



Knowledge-Gap among Doctors in the Niger Delta Region of Nigeria about Sexual and Reproductive Health

Emmanuel Columba Inyang-Etoh¹, Anyiekere Morgan Ekanem², Anietimfon Sunday Akpan³

¹Department of Obstetrics and Gynaecology, University of Uyo, Uyo, Nigeria

²Department of Community Health, University of Uyo, Uyo, Nigeria

³Department of Obstetrics and Gynaecology, University of Uyo Teaching Hospital, Uyo, Nigeria

Email: emmacol2000@yahoo.com

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Abstract

Objective: Sexual and reproductive health the way it is currently conceptualized is a new discipline in medicine, and many medical doctors whose responsibility is to provide information and service to promote this essential component of health do not fully understand the concept. This study was designed to determine the level of knowledge of Nigerian doctors about sexual and reproductive health. **Methods:** Partly pre-coded questionnaires were administered to a cross section study of doctors for self-completion to test their knowledge about sexual and reproductive health. **Results:** One hundred and ninety-eight doctors with a mean age of 33.7 years old and a mean duration of practice of 6.9 years were surveyed. Nearly all (99.5%) of the respondents had heard of the term sexual and reproductive health, but only 15.7% of the respondents were able to define sexual and reproductive health correctly. Doctors who were working in health facilities situated in educational institutions were more significantly able to define sexual and reproductive health correctly than others ($p = 0.001$). Major sources of information on sexual and reproductive health to respondents were journals, colleagues, lectures and conferences. Most (96.5%) respondents knew that sexual and reproductive health was related to the United Nation's MDGs but 30.2% did not know that it equally related to MDGs 4 and 6. There was no significant association between occupational profile of respondents and their level of knowledge about sexual and reproductive health ($p > 0.05$). **Conclusion:** There was a knowledge-gap among the doctors in the Niger Delta region of Nigeria about sexual and reproductive health as 20.2% of them demonstrated low level of knowledge about sexual and reproductive and only 15.7% of them could define the concept correctly.

Keywords

Sexual, Reproductive Health, Knowledge, Medical Doctors, Nigeria

Subject Areas: Gynecology & Obstetrics, Public Health, Women's Health

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1. Introduction

Sexual and reproductive health is defined as a state of complete physical, mental and social well being and not merely the absence of disease or infirmity in matters related to the reproductive system and to its functions and processes [1]. This comprehensive and holistic concept of sexual and reproductive health was borrowed from the WHO concept of sexual health developed in 1975 and adopted at the International Conference on Population and Development (ICPD), which held in Cairo in 1994. This new concept is a paradigm shift from the hitherto narrow concept of maternal/child care and family planning [1] [2].

The current concept of sexual and reproductive health has been expanded to include maternal and child health, adolescent health, prevention and control of sexually transmitted infections (STIs) including human immunodeficiency virus infection/acquired immunodeficiency syndrome (HIV/AIDS), fertility regulation, prevention and management of infertility, prevention and management of genital tract malignancies, sexual and reproductive rights of women, reproductive health of men and elimination of harmful traditional practices [3]-[5].

Adopting a life cycle approach, sexual and reproductive health and the rights therein begin from the womb and end in the tomb. A female's sexual and reproductive right is violated if a couple prefers a male child to a female; if boys are treated preferentially by parents; if the girl child is subjected to female genital mutilation; if the girl child is married out before sexual maturity; if the adolescent girl lacks information and education about her sexuality; if she lacks access to maternity services during pregnancy and childbirth and if she cannot regulate her fertility and access treatment for infertility. Her right is also violated if she is subjected to inhuman treatment and socioeconomic deprivation by her husband or by the in-laws if her husband dies, and if she lacks access to treatment of conditions associated with menopause as well as prevention and management of genital tract malignancies [4].

Information from the Nigerian Federal Office of Statistics 2014 reveals that the level of sexual and reproductive health attained by Nigerians is abysmal [5]. Maternal mortality ratio is still over 500 per 100,000 live births, utilization of family planning methods is still a mere 15%, attainment of adolescent health is poor and harmful traditional practices are still prevalent in some communities in the country [6] [7].

The millennium developmental goals (MDG) 3, 4, 5, and 6 namely, attainment of gender equity, reduction of infant mortality, promotion of maternal health and prevention/control of infectious diseases respectively are directly related to the attainment of sexual and reproductive health, and primary care doctors like general practitioners, family physicians, community physicians and obstetricians and gynaecologists as well as oncologists are crucial to the provision of information and services to promote sexual and reproductive health [8] [9]. Doctors also have a comparative advantage over other health workers in advocacy and influence of policy formulation to promote sexual and reproductive health in the society, including legislation to abolish harmful traditional practices [10].

