



Original Article

Health workers knowledge, attitudes and practices towards youth-friendly sexual and reproductive health service delivery in Calabar Metropolis, South-South, Nigeria

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Abstract

Introduction: The provision of youth-friendly sexual and reproductive health services (YFSRHS) is critical to improving young people's health outcomes. However, millions of young people in Nigeria face numerous barriers to accessing YFSRHS. Therefore, this study assessed the health workers' knowledge, attitude, and practices towards the delivery of YFSRHS in Calabar Metropolis.

Methods: A quantitative cross-sectional descriptive design was utilised for this study. A stratified random sampling technique was employed to select 424 health workers from 50 primary healthcare facilities in Calabar Metropolis. Data was collected using a 30-item structured questionnaire and analysed using SPSS version 26.

Results: The majority (72.8%) of the health workers were females, with 44.7% aged between 21 and 30. A considerable proportion of the respondents had moderate (56.3%) to high (29.9%) knowledge of YFSRHS. Despite most respondents having positive attitudes, a high proportion recorded poor practices, as 58.3% provided sexual and reproductive health services without the use of written guidelines, 87.4% were not trained, and a further 52.9% reported that they did not provide these services in a safe space. Lack of motivation, religious and cultural beliefs, and lack of training were identified as barriers to the delivery of YFSRHS.

Conclusion: Moderate to high levels of knowledge and positive attitudes among health workers did not translate into desired practices in YFSRH service delivery. A re-orientation of healthcare workers within Calabar Metropolis is needed to improve the delivery of YFSRHS for the prevention of sexually transmitted infections (STIs), teenage pregnancy and maternal deaths among young people.

Keywords: Health personnel, Adolescent, Sexual health, Reproductive health, Reproductive health services, Nigeria

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Introduction

Youth-friendly sexual and reproductive health services (YFSRHS) are services aimed at providing a comprehensive range of sexual and reproductive health (SRH) services in ways that are responsive to young people's expectations, vulnerabilities, and specific needs.¹ These services are critical in improving current and future health outcomes of young people undergoing biological, physical, and psychological transition.² YFSRHS encompass health facility characteristics, service provision techniques, and health services offered to improve adolescent and young people's health.³ The World Health Organization (WHO) guidelines for providing YFSRHS have emphasised the need for services to be accessible, acceptable, equitable, gender-sensitive, appropriate, effective, and provided by health personnel who are knowledgeable about young people's health and are skilled in dealing with them.⁴

Adolescent sexual and reproductive health (ASRH) issues comprise a significant component of the global

burden of sexual ill-health.⁵ Consequently, neglecting ASRH issues poses enormous health and socioeconomic risks that negatively interfere with the expected transition to adulthood, resulting in a lifetime of ill effects with significant consequences for the individual and society.^{3,5,6} Despite global consensus on the importance of adolescent and young people's SRH, evidence suggests this group has high unmet information and service needs.⁷⁻⁹ For instance, inadequate health provider knowledge of YFSRHS and unfriendly attitudes towards those who desire the services remain enormous challenges in various settings.^{9,10}

Globally, approximately half of the population is under 25, with 1.8 billion people aged between 10 and 24 years and 90% living in the LMICs, where high prevalence of poverty, unemployment, and disease persist.⁵ An estimated 226 million youths live in Sub-Saharan Africa, accounting for 19% of the world's youth population.³ Despite YFSRHS being a vital component of comprehensive global and national SRH programmes,



young people's access to these services has been sub-optimal, especially in sub-Saharan Africa.¹¹⁻¹⁴ In most African countries, adolescents and young people face various SRH challenges, including limited access to YFSRHS, especially relating to information on safer sex practices, abortion, gender-based violence, sexuality, and family planning.^{3,8} These challenges may be due to parents, healthcare professionals, and educators' reluctance to give adolescents and young people age-appropriate SRH information. Such reluctance to provide critical reproductive health information for adolescents and young people is linked to their uneasiness with the topic or their fear that discussing such information will promote sexual activity.^{8,10,15}

