AGE AT FIRST MARRIAGE AMONG EVER MARRIED WOMEN IN ZAMBIA: WHAT ARE THE DETERMINANTS?

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Abstract

Age at first marriage had been identified as primary determinant of fertility hence the main objective of this study is to investigate socio-economic and demographic determinants of age at first marriage in Zambia. This study used 2013/14 Zambia Demographic and Health Survey data. A total of 9552 women aged 15-49 years reported to had ever been married. Data was analyzed by descriptive analysis of frequency and bivariate to distribute respondent by selected background characteristics. Chi–square with 95CI was used to study association between independent and dependent variable. Multivariate logistic regression was used to measure likelihood of early marriages (< 18 years) with 4 models at 95 CI. Age at sexual debut, education level, region and type of place of residence were strong indicators of age at first marriage. Policy programs in Zambia should emphasize the need for women education through increasing proportion of women with secondary and higher education.

Introduction

The most important pattern to study the rate of population growth is fertility. Fertility is the main element to affect the welfare of a mother. The survival of a child can be affected by high fertility and shorter birth intervals. (Ayele, 2015). Fertility patterns are different between countries and over time (Clair, Rocio, & Robert, 2017) . Fertility in the world had changed intensely over the last few years. Globally fertility had reached exceptional low level yet stark differences persist in childbearing across countries and regions. Fertility rate are still at very high level in Africa and Arabic countries followed by the countries of Southern Africa and South America (Clair, Rocio, & Robert, 2017).

Africa experience higher level due to the context view that limiting family size is a selfish act of individual unwilling to make personal sacrifice for the good of large society (Asogwa & Ugwunta, 2013). Low rates are found in Europe and other industrialized countries like japan and Canada. Fertility rate can be quite useful to a society. It gives researcher a glimpse into the future of society and it population. As a result it can give the government furthest insight to be done currently to prepare for future circumstance (World village, 2017). Controlling for fertility is an important measure. Uncontrolled fertility had been reported to have adversely influence the socio economic demographic and environmental of countries like Ethiopia Bangladesh and Pakistan (Dube, Tariku, & Mohammed, 2013).

Marriage deters the inceptions of exposure to the risk of childbearing for most women and thus it is an important indicator of fertility (Garenne, Age at first mirriage and modernisation in Sub-Saharan Africa, 2004; Chowdhury, Hoq, Hossain, & Khan, 2013). Marriage had traditionally been early and universal in sub Saharan Africa and it had been blamed for high fertility. It is also associated with failure to archive most of MDGs

including eradicating extreme poverty and hunger, archiving the goal of universal primary education, and empowerment of women, (Ayiga & Rampagane, 2013).

Age at first mirage plays a significant role in determining level of fertility of women (Garenne, Leclerc, & Mathews , 2011) (Gurmu & Etana, 2014). The onsets of the sexual acceptable time for sexual activities in most societies are defined by marriage (Lawrence D, 2005) (Mugarura, Kaberuka, & Atuhaire, 2016). Women married at early ages tend to have early pregnancy as well as early motherhood, and have more children during adolescence (Mosammat, Mohammad, & S, 2013; Palamuleni, 2011). Early marriage is associated with early childbearing as, in most cases particularly in the developing countries; the main purpose of marriage is to have children. (Garenne, Leclerc, & Mathews , 2011).

