27%. Premarital child bearing is said to be very common in this country (Russell 1993) and high levels of adolescent pregnancy and adolescent fertility have been documented in this country (Ministry of Health and Social Welfare (MOHSW) Government of Swaziland 2001). Furthermore Swaziland is one of the countries with the highest HIV/AIDS prevalence rates and it estimated that the prevalence of HIV within the reproductive age population (15-49) is about 26% (Swaziland Central Statistical Office and Macro International Inc 2008). Death of a spouse results in single motherhood.

In Gabon premarital fertility is also high estimated at about 26.4% (Garenne and Zwang 2009) Over the years the proportion of never married women has been increasing in Gabon and studies have shown that never married women tend to have children. In Congo Brazzaville teenage pregnancy and teen motherhood is very high, about 31% of women age between 15-19 years reported ever being pregnant (Congo Brazzaville, Demographic and Health Survey youth factsheet, 2005). Early sexual initiation is also high in Congo Brazzaville, 81% of women aged between 18-24 years initiate sexual intercourse before the age of 18 (CBDHS, 2005) and this is a predictor of single motherhood. Cohabiting rates among youths are also high (44%). This type union has been found to be unstable and usually results in single motherhood. A study by Antoine and Nanitelamio (1991) showed that Brazzaville had the largest percentage of single women compared to the other cities that were selected. Antoine and Nanitelamio (1991) pointed out that being single was acceptable in that city. The study further revealed that Brazzaville city had the largest percentage of single mothers compared to Pikine and Abidjan cities, unmarried

women contributed about half of the births that were recorded in that period. It is against this background that these countries were selected for this study.

The aim of this study is therefore to examine the correlates of single motherhood in four sub-Saharan Africa countries: Congo Brazzaville, Gabon, Namibia and Swaziland using Demographic and Health Surveys data which is nationally representative and comparable data. This study will add to the body of literature in family research in sub-Saharan Africa.

Data source and Methods

Data for this study was drawn from the latest Demographic and Health Surveys that were conducted as part of the worldwide Measure DHS program in the selected countries; Congo Brazzaville, Gabon, Namibia and Swaziland. Each survey collected data from a nationally representative sample of women aged between 15 and 49 years on background characteristics (age, education, wealth, place of residence), birth history, fertility, marriage and sexual activity among other things. This study focused on women/mothers who were either married or single and had at least one dependent child at the time of the survey. The study therefore included all women who were never married, married and formerly married (divorced/separated/widowed) who had a child less than 18 years. The index child that was used in the selection of the study population was the first child. A sample of 7 611 (Congo Brazzaville), 5 403 (Gabon), 5 740 (Namibia) and 3 081 (Swaziland) women/mothers was selected. These are all weighted values.

The dependent variable for this study is single motherhood which was derived from the current marital status of the mother with a child below 18 years. It is a binary outcome categorized as “Yes (1)” if one is a single mother and “No (0)” if one is married mother.

The independent variables that were selected were age, age at first birth, age at first sex and number of living children which are continuous variables; place of residence (urban/rural), level of education (no education/primary/secondary plus), wealth index (poor/middle/rich), occupation (not working/professionals and clerical/ sales and services/agriculture, manual and others) and religion (Catholics/other Christians/other religions). The religion variable for Swaziland was categorized into two categories because they were very few observations within the Catholics category so for Swaziland Catholics are included in the other Christians category.

Data Analysis

Data analysis for this study was done at three levels; univariate, bivariate and multivariate. Descriptive statistics were used and the results for the respondent's profile were presented using percentage distribution. The person chi-square test was used to examine the association between single motherhood and each selected independent categorical variable. The multivariate binary logistic regression was then employed to examine the linear relationship between the predictor variables and single motherhood. All the analysis was conducted using Stata version 13 (StataCorp 2013). The women sample weight provided in the DHS individual dataset was used during tabulations. Application of the sample weight is essential during tabulation because it adjusts for non-response and oversampling of some population segments in the survey data. To account for the survey sampling design the Stata survey command (svy) was used in the analysis of the other three countries except for Swaziland where only the sample weight (iw=weight) because the selected sample data could not permit the use of (svy).

The logistic regression model equation used for the multivariate analyses is:

$$\log\left(\frac{P}{1-p}\right) = \beta_0 + \beta_1 x_1 + \beta_2 x_2 \dots \dots \dots \beta_i x_i$$

Where: P = probability of single motherhood

$x_1 - x_i$ = the selected predictor variables

$\beta_1 x_1 + \beta_i x_i$ = regression coefficients

Results

Respondents Profile

The results in table 1 revealed that the proportion of single mothers was 27% in Congo Brazzaville, 32.5% in Gabon, 53.3% in Namibia and 44.1% in Swaziland. The average age of the respondents across the four countries was above 30 years, mean age at birth was between 19 years in Gabon and 20 years in Namibia and age at first sex between 16 years and 19 years respectively. A larger percentage of the selected women across the four countries were educated with secondary/higher education. Swaziland had the largest percentage of the respondents who were unemployed compared to the other countries.

