Assessment of Sexual and Reproductive Health Access among Young Married Women in Nigeria Using a National Representative Sample

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Extended Abstract

Background

Sexual and Reproductive Health (SRH) is the state of the physical and emotional well-being of a person which includes the ability to be free from unwanted pregnancy, unsafe abortion, sexually transmitted infections, and all forms of sexual violence and coercion. SRH is pertinent to the individual's overall well-being and is key to public health initiatives globally (WHO, 2021). Nigeria continues to face significant public health challenges related to SRH. Married young women are particularly vulnerable to adverse health outcomes such as unintended pregnancies, unsafe abortions, and sexually transmitted infections (STIs) (Blanc et al., 2009). However, research on the SRH assessment scheme for married young women is relatively scarce. The earlier studies centered on unmarried young women in Nigeria (Guttmacher Institute, 2015) leaving a critical gap in understanding the characteristics of married young women having poor SRH (Blanc et al., 2009). While national-level data provides an overview of SRH services access, there is a lack of detailed regional studies that explore the situation in different parts of Nigeria, a country with distinct sociocultural contexts that impact SRH access. There is a need for more targeted research that explores the specific SRH needs of married young women as presented in the current study. The study's objectives are to determine the SRH assessment index, identify the determinants of SRH, and assess the spatial distribution of SRH across different regions in Nigeria. The spatiotemporal analysis component of the study provides a foundation for understanding the spread of SRH services across the six geopolitical zones in Nigeria.

Methodology

Study Area

This study was conducted in Nigeria, the most populous country in Africa with a population figure of 229,152,216 (Figure 1). Nigeria is characterized by its rich cultural, geographical, and ethnic diversity. The women who are adolescents (10-19 years) and youths (15-24 years) constituted 12.2% and 10.2% of the total population, respectively. There are six geo-political zones in Nigeria, these are South-West, South-East, North-West, South-South, North-East, and North-Central. Nigeria's population is predominantly young because of the broad-based nature of its pyramid, and it ranks as the seventh most populous country in the world. Nigeria has over 250 ethnic groups with Hausa-Fulani predominantly in the Northern part of Nigeria, Igbo dominating the major part of the Eastern part, and Yoruba dominating the Western part of the country. Cultural practices like child marriage, early childbearing, etc. that promote poor SRH access are still prevalent in some parts of the country. Marriage and sexual activity are important determinants of fertility levels in any nation. The median age at first marriage and age at first sexual intercourse among Nigerian women of reproductive age was 19.1 years and 17.2 years, respectively. About 19% of teenage women aged 15-19 years have begun childbearing, 14% have given birth, and 4% are pregnant with their first child the contraceptive prevalence rate is 17% among currently married women, and 43% of young women aged 15-24 years have comprehensive knowledge of HIV (NDHS, 2019).

Study Population and Design

The study was cross-sectional in design and used the 2018 Nigeria Demographic and Health Survey. The study focuses on married sexually active young women aged 15 to 24 years in Nigeria. Detailed information about the sampling procedures can be found in the DHS report which is available at https://dhsprogram.com/ website. Interested readers should visit this site to access the information.

Variable Definition

The dependent variable was the SRH assessment index. This was determined using a scoring mechanism developed based on nine key indicators of SRH available in the DHS data. Each indicator was assigned a score, and the total score for each respondent was based on her score on each of the indicators of SRH. The details of the computation of each indicator and their respective scores are presented in Table 1 below.

Table 1: Indicators of Sexual and Reproductive Health Access and Scores assigned to each

	Indicators of Sexual and Reproductive Health	**0**	**1**	**2**	**Max**
1	Total children ever born	2+	1	0	2
2	Age at First Sex	0-17	18+	-	1
3	Age at First Birth	0-17	18+	No Child	2
4	Ever Terminated Pregnancy	Yes	No	-	1
5	Current use of any method	None	Traditional	Modern	2
6	Had STI in last 12 months	Yes	No	-	1
7	Sex Refusal	No	Yes	-	1
8	Can ask a partner to use a condom	No	Yes	-	1
9	Total Number of Sex Partners	1+	1	-	1
Overall Score					**12**

The overall index of SRH assessment index was disaggregated into three categories: Good (≥75% of the overall score [3rd Quartile]), Fair (50%-74% of the overall score [2nd Quartile]), and Poor (<50% of the overall score [below 2nd Quartile]). However, for the multivariate analysis, the variable was collapsed into only two categories:

$$\text{SRH assessment index } (\mathbf{x}) = \begin{cases} 1, if\ \boldsymbol{x} \geq 75\%\ of\ the\ overall\ score\ (Good) \\ 0, if\ \boldsymbol{x}\ is\ otherwise \end{cases}$$

The independent variables are region, age, place of residence, religion, ethnicity, highest educational level, wealth index, and media access.

