ORIGINAL RESEARCH ARTICLE

Prevalence of early childbearing practice among young women in Nigeria: Evidence from 2021 multiple indicators cluster survey

DOI: 10.29063/ajrh2025/v29i3.13

Michael A. Omoyemiju[1] and Soladoye S. Asa[2]*

Department of Educational Foundations and Counselling, Obafemi Awolowo University, Ile-Ife, Nigeria[1]; Department of Demography and Social Statistics, Obafemi Awolowo University, Ile-Ife, Nigeria[2]

***For Correspondence:** Email: *adeyemiju@oauife.edu.ng*

Abstract

Globally, Early Childbearing Practice (ECbP) remains one of the harmful practices affecting many young women and denied them the right to make personal and vital decisions related to education, sexual and reproductive health. The UNICEF estimated that not less than 14% of young women gave birth before the age of 18 with associated psychological, social, physical and reproductive health challenges. The study determined the prevalence of ECbP among young women aged 15-19 years in Nigeria and examined the influence of socio-demographic characteristics on ECbP. A cross-sectional data of women aged 15-19 years from the Nigeria 2021 Multiple Indicators Cluster Survey (MICS) were used. A statistically representative total weighted sample of 8,474 women aged 15-19 years who had had a live birth were selected for the study. Bivariate and binary logistic regression analyses were employed to answer the research questions and hypothesis at a 5% level of significance. The results showed that the prevalence of ECbP in Nigeria was 9.23% and there was a statistically significant association between place of residence and ECbP ($\chi^2 = 296.25$, $p < 0.05$). The logistic regression results showed that ECbP was positively associated with age [OR=3.95, 95% CI= 2.89-5.38] while attaining a higher level of education reduced the likelihood of ECbP [OR=1.45, 95% CI = 0.94-2.24] in Nigeria. The study concluded that ECbP among young women aged 15-19 years was prevalent in Nigeria but mild. Nevertheless, reproductive health policies that would reduce the negative consequences of ECbP must be strengthened for improved overall welfare of young women in Nigeria. *(Afr J Reprod Health 2025; 29 [3]: 103-114)*

Keywords: Early childbearing; young women; prevalence; overall welfare

Résumé

À l'échelle mondiale, les pratiques de procréation précoce (ECbP) restent l'une des pratiques néfastes affectant de nombreuses jeunes femmes et leur refusant le droit de prendre des décisions personnelles et vitales liées à l'éducation, à la santé sexuelle et reproductive. L'UNICEF estime qu'au moins 14 % des jeunes femmes ont accouché avant l'âge de 18 ans, ce qui entraîne des problèmes de santé psychologique, sociale, physique et reproductive. L'étude a déterminé la prévalence de l'ECbP chez les jeunes femmes âgées de 15 à 19 ans au Nigeria et a examiné l'influence des caractéristiques sociodémographiques sur l'ECbP. Des données transversales sur les femmes âgées de 15 à 19 ans issues de l'enquête par grappes à indicateurs multiples (MICS) du Nigeria 2021 ont été utilisées. Un échantillon pondéré total statistiquement représentatif de 8 474 femmes âgées de 15 à 19 ans ayant eu une naissance vivante a été sélectionné pour l'étude. Des analyses de régression logistique bivariée et binaire ont été utilisées pour répondre aux questions et hypothèses de recherche avec un niveau de signification de 5 %. Les résultats ont montré que la prévalence de l'ECbP au Nigeria était de 9,23 % et qu'il existait une association statistiquement significative entre le lieu de résidence et l'ECbP ($\chi 2 = 296,25$, $p < 0,05$). Les résultats de la régression logistique ont montré que l'ECbP était positivement associé à l'âge [OR=3,95, IC à 95 % = 2,89-5,38], tandis qu'atteindre un niveau d'éducation plus élevé réduisait la probabilité d'ECbP [OR=1,45, IC à 95 % = 0,94-2,24] au Nigeria. L'étude a conclu que l'ECbP chez les jeunes femmes âgées de 15 à 19 ans était répandue au Nigéria, mais légère. Néanmoins, les politiques de santé reproductive qui réduiraient les conséquences négatives de l'ECbP doivent être renforcées pour améliorer le bien-être général des jeunes femmes au Nigeria. *(Afr J Reprod Health 2025; 29 [3]: 103-114).*

Mots-clés: Maternité précoce ; les jeunes femmes ; prévalence; bien-être global

Introduction

All over the world, Early Childbearing Practice (ECbP) has been identified not only as a continuing public health issue but a major social phenomenon due to its negative multiplier effects on society in terms of physical health, quality of life and overall well-being of young women. The ECbP is defined as the percentage of women who have had a live birth before the age of 20 years otherwise regarded as

adolescent girls by psychologists[1-2]. In spite of the legal and policy frameworks put in place by the United Nations and various countries of the world to mitigate the menace of adolescent marriage and childbearing, the proportion is yet becoming worrisome in Africa[3] and more importantly in Nigeria. Although, statistical evidence that specifically indicates the prevalence of ECbP in Nigeria is scarce in the literature. Related empirical evidence on adolescents' pregnancy rate and girl-child marriage is available. For instance, as of 2018, it was reported by the United Nations Children's Fund (UNICEF) that "41% of young girls in the west and central Africa married before the age of 18 which is an indication that four out of ten girls and young girls married before the age of 18"[4]. It was estimated in 2020 that about 21 million young women aged 15-19 years in developing countries (Nigeria inclusive) become pregnant out of which 12 million of them would give birth to new live babies[5].