Zambia approved the conventional on the right of the child in 1991 (Girlsnotbrides, 2018). The Child Marriage Restraint Act, 1978 raised the minimum age at marriage of girls to 18 years from 15 years and for boys to 21 years. This was intended to prevent early marriage of girls and consequent early pregnancies and thereby curtail fertility at young ages and birth to premature babies. Demographic experts are on the view that delaying age at marriage (raises in the age at marriage) plays a vital role in controlling fertility rate (Subramanian, 2008). Studies indicate that an increase in age at first marriage leads to a rise in premarital sex and in absence of contraception this gives rise to unwanted pregnancies and a rise in adolescent fertility (Palamuleni, 2011; Kumchulesi, Palamuleni, & Sabiti)

Population in which age at first marriage is low tend to have early marriage and high fertility; the situation in Zambia. Marriage occurs relatively early in Zambia. Zambia median age at marriage among women aged 25-49 is 18.4 years. Childbearing begins early in Zambia, with more than one-third of women giving birth by age 18 (Central Statistical Office/Zambia, Ministry of Health/Zambia, and ICF International, 2013-14) while 31 % are married by age 18 (Girlsnotbrides, 2018) and more than half giving birth by age 20. Twenty-nine percent of adolescent women age 15-19 are already mothers or pregnant with their first child (Central Statistical Office/Zambia, Ministry of Health/Zambia, and ICF International, 2013-14). Controlling for fertility is an important measure. Therefore, uncontrolled fertility had been reported to have adversely influence the socio economic demographic and environmental of countries (Dube, Tariku, & Mohammed, 2013). Postponement of first marriage has been outlined as the main determinant of declining fertility (Mosammat, Mohammad, & S, 2013; Kumchulesi, Palamuleni, & Sabiti)

High fertility is linked with low wage, poverty high maternal and child birth, lagging investment in education a situation which is prevailing in Zambia. Fertility patterns are directly relevant for implementation of 2030 agenda for sustainable development and policy making and planning in all countries (United Nations, 2015). Despite decrease in Total fertility rate (TFR) in Zambia from 6.5 births per woman in 1992 to 5.3 births per woman in 2013-14 ,fertility is still high (Central Statistical Office/Zambia, Ministry of Health/Zambia, and ICF International, 2013-14).One of objective of the revised population policy of Zambia is to reduce high level of fertility particularly adolescent fertility by 2030 in line with target 5.3 of the sustainable development Goals (Central Statistical Office/Zambia, Ministry of Health/Zambia, and ICF International, 2013-14) This can be archived if factors associated with early marriages are known.

Many studied had identified education as one of important 'modernization' factor. In many societies, education has been consistently linked with delayed age at first marriage for females. One of the logics for advocating enhancement of women's education by both researchers and policy makers in an attempt to reduce fertility is precisely this. Women's education is negatively associated with early age at first marriage. Thus, it may be stated that the greater the improvement in the level of education of female higher the increase in the age at first marriage. From a policy perspective, that women's education is extremely important in delaying marriages as well as reducing fertility. (Gurmu & Etana, 2014; Ezra, 2003; Palamuleni, 2011; Ikamari, 2005; Garenne, Leclerc, & Mathews , 2011)

Few or no studies have been done in Zambia to study determinants of age at first marriage. Given that stall in fertility in Zambia appears to be a recent phenomenon not much is known about its determinants. As such this study uses data from 2013/14 Zambia demographic and household survey to find the intermediate factors accountable for fertility stall in Zambia, hence the aim objective of this study is to identify socio-economic and demographic factors associated with age at first marriage in Zambia. This research finding will benefit Zambia as they will guide policy maker in coming with the best policy aim at delaying marriage hence reducing fertility

Data and Methods

The following chapter explains the methods used as attempt to explain the sources of data, the sample design, variables data analysis as well as the limitation of the study

Study area

The study was conducted in Zambia. Zambia is a land-locked country in sub-Saharan Africa that borders the Democratic Republic of Congo to the north, Tanzania to the northeast, Malawi and Mozambique to the east, Zimbabwe and Botswana to the south, Namibia to the southwest, and Angola to the west. Zambia covers a land area of 752,612 square kilometers with estimated population of 17.6 million. Administratively, the country is divided into 10 provinces and 74 districts. Of the 10 provinces, two are predominantly urban, namely Lusaka and Copperbelt, the remaining provinces—Central, Eastern, Muchinga, Northern, Luapula, North Western, Western, and Southern—are predominantly rural. The capital city is Lusaka, in the south-central part of the country.

