

Review Article

Epidemiology and health consequences of early marriage: focus on Delta State Nigeria

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ABSTRACT

Early marriage occurs for several reasons including gender inequality, poverty, insecurity and tradition. Marrying at such a young age means that these young girls are forced into sexual relations and often get pregnant when they are not ready, causing health challenges and adding to the health burden in developing countries. This paper reviews the epidemiology of early marriage with particular regards to the public health concepts and negative consequences of early marriage. This was a narrative review of previous works on early marriage. Evaluations included the statistics of the negative consequences on women and how best the practices have been ameliorated to its barest minimum. No data available on the previous works dearth of contextualized epidemiological information about Delta State Nigeria. However, available data shows as high as 88% prevalence rate of child marriage in Nigeria, with unexpected pregnancy at 23% being the major cause, maternal mortality at 90%, VVF over 500,000–1,000,000 reported annually in developing countries as the major health consequences. The causes, consequences and prevalence of early marriage constitute reasons for public health concerns to stem the tide. Willful and urgent attention is needed to prevent the pitiable situation of the victims, especially girls. Health literacy is a primary healthcare concept of community educational outreach to adopt.

Keywords: Early marriage, Health consequences, Health literacy, Morbidity and mortality level, Prevalence rates, Public health concerns

INTRODUCTION

Epidemiology is the study of the distribution and determinants of health. Among the women and girls, one of the determinants of health is forced marriage. Child or early marriage is a form of forced marriage where the girl and/or boy has yet to turn 18 years old and did not consent to be married.^{1,2} In the public health concept of early marriage, child marriage affects both girls and boys, but it affects girls disproportionately. For instance, it was estimated that 45% women in the 20-24 years range were

married before 18 years while about 17% were before 15 years old.³

In terms of causes of early marriage, the general causes behind child marriage across the globe are parents' fear of child trafficking, shame caused by the loss of a daughter's virginity before marriage and of the uncertainty of a child's future outside wedlock; lack of education; unemployment; poverty; geographical and social isolation; conflict; emigration; and a reliance on existing cultural values and traditions.⁴ The relative levels that

these factors influence early girl child are as graphically represented below (Figure 1).

Early marriage forces girls into adulthood before they are emotionally and physically matured, and it has harmful effects on their health, educational, economic and social development. He also stated that those marrying early may be more susceptible to domestic violence, poor mental health, and malnutrition. The study also listed the causes of early marriage as gender inequality, unexpected pregnancy, broken homes, poverty, ignorance and customs/traditions.⁵

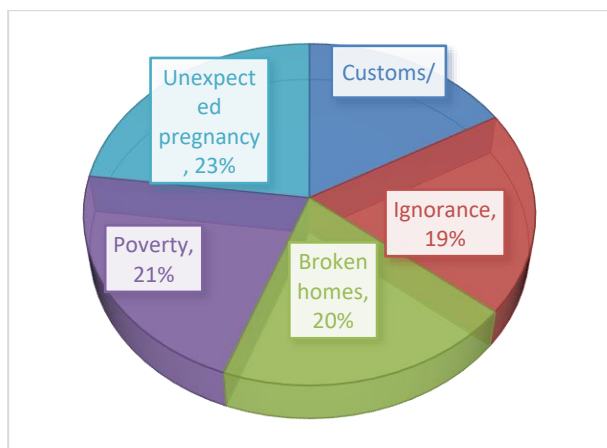


Figure 1: Factors prompting early marriage and relative influences.⁵

Prevalence of early marriage

It was estimated at global level in a report from Canada dated 2008, though ratified in 2016, more than 650 million women alive today were married as children. The report further indicates yearly incidence of over 12 million girls being married before they turn 18 years old, which is approximately at the rate of 28 girl-child marriages every minute. Most of these early marriages occur in developing countries. For instance, at the time of Canadian report, there were estimated 40% of the women 20–24 years old in developing countries compared to 21% global who were married before the age of 18 years (21% globally); and another 12% compared to 5% global married before the age of 15 years.⁶

Out of the 10 countries with the highest rates of child marriage, almost all are Africa and Asia.⁹ The dominance of Sub-Saharan Africa in the top 10 countries with high rates of early marriage has remained consistent over the years (Figure 2), although there is change in composition according to UNICEF global databases reported in April 2020 (Table 1).^{1,7,8}