In 2022, UNICEF also reported that not less than 14% of adolescents and young women gave birth before the age of 18 years as of 2021[6]. Usually, adolescent girls surfers the health risk effects and other associated challenges of early childbirth in the society. The World Health Organisation (WHO) reported that adolescent mothers (aged 10–19 years) are at higher risk of various physical health problems such as eclampsia, puerperal endometritis and systemic infections than women in older age groups, and babies of adolescent mothers face higher risks of low birth weight, preterm birth and severe neonatal condition[7]. Although, efforts of various international agencies, development partners, and reproductive and population health professional are yielding positive results due to the empirical-based statistics which indicates a global reduction in young women's birth rate. However, in spite of the reduction in the magnitude of adolescent and young women's birth rate globally from 64.5 births per 1000 women in 2000 to 42.5 births per 1000 women in 2021, Sub-Sahara Africa including Nigeria still has the highest rate (101/1000 women) of adolescent birth rate when compared with other regions of the world[8]. When there is persistent higher rate of adolescent and young women birth rate, associated complicated physical health issues may be observed in the life of early childbearers among such category of women.

Notwithstanding the United Nations' efforts in fighting against the childbearing practice and as well as various policy efforts by different countries, a study conducted in Nigeria reported people's perception of girl marriage leading to ECbP as a good practice[9]. The problem associated with childbearing practice escalates more with insecurity and COVID-19 pandemic probably due to the shortage of food in society, high level of unemployment among employable male adults, school closures and interruptions in health services which put more young girls at risk of ECbP in Nigeria. Generally, attitudes and practices involving adolescents' pregnancy which result in ECbP are known to be influenced by certain factors. These factors may include cultural and stereotypic beliefs, and social-economic, psychological and demographic factors[10-12]. Apart from this, sexual health knowledge, awareness, belief and use of contraceptive methods by young women are some of the associated factors of childbearing[13-14]. Within the framework of demographic factors, previous studies have found a significant association between place of residence marital status and adolescents' pregnancy and reproductive challenges[15-18]. Other studies have found an association between ECbP and early childcarers' age at debut, place of residence, geopolitical zones, education, knowledge and use of contraceptives[19-20]. The ECbP, being a product of child marriage is common in Nigeria but higher in the Northern region when compared with the South[21]. The ECbP is a very harmful practice that denies children the right to make personal and vital decisions such as educational life, and sexual and reproductive health and impedes their well-being[22-25]. If the ECbP is not mitigated to the bearest minimum, it is potent enough to reinforce further the occurrence of educational (school dropout, illiteracy), social (marriage exploitation, intimate partner violence and family unrest), psychological (depression, low self-esteem, suicidal ideation), and physical (cardiovascular, HIV/STDs, maternal) health problems which may impair the overall well-being of young women or even increase untimely death among them in the society[24-27].

One of the most reliable and comprehensive research evidence about issues related to adolescent and young girls births in Nigeria is National

Demographic and Health Survey (NDHS) was published last by UNICEF[28] but the dearth of sufficient information on ECbP especially with a population increase from approximately 196 million in 2018 to more than 219 million as of July 7, 2023. Given the consistent yearly increase in Nigerian population figures, the advent of the Covid-19 pandemic in early 2020, and various insecurity (kidnapping of schoolgirls) and national economic issues in Nigeria, there is a need for more quality and up-to-date statistical evidence on the prevalence of ECbP and its associated factors in Nigeria. In addition, available empirical evidence on ECbP which can be used by public health professionals, counselling psychologists, international agencies like the National Orientation Agency (NOA) and government ministries that are willing to support the fight against the ECbP in Nigeria and other parts of the world are not only inadequate but also limited in scope and context.

Insufficient and current statistical evidence on the ECbP and its associated factors in Nigeria may hamper the efforts in providing psychosocial supports and developing necessary interventions for the victims. Based on the available literature evidence, in this study, it was hypothesized that socio-demographic characteristics would significantly influence the ECbP among young women aged 15-19 in Nigeria Quality and up-to-date information that would inform the appropriate policy directions, development and implementation of relevant policies for effective prevention of ECbP in Nigeria is therefore required for the improvement of the overall welfare of young women in Nigeria and the achievement of Sustainable Development Goals (SDGs) globally.

Methods

The study used the cross-sectional data of women aged 15-19 years from the Nigeria 2021 Multiple Indicators Cluster Survey (MICS). The MICS is a nationally representative survey that elicits information on household members across all geo-political zones in Nigeria. Being a survey regularly conducted at the interval of four years, MICS specifically focuses on the collection of quality information on men and women aged 15-49 years, children aged 5-17 years and children under 5 years living in households in Nigeria. It provides information on household characteristics, childhood mortality rate, reproductive and maternal health, child-health nutrition and development, early childhood education, violence and exploitation, child marriage, etc. A statistically representative total weighted sample of 8,474 women aged 15-19 years was selected for the study.

