




ORIGINAL ARTICLE ADOLESCENT HEALTH

Factors Associated with Utilization of Sexual and Reproductive Health Services among Married Adolescent Girls in Kano, Northern Nigeria

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ABSTRACT

Background and Objective: Married adolescents face significant obstacles in making informed reproductive health decisions and accessing sexual and reproductive health (SRH) services. It is important to identify barriers hindering these adolescents from accessing SRH services. The aim of this study was to identify factors associated with the utilization of SRH services among married adolescent girls in northern Nigeria.

Methods: We used a cross-sectional study design. The study population comprised of married female adolescents aged 14–19 years who were residents in the study areas for at least six months. The outcome measure was SRH service utilization, defined as the use of any of the conventional SRH services (ante/postnatal care, human immunodeficiency virus (HIV) testing and counseling, sexually transmitted infections (STI) treatment, family planning, and post-abortion care). Predictor variables included the sociodemographic, obstetric, and gynecological characteristics of the respondents. An adapted, pretested, interviewer-administered, and semi-structured questionnaire was employed for data collection. Multivariable logistic regression was used to explore the independent association between selected variables and utilization of SRH services.

Results: A total of 200 respondents were surveyed (100 each from an urban and a rural community in Kano, Nigeria), survey response rate: 94.5%. The age of respondents ranged from 14 to 19 years, with mean age (\pm standard deviation) of 18.5 (\pm 1.1) years and 17.5 (\pm 1.3) years for urban and rural respondents, respectively. All respondents were aware of the available SRH facilities and preferred public facilities (92.6% urban respondents and 67.0% rural respondents). Ever-use of SRH services was higher among urban than rural respondents (86% vs. 56%, respectively). Geographic proximity was a key factor for urban respondents (64.2%), while affordability was considered important by rural respondents (47.9%). Respondent's age and partner's occupation were independently associated with utilization of SRH services. Urban respondents whose husbands were businessmen were seven times more likely to use SRH services than those whose partners were civil servants (adjusted odds ratio [aOR] = 6.80, 95% confidence interval [CI]: 1.29–35.84, $P = 0.02$). Rural respondents 18 years of age and older were approximately six times more likely to utilize SRH services than those <18 years (aOR = 5.71, 95% CI: 1.56–12.78, $P = 0.01$).

Conclusion and Global Health Implications: Awareness of available SRH services was high in the study population, and service utilization was influenced by the respondent's age and partner's occupation. Findings from this study can help inform the development of age-appropriate and accessible SRH services tailored to married adolescents in similar settings.

Keywords: Sexual and Reproductive Health, Married Adolescents, Service Utilization, Predictors, Nigeria

INTRODUCTION

Sexual and reproductive health (SRH) is a comprehensive concept encompassing the ability to enjoy a satisfying and safe sex life, the capacity to reproduce, and the freedom to make decisions regarding when, if, and how often to engage in reproduction.^[1] Sustainable development goal (SDG) 3.7 seeks to ensure universal access to SRH services, including family planning, information and education, and the integration of reproductive health into national strategies and programs by the year 2030.^[2] Despite ongoing efforts, adolescents continue to face several SRH challenges, such as early sexual debut, early marriage, and early pregnancy and parenthood, in addition to complications from pregnancy and childbirth.^[3,4] Adolescents also face difficulties accessing family planning services, safe abortion care, and grapple with high rates of human immunodeficiency virus (HIV) and sexually transmitted infections (STIs).^[3,5] Approximately half of pregnancies among adolescent women (15–19 years of age) residing in low-and middle-income countries (LMICs) are unintended.^[6] Of the estimated 333 million new cases of curable STIs that occur worldwide, the highest rate is among persons 20–24 years of age, followed by persons between 15 and 19 years of age.^[7] Early sexual debut, particularly in Sub-Saharan Africa, amplifies the risk of STI acquisition among adolescents, contributing to higher HIV incidence there compared to other regions.^[8] Not surprisingly, adolescents were the demographic group most severely impacted by HIV/acquired immunodeficiency syndrome (AIDS) – in 2022 around 98,000 adolescent girls aged 10–19 acquired HIV, at a rate that was more than twice that of boys of the same age group.^[9]