Table 1: Description of the study Population

Characteristics	Congo Brazzaville N=7 611		Gabon N= 5 403		Namibia N=5 740		Swaziland N=3 081	
Marital status								
Married	5 522	72.6	3 646	67.5	2 679	46.7	1 723	55.9
Single mothers	2 088	27.4	1 757	32.5	3 061	53.3	1 358	44.1
Age	30.6		30.9 (sd 8.3)		32.1 (sd 8.3)		30.9 (sd 8.6)	
Residence								
Urban	4 975	65.4	4 711	87.2	3 155	55.0	820	26.6
Rural	2 635	34.6	692	12.8	2 585	45.0	2 261	73.4
Religion								
Catholics	2 236	29.4	2 223	41.1	1 179	20.5	-	-
Other Christians	1 939	25.5	2 491	46.1	1 558	27.1	1 448	47.0

Other religions	3 436	45.1	688	12.7	3 003	52.3	1 631	53.0
Age at 1st birth	19.1 (sd 3.7)		18.9 (sd 4.0)		20.6 (sd 4.1)		18.8 (sd 3.2)	
Age at 1st sex	15.7 (sd 2.0)		16.3 (sd 2.2)		18.3 (sd 3.1)		17.4 (sd 2.6)	
Education								
No education	489	6.4	302	5.6	332	5.9	287	9.3
Primary	1 989	26.1	1 291	23.9	1 242	21.6	1 020	33.1
Secondary+	5 134	67.5	3 809	70.5	4 165	72.6	1 774	57.6
Occupation								
Not working	1 872	24.8	2 294	42.9	2 621	45.8	1 463	47.6
Professionals	409	5.4	666	12.5	887	15.5	322	10.5
Sales/Services	3 001	39.8	1 637	30.7	1 869	32.6	899	29.3
Agric/Manual	2 265	30.0	744	13.9	349	6.1	389	12.7
Wealth Index								
Poor	3 023	39.7	2 018	37.3	2 117	36.9	1 065	34.6
Middle	1 562	20.5	1 187	22.0	1 184	20.6	600	19.5
Rich	3 026	39.8	2 198	40.7	2 439	42.5	1 415	46.0
# living children	3 (sd 1.8)		3 (sd 2.1)		3 (sd 1.7)		3 (sd 2.1)	

*weighted values

Figure 1: Levels of single motherhood in Congo Brazzaville, Gabon, Namibia and Swaziland