Interestingly, sexual and reproductive health was only expanded and accorded priority globally barely two decades ago, and the Nigerian National Reproductive Health Policy and Strategy was constituted in 2001, while the subject only entered the country's medical curriculum in 2005 [3] [4]. This development has invariably created knowledge-gap, as a doctor who graduated from medical school before the year 2000 may not have heard the phrase sexual and reproductive health, let alone understand this rather composite and holistic concept.

This study was designed to assess the level of knowledge of doctors in the Niger Region of Nigeria about sexual and reproductive health. Findings from this study will probably help stake holders make a case for the introduction of sexual and reproductive health into the curriculum of the Continuing Medical Education programme of the Medical and Dental Council of Nigeria (MDCN). It is the responsibility of the MDCN to promote quality medical education at undergraduate and postgraduate levels, as well as continuing medical education and continuing professional development of all doctors practicing medicine in Nigeria.

2. Methods

2.1. Study Design and Study Area

This was across sectional questionnaire-based exploratory study among medical doctors who were attending an Annual General Meeting and Scientific Conference of the Nigerian Medical Association (NMA), Akwa Ibom State branch, Nigeria in August 2014.

Akwa Ibom State is located in the Niger Delta region of Nigeria with a population of 3.9 million people ac-

cording to the Nigerian census conducted in 2006 and projected to 4.8 million people by 2014 [6] [11]. Akwa Ibom state is one of the 36 states of the federal republic of Nigeria, and it has one federal teaching hospital, 3 academic institutional medical centres, 16 general hospitals and 125 private clinics [12]. There were 205 medical officers and 14 medical specialists practicing in state-owned health facilities at the time of the study, while a few of the doctors were engaged in administrative duties in the ministry of health. The teaching hospital had 60 house officers, 190 resident doctors and 65 medical specialists practicing in the hospital according to the human resource unit of the hospital.

2.2. Data Collection and Analysis

Approval was obtained from the Akwa Ibom State Ministry of Health Research Ethical Committee before commencement of the study. Permission was also obtained from the leadership of the Association before the questionnaires were administered. Participants were counseled on the purpose of the study and informed that participation in the study was voluntary. The questionnaires which were structured and partly pre-coded had been pre-tested among a cross section of 20 doctors attending an Ordinary General Meeting (OGM) 3 months earlier and necessary corrections made.

The questionnaires were administered by trained research assistants to a cross section of doctors at the Annual Conference for self-completion. Respondents were instructed to complete the questionnaires independently and submit as soon as completed to the research assistants. The questions were set to obtain the occupational profile of the respondents, the ability of respondents to define sexual and reproductive health correctly, the people they thought sexual and reproductive health concerned and what category of doctors they thought were directly involved in the promotion of sexual and reproductive health, as well as the relationship between sexual and reproductive health and the United Nation's Millennium Developmental Goals (MDG). For example, respondents were asked two open ended questions namely, what do you think sexual and reproductive health refer to? And Do you think sexual and reproductive health is essential for the attainment of total human health? If yes, why? The closed ended questions included: Which of the following persons do you think are concerned with sexual and reproductive health? Women only, Men only, Both Women and Men, Children, Others, please specify. Do you think sexual and reproductive health is related to the UN's Millennium Developmental Goals? Which of the Millennium Developmental Goals are related to sexual and reproductive health? Eradication of Poverty/hunger, Basic education, Gender equity, Infant survival, Maternal health, Infectious disease control, Environmental sustainability, Global partnership. Which of these categories of doctors do you think are directly involved in the promotion of sexual and reproductive health, Gynaecologists, General surgeons, Community physicians, General practitioners, Paediatricians, Oncologists, Orthopaedic surgeons? The respondents were expected to select Yes, No or I don't know option for each question.

A total of 11 questions were intended to test respondents' knowledge about sexual and reproductive health. Each item was assigned a score of 1 for a correct response and 0 for a wrong response. A score of 0 - 5 was graded as low, 6 - 8 as moderate and 9 - 11 as high level of knowledge about sexual and reproductive health.

Data generated from the study were coded and entered into the soft ware of the Statistical Package for Social Sciences (SPSS), Version 17 Inc. Chicago, Illinois, USA. Descriptive statistics was performed for continuous variables, while the association between categorical variables was compared using the Chi square test. A confidence interval of 95% was adopted and differences were considered significant at a p-value of less than 0.05.