Study Setting and Source of data

In the year 2013/14 Zambia conducted demographic health survey. Data from this survey is being used to conduct a current research, implying that this research is based on secondary data. The study covered people aged between 15-49years. This study took in to account that age at first marriage is a determinants for fertility.

Sample design

The sample for the 2013-14 ZDHS was designed to provide estimates at the national and provincial levels, as well as for rural and urban areas within the provinces. The updated list of enumeration areas (EAs) for the 2010 Population and Housing Census provided the sampling frame for the survey. The frame comprises 25,631 EAs and 2,815,897 households. A representative sample of 18,052 households selected from 722 cluster was archived during stage two was drawn for the 2013-14 ZDHS. The survey used a two-stage stratified cluster sample design, with EAs (or clusters) selected during the first stage and households selected during the second stage.

A total of 31132 individuals were successfully interviewed in a total of 13 administrative regions in Zambia. Of the 16 382 respondents, 9552 (52%) were women who reported to have ever married and this forms the sample for this study A total of 9552 respondent aged between 15 years and 49 years constituted the study sample. The sample were archived by selecting case (ever married female)

Measurement of variable

Dependent variable

The dependent variable is the age at first marriage measured in terms of completed years at first marriage. During the survey all women were asked a series of questions regarding their marital status and whether they had ever lived with a man. All those who reported that they were ever married or ever-lived with a man, were

asked to indicate how old they were at the time when they started, for the first time ever, living with a man as a wife, irrespective of the legality or otherwise of their union. The response to this question constitutes the woman's age at first marriage. All the women who indicated that they had never been in a union or lived with a man were considered single and as a result they were not asked the question about the age at first marriage. This is the standard way in which age at first marriage is being measured in the worldwide DHS program. The single years were recorded and was categorized into two early (<18 years) marriage and late marriage (>18 years).

Independent variable

Demographic variable

Age at first sex, Place of residence and Region

Socio economic

Highest level of education, Wealth index, Employment status and Religion

Description of variable

Age at first sex- this an age at which the respondent had sexual debut (<15 years, 15-19 years and 20+ years after marriage). Highest education level- the level at which the respondent attain. The respondents were asked the highest level of school they had attended. There were four option to pick one of any which were none, primary, secondary and tertiary/higher. The four choices were then recorded into two. Secondary and higher put together then primary and none resulting in none/primary and secondary/higher. Wealth index- The wealth index is a composite measure of a household's cumulative living standard. Generated with a statistical procedure known as principal components analysis, the wealth index places individual households on a continuous scale of relative wealth. The variable separates all interviewed households into five wealth quintiles to compare the influence of wealth on age at first marriage. From the data set of Zambia 2013/14 wealth index was in five categories poor, poorest, middle rich, and richest, which was then recorded into three classes leaving middle class as it is and combating rich and richest to rich then poor and poorest to poor. Region is large, usually continuous segment of a surface or space. The 10 administrative region of Zambia were adopted as they are. Religion is a cultural system of behaviors and practices, world views, ethics, and social organization that relate humanity to an order of existence. This variable was recorded into 3 categories. Roman, Pros tent/ Christians and other. Place of residence is the civil subdivision of a country (district, county, municipality, province, department, state) in which the individual resides. The variable adopted as it was from data set with two categories rural and urban. Ethnicity was recorded into two categories African and None African. Employment status working and none working

Table 1: Variable and their measurement

VARIABLE NAME	**MEASUREMENT**
Age at first marriage	Below 18 years 18 years and above
Demographic Factors Age at first sexual intercourse	1=Below 15 Years 2=15-19 Years 3= 20 + years
Place of residence	1=Urban 2=Rural
Religion	1= Roman Catholic 2= Protestant/other Christians