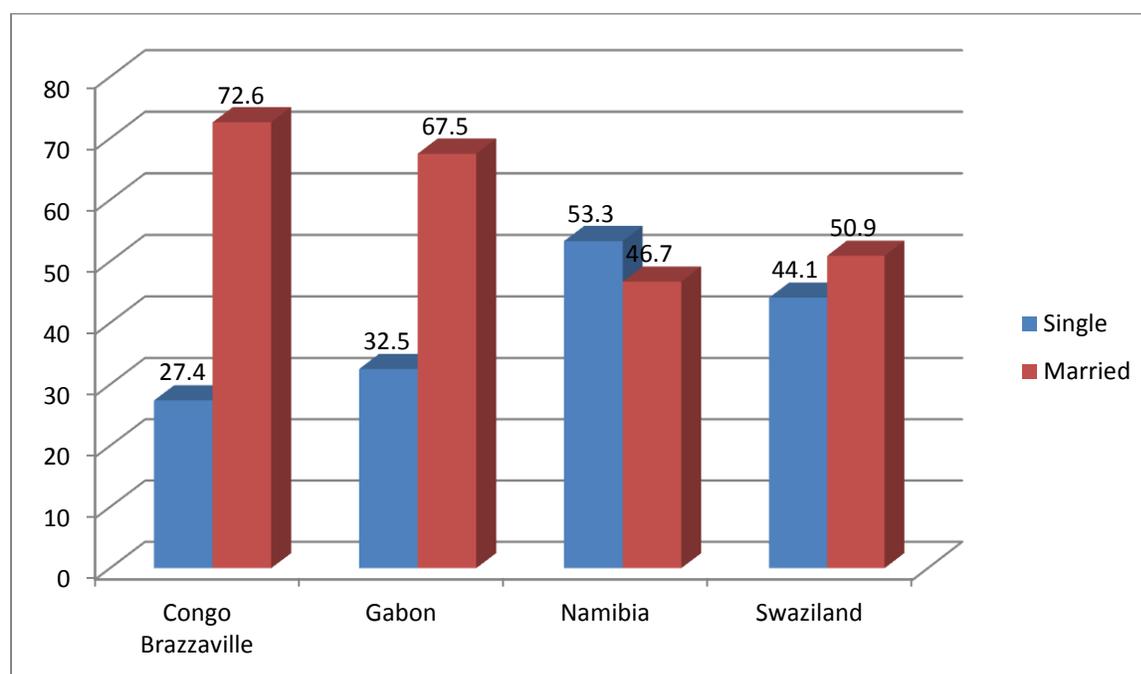


Figure 1 above shows that 27.4% of the 7611 respondents in Congo Brazzaville who had a dependent child at the time of survey were single mothers. In Gabon 32.5% of 5 403 selected women were single mothers. In Namibia 3 061 (53.3%) out of 5 740 respondents were single mothers while in Swaziland 1 358 out of 3 081 women were single mothers.

Figure 2: Distribution of single motherhood by marital status

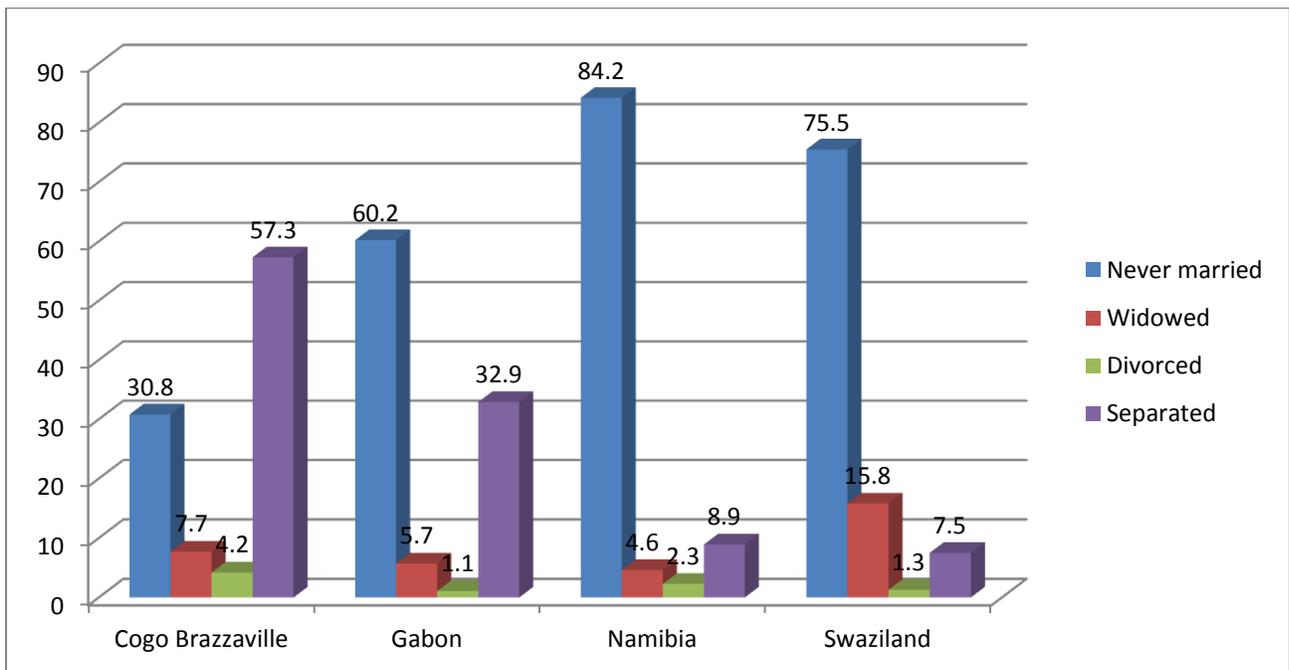


Figure 2 above shows the different types of single motherhood. In Congo Brazzaville a larger percentage of single mothers were single because of separation (57.3%) followed by never married mothers (30.8%). In Gabon the majority of single mothers were never married (60.2%) followed by 32.9% who were separated mothers. A higher percentage of single mothers in Namibia had never been married (84.2%), followed by 8.9% mothers who were separated from their spouse. In Swaziland 75.5% of the single mothers were never married mothers followed by 15.8% widows due to death of a spouse. Divorce was the least reported cause of single motherhood across all the four countries.