Outcome variable

The outcome variable for the study was ECbP which was defined as women aged 15-19 years that have ever given live birth to either one or more children. This variable was dichotomized into 0 and 1 to represent "No live birth" and one or more live birth" respectively.

Explanatory variables

Seven explanatory variables were investigated with respect to the outcome variable. The explanatory variables of interest include women's age, education, place of residence, marital/union status, geo-political zone, wealth index, age at first sexual intercourse and estimation of overall happiness. The selection of these variables was guided by the established related literature evidence.

Data analysis

Data were analysed using appropriate descriptive and inferential statistics. The univariate analysis was carried out to determine the prevalence of ECbP. The bivariate analysis was employed to examine the significance of the influence of identified explanatory on ECbP at 5% level of significance. The Binary logistic regression was employed at the multivariable level of analyses to establish the influence of explanatory variables on ECbP among young women aged 15-19 years.

Results

The results are presented in order of arrangement of research questions and hypotheses formulated. With a weighted sample of 8,474 women aged 15-19 years, the mean and standard deviation were 1.9077 and 0.2894 respectively.

Table 1: Percentage distribution of study sample by background characteristics

Variable	Frequency	Percentage
Total	8,475	100.00
Age of the women		
15-17 years	5,369	63.35
18-19 years	3,106	36.65
Mean Age	16.81	
Education		
None	1,536	18.13
Primary	804	9.49
Junior Secondary	1,400	16.53
Senior Secondary	4,467	52.70
Higher/Tertiary	267	3.15
Place of Residence		
Urban	3,813	45.00
Rural	4,661	55.00
Marita/Union Status		
Currently Married/in union	1,034	12.20
Formerly Married/in union	56	0.67
Never Married/in union	7,383	87.13
Geo-Political Zone		
North Central	1,249	14.74
North East	1,272	15.01
North West	2,352	27.76
South East	909	10.73
South South	1,175	13.87
South West	1,516	17.89
Wealth Index		
Poorest	1,456	17.19
Poorer	1,632	19.27
Middle	1,850	21.83
Richer	1,820	21.49
Richest	1,714	20.22
Age at First Sexual Intercourse		
8-11 years	36	1.56
12-15 years	1,005	44.10
16-19 years	1,237	54.32
Mean age at first sexual intercourse	13.5	54.32
Estimation of Overall Happiness		
Very Happy	4,203	49.61
Somewhat Happy	2,848	33.60
Neither Happy Nor Unhappy	923	10.89
Somewhat Unhappy	334	3.94
Very Unhappy	166	1.95

The descriptive analysis of sample participants with respect to their background characteristics is presented in Table 1. It can be observed in Table I that the mean age of young women sampled was 16.8 with a standard deviation of 1.38. The highest proportion of young women (63.4%) was within 15-17 years while a proportion of 36.7% of them was within the age range of 18-19 years as of the time of the survey. While 18% had no education at all, about 10% of them had primary education. More than half of them (69%) had secondary education out of which 17% and 53% had junior and senior secondary education respectively. Only 3% of them had tertiary education experience. More than half of them (55%)

Table 2: Descriptive statistics showing the prevalence of childbearing practice among young women aged 15-19 in Nigeria

Ever Given Birth	Frequency	Percentage
No	7,692	90.77
Yes	782	9.23
Total	8,474	100.00

were residing in rural areas, while 45% were urban dwellers. A very high proportion (87%) of the young women were neither married nor in a marital union, 0.7% had married earlier or in a marital union before. Only 12% of them reported being in a marital union currently. In terms of geo-political zones, more than half (58%) of the young women were in the northern part of the country out of which 15%, 15% and 28% of them were in the north-central, north-east and north-west respectively with north-west having the highest proportion of them. Southeastern part of the country had 11% while south south and south-west also had 14% and 18% respectively. About 42% of young women were found to have a rich status of wealth while 37% of them were in a poor status of wealth. Only about one-quarter of them were found in the moderate wealth status. In terms of age at first sexual intercourse, the mean age of young women to experience it was 14 years. More than half (54.32%) of the respondents reported having had their first sexual intercourse before the age of 16-19 years, while 44.11% of them had their first intercourse between 12 to 15 years. Only 1.56% reported that they have had first sexual intercourse between 8-11 years.

While examining the overall happiness of the respondents, approximately half (49.61%) of them claimed to be very happy, while 33.60%, 10.89%, and 3.94% of them reported being somewhat happy, neither happy nor unhappy and somewhat unhappy respectively. Only 1.95% of them claimed to be unhappy. As shown in Table 2, out of 8,474 weighted sampled young women aged 15-19, 782 (9.23%) of them reported having given birth to at least one child before while 7,692 (90.77%) have not given to a child at all. Therefore, it can be summarized that the prevalence of ECbP in Nigeria was 9.23% as of the period of this study. Further to this, the results on childbearing prevalence among young women aged 15-19 were cross-tabulated with respect to respondents' socio-demographic variables (age, education, place of residence, marital union status, geo-political zone, wealth index and age at first sexual intercourse) and were subjected to descriptive statistics. The results are presented in Table 3.