Nigeria is Africa's most populous country and home to the largest number of adolescents on the continent.^[10,11] Slightly more than one-fifth (23%) of Nigeria's population of 223 million is made up of adolescents, with over half of them residing in rural areas.^[11,12] Significant rural-urban disparities exist in the utilization of SRH services in Nigeria,^[13,14] especially as they pertain to the uptake of family planning and contraception services among married adolescents.^[15,16] Approximately 40% of incident HIV infections occur among young people in Nigeria, attributed to factors such as early sexual debut, among others.^[17]

While the legal age for marriage in Nigeria is 18 years, the practice of marrying before this age remains prevalent, particularly in northwest Nigeria that is the focus region of this study. A multilevel analysis of 2018 Nigeria Demographic Health Survey data reported the overall prevalence of marriage before the age of 18 in Nigeria to be 65%, with a considerably higher rate of 81% among respondents from the northwest region.^[18] Prior studies have also documented higher rates of

early marriage and childbearing among adolescents residing in rural areas of Sub-Saharan Africa compared to those living in urban areas, with a recent decline being observed among urban and educated adolescents.^[19-21] Efforts to address the SRH concerns of Nigerian adolescents or provide them with the required SRH services, especially those residing in rural areas, have however, been limited.^[22] This is particularly true for married adolescents and young women, who, despite assumptions of safety in marriage, face significant obstacles in making informed SRH decisions and accessing available services. Another important assumption is that married adolescents do not face the stigma that unmarried adolescents experience in accessing contraceptives, STI/HIV care, pregnancy-related, and other SRH services.^[23] Disparities also exist in knowledge and access to SRH services among married adolescents, with notable differences between those residing in rural areas and their counterparts in urban areas.^[24] Access to SRH services is essential for the health, well-being, and empowerment of married adolescents, promoting healthier families and aligning with global development goals. There is thus, a need for studies identifying factors hindering married adolescents from acquiring much-needed knowledge and accessing SRH services in Nigeria. The aim of this study was to identify factors associated with the utilization of SRH services among married adolescents by place of residence (urban vs. rural) in northern Nigeria.

METHODS

Study Setting

We conducted the study in two local government areas (equivalent to “counties”) in Kano state – one urban (Tarauni, population density [2022]: 15,757 persons/km²) and the other rural (Dawakin Kudu, population density [2022]: 876 persons/km²). Tarauni is one of the eight local government areas that comprise metropolitan Kano and is home to 35 public health facilities, including the largest tertiary facility in the state (Aminu Kano Teaching Hospital). These facilities offer a range of maternal and child health services, particularly to married women, including married adolescents. Dawakin Kudu local government area is in the southern part of Kano state and has 27 health facilities, including a large public hospital that offers a wide range of secondary health services to the general population of women.

Study Design, Population, and Sampling

We used a comparative cross-sectional study design. The study population comprised of married adolescent females (14–19 years of age) who resided in the selected local government areas for at least six months. A four-stage sampling technique was employed to select the respondents. First, two local

government areas (one urban – Tarauni and one rural – Dawakin Kudu) out of the 44 local government areas in Kano State were randomly selected using balloting. Using simple random sampling, we then selected three wards from Tarauni (out of ten wards) and four wards from Dawakin Kudu local government areas (out of 15). One settlement (equivalent to community or neighborhood) was then randomly selected from each of the wards. Systematic sampling was used for the selection of respondents.

Sample Size Determination

The sample size was determined using the formula for two proportions and based on a prior study,^[16] with estimated family planning service uptake rates among adolescents of 47% in rural and 67% in urban communities in Abuja, Nigeria. With a 95% confidence level, and an error margin of 5%, a sample size of 91 for each local government area was obtained. To account for possible non-response, we adjusted the number upward by 10%, resulting in a total of 100 participants per group.

Study Variables

The outcome measure was SRH utilization, defined as the use of any sexual and/or reproductive health services. These included medical checkups, consultations, family planning services, HIV/AIDS and STI education and treatment services, antenatal care services, and abortion/post-abortion care provided in the healthcare facilities. Explanatory variables included sociodemographic, obstetric, and gynecological characteristics of the respondents. An adapted, pretested, interviewer-administered, and semi-structured questionnaire^[24,25] was employed for data collection by trained research assistants.