3. Results

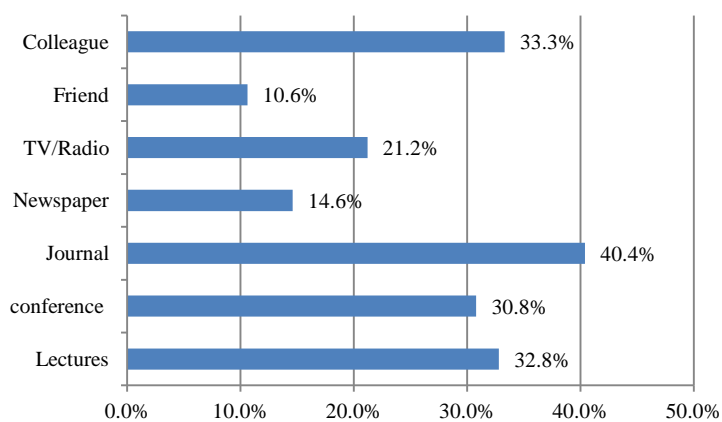
One hundred and ninety eight medical doctors participated in the study. The mean age of respondents was 33.07 ± 7.70 years old, and the mean duration of their practice was 6.9 years with a standard deviation of 7.59 years. Nearly all (99.5%) the respondents had heard of the term sexual and reproductive health and 99.0% of them expressed their desire to learn more about the concept. Only 15.7% of the respondents were able to define sexual and reproductive health correctly, definitions stated by 58.6% of the respondents were incorrect, while 25.7% of them declined to respond. The majority (79.8%) of the respondents had moderate to high level of knowledge about the concept.

Table 1 shows that a vast majority (86.4%) of the respondents had basic MB, BS degree, and 75.8% of them had practiced for less than 10 years as at the time of the study. The majority (70.2%) of them were working with the University of Uyo Teaching Hospital, with 33.8% of them being house officers. **Figure 1** shows that common

Table 1. Occupational profile of respondents in the study population.

Characteristics	Frequency	Percentage (%)
Qualification		
Basic MB, BS	171	86.4
ΨPG Diploma	10	5.1
MSc.	4	2.0
PhD.	5	2.5
Professional fellowship	8	4.0
Practice duration		
<10 years	150	75.8
>10 years	48	24.2
Work place		
General hospital	32	16.2
®Medical centre	9	4.5
Ministry of health	9	4.5
Teaching hospital	139	70.2
Private clinic	9	4.5
Designation		
House officers	67	33.8
Medical officers	49	24.7
Sr. Medical officers	35	17.7
Resident doctors	40	20.2
Consultants	7	3.5
Total	198	100.0%

®These are health facilities situated in academic institutions like polytechnics and universities; ΨPG stands for post graduate.

**Figure 1.** Sources of information about sexual and reproductive health.

sources of information about sexual and reproductive health to the respondents in descending order of frequency were journal, colleagues, lectures and conferences. Respondents were less likely to hear about sexual and reproductive health from their friends.

Most of the respondents correctly posited that sexual and reproductive health was related to the United Nation's Millenium Developmental Goals (96.5%); that gynaecologists were involved (93.4%); and that it was essential for the attainment of complete human health (99.0%) as shown in **Table 2**. An abysmal proportion of respondents knew that it also related to MDG 4 (30.2%), MDG 6 (23.4%) and that oncologists were equally involved (36.4%).

Table 3 shows the association between occupational profile of respondents and their ability to define sexual and reproductive health correctly. Respondents working in medical centres situated in educational institutions

Table 2. Respondents' knowledge about sexual and reproductive health (positive responses only).

Knowledge of Reproductive Health	Frequency	Percentage
Reproductive health concerns both men and women	138	69.7
Reproductive health is related to MDGs	191	96.5
Reproductive health relates to MDG 3	80	41.7
Reproductive health relates to MDG 4	58	30.2
Reproductive health relates to MDG 5	157	80.6
Reproductive health relates to MDG 6	45	23.4
Gynaecologists are involved in reproductive health	185	93.4
Community physicians are involved in reproductive health	168	84.8
General practitioners are involved in reproductive health	144	72.7
Oncologist are involved in reproductive health	72	36.4
Reproductive health, essential for the attainment of complete human health	196	99.0

Table 3. Association between respondents' occupational profile and ability to define sexual and reproductive health correctly.