Table 3 showed that a higher proportion (20.5%) of women aged 15-17 reported having had an early child. However, only 2.72% of them that are within the age bracket of 18-19 years reported ECbP experience. The result showed a significant association between age and young women's childbearing ($\chi^2 = 760.15$; $p < 0.05$). The ECbP increases with age among young women aged 15-19 years. It can be summarized that ECbP was more prevalent among late adolescents than younger ones.

In terms of education, the results show that the prevalence of ECbP was more observed among young women that have no education at all (26.7%), but let prevalent among those with a higher level of education (0.81%). A significant association was observed between the level of education and ECbP among young women ($\chi^2 = 834.3$; $p < 0.05$). This result indicates an inverse association between the two variables. The implication is that the higher the level of education of young women, the lower the prevalence of ECbP among them. Relatedly, with a significant association being observed ($\chi^2 = 4549$; $p < 0.05$), ECbP was more prevalent among young women residing in rural areas (14%) when compared with those living in urban areas (3.33%). In terms of marital/union status, the prevalence was more observed among those that formerly married but in another marital union (78.5%) followed by those that are currently married and still in the same marital union (62.7%).

However, it was less prevalent among those that are never married/in a union but had given birth (1.2%).When considering the geo-political zone, the prevalence of ECbP was higher in the northern part of the country (36.3%) than southern part (13.45%).

Table 3: Prevalence of ECbP across socio-demographic characteristics of respondents

Variable	Ever Given Birth						
	No		Yes		Total	χ^2	p
	F	%	F	%			
Age of the women							
15-17 years	5222	97.3	146	2.72		760.15	p < 0.05
18-19 years	2470	79.5	636	20.5			
Education							
None	1126	73.3	410	26.7	1536		
Primary	680	84.6	124	15.4	804		
Junior Secondary	1305	93.2	95	6.8	1401	834.38	p < 0.05
Senior Secondary	4316	96.6	151	3.37	4466		
Tertiary	265	99.2	2	0.81	267		
Area of Residence							
Urban	3687	96.7	127	3.33	3813	296.25	p < 0.05
Rural	4006	85.9	655	14.1	4661		
Marital/Union Status							
Currently Married/in Union	386	37.3	649	62.7	1034		
Formerly Married/in union	12	21.5	45	78.5	57	4549.48	p < 0.05
Never Married/in union	7295	98.8	89	1.2	7384		
Geo-Political Zone							
North Central	1166	93.3	83	6.66	1249		
North East	1083	85.2	189	14.8	1272		
North West	2004	85.2	349	14.8	2352		
South East	882	97	28	3.04	909	264.73	p < 0.05
South South	1091	92.9	84	7.14	1175		
South West	1467	96.7	50	3.27	1516		
Wealth Index							
Poorest	1206	82.8	250	17.2	1457		
Poorer	1360	83.3	273	16.7	1633	391.13	p < 0.05
Middle	1709	92.4	141	7.63	1850		
Richer	1683	98.2	31	1.82	1714		
Richest	7693	90.8	782	9.23	8475		
Age at First Sexual Intercourse							
8-11 years	27	76	9	24.0	36		
12-15 years	630	62.7	375	37.3	1005	8.741	p > 0.05
16-19 years	839	67.8	399	32.2	1237		
Estimation of Overall Happiness							
Very Happy	3875	92.2	330	7.84	4204		
Somewhat Happy	2549	89.5	299	10.5	2848		
Neither Happy Nor Unhappy	828	89.7	95.1	10.3	923	21.11	p < 0.023
Somewhat Unhappy	293	87.7	41.3	12.3	334		
Very Unhappy	148	89.5	17.3	10.5	166		

The result shows that the prevalence of ECbP was the same in the northeast (14.8%) and northwest (14.8%) but lower in the north-central (6.66%). However, ECbP was relatively more prevalent in the south-south region (7.14%) than the south-west region of the country (3.27%), and there was a significant association between geo-political zones and early childbearing practice among young women ($\chi^2 = 264.73$; $p < 0.05$). Also, it was observed in the result that there was a significant association between the wealth status of young women and their ECbP ($\chi^2 = 391.13$; $p < 0.05$).

The highest proportion of ECbP was found among those living under poor conditions (40%) while those in the rich status were found to be 11.05 percent, with about 8% of the in a moderate wealth

Table 4: Multivariate binary logistic regression model for childbearing practice with 95% C.I.