	3=Others
Socio-Economic Variables Education level	0=No education 1=Primary 2=Secondary 3= Higher
Region	Central Copperbelt Eastern Luapala Lusaka Machinga Northern North western Southern Western
Household Wealth Index	1=Poor 2= Middle 3= Rich
Employment status	0= Not employed 1= Employed
Religion	1= Roman Catholic 2= Protestant/other Christians 3= Muslim

Statistical Approach

All the analyses of this paper were performed by Statistical Package for Social Sciences (SPSS 20). Data was analyzed by means of descriptive analysis of frequency and cross tabulation to see the distribution of respondents by variables (age at first sexual debut, occupation, religion, region, highest education level marital status and wealth index. The bivariate regression and chi square was used to determine the effects of independent variable and dependent variable (age at first marriage) a chi square with confidence level of (95%) was used to measure the friendship within independent variables. A multivariate logistic regression with four models was used to measure the likelihood of being married at early age or late using odds ratio with 95% confidence interval. Model 1 is univariate whereas model 2 includes socioeconomic variables only. Model 3 introduce demographic variables whereas the last model (model 4) includes all the explanatory socio economics and demographic variables. The reference category was early marriage and the last category of independent variable was set to zero. All the results from analysis will be presented in forms of tables.

Results

Table 2 gives a summary statistics of the sample space by selected background characteristic, Out of 9552 female who had ever been married about half 49.8% married before the set minimum age by Child Marriage Restraint Act, 1978 which set minimum age at marriage of girls to 18 years. Majority of women (47.1%) experienced their first sexual intercourse at the age above 20 years and after union followed by 15-19 years and below 15 with 44.1% and 8.5% respectively. Almost three fifth (58.2%) of the women reside in rural areas. A slight difference was observer in the distribution of respondent by region as they range from 13.3% to 8.5% a great portion coming from eastern and the least from central. A high number of the respondents had none or primary as highest educational level. Majority (55.2%) of ever married women had primary as their highest level of education followed by secondary (28.9%), none (11%) and higher (4.5%). Sixty two percent

of women are employed. Almost 40% of ever married are poor followed by richer and middle wealth quartile with 37.4% and 22.2% respectively.

Table 2: Distribution of respondent by selected background characteristics

VARIABLE	*CATERGORIES*	*FREQUENCY*	*PERCENT*
Age at first sex	Below 15	814	8.5
	15-19	4217	44.1
	20+ & after union	4503	47.1
Place of residence	Urban	3977	41.6
	Rural	5575	58.4
	Central	799	8.4
Region	Copperbelt	936	9.8
	Eastern	1271	13.3
	Luapula	979	10.2
	Lusaka	1048	11
	Muchinga	887	9.3
	Northern	1032	10.8
	North Western	859	9
	Southern	1090	11.4
	Western	651	6.8
Religion	Catholic	1621	17
	Pros tent	7782	81.5
	Others	123	1.3
Education	None	1047	11.0
	Primary	5271	55.2
	Secondary	2758	28.9
	Higher	469	4.9
Occupation	Not working	3599	37.7
	Working	5922	62
Wealth index	Poor	3859	40.4
	Middle	3768	22.2
	Rich	1925	37.4
TOTAL	Total	9552	100

Bivariate

The relationship between age at first marriage and the independent variables (age at fist sex, place of residence religion, region, ethnicity, highest educational level, and occupation and wealth index) was further examined by the percentage of mirage that occurred before 18 years. Table 2 shows the per cent of women experience their first married before 18 years by selected background characteristics. Out of 9552 ever married Zambian women 39.8% were married before age 18. As age at sexual debut increases the proportion married early decreases. Within age at sexual debut the proportion is high among whom had first sex at age below 15 years followed by 20+ years (52.5%) and 15-19 years (43.9%). Proportion of early marriage by religion is higher among Catholic (52.6%) followed by Pros tent (49.2%) and other religion (47.2%). Almost 70% (65.8) of early marriage belong to rural residence. Majority of female proportion whom indulged in early marriages are from eastern region (59.3%) followed by Northern (59.1%), Muchinga (56%) Central (51.6%) Luapala (48.9%), Northwest (47.1%) Southern (46.6%), Copperbelt (46.3%), Lusaka (42.5%) and Western (32.6%). African women had higher proportion (49.9%) of marrying at early ages. The proportion of early marriage decreases as education level increases. The proportion of early marriage is high among women with none education (63.8%) followed by primary, secondary and higher with 59.4%, 33.6% and 5.1% respectively. The