Adolescents and young people in Nigeria bear a significant burden of SRH issues such as STIs, HIV, teenage pregnancies, and unsafe abortions. The 2018 Nigeria HIV/AIDS Indicator and Impact Survey found that over 50 000 persons aged 15-24 years were living with HIV, with females among this group being disproportionately affected.¹⁶ Similarly, girls aged 15-19 years account for almost 50% of an estimated 400 000 unintended births that happen in Nigeria annually.¹⁷ The high prevalence of HIV and unintended pregnancies among Nigeria's young people have far-reaching negative socioeconomic, psychological, and health consequences for this group and the country at large.¹⁷ Hence, there is a need to strengthen the health system and improve the uptake of YFSRHS among young people. However, in Nigeria, it has been reported that many healthcare workers deter adolescents from using SRH services because of their lack of confidentiality, judgmental attitudes, disrespect, or not taking their patients' needs seriously.^{3,5,10} For instance, some adolescents have reported refusing to go to public clinics or health facilities because of the healthcare providers' unfriendly or judgmental attitudes and practices despite needing SRH information and services.^{7,8,18} Such unfriendly or judgmental attitudes towards youths seeking SRH services are likely to restrict further their access to the available SRH services.^{7,9}

Health workers, including those in Nigeria, are expected to provide a range of YFSRHS such as counselling; effective treatment and management of sexually transmitted infections (STIs), including HIV; antenatal and post-natal care; ensuring a safe environment for the privacy and confidential needs of young people; providing safe, accessible and affordable contraceptive methods; and delivering safe abortion care services when unintended pregnancy occurs.^{10,19} Studies indicate that health workers may lack the necessary training for the quality provision of these critical services.^{2,4,12} Regrettably, insufficient SRH-focused training, poor compliance to service guidelines in youth-friendly SRH service provision, and unavailability of critical infrastructure and commodities have been adduced as reasons for health workers inability

to provide quality services that are responsive to the needs of adolescents and young people.^{19,20}

Over the last 50 years, the need to improve the delivery of SRH services has led to an increase in evidence-based research directed toward developing, implementing, and assessing YFSRHS.⁹ Equally important is the need to generate current evidence on health worker-related factors that can influence the uptake of YFSRHS. However, in Nigeria, there is limited research evidence on YFSRHS and its relationship with improved access to SRH and the rights of young people. Similarly, despite being a metropolitan area with a significant proportion of young people, health worker-related factors influencing SRH service uptake by young people in Calabar have been underexplored. Therefore, this study assessed health workers' knowledge, attitudes, and practices in the delivery of YFSRHS. An in-depth understanding of these determinants could contribute significantly to developing programmes and policies that may improve health workers' knowledge and attitudes and translate to increased access and utilisation of SRH services by adolescents and young people.^{19,20}

Methods

Study design

A cross-sectional quantitative descriptive study design was used to assess health workers' knowledge, attitudes, and practices in the delivery of YFSRHS.

Description of study area

This study was conducted in Calabar Metropolis of Cross River State, Nigeria. It is situated in the southern part of Nigeria. Calabar Metropolis comprises two local government areas (LGAs), Calabar Municipality and Calabar South LGAs, with an estimated population of 191,630 for Calabar South and 179 392 for Calabar Municipality.²¹ The Municipality has a land mass of 142 km², while the South, which lies in the coastal area, has a land mass of 264 km². Calabar is known for its rich cultural heritage, warm hospitality, and peace-loving disposition. Calabar metropolis has three levels of healthcare facilities: one tertiary health facility, 59 secondary health facilities (57 private-owned and two government-owned facilities), and 101 primary healthcare facilities (including health posts). This study was implemented at the primary healthcare level, which represents the entry point into the Nigerian health system.