Women Ever Given Birth	Odds Ratio	Linearized Std. Err	t	p>|t|	[95% Conf. Interval]	
Age of the women						
15-17 years (RC)						
18-19 years	3.95	0.62	8.70	0.00	2.89	5.39
Education						
None (RC)						
Primary	1.45	0.32	1.68	0.09	0.94	2.25
Junior secondary	1.19	0.32	0.66	0.51	0.71	2.01
Senior secondary	0.93	0.25	-0.26	0.79	0.55	1.57
Higher/tertiary	0.16	0.12	-2.44	0.02	0.03	0.69
Area of Residence						
Urban (RC)						
RURAL	0.78	0.19	-0.97	0.33	0.48	1.29
Geo-Political Zone						
North-Central (RC)						
North-East	1.12	0.25	0.50	0.62	0.72	1.72
North-West	0.96	0.20	-0.19	0.85	0.64	1.45
South-East	1.53	0.63	1.04	0.30	0.68	3.42
South-South	1.85	0.56	2.02	0.04	1.02	3.35
South-West	1.36	0.52	0.79	0.43	0.64	2.91
Wealth index						
Poorest (RC)						
Poorer	1.24	0.22	1.19	0.23	0.87	1.75
Middle	0.98	0.21	-0.09	0.93	0.65	1.48
Richer	1.15	0.35	0.49	0.62	0.64	2.09
Richest	0.45	0.19	-1.87	0.06	0.20	1.04
Marital/union status						
Currently married/in union (RC)						
Formerly married/in union	1.67	0.61	1.39	0.16	0.81	3.44
Never married/in union	0.03	0.04	-13.61	0.00	0.02	0.06
Age at first sexual intercourse						
8-11 years (RC)						
12-15	0.97	0.40	-0.07	0.95	0.44	2.18
16-19	0.54	0.22	-1.49	0.14	0.24	1.22
Estimation of Overall Happiness						
Very Happy (RC)						
Somewhat Happy	1.59	0.25	3.02	0.00	1.18	2.16
Neither Happy Nor Unhappy	1.38	0.29	1.50	0.13	0.91	2.11
Somewhat Unhappy	2.29	0.99	1.90	0.05	0.97	5.38
Very Unhappy	1.75	0.93	1.05	0.29	0.62	4.96
Constant	0.78	0.39	-0.49	0.62	0.29	2.11

status. In terms of age at first sexual intercourse, the highest prevalence (37.3%) of ECbP was found among those within the age bracket of 12-15 years followed by (32.2%) among those within 16-19 years. The smallest proportion of them (24%) were found to be within 8-11 years of age, and there was no significant association between the age at first sexual intercourse and ECbP of young women ($\chi^2 = 8.741$; $p > 0.05$).

In examining the association between overall happiness and ECbP of young women, it was found that 10.5% of the respondent rated their overall level of happiness as "very happy" while 12.3%, 10.3%, 10.5% and 7.84% of them rated their level of happiness as "somewhat unhappy", "neither happy nor unhappy", "somewhat happy", and "very happy" respectively. Further to this, data were subjected to binary logistic regression analysis to further determine the predictive contribution of selected socio-demographic factors on childbearing practice. The results are presented in Table 4.

As shown in Table 4, the results of binary logistic regression analysis of ECbP with respect to the selected socio-demographic factors revealed that the odds of having a child increase with age. For instance, women aged 18-19 years are 3.95 times more likely to have an early live birth than their counterparts aged 15-17years [OR=3.95, 95% CI= 2.89-5.38]. This is an indication that indicates that the older age group is approximately four times more likely to have given birth. This finding underscores the increased likelihood of childbearing as adolescents approach adulthood. This result was found to be significant at $p < 0.05$. However, inverse relationship between ECbP and the level of education of young women. Young women with higher/tertiary education are significantly less likely to have given birth compared to those with no education. For instance, the odds of having early live birth reduce with the attainment of education. Young women that had higher, senior secondary, junior secondary, and primary education were 0.15, 0.93, 1.19, and 1.45 times respectively likely to have ECbP than their counterparts that has no education at all. The implication of this is that having higher education reduces the odds of having more early birth [OR=1.45, 95% CI = 0.94-2.24]. Interestingly, no other education categories show significant differences compared to the reference category (no education), highlighting the unique impact of higher education.The probability of having ECbP among young women residing in rural is 0.78 times higher than their counterparts in urban areas [OR=0.78, 95% CI = 0.47-1.28]. In terms of geo-political zones, young women from the northeast had 1.12 odds of having more ECbP higher than those in the North-Central. The odds of having ECbP reduces by 0.96 in North-West than those in the North Central. However, South East, South-South, and South West were 1.52, 1.84 and 1.35 times more likely to have higher early childbirth than their counterparts from North Central. [OR=1.12, 95% CI = 0.72-1.72]. The likelihood of experiencing ECbP among young women formerly married/in the union is 1.67 times higher than their counterparts that are currently married/in union while the likelihood of experiencing ECbP is 0.04 lesser than those currently married/in union [OR=1.67, 95% CI = 0.81-3.44]. Young women with the richest wealth status are less likely to experience ECbP than their counterparts that were found in the poorest wealth status. The odds of having ECbP reduces by 0.45 than their counterpart in the poorest wealth status. The odds of having ECbP are 1.23 times higher among the poorer young women than those in the poorest wealth status [OR=1.23, 95% CI = 0.87-1.74].

Furthermore, it was observed that age at first sexual intercourse and the likelihood of experiencing ECbP. Young women that had their first sexual intercourse between 12-15 years were 0.97 less likely to have experienced ECbP than those whose age is between 8-11 years. Also, young women that had their first sexual intercourse between 16-19 years were 0.56 times less likely to have experience of ECbP than those whose age is below 8-11 years [OR=0., 97% CI = 0.43-2.17]. Young women that reported their level of overall happiness as "somewhat happy", "neither happy nor unhappy", "somewhat unhappy", and "very happy" were 1.59, 1.38 2.28, and 1.74 times respectively likely to have more ECbP than their counterparts that were very happy. The results showed a statistically significant relationship between ECbP and the estimation of overall happiness of young women at 0.05 [OR=1.59, 95% CI = 1.17-2.16].