proportion of early marriage is almost equal for working and not working with 49.7% and 49.8% respectively. Early marriage is higher among poor female compared to middle (42.5%) and rich (47%) women

Table 3: Association between independent variable and infant mortality

		Early marriages	
Variables	Categories	Percent	Total
age at first sex	Below 15	64.9	814
	15-19	43.9	4217
	20+	52.5	4503
Religion	Catholic	52.6	1621
	Pros tent	49.2	7782
	Other	47.2	123
Type of residence	Urban	34.2	3977
	Rural	65.8	5575
Region	Central	51.6	799
	Copperbelt	46.3	936
	eastern	59.3	1271
	Luapala	48.9	979
	Lusaka	42.5	1048
	Muchinga	56.0	887
	Northern	59.1	1032
	north west	47.1	859
	Southern	46.6	1090
	Western	32.6	651
Education	None	63.8	1047
	Primary	59.4	5271
	Secondary	33.6	2758
	Higher	5.1	469
Occupation	not working	49.7	3599
	Working	49.8	5922
Wealth index	Poor	58.3	3859
	Middle	42.5	3768
	Rich	47.0	1925
Total		49.8	9552

Multivariate logistic regression

All the independent variables were put in a binary logistic regression to asses' individual socio-economic, demographic and all explanatory variables effect on the dependent variable; the results are presented as odds and adjusted odds ratios,

Model one

Zambian women who did sexual debut at age below fifteen years were 66.9% more likely to indulge in early marriages whereas those whom begin at age 15-19 years were 30% as likely to practice early marriages as compared to women who experienced sex at the age above 20 women residing in urban areas where 50.1% as likely to marry below 18 years as compared to their rural counterpart. Women from central , Copperbelt, Lusaka, Luapala, north western southern and women from Eastern, Machinga and Northern were almost 2 and 3 times respectively more likely to be married at early ages compared to women from western. Women

with no education, primary and secondary were almost 33, 27 and 9 times respectively more likely to be married below 18 years compared to women with higher education. Poor women were about 2 times more likely to be married before 18 years while those with middle wealth were almost 20% less as likely to be married before 18 years compare to rich women.

Model two

Women who made their sexual debut before 15 years were about 2 times to be married before 18 years while those who made sexual debut at 15-19 years were 80.1% less likely to be married before 18 years. Women from the nine regions were more likely to be married before 18 years compared with those from western,

Model three

Only education was associated with age at first marriage. Women with no education, primary and secondary were almost 30, 25 and 9 times more likely to indulge in early marriages as compared to women with higher education.

Model four

The propensity of women who had sexual debut below 15 years is higher than women who did sexual debut at 15-19 years compare to women who experienced it at the age of 20+ years as they are 75% more and 18.5% less. Women who reside in urban area were 0.955 times less likely to indulge in early marriages compare to rural women. The odds ratios indicated that respondents from Lusaka northern western and respondents from central Copperbelt, Machinga, Luapala eastern and northern were almost 2 and 3 times more like be married before 18 years as compared to western women. From this analysis, it can be shown that occurrence of early marriage is 29.587, 24.642 and 9.355 times more likely for those whose women with no education, primary and secondary education in comparison to those who have higher education. In contrast, women living in the rural areas were 1.303 times more likely to get married early than those women living in urban areas.