Study population

The study population were health workers (male and female), such as doctors, nurses/midwives, pharmacists, and community health extension workers (CHEWs), who provide direct SRH services to young people at primary health care (PHC) facilities and who were physically present at the time of study in Calabar Metropolis. Other

cadre of facility staff that do not provide direct SRH services to young people were excluded from this study. The PHC system, being the point of entry into Nigeria's health system and being readily reachable by young people in Nigerian communities, formed the rationale for choosing health workers within this level.

Sample size and sampling method

The sample size used for this study was calculated using Fisher's formula – $n = Z^2PQ/d^2$.²² A sample size of approximately 382 was calculated and increased to 424 to account for a 10% non-response rate (see [Supplementary file 1](#)). However, 412 questionnaires were retrieved after the study. A multi-stage sampling technique was used as the sampling procedure for this study. The first stage involved randomly selecting 50 PHC facilities from the available 101 facilities in Calabar Municipality and South LGAs (See [Table S1](#)). The minimum sampling units (health workers) required in the two LGAs were calculated using a proportionate-to-size allocation formula (Calabar Municipality LGA = 254 health workers and Calabar South LGA = 170 health workers). A stratified random sampling method was then employed to select the various cadres of health workers in the 50 selected primary healthcare facilities within the study area.

Data instrument and data collection

A 30-item structured questionnaire was used to obtain information from the respondents. The questionnaire was adapted from Tomori²³ and divided into five sections – sociodemographic characteristics, knowledge, attitudes, practices of health workers towards the delivery of YFSRHS, and factors influencing the delivery of YFSRHS. The knowledge of health workers was assessed using nine structured questions contained in the questionnaire. The nine knowledge questions had a total score of 9. A high level of knowledge was scored 7-9, a moderate level of knowledge was scored 4-7, while low knowledge was scored 0-4. The data collection was carried out between June and August 2022.

For reliability and validity purposes, the instrument for data collection was pretested on 10% (42) of the study's sample size (424) in the Akamkpa Local Governmental Area of Cross Rivers State. The pretest sample included health workers who shared similar characteristics to those used in this study. This was done to ensure that the data instrument was fit to meet the study's objectives. The research team, including two research assistants who were trained on best practices in administering questionnaires, administered the data collection instruments. The questionnaires were administered only to respondents in the selected health facilities who were willing to participate in the survey. For final data collection, the respondents were not required to write but to tick the appropriate boxes

for each option. Respondents' identifiers were excluded from facility tags to ensure anonymity. Additionally, a checklist was used to assess the health facility and YFSRHS programme characteristics across the 50 selected PHC facilities in the study.

Data analysis

All questionnaires were numbered for tracking, sorted and checked for completeness. The obtained data was then entered and analysed using the statistical package of social science (SPSS version 26). The data were presented in frequency distribution tables with percentages. Chi-square analysis was used to test the relationships of the variables of interest at a significance level of $P < 0.05$.

Results

Sociodemographic characteristics of respondents

In this study, 412 out of 424 questionnaires were correctly completed and returned, giving a response rate of 97.0%. As shown in [Table 1](#), the majority of the respondents, 191 (46.4%), were aged 30 years and below, while a few of them, 45 (10.9%), were between the ages of 51 and 60 years and above. Most of the respondents 300 (72.8%) were females, while 112 (27.2%) were males. CHEWs who are primarily domiciled at the primary healthcare level formed the highest proportion of respondents (39.1%), followed by nurses (34%). At the same time, medical doctors were the fewest number of respondents, 29 (7.0%).

Relationship between sociodemographic characteristics and health workers' knowledge of YFSRHS delivery

[Table 2](#) provides the result of the relationship between sociodemographic variables and health workers' level of knowledge on YFSRHS. Results indicated that 57 (13.8%) health workers had a low level of knowledge of YFSRHS. In comparison, 232 (56.3%) respondents had a moderate level of knowledge, and 123 (29.9%) had a high level of knowledge. The chi-square test showed a significant association ($P < 0.05$) between knowledge of YFSRHS and sociodemographic characteristics such as age, sex, ethnicity, religion, marital status, and designation.