In conclusion, the multivariate binary logistic regression model reveals that age, higher education, marital status, and regional location significantly influence the likelihood of childbearing among young women in Nigeria. Specifically, older age (18-19 years), lack of higher education, being currently married or in a union, and residing in the South-South region increase the likelihood of childbearing

Discussion

The study has determined the prevalence of ECbP and examined the socio-demographic characteristics that influenced ECbP among young women aged 15-19 years in Nigeria. Prevalence of early childbearing with respect to socio-demographic factors is very important for the appropriate decision-making and policy directions by relevant stakeholders in Nigeria.

The findings of this study established a prevalence rate of 9.23% of ECbP in Nigeria. The implication of this is that by approximation, one out of ten young women aged 15-19 years is a victim of ECbP practice. Though previous studies on the prevalence of ECbP are not common but there exists a number of empirical pieces of evidence regarding adolescent pregnancy and girl-child marriage. The findings in this study were similar to those 2022 of UNICEF that adolescents and young women gave birth before 18 years[6].

In terms of socio-demographic factors, it was found in the present study that ECbP increases with the age of adolescents and young women, especially among late adolescents. This finding was consistent with findings in the previous studies that established that the adolescent pregnancy rate was high among the 16-19 years age group[20,29]. While examining educational attainment, it was found in the present study that ECbP reduces with the age of young women and adolescents. The finding of the present study was in tandem with submissions in previous studies[19-20]. Although, a study conducted in the northern part of Nigeria reported that the perception of many Nigerian towards girl marriage which may lead to ECbP in adolescents and young women was a good practice[9]. However, the finding of this study reflected the level of awareness, orientation and previous policy implantation by various stakeholders. The implication of this is that more policy frameworks that will impact better knowledge about the dangers associated with ECbP practice must be put in place. More sexual health education, awareness, and use of contraceptive methods by young women may reduce the degree of ECbP as advocated by population and reproductive health experts[13,21].

Like in previous studies, a greater proportion of young women with ECbP practice were found in the rural areas in the present study[30]. From the bivariate and multivariate analyses, a statistically significant association was found between the place of residence and young women's childbearing and the likelihood of having more ECbP was observed more in the rural area than in urban areas. This finding is similar to other previous studies that found an association between the two variables[15-17]. The implication of this is that more awareness programmes need to be implemented to mitigate dangers associated with adolescent pregnancy and ECbP should be focused on rural dwellers. The study also found that the prevalence of ECbP was higher among young women that had married before getting into another marital union. Also, it was observed that young women thatformerly married/in a union had a higher probability of having more early childbirth. This probably may be due to many factors such as ignorance of young women leading to unwanted pregnancy. The implication of this is that young women and late adolescent girls would be at risk of burning the incidence of reproductive health challenges which may have future negative impact on their overall well-being[18,24].

The geo-political zones are another factor found in this study to be significantly associated with ECbP. This finding agreed with finding in previous studies conducted in 2014 by NPC and ICF International that ECbP among adolescents and young women was more prevalent in the northern zones of Nigerian than in the other zones[19,31]. However, this must be interpreted with caution because the results of multivariate logistic regression indicated that southern zones were more likely to have higher ECbP than the northern zones. The implication of this is that any policy direction to be put in place should take these statistics into account

for appropriate policy interventions. The present study found that young women with the richest wealth status were less likely to experience ECbP than their counterparts that were found in the poorest wealth status. This finding agreed with the finding of Ahmed and his colleagues[31] on the influence of wealth status of young women's health.

In addition, it was found in present study that there was a significant association between the estimation of the overall happiness of young women and ECbP. A significant proportion of young ECbP women indicated happiness and a lower proportion reported unhappiness. Although being a psychological construct, happiness is a function of many factors some of which may be qualitative in nature, but it has been theorized that happiness is a subjective concept. Based on objective list theory which holds that happiness is not only a function of what an affluent person would consider important like high wealth status, education, career, and freedom from pain but could be having a sex partner for casual sex, with little plan for a better future[33]. Using this theory, it may be difficult to understand the source of happiness or what makes a young woman who has little or no education and with a plan for the future be expressing happiness. On the other hand, the higher odds of unhappiness observed is an indication that many of them were not happy with their living conditions.

Finally, the study found a significant association between the age at first sexual intercourse and ECbP. The mean age at first sexual intercourse was 14 years and this was almost the same with previous study that reported 13.10 years[33]. As found in this study, middle and late-adolescent young women have a tendency to experience ECbP more than those in their early adolescent stage. It has been well documented in reproductive health research literature that early sexual debut has a lot of devastating physical, psychological and social consequences which may negatively impact the overall well-being of adolescents and young adults[18,21,22].

Advancing the overall welfare of young women in Nigeria and the rest of the world would propel the achievement of Sustainable Development Goals. The findings of this study underscore the importance of education and marital status in shaping reproductive health behaviours of young women in Nigeria and could inform policies aimed at reducing early childbearing and improving the overall well-being of young women in Nigeria.