Bivariate Analysis

In table 2 below the results showed that educational level is significantly associated with single motherhood in all the selected countries and occupation is significantly associated with single motherhood in Congo Brazzaville, Namibia and Swaziland. Other factors that were also significantly associated with single motherhood were wealth index in Congo Brazzaville, place of residence (Congo Brazzaville, Namibia and Swaziland) and religion in Gabon and Swaziland. The results in table 2 further revealed that a larger proportion of the single mothers in Congo Brazzaville (70%), Gabon (88%) and Namibia (53%) resided in the urban areas whilst in and Swaziland (66%) most of the single mothers were rural residents. Across the four countries over 60% of the single mothers had secondary/higher education. A larger percentage of single mothers in countries like Gabon (44%), Namibia (45%) and Swaziland (47%) were not working whilst in Congo Brazzaville (43%) most of the single mothers' occupation was in sales/services. About 40% of single mothers in Congo Brazzaville and Gabon were poor whilst in Namibia and Swaziland about 40% of the single mothers were rich.

Table 2: Bivariate Analysis of single motherhood and the selected independent variables

Characteristics	Congo Brazzaville		Gabon		Namibia		Swaziland**	
	2 088	27.4	1 757	32.5	3 061	53.3	1 358	44.1
	%	P value	%	P value	%	P value	%	P value
Residence								
Urban	70.0	0.000	88.5	0.076	53.0	0.023	33.8	0.002
Rural	30.0		11.5		47.0		66.2	
Religion								
Catholics	31.8	0.056	41.2	0.000	19.8	0.436	-	-
Other Christians	26.3		52.2		27.0		51.5	0.000
Other religions	41.9		6.6		53.1		48.5	
Education								
No education	4.9	0.000	1.6	0.000	4.4	0.000	7.4	0.000
Primary	23.0		21.6		19.9		30.7	
Secondary+	72.1		76.8		75.7		61.9	

Occupation								
Not working	27.1	0.001	44.2	0.441	44.7	0.000	47.0	0.006
Professionals	5.5		11.7		12.5		8.8	
Sales/Services	43.5		28.9		37.1		31.4	
Agric/Manual	23.8		15.2		5.7		12.7	
Wealth Index								
Poor	41.1	0.042	40.0	0.342	37.4	0.190	32.6	0.133
Middle	22.4		21.0		21.4		20.0	
Rich	36.5		39.0		41.1		47.4	

**** Not weighted, the data was not compatible with the svy command**

Multivariate Analysis

Single motherhood was significantly associated with age at first birth and number of living children across the four countries after adjusting for the selected potential confounders (table 3 below). The likelihood of single motherhood decreased as age at first birth increased and also as the number of living children increased in all the selected countries. The risk of single motherhood reduced by 40% in Congo Brazzaville and 5% in Namibia as age at first birth increases. Across the four countries the odds of single motherhood reduced by about 30% as the number of living children increased. In Gabon and Swaziland religion was found to be significantly associated with single motherhood. Mothers who reported other religions other than Christianity/Catholics in these countries were 0.61 [CI 0.44 - 0.84] and 0.71 [CI 0.60 - 0.83] times less likely to be single mothers respectively. Educated mothers in Gabon were twice more likely to be single mothers compared to uneducated mothers in that country (primary AOR 2.90; CI 1.34-6.28) secondary/higher education (AOR 2.74; CI 1.33 - 5.63). Mothers whose occupation was either agricultural or manual in Congo Brazzaville were 0.74 times less likely to be single mothers compared to unemployed mothers whilst in Gabon they were 1.46 times more likely to be single mothers compared to the unemployed (table 3). In Namibia and Swaziland mothers who were professionals were 0.76 and 0.68 times less likely to be single mothers compared to the unemployed mothers respectively while those mothers employed in

sales/services were 1.59 and 1.27 times respectively more likely to be single mothers compared to unemployed mothers in these countries. In Congo Brazzaville current age, place of residence and wealth index were also significantly associated with single motherhood. The odds of being a single mother increased as age increased (AOR 1.05; CI 1.03 - 1.07) and rural residents had lower odds (AOR 0.64; CI 0.52 - 0.79) of being single mothers than urban residents. Also women whose wealth index was middle (AOR 0.53; CI 0.39 - 0.71) and rich (AOR 0.36; CI 0.28 - 0.46) had lower risk of being single mothers compared to the poor in Congo Brazzaville as well as rich mothers in Swaziland (AOR 0.67; CI 0.54 - 0.83). In Namibia rural residents were 1.5 times more likely to be single mothers compared to urban residents (AOR 1.51; CI 1.25 - 1.83) and the odds of being a single mother increased as age at first sex increased (AOR 1.04; CI 1.02 - 1.07).