The attitude of health workers towards the delivery of YFSRHS

[Table 3](#) shows that the health workers have a positive attitude towards youth-friendly sexual and reproductive health service delivery. A vast proportion of health workers sampled in this study reported that they either strongly agreed (60%) or agreed (34.2%) that youths should be allowed into the facility when they seek YFSRHS. The majority of the respondents, 219 (53.2%), were not in support of discouraging young people who desire SRH services from accessing them. However, a few respondents, 55 (13.3%), had a contrary opinion as they reported that they would reprimand young people

Table 1. Sociodemographic characteristics of respondents

Variable	Frequency (n=412)	Percent
Age (y)	34.78 ± 10.66	
21-30	184	44.7
31-40	111	26.9
41-50	74	18.0
51-60	33	8.0
60 above	10	2.4
Sex		
Male	112	27.2
Female	300	72.8
Ethnicity		
Yoruba	31	7.5
Igbo	95	23.1
Efik	286	69.4
Religion		
Christianity	377	91.5
Islam	31	7.5
African traditional religion	4	1.0
Marital status		
Married	162	39.3
Single	218	52.9
Widowed	32	7.8
Designation/Cadre		
Medical doctor	29	7.0
Nurse/Midwife	141	34.2
CHEW	161	39.1
Pharmacist	40	9.7
Medical laboratory scientist	41	10.0

who seek services. Most respondents, 384 (93.2%), were willing to recommend YFSRHS to young people, while 28 (6.8%) responded negatively.

Practices of health workers in YFSRHS delivery

Table 4 shows health workers' practices in the delivery of YFSRHS. A high proportion of respondents, 240 (58.3%), provide SRH services to adolescents and youths without the use of written guidelines. Most respondents (87.4%) were not trained in delivering YFSRHS, and a further 218 (52.9%) reported that they do not provide these services in a safe space that ensures privacy and confidentiality. Nearly half (47.1%) of health workers reported that YFSRHS were not integrated within the same service delivery points in the PHC facility and that they experienced stock-outs of essential commodities in their facilities.

Analysis of the checklist (See Table S2) used to assess the status of the health facility and YFSRHS programme characteristics across the 50 health facilities showed that most (94%) of the health facilities do not provide free

services to young people. Young people were not involved in the delivery of SRH services, such as post-abortion care, family planning, counselling, and treatment for STIs, including HIV care in 96% of the health facilities. Only 54% of the health facilities under study had SRH educational materials available within the health facility. Finally, we identified lack of training (80%), no motivation (50%), cultural beliefs (60%), and religious beliefs (60%) as barriers affecting health workers delivery of YFSRHS.

Discussion

This study assessed health workers' knowledge, attitudes, and practices towards delivering quality YFSRHS in Nigeria's Calabar Metropolis. In this study, a significant proportion of health workers had moderate (56.3%) to high (29.9%) knowledge levels on YFSRHS. Such moderate to high level of knowledge in this study aligns with previous studies that reported similar knowledge levels.^{10,23,24} Possible reasons for respondents' moderate to high level of knowledge on YFSRHS could be attributed to their pre-service or in-service training as health workers, years of professional practice in the health system, and continuing professional development opportunities that may include YFSRHS delivery on its agenda.^{19,25,26} Nevertheless, to address the diverse challenges young people face, it is imperative to ensure that every health worker who interfaces with young people is highly knowledgeable and competent in delivering quality YFSRHS.^{19,27}

Similar to previous findings,^{10,23} most health workers in this study had a positive attitude towards providing SRH services for adolescents and young people. It was observed that despite health workers having positive attitudes, it did not translate to quality delivery of YFSRHS. However, a small proportion of health workers had negative attitudes that could affect SRH service uptake by young people. Findings from other studies show that health workers exhibit negative attitudes towards young people, such as scolding those seeking contraceptive services.^{23,24} Religious, cultural, and moral beliefs could influence these negative attitudes.^{3,18} Negative attitudes can be reduced through targeted training of health workers to provide adequate, private, non-judgmental, respectful, and confidential SRH services in a conducive environment for young people.