Data Analysis

Due to the cluster sampling design approach used for the data collection, the data was weighted to extrapolate to other areas not covered during the survey. Frequencies and percentages were used to describe the demographic and socio-economic characteristics of the women. This provided a summary of the variables included in the study. The Chi-square test was used to examine the association between the independent variables and SRH assessment index. Both unadjusted and adjusted logistic regression models were used to identify the determinants of access to good SRH assessment index (α=0.05). The logistic regression predicts the probability of having good SRH as shown in equations (1) and (2).

$$p(x) = \frac{1}{1 + e^{-(\beta_0 + \beta_1 x_{1i} + \beta_2 x_{2i} + \cdots \beta_0 x_{ki})}} \qquad (1)$$

$$\log\left(\frac{p(x)}{1 - p(x)}\right) = \beta_0 + \beta_1 x_{1i} + \beta_2 x_{2i} + \cdots \beta_k x_{ki} \qquad (2)$$

Where; $\beta_0, \beta_1, \beta_2, \ldots, \beta_k$ are the regression parameters to be estimated and $x_{1i}, x_{2i}, \ldots, x_{ki}$ are the independent variables.

Ethical Approval

This study was based on the analysis of secondary data. The Institutional Review Board (IRB) of Inner-City Fund International (ICF) Macro at Fairfax, Virginia in the USA reviewed and approved the protocol for the Survey.

Results

The mean age of the respondents was 20.53 ± 2.34 years and the majority were within the age group 20-24 years (70.1%). About 76.5% live in rural areas, 75.6% are Muslims, and 23.5% are Christians. The women are predominantly Hausa/Fulani tribe (57.0%), about 5.9% are Igbo, and 5.1% are Yoruba. Approximately, 68.0% of the respondents have at most primary education, while 32.2% have at least secondary education. The composition of the women according to household wealth shows that 51.8% are poor, 32.5% are in the middle class, and 15.7% are in the rich wealth. The data showed that 56.9% of the women have poor SRH access, while 38.4% and 5.9% have fair and good SRH access, respectively.
(Mean SRH access index = 5.38±1.94).

The data showed that the proportion of women with good SRH access was higher among younger (9.2%) than older (4.5%) married women. The urban (8.6%) areas have a higher proportion of women with good SRH access than their counterparts in the rural (5.0%) areas. About 12.0% of women belonging to the Yoruba ethnic group have good SRH access, while 8.2% and 5.2% were found among the Igbo and Hausa/Fulani ethnic groups, respectively. The proportion of women with access to good SRH increases consistently with increasing level of education and household wealth. The percentage of women with good SRH was higher among women who have high access (15.6%) to media than those who have low access (5.6%). Access to SRH among young married women was highest in the South West (11.1%) region and least in the South-South (5.0%).

The output from the multivariate analysis is presented in Table 4. The predictors of good SRH access among young women in Nigeria included age, level of education, and religion. Other predictors of SRH access were region, household wealth, media access, and region of residence. The likelihood of SRH access was higher (aOR=3.042, 95% C.I=2.686-3.446, p<0.001) among the teenagers than the older women. The odds of SRH access were 100.2% higher among the young married women who have at least secondary education (aOR=2.002, 95% C.I=1.713-2.336, p<0.001) than those with at most primary education, but 27.9% significantly lower among the Muslims (aOR=0.721, 95% C.I=0.589-0.883, p<0.001) than the Christians. Belonging to the middle (aOR=1.253, 95% C.I=1.096-1.434, p=0.001) and rich (aOR=2.284, 95% C.I=1.849-2.821, p<0.001) household wealth promotes access to SRH compared to their counterparts in poor households.