Table 4: Factors associated with age at first marriage among ever married women in Zambia (unadjusted and adjusted odds ratio)

	Co variables	*OR*	*CI*		*AOR*	*CI*		*AOR*	*CI*		*A0R*	*CI*	
*Age at first sex****	Below 15	1.669*	1.429	1.949	1.907*	1.622	2.243				1.757*	1.485	2.078
	15-19	0.708*	0.651	0.77	0.812*	0.742	0.889				0.815*	0.741	0.896
	20+/after union	1	1	1	1	1	1				1	1	1
Religion	Catholic	1.242	0.86	1.793	1.070	0.732	1.566				1.161	0.769	1.755
	Prostant	1.087	0.761	1.553	1.041	0.719	1.506				1.124	0.752	1.680
	Other	1	1	1	1	1	1				1	1	1
*Types of residence****	Urban	0.541*	0.498	0.587	0.558*	0.511	0.608				0.856*	0.766	0.958
	Rural	1	1 1	1 1	1	1	1				1	1	1
*Region****	Central	2.205	1.778	2.733	2.317	1.856	2.892				2.577	2.042	3.253
	Copperbelt	1.783	1.447	2.195	2.239	1.802	2.782				2.766	2.196	3.484
	Eastern	3.020	2.476	3.683	3.019	2.456	3.711				2.997	2.413	3.723
	Lusaka	1.984	1.614	2.438	2.030	1.634	2.521				1.991	1.590	2.493
	Luapala	1.528	1.245	1.875	1.967	1.588	2.437				2.260	1.798	2.842
	Muchinga	2.639	2.137	3.258	2.807	2.253	3.498				2.865	2.280	3.600
	Northern	2.99’3	2.437	3.677	3.197	2.579	3.962				3.112	2.492	3.886
	North Western	1.847	1.495	2.283	1.911	1.537	2.377				2.061	1.642	2.586
	Southern	1.807	1.476	2.213	1.970	1.600	2.426				2.323	1.867	2.891
	Western	1	1	1	1	1	1				1	1	1
*Education****	No education	32.68*	21.267	50.219				30.033	19.432	46.416	29.587	1.740	46.280
	Primary	27.149*	17.939	41.089				24.921	16.402	37.867	24.642	16.035	37.868
	Secondary	9.387*	6.179	14.262				8.976	5.895	13.667	9.355	2.740	14.393
	Higher	1	1	1				1	1	1	1	1	1
Occupation	Not working	0.992	0.193	1.1078				1.001	0.917	1.092	0.945	3.740	1.036
	Working	1	1	1				1	1	1	1	1	1
Wealth index	Poor	1.57*	1.412	1.759				1.083	0.962	1.220	0.996	0.864	1.149
	Middle	0.832*	0.745	0.929				0.944	0.840	1.061	0.926	0.821	1.044
	Rich	1	1	1				1	1	1	1	1	1

CI: Confidence interval; p-value <0.005***; OR: Odds ratio; AOR: Adjusted odds ratio

Discussion

Marriage signals the onsets of exposure to the risk of pregnancy for most women thus it is important indicator of fertility. Populations with a lower age at first marriage tend to have high levels of early child bearing and high fertility. Population groups with uncontrolled fertility had been reported to have adversely influence socioeconomic development of countries. Age at first marriage had been identified as primary determinant of fertility hence the main objective of this study was to investigate socio-economic and demographic determinants of age at first marriage among ever married women in Zambia. This study was conducted to study factors associated with age at first marriage.

The finding shows that, relatively a high proportion of women indulged in early marriages (49.2). This was influenced by factors which were significant at bivariate and multivariate analysis. Education, residence, religion, region, type of residence, occupation, age at first sex and wealth index are significantly associated with early marriages while ethnicity and occupation, had no relationship with early marriages. The discussion is focuses only on factors which were significant (age at first sex, type of residence, region and highest educational level) at model four of multivariate logistic regression as it a better fit model.