The high prevalence of poor practices in the delivery of YFSRHS by health workers in this study, especially in the non-use of established guidelines, lack of specific training for health workers at the PHC level, and failure to provide services in a safe space for young people have negative implications for the quality-of-service. The findings are aligned with those of Ur Rehman et al,²⁸ in which poor practices in meeting the minimum service delivery standards were recorded among health workers in SRH service delivery. Thus, beyond training health workers,

Table 2. Relationship between sociodemographic characteristics and knowledge of health workers

Variables	Knowledge level			Total	Test statistics (χ^2)	df	P value*
	Low knowledge	Moderate knowledge	High knowledge				
Age							
21-30	26	82	76	184	57.02	8	<0.001
31-40	3	73	35	111			
41-50	18	53	3	74			
51-60	6	19	8	33			
60 above	4	5	1	10			
Total	57	232	123	412			
Sex							
Male	43	58	11	112	88.28	2	<0.001
Female	14	174	112	300			
Total	57	232	123	412			
Ethnicity							
Yoruba	0	31	0	31	46.162		<0.001
Igbo	14	67	14	95			
Efik	43	134	109	286			
Total	57	232	123	412			
Religion							
Christian	57	196	123	376	29.81	4	<0.001
Muslim	0	32	0	32			
African traditional religion	0	4	0	4			
Total	57	232	123	412			
Marital status							
Single	57	93	68	218	82.10	4	<0.001
Married	0	107	55	162			
Widowed	0	32	0	32			
Total	57	232	123	412			
Designation/Cadre							
Medical doctor	0	18	11	29	242.14	8	<0.001
Nurse/Midwife	43	14	84	141			
CHEW	0	147	14	161			
Pharmacist	0	26	0	40			
Medical scientist	14	27	14	41			
Total	57	232	123	412			

*Statistically significant based on P value < 0.05

health facilities must be equipped with YFSRHS guidelines to ensure service quality. Findings from this study revealed that operational barriers, such as requirements for out-of-pocket service payments, lack of youth participation in programme design and implementation, and stock-outs of essential commodities for YFSRHS, are the prevalent health system challenges. Possible reasons for these operational barriers could be the lack of political will to prioritise young people's SRH, lack of investments, poor implementation of policy and quality assurance measures, and a weak health system environment.^{3,4,9} However, these findings highlight the need for broader health systems thinking and the implementation of contextually relevant strategies to address these operational barriers hindering equitable access.²⁹

The delivery of SRH services is fragmented across a number of the health facilities surveyed. The lack of an

integrated approach to the delivery of the SRH services implies that those seeking services must go to the different service points. Such fragmentation invariably affects the quality of delivery of these services intended for young people, resulting in long waiting times at the facilities. This finding is in accordance with Tomori,²³ who reported poor SRH service integration and its detrimental effects on the implementation and delivery of services for young people. Integrating related health services is critical because it reduces workload, increases efficiency, improves client satisfaction, and increases motivation for health workers.^{27,30}

This study documented several barriers affecting the delivery of YFSRHS, including lack of training, religious beliefs, motivation, and cultural beliefs. Previous studies have also reported similar findings on health provider-related barriers affecting the delivery of YFSRHS.^{7,10,13,24}

Table 3. Health workers attitudes towards the delivery of youth-friendly sexual and reproductive health services

Variable	Frequency (n=412)	Percent
Youths should be allowed into the facility for SRH services if they seek YFSRHS		
Agree	141	34.2
Strongly agree	247	60.0
Disagree	10	2.40
Strongly disagree	14	3.40
Would you reprimand an unmarried youth who seeks contraceptive services?		
Agree	55	13.3
Strongly agree	14	3.40
Disagree	124	30.1
Strongly disagree	219	53.2
Discussing sexual intercourse with young people is shameful		
Agree	14	3.4
Strongly agree	14	3.4
Disagree	164	39.8
Strongly disagree	220	53.4
Willingness to recommend YFSRHS		
Yes	384	93.2
No	28	6.8