Statistical Analysis

Continuous variables were summarized using means and standard deviation (SD), while categorical variables were summarized using frequencies and percentages. Analysis of the association between the independent variables (sociodemographic variables and reproductive characteristics) and the outcome variable (utilization of SRH services) involved appropriate bivariate comparisons (Pearson's Chi-square or Fisher's exact test) and multivariable logistic regression. Variables associated with the outcome variable at bivariate analysis with $P < 0.1$ and variables identified a priori from the literature were included in the multivariable regression model. Adjusted odds ratios (aORs) and their 95% confidence intervals (CIs) were used to measure the strength and direction of the effect of the independent variables on the outcome. Type I error was fixed at 5% for all tests. Data

were analyzed using SPSS software version 23 (IBM Corp., Armonk, NY).

Ethical Considerations

We obtained ethics approval from the Health Research Ethics Committee of the Kano State Ministry of Health, approval number NHREC/17/03/2018. Written informed consent was obtained from all participants. For participants who could not read, the forms were explained to them in detail after which they provided consent by thumb printing in the presence of a witness.

RESULTS

Out of 100 questionnaires administered in each local government area, a total of 95 and 94 were returned from urban and rural areas, giving a response rate of 95% and 94%, respectively. The age of respondents ranged from 14 to 19 years, with mean age (\pm SD) of 18.5 (\pm 1.1) years and 17.5 (\pm 1.3) years for urban and rural respondents, respectively [Table 1]. Most respondents across both groups were of Hausa-Fulani ethnicity and Muslim faith. More than half of respondents (57.4%) residing in rural areas were homemakers with no reported income. Educational attainment was lower among rural residents (only 40.4% completed secondary school compared to 72.6% of urban respondents).

The mean age at menarche (12.6 ± 1.1 years) was similar across both groups [Table 1]. Two-thirds of rural respondents (67.0%) were married before attaining 18 years of age compared to about one-quarter (24.2%) of urban respondents. Slightly more than one-half of rural respondents (52.1%) were pregnant at the time of the study. The history and number of miscarriages were similar across both groups.

The mean age of participants' husbands was similar by rural-urban residence [33.3 ± 5.6 years and 32.6 ± 6.0 years, respectively]. The majority of husbands had between 1 and 2 wives (83.1% of urban respondents and 61.7% of rural residents) and were educated at least to secondary school level (41.1% of urban respondents and 56.0% of rural respondents).

All the respondents reported knowing about an available facility that provides SRH services [Table 2]. The majority of respondents across both groups indicated a preference for attending government health facilities (92.6% of urban respondents and 67.0% of rural respondents). Ever-use of SRH services was higher among urban than rural respondents (86.3% vs. 56.4%, respectively). Urban respondents mentioned geographic proximity as an important consideration in determining preferred health facilities (64.2%), while affordability was rated high by rural respondents (47.9%). The cost of services rendered was considered a hindrance to

Table 1: Sociodemographic, obstetric, and gynecological characteristics of respondents by urban/rural residence, Kano, Nigeria.

Variable	Urban <i>n</i> = 95, unless otherwise specified No. (%)	Rural <i>n</i> = 94, unless otherwise specified No. (%)
Age		
<18 years	39 (41.1)	68 (72.3)
≥18 years	56 (58.9)	26 (27.7)
Mean ± SD (years)	18.5 ± 1.1	17.5 ± 1.3
Religion		
Islam	91 (95.8)	93 (98.9)
Christianity	4 (4.2)	1 (1.1)
Ethnicity		
Hausa/Fulani	74 (77.9)	89 (94.7)
Other*	21 (22.1)	5 (5.3)
Occupation		
Homemaker	39 (41.1)	57 (57.4)
Student	23 (24.2)	11 (11.7)
Other**	33 (34.7)	26 (27.7)
Respondent's monthly income		
NGN 1,000–NGN 50,000	27 (28.4)	19 (20.2)
No income	42 (44.2)	54 (57.4)
Undisclosed	26 (27.4)	21 (22.3)
Educational attainment		
Qur'anic	14 (14.7)	24 (25.5)
Primary	12 (12.6)	32 (34.0)
Secondary	69 (72.6)	38 (40.4)
Age at menarche		
≤12 years	47 (49.5)	51 (54.3)
>12 years	48 (50.5)	43 (45.7)
Mean ± SD (years)	12.6 ± 1.1	12.6 ± 1.1
Duration of menstrual flow		
<5 days	53 (55.8)	32 (34.0)
≥5 days	42 (44.2)	62 (66.0)
Mean ± SD (days)	4.3 ± 1.1	5.0 ± 1.1
Age at marriage		
<18 years	23 (24.2)	63 (67.0)
≥18 years	72 (75.8)	31 (33.0)
Mean ± SD (years)	16.7±0.9	15.3 ± 1.1
Currently pregnant		
Yes	39 (41.1)	49 (52.1)
No	56 (58.9)	45 (47.9)