Table 3: Multivariate Analysis of the four selected countries

Characteristics	Congo Brazzaville*			Gabon*			Namibia*			Swaziland**		
	OR	95%CI	P-value	OR	95% CI	P-value	OR	95% CI	P-value	OR	95% CI	P-value
Age	1.05	1.03 - 1.07	0.000	1.01	0.98 - 1.02	0.585	1.00	0.97 - 1.00	0.093	1.01	0.99 - 1.02	0.225
Residence												
Urban	1		-	1	-	-	1		-	1	-	-
Rural	0.64	0.52 - 0.79	0.000	0.86	0.66 - 1.11	0.248	1.51	1.25 - 1.83	0.000	0.87	0.72 - 1.06	0.164
Religion												
Catholics	1	-	-	1		-	1	-	-	-		-
Other Christians	0.94	0.76 - 1.17	0.599	1.12	0.87 - 1.43	0.380	1.22	0.99 - 1.49	0.052	1	1	-
Other religions	0.85	0.69 - 1.04	0.125	0.61	0.44 - 0.84	0.002	1.19	1.00 - 1.43	0.050	0.71	0.60 - 0.83	0.000
Age at 1st birth	0.60	0.88 - 0.94	0.000	0.94	0.91 - 0.97	0.000	0.95	0.93 - 0.97	0.000	0.93	0.90 - 0.96	0.000
Age at 1st sex	1.31	0.99 - 1.08	0.134	1.02	0.97 - 1.07	0.365	1.04	1.02 - 1.07	0.001	0.99	0.95 - 1.03	0.718
Education												
No education	1		-	1		-	1		-	1		-
Primary	1.17	0.84 - 1.63	0.361	2.90	1.34 - 6.28	0.007	1.09	0.80 - 1.52	0.615	1.07	0.79 - 1.45	0.650
Secondary+	1.31	0.92 - 1.86	0.134	2.74	1.33 - 5.63	0.006	1.14	0.84 - 1.60	0.427	1.26	0.92 - 1.71	0.151
Occupation												
Not working	1		-	1		-	1		-	1		-
Professionals	1.07	0.68 - 1.68	0.761	0.97	0.65 - 1.45	0.882	0.76	0.60 - 0.94	0.015	0.68	0.51 - 0.91	0.010
Sales/Services	0.99	0.76 - 1.29	0.945	1.14	0.88 - 1.46	0.321	1.59	1.35 - 1.87	0.000	1.27	1.06 - 1.52	0.011
Agric/Manual	0.74	0.56 - 0.97	0.030	1.46	1.14 - 1.86	0.002	1.04	0.79 - 1.39	0.614	1.09	0.85 - 1.39	0.515
Wealth Index												
Poor	1		-	1		-	1		-	1		-
Middle	0.53	0.39 - 0.71	0.000	0.79	0.55 - 1.13	0.203	0.95	0.78 - 1.17	0.645	1.02	0.82 - 1.27	0.859
Rich	0.36	0.28 - 0.46	0.000	0.79	0.56 - 1.10	0.166	0.93	0.74 - 1.19	0.563	0.67	0.54 - 0.83	0.000
# living children	0.60	0.54 - 0.67	0.000	0.72	0.66 - 0.80	0.000	0.71	0.67 - 0.75	0.000	0.68	0.64 - 0.73	0.000

*svy applied in the analysis ** iw=weight used for Swaziland

Discussion

The findings of this study showed that single motherhood is prevalent in sub-Saharan Africa ranging from about 27% in Congo Brazzaville to 53% in Namibia. The study further revealed that a larger percentage of single mothers had never been married in Gabon, Namibia and Swaziland. This shows that women are more likely to become single mothers as a result of premarital child bearing compared to union dissolution in these countries. This finding concurs with other studies that have been done in this region that have shown that premarital fertility is high (Garenne and Zwang 2006, Palamuleni and Adebawale 2014). The pattern of high levels of non-marital births is very common and well established in countries like Namibia and Swaziland (Russell 1993, Garenne and Zwang 2006). In Congo Brazzaville women are more likely to become single mothers as a result of union dissolution through separation. Post marital single motherhood as a result of divorce or separation has been found to be increasing in some sub-Saharan countries (Takyi 2001). Widowhood was also a major reason of single motherhood in Swaziland and this could be a reflection of high HIV related deaths among adults in this country. Studies have shown that men are more likely to die early than women.

The results further indicated that age at first birth and the number of living children were common correlates of single motherhood in all the selected countries. The findings suggest that women who have children at a younger age are more likely to be single mothers compared to those women who have their first child when they are mature and older. Studies have shown that single mothers are usually young mothers of less than 25 years (Lipman, Offord et al. 1997, Dlamini 2006). Premarital fertility has also been found to be high among adolescents compared to other age groups (Garenne, Tollman et al. 2000). The existence of a negative relationship between the number of living children and single motherhood has also been found in other

studies (Curtis 2001; Hsieh and Leung 2013). These studies have shown that single mothers tend to have fewer children compared to married mothers.