These barriers contribute significantly to the SRH challenges young people face in accessing services. Removing these barriers will substantially improve the provision and uptake of quality YFSRHS services by adolescents and young people.^{9,13} It becomes critical to strengthen policy and programme initiatives to address identified barriers and improve service quality.²⁹ For instance, providing a range of sustainable incentives to health workers can motivate them to leverage training opportunities and provide quality YFSRHS that meets the diverse needs of young people.^{31,32} Equally important is that non-governmental organisations can expand their community-based services to cover the training of health workers to improve YFSRHS.

Limitations of the study

The findings of this study must be interpreted with caution due to inherent biases in cross-sectional studies. Potential bias may emanate from social desirability or recall bias, considering that data were self-reported. For instance, social desirability bias may influence the level of positive attitude found in this study, which is at variance with extensive reporting of negative health provider attitudes as a significant barrier faced by young people in seeking SRH services. Additionally, the design of this study did not allow for an in-depth exploration of the underlying issues for different factors reported by study participants. However, this study adopted research best practices in pretesting data collection instruments, ensuring adherence to research ethics, and implementing quality data collection approaches.

Table 4. Practices of health workers in youth-friendly sexual and reproductive health services delivery

Variable	Frequency (n=412)	Percent
Are there available SRH service guidelines that you use to provide services to young people		
Yes, there are available guidelines	157	38.1
No, there are no available guidelines	240	58.3
I don't know anything about the guidelines	15	3.60
Are YFSRHS services integrated within the facility?		
Same service location within the same facility	203	49.3
Different service locations within the same facility	194	47.1
Referred to other facilities	15	3.60
Do you ensure young people's privacy and confidentiality when delivering YFSRHS services to them?		
Yes, always	284	68.9
Sometimes, I do	72	17.5
I rarely do	27	6.6
I don't know	29	7.0
Have you been trained to provide youth-friendly SRH services?		
Yes	52	12.6
No	360	87.4
Do you provide services to young people in a safe space		
Yes	194	47.1
No	218	52.9
Ever had stock-outs of family planning commodities in your facility		
Yes	194	47.1
No	218	52.9

Conclusion

The findings of this study highlight the status of health workers' knowledge, attitude and practices in delivering YFSRHS and the predominant barriers affecting them in the study area. While a significant proportion of health workers had moderate to high levels of knowledge and positive attitudes, these did not translate into desired practices in delivering YFSRHS services. This study recommends appropriate training of health workers and implementing contextually relevant and effective strategies that improve the quality of YFSRHS for young people. Furthermore, opportunities exist for future researchers to use mixed methods approaches to uncover underlying and contemporary issues affecting the translation of health workers' knowledge and attitude into the delivery of YFSRHS that meets national and global standards.

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Authors' Contribution

Conceptualization: Felicity Nneoma Ike, Elvis Anyaehiechukwu Okolie, Philip Etabee Bassey.

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Competing Interests

The authors declare that they have no competing interests.

Consent for Publication

All respondents permitted publication, provided anonymity was ensured.

Ethical Approval

This study was approved by the Research and Ethics Committee of the University of Calabar (approval no. UC/CM/PUH/ETH/2226). Signed informed consent was sought and received from all participants enrolled in this study after the research objectives were explained and their questions and concerns addressed. Regardless of the signed informed consent, participants could decline to answer questions or withdraw from the study at any time. All methods were carried out in accordance with relevant guidelines and regulations. Informed consent was obtained from all participants in the study. The study was performed in line with the principles of the Helsinki Declaration.

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Supplementary Files

Supplementary file contains Table S1, S2, and sample size calculation.

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