Limitations

One limitation of this study is the total reliance on the secondary dataset. Researchers that are interested in the topic of this study are encouraged to investigate other salient factors such as cultural factors and stereotypic beliefs that may be associated with ECbP in Nigeria using primary data and qualitative methods of analysis

Conclusion

Based on the analyzed dataset of 2021 MICS, the study concluded that the prevalence of ECbP among young women aged 15-19 years was mild in Nigeria, but varies across ages, levels of education, geo-political zones, wealth status and major factors that reinforces ECbP in Nigeria were low educational level, rural area and low wealth status.

Recommendations

Sequel to the findings of the present study, the following recommendations were made:

More reproductive health policy direction, advocacy and orientation that would reduce the negative consequences of young childbearing practice become imperative for the overall welfare of young women and society at large. Also, efforts should be made to increase the level of awareness and sensitization programmes that would encourage the use of contraceptives by young women that are unmarried but can't abstain from having sexual intercourse without protection against unwanted pregnancy and sexually transmitted diseases, especially in the rural areas. There is a need to strengthen existing legal and policy frameworks that would further discourage ECbP, especially in the northern part of Nigeria and other parts of the world where it is prevalent.

It is also recommended that government should engage more professional counsellors, social workers and adolescent psychologists that would provide therapeutic help and support for the victims of ECbP and enlightenment programmes in the societies.

Ethical consideration

Ethical approval was obtained from the Health Research Ethics Committee of the University of Medical Sciences, Ondo City, Nigeria. After a full review by the committee, the study was given approval (NHREC/TR/UNIMED-HREC-Ondo-St/22/6/21)

Conflicts of interest

The authors declare that there is no conflict of interest.

Funding

The study was funded by Strengthening Programming for Adolescents and Youth through Resource and Knowledge Generation and linked to the Evidence (SPARKLE) Project with support from Ford Foundations.

Acknowledgements

The authors are grateful to the Statistician General and the entire management of the National Bureau of Statistics (NBS) Abuja for making the 2021 MICS dataset available for use in this study.

References

1. National Bureau of Statistics (NBS) and United Nations Children's Fund (UNICEF). August, 2022. *Multiple Indicator Cluster Survey 2021, Survey Findings Report. Abuja, Nigeria.* National Bureau of Statistics and United Nations Children's Fund.
2. Csikszentmihalyi M. A***dolescence***. ***Encyclopedia Britannica***. https://www.britannica.com/science/adolescence. Accessed June 28, 2023.
3. Grønvik T. and Fossgard Sandøy I. *"Complications associated with adolescent childbearing in Sub-Saharan Africa: A systematic literature review and meta-analysis,"* ***PLOS ONE***, vol. 13, no. 9, pp. e0204327-, Sep. 2018, [Online]. https://doi.org/10.1371/journal.pone.0204327 pmid:30256821. Accessed March 10, 2023
4. UNICEF. *Child marriage in West and Central Africa at glance: Demographic and Health Surveys (DHS) and Multi-Indicator Country Surveys (MICS), 2005-2017.* Generated byUNICEF Data and Analytics Section. https://www.unicef.org/chad/media/246/file /Child-Marriage-in-WCA-At-a-Glance.pdf. Accessed March 10, 2023.
5. Sully EA, Biddlecom A, Darroch JE, Riley T, Ashford TS, Lince-Deroche N, Firestein L and Muro R.. *Adding It Up: Investing in Sexual and Reproductive Health 2019*. New York: Guttmacher Institute 2020. https://www.guttmacher.org/report/adding-it-up-investing-in-sexual-reproductive-health-2019. Accessed March 10, 2023.
6. UNICEF. Early childbearing: Early childbearing can have consequence for adolescent girls.2022 https://data.unicef.org/topic/child-health/adolescent-health/. Accessed March 10, 2023.
7. World Health Organisation. Adolscent pregnancy: Key facts. https://www.who.int/news-room/fact-sheets/detail/adolescent-pregnancy. Accessed March 10, 2023.
8. United Nations Department of Economic and Social Affairs. World Population Prospects, 2019 Revision: Age-specific fertility rates by region, sub-region and country, 1950 2100 (births per 1,000 women) Estimates. https://population.un.org/wpp/publications /files/wpp2019_databooklet.pdf. Accessed March 10, 2023.
9. Adamu H, Yusuf, Tunau,and Yahaya M. Perception and Factors Influencing Early Marriagein a Semi-Urban Community of Sokoto State, North-WestNigeria. Annual Report of International Medical and Dental Research 2017; 3(5): CM06-CM12.
10. Ahinkorah BO, Hagan JE Jr, Seidu AA, Mintah JK, Sambah F, Schack T and Hormenu T. Examining pregnancy related socio-cultural factors among adolescent girls in the Komenda-Edina-Eguafo-Abrem Municipality in the central region of Ghana: A case-control study. Frontier Public Health 2019; 7(93). doi: 10.3389/fpubh.2019.00093.
11. Akanbi, Adeloye DO., Amoo EO, Iruonagbe TC and Omojola O. Influence of socio-economic factors on teenage pregnancy. African Journal of Reproductive Health 2021; 25(5s): 138
12. Aranban M, Karimy M, Armoon B, and Zamani-Alavijeh F. Factors related to childbearing intentions among women: A cross-sectional study in health centres, Saveh, Iran. Journal of the Egyptian Public Health Association 2020; 95(6). doi.org/10.1186/s42506-020-0035-4
13. Osaikhuwuamwan JA, and Osemwenkha AP. Adolescents' perspective regarding adolescent pregnancy, sexuality, and contraception. Asian Pacific Journal of Reproduction 2013; 2: 58-62.
14. Gilda S, Finer LB, Bankole A, Eilers MA, and Singh S. Adolescent pregnancy, birth, and abortion rates across countries: Levels and recent trends. Journal of Adolescent Health 2015; 56(2): 223–230.
15. Izugbara C. Socio-demographic risk factors for unintended pregnancy among unmarried adolescent Nigerian girls. South African Family Practice 2015; 57(2): 121–5.
16. Akanbi F, Afolabi KK, and Aremu AB. Individual risk factors contributing to the prevalence of teenage