Occupation was also found to be a determinant of single motherhood. The study revealed that a larger percentage of single mothers were unemployed in countries like Gabon, Namibia and Swaziland and if employed they are most likely to be employed in low paying jobs such as sales/manual/agricultural jobs. Professionals had a lower risk of being single mothers in Swaziland compared to those unemployed whilst those employed in in sales/services (Swaziland and Namibia) and Agriculture/Manual had a higher risk of being single mothers. This finding has been found in other studies (Dlamini 2006, Jordal, Wijewardena et al. 2013). The explanation for most single mothers not working could be that they lack education or the required qualifications (Dlamini 2006). Sometimes single mothers cannot take up employment because of the child's needs especially if their child is still young. A study by Jordal, Wijewardena et al. (2013) showed that single mothers end up engaging in low paying jobs such as vegetable cultivation and pottery production as a way of coping with single motherhood, as this will enable them to take care of their children and families.

The study also showed a negative association between wealth index and single motherhood. Women whose wealth index was middle (Congo Brazzaville) or rich (Congo Brazzaville and Swaziland) had lower odds of being single mothers compared to the poor. Studies have shown that single motherhood is common among the poor (Christopher, England et al. 2002, Dlamini 2006). Also factors that lead to the formation of single mother families such as teen/adolescent pregnancy and premarital fertility have been found to be high among the poor compared to the rich (Ratcliffe and McKernan 2012, Palamuleni and Adebawale 2014). Furthermore other

studies have shown that divorce rates tend to be higher among the poor compared to the rich (Karney and Bradbury 2005, Akuamoah 2013).

The study further established that education was a correlate of single motherhood in Gabon. Educated mothers were more likely to be single mothers compared to uneducated women in these countries. The likelihood of marriage decreases as the educational level of women increases, educated women are less likely to be married compared to less educated women (Torr 2011). Some of the reasons that have been highlighted by professional single women for not marrying include wanting to be independent and not finding a right partner (Berg-Cross, Scholz et al. 2004). Educated men tend to marry women who are less educated than them and this affects the marriage market of educated women as these desire to marry men who are more educated than them (Berg-Cross, Scholz et al. 2004). Marriage practices that involve bride-wealth payment are also a barrier for marriage among educated women as these are highly priced and beyond reach for most men compared to other women (Isiugo-Abanihe 1994, Posel, Rudwick et al. 2011). This finding also supports literature that has shown that divorce rates are usually high among educated therefore resulting in the formation of single mother parent families (Amato 2010). About 33% of women in Gabon were single mothers due to separation according to this study. This finding however contradicts findings from other studies done in the sub-Saharan region that have shown that single mothers are usually uneducated (Dlamini 2006, Moyo and Kawewe 2009).

The finding that single motherhood is more likely to be common among urban residents compared to rural residents in Congo Brazzaville is consistent with findings from other studies (Antoine and Nanitelamio 1991). A study by Antoine and Nanitelamio (1991) showed that the city of Brazzaville had the largest proportion of single women and single mothers compared to other cities that were selected in that study. This could be an explanation of why single

motherhood is high among urban residents in that country. However in Namibia contrary results were found, the risk of single motherhood was found to be high among rural residents compared to urban residence. This finding supports the findings of a study that was done by Pazvakawambwa, Indongo et al. (2013) in Namibia that shows that women who resided in urban areas were more likely to be married compared to rural residents. Also a study by Palamuleni and Adebawale (2014) showed that premarital child bearing was common among rural youth residents in Namibia and premarital child bearing is one of the pathways that results in single motherhood.

Furthermore age at first sex was found to be a determinant of single motherhood in Namibia. The positive relationship that was found between age at first sex and single motherhood is contrary to results from other studies that have shown that early initiation of sex increase the risk of becoming a single mother as this result in teen pregnancy and premarital child bearing. This requires further investigation.

In Gabon and Swaziland religion also emerged as a determinant of single motherhood in these countries. Women affiliated to other religions not Catholics/Christians had a lower risk of single motherhood. Studies have shown that divorce rates are lower among other religions such as Muslims compared to other religions such as Christianity (Tilson and Larsen 2000, Adegoke 2010). This could be an explanation of why other religion category had a lower risk of single motherhood since Muslims form part of this category in Gabon where about 12% of the population is affiliated to Islam. As for Swaziland the explanation could be that most people are affiliated to the Swazi traditional religion where divorce in a traditional marriage is prohibited.

Current age was also found to be positively associated with single motherhood in Congo Brazzaville. The explanation to this could be that older women are more likely to become single as a result of marriage dissolution due to death or divorce or/ separation. The results of this study showed that separation was the highest cause of single motherhood in this country.