(Continued)

Variable	Urban <i>n</i> = 95, unless otherwise specified No. (%)	Rural <i>n</i> = 94, unless otherwise specified No. (%)
Number of previous pregnancies		
	(<i>n</i> = 45)	(<i>n</i> = 55)
1–2	37 (82.2)	37 (67.3)
3–4	8 (17.8)	18 (32.7)
Number of living children		
	(<i>n</i> = 30)	(<i>n</i> = 39)
1–2	23 (76.7)	29 (74.4)
3–4	7 (23.3)	10 (25.6)
Ever had a miscarriage?		
	(<i>n</i> = 45)	(<i>n</i> = 55)
Yes	15 (33.3)	16 (29.1)
No	30 (66.7)	39 (70.9)
Number of prior miscarriages		
	(<i>n</i> = 15)	(<i>n</i> = 16)
1	14 (93.3)	14 (87.5)
2	1 (6.7)	2 (12.5)
Husband's age		
<30 years	45 (47.4)	48 (51.1)
≥30 years	50 (52.6)	46 (48.9)
Mean ± SD (years)	33.3 ± 5.6	32.6 ± 6.0
Husband's number of wives		
1	79 (83.2)	58 (61.7)
≥2	16 (16.8)	36 (38.3)
Husband's primary occupation		
Civil servant	25 (26.3)	11 (11.7)
Farming	11 (11.6)	25 (26.6)
Business	36 (37.9)	27 (28.7)
Other [†]	23 (24.2)	31 (33.0)
Husband's level of education		
Qur'anic	11 (11.6)	13 (13.8)
Primary	13 (13.7)	19 (20.2)
Secondary	39 (41.1)	47 (50.0)
Tertiary	32 (33.6)	15 (16.0)

*Other ethnic groups: Yoruba, Igbo, Babur, Nupe, Epira. **Other occupations: trading, tailoring, hair weaving, henna application, etc. [†]Husband's other occupations: tailor, driver, carpenter, mechanic, bricklayer, plumber, factory worker, etc. SD: Standard deviation, NGN: Nigerian naira, n: number of respondents.

accessing SRH services by both urban and rural respondents (54.7% and 70.2%, respectively). Lack of privacy was listed as a major obstacle to utilizing SRH services by urban respondents (64.2%). The perceived quality of SRH services

Table 2: Utilization of SRH services among married adolescents, Kano, Nigeria.

Variable	Urban n = 95 No. (%)	Rural n = 94 No. (%)
Available facility that provides SRH services		
Yes	95 (100.0)	94 (100.0)
No	0 (0.0)	0 (0.0)
Preferred health facility that provides SRH services		
Government health facility	88 (92.6)	63 (67.0)
Chemist	2 (2.1)	21 (22.3)
Traditional health practitioner	5 (5.3)	10 (10.6)
Reasons for preferring the facility		
Geographic proximity to residence	61 (64.2)	43 (45.7)
Affordability	21 (22.1)	45 (47.9)
Friendly staff	13 (13.7)	6 (6.4)
Perceived quality of services		
Good	83 (87.4)	81 (86.2)
Fair	12 (12.6)	13 (13.8)
SRH service ever utilized		
HIV counseling and testing	33 (34.7)	4 (4.2)
Miscarriage/post-abortion care	20 (21.1)	8 (8.5)
Family planning	45 (47.4)	18 (19.1)
STI treatment and counseling	49 (51.6)	11 (11.7)
Antenatal care	82 (86.3)	53 (56.4)
Postnatal care	16 (16.8)	1 (1.1)
Difficulty with accessing SRH services		
Distance	21 (22.1)	11 (11.7)
Lack of permission from husband	14 (14.7)	16 (17.0)
Long queues/extended wait times	8 (8.4)	1 (1.1)
Cost	52 (54.7)	66 (70.2)
Obstacle to utilizing SRH services		
Service not necessary	4 (4.2)	32 (34.0)
Do not know where to go	4 (4.2)	23 (24.5)
Lack of privacy	61 (64.2)	20 (21.3)
Unfriendly health workers	26 (27.4)	19 (20.2)
STI: Sexually transmitted infections, HIV: human immunodeficiency virus, SRH: sexual and reproductive health, n: number of respondents.		

was, however, rated as “good” by the majority of respondents (87.4% urban and 86.2% of rural respondents).