According to the UNICEF report that included data from Nigeria, 43% of married girls are early marriages that occurred before their 18th birthday and another 16% are before they turned 15 years old (Table 1).⁸ Within

Nigeria, the prevalence of child marriage varies widely from one region to another, with figures as high as 88% in the North West region and as low as 10% in the South East (Figure 3). Given this phenomenon i.e. early marriage in South-South Nigeria being higher than global average of 5%, it will be interesting to know the level in Delta State and the Urhobo ethnic communities in particular.¹⁰

The forecast about child marriage stated that today, over 60 million marriages include girls under the age of 18 years: approximately 31 million in South Asia, 14 million in sub-Saharan Africa, and 6.6 million in Latin America and the Caribbean.¹² While data show some marginal decline in the prevalence of child or forced marriage since 2003, it is agreed that action to prevent thousands of early marriages in the coming years is very imperative.^{9,13} According to the National Demographic Health Survey published by The Save the Children Fund⁶, the highest 10 states with early marriages in Nigeria are mainly in the northern part of the country. While this may be attributed to cultural and/or religious practices; Delta State occupying the 19th position with 37.7% prevalence is of particular concern that should be investigated.

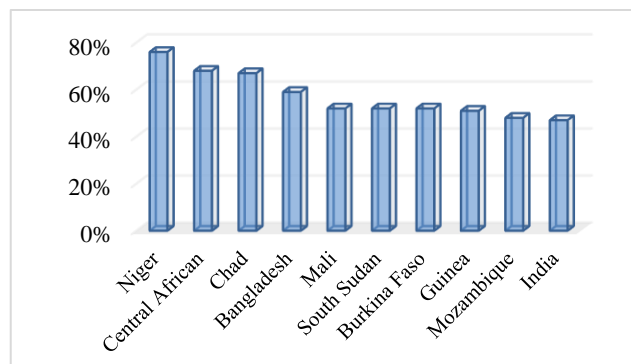


Figure 2: Top 10 countries' rates of early marriage in 2018 report.^{3,7}

Table 1: Top 10 countries' rates of early marriage in 2020 report.⁸

Countries	Girls married ≤15 (%)	Girls married ≤18 (%)	Boys married ≤18 (%)
Chad	30	67	8
Central African Republic	29	68	28
Niger	28	76	6
Bangladesh	22	59	4
Mauritania	18	37	2
Guinea	17	47	2
Mozambique	17	53	10
Mali	16	54	2
Nigeria	16	43	3
Ethiopia	14	40	5

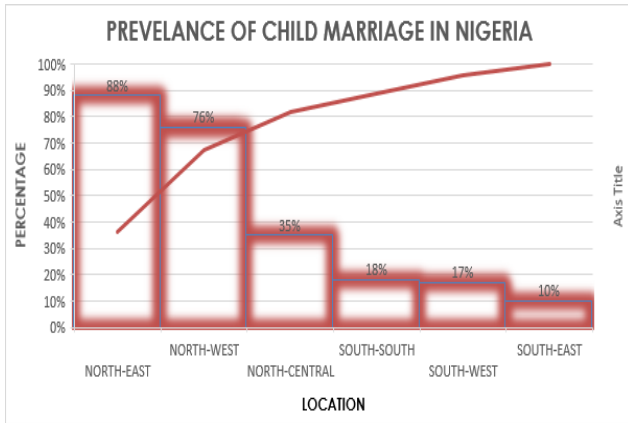


Figure 3: Prevalence of early marriage in Nigeria by region.¹¹

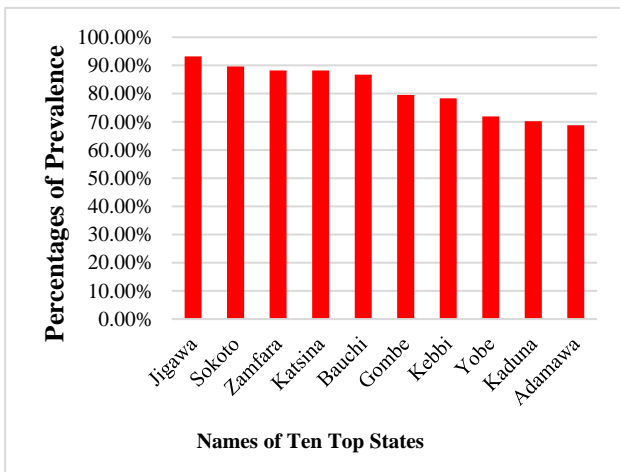


Figure 4: Ten Top States with Prevalence of Early Marriage in Nigeria.¹¹

CONSEQUENCES OF CHILD MARRIAGE – EPIDEMIOLOGICAL NARRATIVE

This section will have a look at some of the common health consequences of early marriage globally, continentally, nationally and possibly at the state and local levels. It will extend on what has been previously reported from the area.^{5,14}