Highest Education level of a mother was also a determining factor for age at first marriage. It was significant at multivariate logistic regression analysis. Women with no education, primary education and secondary were about 30, 25 and 9 times respectively more likely to be married before 18 years compared to those with higher education. This finding compare well with similar studies in Bangladesh and Southern Ethiopia by Jinsu, (2016**)** and Ezra (2003) respectively (Ezra, 2003; Jinsu, 2016).

The likely explanation for this study could be that with expansion of education; it is more likely that the youth undermine the traditional marriage norms and values that encourage early marriage and birth. This often delays age at first marriage. In addition, women with more years of education have high self-confidence. In Zambia, for example, only 44 per cent of women aged 20-24 married before the age of 20 had completed primary school, compared to 83 per cent of those married at age 20 or older, according to research in the mid-1990s (Central Statistical Office/Zambia, Ministry of Health/Zambia, and ICF International, 2013-14)

Another factor which influence age at first marriage is type of place of residence. Women who reside in urban area were 0.955 times less likely to indulge in early marriages compare to rural women. This study findings compare well with study by Ezra (2003) whom found that age at first marriage is less likely to be before 18 in the urban areas compared to rural areas (Ezra, 2003).

Region also is contributing factor for women age at first marriage in Zambia. The odds ratios indicated that respondents from Lusaka northern western and respondents from central Copperbelt Machinga, Luapala eastern and northern were almost 2 and 3 times more like be married before 18 years as compared to western women. This finding of this study do not compare well with study by (Chowdhury, Hoq, Hossain, & Khan, 2013) whom found negative relationship between region and age at first marriage.

One more influential factor which influenced age at first marriage is age at first sex. The propensity of women who had sexual debut below 15 years is higher than women who did sexual debut at 15-19 years compare to women who experienced it at the age of 20+ years as they are 75% more and 18.5% less. This study findings compare well with study by Rutto (2012) found that the women in urban areas who engaged in first sexual intercourse below ages 15 years were more likely to enter into marriage than those between ages 15-19 years and 20 years (Rutto, 2019).

Conclusion and recommendation

This study investigates the predictors of age at first marriage in Zambia among ever married women. It has used the national representative data from the Zambia Demographic and Health Survey. Both cross-tabulation and Logistic regression analysis techniques have been applied to identify the important predictors of age at first marriage. This study reflects that women in Zambia marry relatively at the earliest ages. Education, residence, religion, region, type of residence, occupation, age at first sex and wealth index are significantly associated with early marriages while ethnicity and occupation, had no relationship with early marriages. Only four factors were significant (age at first sex, type of residence, region and highest educational level) at model four of multivariate logistic regression which is a better fit model. It is clear that the promotion of education is a strategy with potential for reducing impact on early marriage. Girls who attend school become educated women and, in turn, contribute in human and economic terms to society in a way that goes far beyond their capacity for child bearing and domestic work Education seem to be important predictors of age at first marriage. Policy implication should emphasize that, to increase age at first marriage, women should be enouraged to delay sexual debut. Women from rural areas, mhom are less educated should also be targeted.

References

Asogwa, S. N., & Ugwunta, D. O. (2013). Effect of uncontrolled fertility on Nigerian Economic Growth. *International Jornal of Social Science, II(2)*, 1-15.

Ayele, D. G. (2015). Determinants of fertility in Ethiopia. *Africa Health Science*, 546-551.

Ayiga, N., & Rampagane, V. (2013). determinants of age at first mirrage in sub-Saharan Arfica: A comparative study of Uganda and South Africa. *Jornal of Social Development in Africa, 28(1)*, 9-34.

Central Statistical Office/Zambia, Ministry of Health/Zambia, and ICF International. (2013-14). *Zambia Demographic and Health Survey* . Rockville, Maryland, USA: Central Statistical Office/Zambia, Ministry of Health/Zambia, and ICF International.