After adjusting for potential confounders, the only predictor of utilization of SRH services among urban respondents

was the occupation of the husband [Table 3]. Respondents whose husbands were businessmen were about seven times more likely to utilize SRH services compared to those whose partners were civil servants (aOR = 6.80, 95% confidence interval, CI: 1.29–35.84, $P = 0.02$). Among respondents living in rural settings, SRH service utilization was associated with the respondents’ age. Respondents >18 years were approximately six times more likely to utilize SRH services compared to those who were 18 years or younger (aOR = 5.71, 95% CI: 1.56–12.78, $P = 0.01$), [Table 3]. There was no association between respondent age and SRH utilization among urban respondents.

DISCUSSION

Understanding the factors influencing the utilization of SRH services is important in shaping the design and implementation of SRH programs. In this cross-sectional study focusing on the utilization of SRH services among married adolescents in Nigeria, we found that among urban respondents, the husband’s occupation was independently associated with the use of SRH services. The positive association between the occupation of the respondents’ husband (specifically being engaged in business) and the uptake of SRH services can be attributed to considerations of affordability. In the context of northern Nigeria, businessmen are generally more financially stable compared to civil servants, making them more inclined to support and encourage their wives to access these services. This finding also underscores the importance of incorporating considerations of cultural norms into the design of SRH services. Northern Nigeria is a highly patriarchal society where men dominate almost all aspects of a woman’s life, including family health decision-making.^[26] Acknowledging and accommodating these cultural dynamics become imperative when developing and implementing SRH services that not only meet the needs of the community but are also accepted by its members.

We found that among respondents living in rural settings SRH service utilization was associated with the respondents’ age – respondents 18 years of age and older were more likely to use SRH services than their counterparts who were younger than 18 years. The association between the use of SRH services and age are consistent with some studies,^[24,27–29] but at variance with others.^[30] Unlike in our study where older adolescents were more likely to uptake SRH services, Odo et al.^[25] found that older respondent age was associated with lower odds of SRH service utilization, in addition to other sociodemographic factors (education, income, and urban residence). The positive correlation between older age and the utilization of SRH services, as evidenced in our study, may be due to several factors. Older adolescents might possess

Table 3: Predictors of SRH service utilization among married adolescents by urban/rural residence, Kano, Nigeria.

Variable	Urban respondents			Rural respondents		
	aOR	95% CI	P-value	aOR	95% CI	P-value
Respondent's age, years						
<18	Reference	-	-	Reference	-	-
≥18	0.88	(0.22–3.55)	0.86	5.71	(1.56–12.78)	0.01*
Respondent's occupation						
Homemaker	Reference	-	-	Reference	-	-
Student	2.61	(0.61–11.12)	0.19	0.96	(0.19–4.84)	0.96
Other	4.26	(0.97–18.81)	0.06	0.89	(0.26–3.09)	0.86
Respondent's monthly income, NGN						
1000–50,000	Reference	-	-	Reference	-	-
None	1.12	(0.25–5.02)	0.88	0.71	(0.19–2.66)	0.61
Not disclosed	2.12	(0.32–13.68)	0.43	1.67	(0.35–7.99)	0.52
Respondent's educational attainment						
Quranic	Reference	-	-	Reference	-	-
Primary	0.54	(0.07–3.93)	0.54	1.92	(0.32–11.68)	0.48
Secondary	2.47	(0.48–12.73)	0.28	1.79	(0.31–10.24)	0.52
Age at marriage, years						
<18	Reference	-	-	Reference	-	-
≥18	0.93	(0.20–4.21)	0.92	1.32	(0.44–3.89)	0.62
Husband's age, years						
≤30 years	Reference	-	-	Reference	-	-
>30 years	3.59	(0.88–14.66)	0.08	1.23	(0.43–3.54)	0.69
Husband's occupation						
Civil service	Reference	-	-	Reference	-	-
Farming	2.49	(0.28–22.26)	0.42	0.34	(0.04–2.68)	0.31
Business	6.80	(1.29–35.84)	0.02*	0.85	(0.14–5.31)	0.86
Other	1.26	(0.23–6.89)	0.79	2.48	(0.36–16.97)	0.36
Husband's level of education						
Quranic	Reference	-	-	Reference	-	-
Primary	2.37	(0.13–43.4)	0.56	0.32	(0.05–2.22)	0.25
Secondary	0.73	(0.09–5.58)	0.76	0.23	(0.03–1.63)	0.14
Tertiary	0.54	(0.07–4.10)	0.55	0.26	(0.03–2.66)	0.26