Conclusion

Single motherhood is prevalent in Sub-Saharan Africa with premarital child bearing being the major cause of single motherhood in Gabon, Namibia and Swaziland. Post marital single motherhood as a result of marriage dissolution due to separation is also high in countries like Congo Brazzaville and Gabon. Correlates of single motherhood across the four countries were age at first birth and number of living children. Also factors such as level of education, wealth index, religion and occupation were found to be significant predictors of single motherhood in more than one country. These findings suggest that interventions should focus on promoting contraceptive use to prevent unwanted pregnancies since these have been found to be associated with premarital childbearing among teenagers and adolescents there by leading to single motherhood. Government policies, programs and interventions should also focus on empowering single mothers and their children as a way of alleviating poverty and other negative health outcomes associated with this family structure. The results also show that the significance of marriage being the context of which childbearing occurs is also declining.

References

Adams, B. N. (2004). "Families and family study in international perspective." Journal of Marriage and Family **66**(5): 1076-1088.

Adegoke, T. (2010). "Socio-cultural Factors as Determinants of Divorce Rates among women of reproductive age in Ibadan Metropolis, Nigeria." Stud Tribes Tribals **8**(2): 107-114.

- Adepoju, A. (2000). "Issues and Recent Trends in International Migration in Sub-Saharan Africa." International Social Science Journal **52**(165): 383-394.
- Akuamoah, V. (2013). *Determinants of Divorce in Ghana, 2008*, University of Ghana.
- Allan, G., et al. (2001). "Family diversity and change in Britain and Western Europe." Journal of Family Issues **22**(7): 819-837.
- Amato, P. R. (2010). "Research on divorce: Continuing trends and new developments." Journal of Marriage and Family **72**(3): 650-666.
- Antoine, P. and J. Nanitelamio (1991). "More single women in African cities: Pikine, Abidjan and Brazzaville." Population an English Selection: 149-169.
- Berg-Cross, L., et al. (2004). "Single professional women: A global phenomenon challenges and opportunities." Journal of International Women's Studies **5**(5): 34-59.
- Bigombe, B. and G. M. Khadiagala (2003). "Major trends affecting families in Sub-Saharan Africa." UN (ed.), Major Trends Affecting Families: A Background Document: 164-187.
- Brown, G. W. and P. M. Moran (1997). "Single mothers, poverty and depression." Psychological Medicine **27**(01): 21-33.
- Calvès, A.-E. (1999). "Marginalization of African single mothers in the marriage market: Evidence from Cameroon." Population Studies **53**(3): 291-301.
- Casper, L. M., et al. (1994). "The gender-poverty gap: What we can learn from other countries." American sociological review: 594-605.
- Cherlin, A. J. (2005). "American marriage in the early twenty-first century." The Future of Children **15**(2): 33-55.
- Christopher, K., et al. (2002). "The gender gap in poverty in modern nations: Single motherhood, the market, and the state." Sociological Perspectives **45**(3): 219-242.
- Clark, S. and D. Hamplová (2013). "Single motherhood and child mortality in sub-Saharan Africa: a life course perspective." Demography **50**(5): 1521-1549.
- Dintwat, K. F. (2010). "Changing family structure in Botswana." Journal of Comparative Family Studies: 281-297.
- Dlamini, N. S. (2006). *Measurement and characteristics of single mothers in South Africa: analysis using the 2002 general household survey*.
- Ellwood, D. T. and C. Jencks (2004). "The uneven spread of single-parent families: What do we know? Where do we look for answers?" Social inequality **1**: 3-77.
- Esteve, A., et al. (2012). "The family context of cohabitation and single motherhood in Latin America." Population and Development Review **38**(4): 707-727.
- Gage, A. J., et al. (1997). "Household structure and childhood immunization in Niger and Nigeria." Demography **34**(2): 295-309.
- Garenne, M., et al. (2000). "Premarital fertility in rural South Africa: a challenge to existing population policy." Studies in family planning **31**(1): 47-54.
- Garenne, M. and J. Zwang (2006). "Premarital fertility in Namibia: trends, factors and consequences." Journal of biosocial science **38**(02): 145-167.