Chowdhury, A. H., Hoq, M. N., Hossain, M. E., & Khan, M. M. (2013). Factors Affecting an Age at First Marriage among Female Adolescents in Bangledash. *Research on Humanities and Social Sciences*, 131-139.

Clair, N., Rocio, G., & Robert, L. (2017, March 10). *some causes of fertility.* Retrieved from research institution: https://uwaterloo.ca/waterloo-research-institute-in-insurance-securities-and-

quantitative-finance/sites/ca.waterloo-research-institute-in-insurance-securities-and-quantitative-finance

Dube, J., Tariku, D., & Mohammed, T. (2013, june 10). Determinants of High Fertility Status among Married Women in Gilgel Gibe Field Research Center of Jimma University, Oromia, Ethiopia: A Case Control Study. *Public Health Research, Vol. 3 No. 2*, 9-17. doi: 10.5923/j.phr.20130302.01. Retrieved from public health research: http://article.sapub.org/10.5923.j.phr.201303

Ezra, M. (2003). Factors ssociated with mirraige formation and family process in southern ethiopia. *jornal of comparative family studies*, 509-530.

Garenne, M. (2004). Age at first mirriage and modernisation in Sub-Saharan Africa. *Southern Africa Journal of Demography,9(2)*, 59-79. Retrieved from http://www.jstor.org/stable/20853271.

Garenne, M., Leclerc, P., & Mathews , A. (2011). Paraneterisation of the transition to first mirrage with the Picrate model. *Southern Africa Jornal of Demography, 12(1)*, 109-124. Retrieved from http://www.jstor.org/stable/soutafrijourdemo.12.1.109.

Girlsnotbrides. (2018, May 29). *Girls not Bride*. Retrieved from Girls not Bride: https://www.girlsnotbrides.org/child-marriage/zambia/

Gurmu, E., & Etana, D. (2014). Age at First Marriage and First Birth Interval in Ethiopia: Analysis of the Roles of Social and Demographic Factors. *Journal of African Population studies, 28(3)*, 1332-1344.

Ikamari, L. D. (2005, December 1). The effect of education on the timing of. (P. review, Ed.) *demographic research*, 13-33.

Jinsu, T. F. (2016). Early marriages of women: a case in Bangladesh. *World Journal of Social Sciences :Vol. 6. No. 2. 2016 Special Issue.*, 51 – 6.

Kumchulesi, G., Palamuleni, M., & Sabiti, I. K. (n.d.). factors affecting age at first marriage in malawi. *Jornal of Demography*, 1-21.

Lawrence D, E. I. (2005). *The effect of education on the timing of.* Rostock: Max Planck Institute for Demographic Research.

Mosammat, Z. N., Mohammad, S. Z., & S, M. S. (2013). Age at first marriage and its relation to fertility in Bangladash. *Chinese Journal of Population Resources and Enviroment, 11:3*, 227-235, DOI: 10.1080/10042857.2013.835539.

Mugarura, A., Kaberuka, W., & Atuhaire, R. (2016). factors determinin age at first birth in Uganda. *Issues in Scientific Research,5(1)*, 61-62.

Palamuleni, M. E. (2011). Socioeconomic determinants of age at first marriage in Malawi. *International Jornal of Social Anthropol,Vol. 3(7)*, 224-235, July 2011.

Rutto, R. K. (2019, 05 31). *University of Nairobi Research archive.* Retrieved from University of Nairobi: http://erepository.uonbi.ac.ke/

Subramanian, P. K. (2008). Determinants of the Age at Marriage of Rural Women in India. *Family and Consumer Sciences Research Jornal*, 160-166.

United Nations. (2015). *World Fertility patterns 2015.* united nation.

World village. (2017, March 28). Retrieved from World village.com: https://www.worldvillage.com/why-fertility-rates-are-important/