*Statistically significant ($P < 0.05$), aOR: Adjusted odds ratio, CI: Confidence interval, SRH: sexual and reproductive health, NGN: Nigerian naira

greater exposure to SRH information, a more comprehensive understanding of SRH issues, and an increased likelihood of requiring SRH services due to the onset of sexual activity and its associated risks (pregnancy, STI acquisition, etc.). Our findings also highlight the importance of implementing and enforcing minimum marriage age laws in improving adolescent women's SRH outcomes. Enforcing a legal marital age delays early marriages,^[31] enabling young women to mature physically and emotionally. This, in turn, reduces

health risks linked to early pregnancies.^[32,33] Protection from early marriage is also important in preventing gender-based violence^[34,35] and empowers women by granting them autonomy over life choices and facilitating their access to educational and employment opportunities.^[36] This empowerment is vital for achieving gender equality and enhancing women's participation in social, economic, and political realms.^[37]

The barriers hindering the utilization of SRH services in our study align with findings from a qualitative study in the same region.^[38] The authors identified social and health system barriers, including parental influence, adherence to community and religious norms, financial constraints, stigma, and unsatisfactory attitudes of service providers. The concern regarding the lack of privacy expressed by our urban respondents is consistent with findings from Ethiopia, where 45% of in-school adolescents cited insufficient privacy as the primary reason for not revisiting facilities offering SRH services.^[30]

In contrast to our study, where all respondents were aware of the available facilities providing SRH services, almost half of the adolescent respondents in a study from southern Nigeria Ilori *et al.*^[39] reported never having visited such facilities due to a lack of awareness about where to seek SRH services. This highlights a significant regional disparity in knowledge and access to SRH services and underscores the need for targeted awareness campaigns and improved information dissemination to enhance awareness of the availability of such services.

This study has limitations. The cross-sectional design limits our ability to make any causal inferences. In addition, our findings are based on respondent self-report, which is susceptible to reporting bias. The relatively modest sample size further limits our ability to thoroughly examine the associations between the utilization of distinct components of SRH services – such as sexuality education, safe motherhood, and HIV counseling and testing – and potential predictors. Despite these constraints, the insights gleaned from this study will help inform the development of age-appropriate and accessible SRH services tailored to married adolescents in similar settings.

CONCLUSION AND GLOBAL HEALTH IMPLICATIONS

SRH services for married adolescents are often deficient in many communities in low- and middle-income settings and have traditionally been integrated into services designed for adults. Many adolescents, especially those who are most marginalized or vulnerable, are not being reached by adolescent health programs in such settings.^[40] Evidence-based coordinated and comprehensive approaches implemented with fidelity^[41] will help to facilitate access to SRH services for all adolescents, including those who are married. A more comprehensive understanding of SRH service utilization among married adolescents and the identification of factors that impact the utilization of SRH services in this demographic will also be important in shaping and improving services that are specifically tailored to meet their unique SRH needs.

Key Messages

- Awareness of available SRH facilities was high in both urban and rural respondents.
- Utilization of SRH services by married adolescents was independently associated with the husband's occupation and respondent's age.
- Distance, cost of services, and lack of privacy were considered important obstacles to uptake of SRH services by our study participants.

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COMPLIANCE WITH ETHICAL STANDARDS

Conflicts of Interest

Dr. Hamisu M. Salihu is on the editorial board of the Journal.

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Nothing to declare.

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Ethics Approval

The study protocol was reviewed and approved by the Health Research Ethics Committee of the Kano State Ministry of Health, approval number NHREC/17/03/2018.

Declaration of Patient Consent

The authors certify that they have obtained all appropriate patient consent.

Use of Artificial Intelligence (AI)-Assisted Technology for Manuscript Preparation

The authors confirm that there was no use of artificial intelligence (AI)-assisted technology for assisting in the

writing or editing of the manuscript and no images were manipulated using AI.

Disclaimer

None.

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