According to UNICEF and other reports,¹⁵⁻¹⁷ child marriage is driven by poverty and has many effects on girls' health ranging from increased risk for HIV infection,¹⁸⁻²⁰ lower outcome of malaria management,¹² maternal death during childbirth,²¹ and obstetric fistulas.^{16, 22, 23} Suicide is also common.^{24, 25} Girls in early marriage are at higher risk for premature birth and death as neonates, infants, or children.²⁶

Maternal mortality and morbidity

According to 2003 report of survey from 42 countries; about 2.5 million yearly births are attributed to girls who

are under 16 years old.²⁶ The highest rates of childbearing in adolescents were found to occur in Sub-Saharan African countries. Then, it was estimated that over 10% of adolescent girls in the Sub-Saharan countries bear children before turning 16 years old. These maternal mortality indices do not seem to have improved as report from 2015 data, which indicates South Asia and Sub-Saharan Africa contribute approximately 82% of the global number of maternal deaths (Table 2).²¹

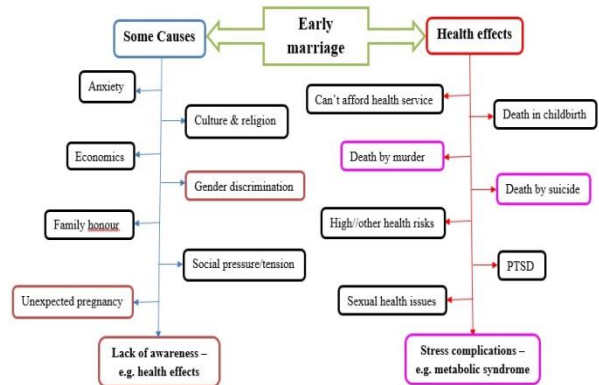


Figure 5: Graphical overview of causes' influence on effects of early marriage.^{25,27}

Table 2: Maternal mortality indices on 2015.²¹

Countries	No. of deaths	Mortality ratio
High-income North America	1091	24.7
Australasia	25	6.6
High-income Asia Pacific	123	8
Western Europe	315	7.2
Southern Latin America	435	42
Central Europe, eastern Europe, and central Asia	1135	20.3
Latin America and Caribbean	7214	73.6
Southeast Asia, east Asia, and Oceania	20424	68.9
Oceania	1076	386.8
North Africa and Middle East	19066	142.3
South Asia	92419	264.3
Sub-Saharan Africa	133043	374.9
Nigeria	20321	284.9
Global	275288	195.7

Additionally, some 3.9 million unsafe abortions among the adolescent girls occur each year. These further contribute to maternal mortality and morbidity rates as well as other health problems.²⁸ Preventing unintended pregnancy is essential to improving adolescents' sexual and reproductive health and their social and economic well-being.²⁹ An estimated 38 million adolescent girls are

sexually active, but do not want to be pregnant or become mothers within the immediate two years. However, only about 15 million (39%) of these girls use modern contraceptive methods, while the remaining 61% of the subpopulation are in need of contemporary contraceptives in order to reduce risk of unintended pregnancy.²⁸

Vesico-vagina fistula

Obstetric fistula remains a major public health problem in developing world where unattended obstructed labor is common and maternal mortality is unacceptably high. It is a tragedy in developing world because of illiteracy, poverty, ignorance and lack of health facilities.¹⁶ In Nigeria, Vesico-vagina fistula (VVF) affects up to 150,000 women.³⁰ Suffice to note that vaginal fistula is prevented by delaying the age of first pregnancy. Hence, statistics is comparable to maternal mortality (Table 3).

Table 3: Prevalence and prevention of vaginal fistula.