Table 4: Logistic Regression Analysis of Determinants of Good Sexual and Reproductive Health Access among young married women in Nigeria

Background	Unadjusted Model		Adjusted Model	
Variables	**OR (95% CIOR)**	**p-value**	**OR (95% CIOR)**	**p-value**
Age				
15-19	2.054(1.833-2.301)*	<0.001	3.042(2.686-3.446)*	<0.001
20-24	1.000		1.000	
Place of Residence				
Rural	1.000		1.000	
Urban	1.639(1.451-1.851)*	<0.001	0.944(0.807-1.105)	0.474

Level of Education				
At most Primary	1.000		1.000	
At least Secondary	2.619(2.340-2.931)*	<0.001	2.002(1.713-2.336)*	<0.001
Religion				
Christianity	1.000		1.000	
Islam	0.518(0.458-0.585)*	<0.001	0.721(0.589-0.883)**	0.002
Others	0.376(0.182-0.778)**	0.008	0.473(0.219-1.024)	0.058
Ethnicity				
Hausa/Fulani	1.000		1.000	
Igbo	2.617(2.081-3.290)*	<0.001	1.594(0.946-2.684)	0.080
Yoruba	3.791(2.933-4.900)*	<0.001	2.153(1.361-3.406)**	0.001
Others	1.362(1.214-1.528)*	<0.001	1.193(1.001-1.422)***	0.049
Household Wealth				
Poor	1.000		1.000	
Middle	1.482(1.318-1.666)*	<0.001	1.253(1.096-1.434)**	0.001
Rich	3.278(2.808-3.826)*	<0.001	2.284(1.849-2.821)*	<0.001
Media Access				
Poor	1.000		1.000	
Good	3.709(2.655-5.183)*	<0.001	1.674(1.166-2.403)**	0.005
Region				
North Central	1.000		1.000	
North East	0.693(0.591-0.591)*	<0.001	1.060(0.877-1.282)	0.544
North West	0.708(0.611-0.820)*	<0.001	1.104(0.900-1.353)	0.342
South East	1.675(1.292-2.172)*	<0.001	0.694(0.407-1.181)	0.178
South South	1.069(0.820-1.392)	0.623	0.617(0.458-0.833)**	0.002
South West	2.370 (1.815-3.095)*	<0.001	1.079(0.698-1.668)	0.731

p<0.001, **p<0.01, ***p<0.05

The geospatial distribution of good access to SRH among young married women in the six geo-political zones in Nigeria is presented in Figure 2. The hot-spot for good access to SRH was found in the South-West, while the weak-spot was in the South-South and North-East, Nigeria.

Conclusion

Access to SRH among young married women was abysmally poor in Nigeria and this situation was observed across the six geo-political zones in Nigeria. However, living in the South-South and North-East, residence in rural areas, being in poor households, less educated, and poor access to media predisposes young married women to poor SRH access. Thus, improving access to SRH information on media and more commitment to SRH services, particularly in rural areas and poor households may likely promote access to SRH among young married women in Nigeria. Educational programs that provide accurate information and promote positive attitudes toward SRH services are crucial. Expunging avoidable barriers associated with healthcare access and services will improve the SRH of young married women in Nigeria.

Keywords: Sexual and reproductive health, Healthcare access, Married young women, Nigeria.

References

Blanc, A. K., Tsui, A. O., Croft, T. N., & Trevitt, J. L. (2009). Patterns and trends in adolescents' contraceptive use and discontinuation in developing countries and comparisons with adult women. International Perspectives on Sexual and Reproductive Health, 35(2), 63-71.

Guttmacher Institute. (2015). *Adolescents and youth in Nigeria: Highlights from a national survey*. Retrieved from https://www.guttmacher.org/report/adolescents-and-youth-nigeria

National Population Commission (NPC) [Nigeria] and ICF. (2019). *Nigeria Demographic and Health Survey 2018*. Abuja, Nigeria, and Rockville, Maryland, USA: NPC and ICF.

World Health Organization. (2021). **Sexual and reproductive health and research (SRH)**. https://www.who.int/teams/sexual-and-reproductive-health-and-research-%28srh%29/overview