- Garenne, M. and J. Zwang (2009). "Premarital fertility and HIV/AIDS in sub-Saharan Africa." African Journal of Reproductive Health **12**(2): 64-74.
- Golombok, S. and S. Badger (2010). "Children raised in mother-headed families from infancy: a follow-up of children of lesbian and single heterosexual mothers, at early adulthood." Human Reproduction **25**(1): 150-157.
- González, L. (2005). "The determinants of the prevalence of single mothers: A cross-country analysis."
- Gurmu, E. and D. Etana (2013). "Household structure and children's nutritional status in Ethiopia." Genus **69**(2).
- Hernández, R. L., et al. (2009). "Depression and quality of life for women in single-parent and nuclear families." The Spanish journal of psychology **12**(01): 171-183.
- Isiugo-Abanihe, U. C. (1994). "Consequences of bridewealth changes on nuptiality patterns among the Ibo of Nigeria."
- Jordal, M., et al. (2013). "Unmarried women's ways of facing single motherhood in Sri Lanka—a qualitative interview study." BMC women's health **13**(1): 5.
- Kalule-Sabiti, I., et al. (2007). "Family formation and dissolution patterns." Families and households in post-apartheid South Africa: Socio-demographic perspectives: 89-112.
- Karney, B. R. and T. N. Bradbury (2005). "Contextual influences on marriage implications for policy and intervention." Current Directions in Psychological Science **14**(4): 171-174.
- Kpoor, A. (2013). "Household Maintenance and Decision Making in Lone Female Parent Families in Ghana." Journal of Family Issues: 0192513X13483969.
- Lipman, E. L., et al. (1997). "Single mothers in Ontario: sociodemographic, physical and mental health characteristics." Canadian Medical Association Journal **156**(5): 639-645.
- Locoh, T. and M. Thiriati (1995). "[Divorce and remarriage of women in West Africa: the situation in Togo]." Population **50**(1): 61-93.
- Mannis, V. S. (1999). "Single mothers by choice." Family Relations: 121-128.
- McLanahan, S. and G. Sandefur (1994). "Growing up with a single parent: What helps, what hurts." Cambridge, MA: Harvard University Press **17**: 21.
- Mhongo, C. and D. Budlender (2013). "Declining rates of marriage in South Africa: What do the numbers and analysts say?" Acta Juridica: Marriage, land and custom: 181-196.
- Ministry of Health and Social Welfare (MOHSW) Government of Swaziland (2001). Reproductive Health Programme: Ministry of Health and Social Welfare. National Strategic Planning and Plan of Action for Reproductive Health Initiative 2001–2005. M. o. H. a. S. Welfare. Mbabane, Swaziland.
- Moyo, O. N. and S. M. Kawewe (2009). "Lone motherhood in Zimbabwe: the socioeconomic conditions of lone parents and their children." Social work in public health **24**(1-2): 161-177.
- Palamuleni, M. (2010). "Recent marriage patterns in South Africa 1996-2007." Bangladesh e-Journal of Sociology **7**(1): 47.
- Palamuleni, M. and A. Adebawale (2014). "Patterns of premarital childbearing among unmarried female youths in sub-Saharan Africa: Evidence from demographic health survey." Scientific Research and Essays **9**(10): 421-430.

- Pazvakawambwa, L., et al. (2013). "Explaining marital patterns and trends in Namibia: a regression analysis of 1992, 2000 and 2006 demographic and survey data." PloS one **8**(8): e70394.
- Posel, D., et al. (2011). "Is marriage a dying institution in South Africa? Exploring changes in marriage in the context of ilobolo payments." Agenda **25**(1): 102-111.
- Ratcliffe, C. E. and S.-M. McKernan (2012). "Child poverty and its lasting consequence." Urban Institute Low-Income Working Families Working Paper(21).
- Reniers, G. (2003). "Divorce and remarriage in rural Malawi." Demographic Research **6**: 175-205.
- Russell, M. (1993). "Women, children and marriage in Swaziland." International journal of sociology of the family: 43-57.
- StataCorp (2013). Stata Statistical Software: Release 13. . College Station, TX: StataCorp LP.
- Steele, F., et al. (2009). "Consequences of family disruption on children's educational outcomes in Norway." Demography **46**(3): 553-574.
- Swaziland Central Statistical Office and Macro International Inc (2008). Swaziland Demographic and Health Survey 2006-07. Mbabane, Swaziland: Central Statistical Office and Macro International Inc. .
- Takyi, B. K. (2001). "Marital instability in an African society: Exploring the factors that influence divorce processes in Ghana." Sociological focus **34**(1): 77-96.
- Tilson, D. and U. Larsen (2000). "Divorce in Ethiopia: the impact of early marriage and childlessness." Journal of biosocial science **32**(03): 355-372.
- Torr, B. M. (2011). "The changing relationship between education and marriage in the United States, 1940-2000." Journal of family history: 0363199011416760.
- Young, L., et al. (2005). "Lone mothers are at higher risk for cardiovascular disease compared with partnered mothers. Data from the National Health and Nutrition Examination Survey III (NHANES III)." Health care for women international **26**(7): 604-621.