	Prevalence	Prevention ^{22, 30, 31}
VVF²⁶	50 000 to 100 000 yearly incidence	delaying the age of first pregnancy;
	>2 million sufferers in Africa and Asia	the cessation of harmful traditional practices; and
Maternal and mortality.^{26, 28}	≈2.5 million births per year by girls <16 years old. (Neal...)	Action to address social determinants and health inequity
	>10% of adolescent girls in the Sub-Saharan countries bear children before turning 16 years old. (Neal...)	Disease prevention
	3.9 million Unsafe abortions per year by girls ≤19 years old. (Darroch...)	Health promotion

Antenatal malaria

Pregnancy poses many challenges for young girls. Because pregnancy suppresses the immune system, pregnant girls are at increased risk of acquiring diseases like malaria. Malaria kills >1 million people each year, 90% of them in Africa, approximately 25 million pregnant women are exposed to malaria per year, and pregnant women are among the most severely affected by malaria.¹² The incidence rate of malaria in pregnancy may appear low, but mortality rate is up to 50% (Figure 6), especially in first pregnancy that is synonymous with early marriage.¹³

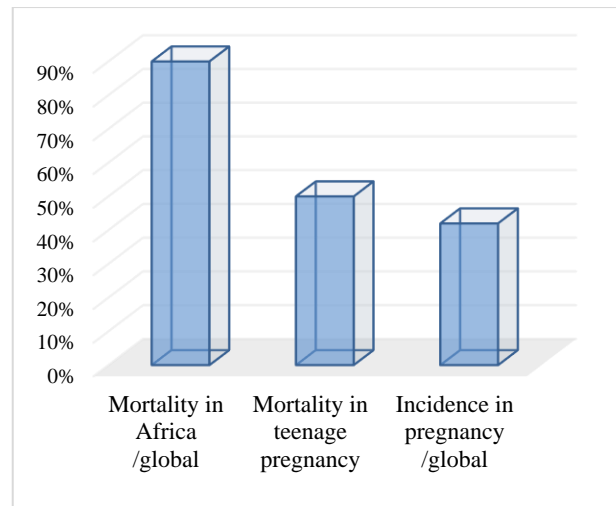


Figure 6: Incidence and mortality rates of malaria in pregnancy.^{12,13}

Psychological issue

Psychologically, women married as children are more or very likely to suffer depression and isolation,^{13,32} as well as post-traumatic stress disorder (PTSD) and somatic illnesses.³² This is a still a global issue as early marriage by American girls is associated with a 23% greater risk of stress-related diseases such as diabetes and heart disease.³³

Often, the girls who are forced into early marriage become victims of violence. There are cases of such girls being so estranged in domestic abuse to the extent of committing murder whilst trying to escape.²⁵ Suffice to mention that the murder will lead to long-term consequences including PTSD and suicidal ideations.²⁴ If VVF develops, psychosocial impact may be aggravated.³¹ This is especially because VVF has both physical and economic impacts on the individual.³⁴

Sexual health and others

Child marriage victims are risk of other health problems such as cervical cancer and sexually transmitted diseases (STD) including HIV infection.^{13,31} Besides unwanted pregnancy and pregnancy-related complications, it is generally known that pregnancies among the adolescent girls are more (relative to adults) associated with preterm delivery and low birth weight babies, as well as infant and neonatal mortality.²⁰

Globally, the prevalence of HIV infections among women is highest from ages 15 to 24; Report indicated that new HIV infections are more prevalent among the women subgroups below 25 years old.³⁵ There is no gain-saying that HIV infection is a global public health issue, but awareness and being undergraduate studies constitute integral determinants of the girls' wellbeing.^{36,37}

Perhaps, so much has yet to be focused upon regarding the long-term effects of anaemia, cardiovascular diseases, diabetes, infection and stress. For instance, prevalence of diabetes and diabetic retinopathy has yet to be investigated among victims of early marriage. Malaria deaths and other health consequences of early marriage have yet to be compared between the different age-strata of married women in the Delta State Nigeria. Therefore, investigation of these issues to generate data will represent advancement in public health epidemiology.

CONCLUSION

Available data from literatures empirically indicate that the issues of early marriage need urgent attention to stop the trend. The health status of the victims is unpalatable and the minds of the victims' parents need resetting. Hence education, empowerment, mobilization and health advocacy should continue to be strategically planned to achieve these goals. However, the lack of previous studies on early marriage and its negative health effects in many communities, such as Urhobo community in Delta State Nigeria, means dearth of data to substantiate the menace associated with early marriage at the local level. Hence the need for further studies.

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