pregnancy among teenagers at Naguru teenage Centre Kampala. Uganda Primary Health Care 2016;6(4):15. doi.org/10.4172/21671079.1000249.

17. Melesse DY, Cane RM., Mangombe A, Ijaduaola MY, Adom M, Bamgboye E, Mohiddin A, Kananura RM, Akwara E, Plessis E, Wado YD, Mutua MK, Mekonnen W Faye CM, Neal S and Boerma T.. Inequalities in early marriage, childbearing and sexual debut among adolescents in sub-Saharan Africa. *Reproductive Health* 2021, 18 (Suppl 1), 117. doi.org/10.1186/s12978-021-01125-8.
18. Fafard St-Germain A-A, Kirby RS, and Urquia ML. Reproductive health among married and unmarried mothers aged less than 18, 18–19, and 20–24 years in the United States, 2014–2019: A population-based cross-sectional study. PLoS Medicine 2022;19(3): e1003929.https://doi.org/10.1371/journal.pmed.1003929
19. Oyinloye BO, Kupoluyi JA, and Njoku EO. Level and determinants of teenage pregnancy in Nigeria. Journal of Demography and Social Statistics 2016;2(1&2):89-99
20. Bolarinwa OF, Tessema ZT, Frimpog JB, Bbalola TO, Ahinkorah BO and Seidu A. Spatial distribution and factors associated with adolescent pregnancy in Nigeria: A multi-level analysis. Archives of Public Health 2022;80(43): doi.org/10.1186/s13690-022-00789-3
21. Mobolaji JW, Fatusi AO, and Adedini SA. Ethnicity, religion affiliation and girl-child marriage: A cross-sectional study of nationally representative sample of female adoloscents in Nigeria. BMC Public Health 2020; 20(583):1-10.
22. Nguyen MC, and Wodon Q. *Impact of child marriage on literacy and education attainment in Africa.* UNICEF and UNESCO Statistics 2014; Washington, DC: The World Bank.
23. Usman M, and Musa AA. The Consequences of Early Marriage on Girl Child Education in Geidam, Yobe State, Nigeria. Journal of Research in Humanities and Social Science 2021;9(6):19-24.
24. Fatusi AO. Young People's sexual and reproductive health interventions in developing countries: making the investments count. Journal of Adolescent Health 2016;59(3). SI doi.org/10.1016/.
25. John NA, Edmeades J, and Murithi L. Child marriage and psychological well-being in Niger and Ethiopia. BMC Public Health 2019;19(1029):1-12.
26. Gage AJ. Association of child marriage with suicidal thoughts and attempts among adolescent girls in Ethiopia. Journal of Adolescent Health 2013;52(5): 654–6
27. Worldometer. Nigeria population (live): Population of Nigeria (2020 and historical). https://www.worldometers.info/world-population/nigeria-population/. Accessed March 7, 2023.
28. Ekefre EN, Ekane SA., and Esien OE. Teenage Pregnancy and Education in Nigeria: A Philosociologi cal Management Strategy. Journal of Educational and Social Research MCSER Publishing, Rome Italy 2014;4(3):41-47.
29. Kassa GM, Arowojolu AO, Odukogbe AA. and Yalew AW Prevalence and determinants of adolescent pregnancy in Africa: a systematic review and Meta-analysis. *Reproductive Health* 2018; 15(195): https://doi.org/10.1186/s12978-018-0640-2.
30. National Population Commission (NPC) [Nigeria] and ICF International (2014). Nigeria Demographic and Health Survey 2013. Abuja, Nigeria, and Rockville, Maryland, USA: NPC and ICF International.
31. Ahmed S, Creanga AA, Gillespie DG, and Tsui AO. Economic status, education and empowerment: Implications for maternal health service utilization in developing countries. PLoS ONE 2010;5(6): e11190. https://doi.org/10.1371/journal.pone.0011190
32. Nussbaum M. Human functioning and social justice: In defense of Aristotelian essentialism. Political Theory 1992;20:202-246.
33. Durowade KA Babatunde OA, Omokanye LO, Elegbede OE, Ayooade LM, Adewoye KR, Adetokunbo S, Olomofe CO, Fawolw AA, Adebola OE and Olaniyan TO. Early sexual debut: prevalence and risk factors among secondary school students in Ido-Ekiti, Ekiti State, Southwest Nigeria. African Health Sciences 2017; 17(3):614-622.