Factors	Definition of Reproductive Health		Total	Statistical Tests and Values
	Correct	Incorrect		
Practice duration				
<10 yrs	24 (16.0)	126 (84.0)	150 (100.0)	$X^2 = 0.055$ df = 1 P = 0.814
≥10 years	7 (14.6)	41 (85.4)	48 (100.0)	
Place of Work				
General Hospital	0 (0.0)	32 (100.0)	32 (100.0)	$X^2 = 14.378$ df = 4 p = 0.001
Medical centre	4 (44.4)	5 (55.6)	9 (100.0)	
Min. of Health	1 (11.1)	8 (88.9)	9 (100.0)	
Teaching Hospital	26 (18.7)	113 (81.3)	139 (100.0)	
Private clinic	0 (0.0)	9 (100.0)	9 (100.0)	
Designation				
House officers	13 (19.4)	54 (80.6)	67 (100.0)	$X^2 = 12.94$ df = 4 p = 0.012
MOs	4 (8.2)	45 (91.8)	49 (100.0)	
Snr MOs	2 (5.7)	33 (94.3)	35 (100.0)	
Resident doctors	12 (30.0)	28 (70.0)	40 (100.0)	
Consultants	0 (0.0)	7 (100.0)	7 (100.0)	

MOs refers to medical officers; Snr MOs refers to senior medical officers.

(44.4%) and the teaching hospital (18.7%) were significantly able to define sexual and reproductive health correctly when compared to respondents working in other health facilities ($p = 0.001$). Respondents who were resident doctors significantly defined sexual and reproductive health correctly when compared to other categories of respondents ($p = 0.012$).

The association between occupational profile of respondents and their knowledge of the concept of sexual and reproductive health is shown in **Table 4**. There was no statistically significant association between occupational profile of respondents and their level of knowledge about the concept of sexual and reproductive health ($p > 0.05$).

4. Discussion

Unless medical doctors themselves understand the composite and complex concept of sexual and reproductive health, they will not be able to contribute their quota to the promotion of this essential component of health to the populace. The study population was made up of medical doctors in their prime, with a mean age of 33.07 years old and mean duration of practice of 6.9 years. This finding is a reflection of the setting of this study in which a cross section of Nigerian doctors attending an annual general meeting and scientific conference had their knowledge about the subject surveyed. Anecdotal evidence has shown that such meetings are often largely attended by the young doctors in our environment.

Table 4. Association between occupational profile of respondents and knowledge of the concept of sexual and reproductive health.

Factors	Knowledge of Sexual and Reproductive Health		Total	Statistical Tests and Values
	Poor	Good		
Qualification				
Basic MB, BS	36 (21.1)	135 (78.9)	171 (100.0)	$X^2 = 5.106$ df = 4 p = 0.154
ΨPG Diploma	0 (0.0)	10 (100.0)	10 (100.0)	
MSc.	2 (50.0)	2 (50.0)	4 (100.0)	
Ph.D	1 (20.0)	4 (80.0)	5 (100.0)	
Fellowship	1 (12.5)	7 (87.5)	8 (100.0)	
Practice Duration				
<10 years	32 (21.3)	118 (78.7)	150 (100.0)	$X^2 = 0.491$ df = 1 p = 0.317
≥10 years	8 (16.7)	40 (83.3)	48 (100.0)	
Workplace				
General Hospital	9 (28.1)	23 (71.9)	32 (100.0)	$X^2 = 3.116$ df = 4 p = 0.561
®Medical Centre	3 (33.3)	6 (66.7)	9 (100.0)	
Min. of Health	2 (22.2)	7 (77.8)	9 (100.0)	
Teaching Hospital	25 (18.0)	114 (82.0)	139 (100.0)	
Private Clinic	1 (11.1)	8 (88.9)	9 (100.0)	
Designation				
House Officers	12 (17.9)	55 (82.1)	67 (100.0)	$X^2 = 8.020$ df = 4 P = 0.091
MOs	16 (32.7)	33 (67.3)	49 (100.0)	
Snr. MOs	6 (17.1)	29 (82.9)	35 (100.0)	
Residents Drs	4 (10.0)	36 (90.0)	40 (100.0)	
Consultants	2 (28.6)	5 (71.4)	7 (100.0)	

MOs refers to medical officers; Snr MOs refers to senior medical officers. ®These refer to health facilities situated in academic institutions like polytechnics and universities; ΨPG refers to post graduate.

Nearly all (99.5%) the respondents had heard of the term sexual and reproductive health, but they equally expressed their desire to learn more about the concept. This result is in agreement with findings from similar studies where most health-care providers have heard of new subjects and concepts in medicine but often lack in depth knowledge as was demonstrated in a study of knowledge and attitude of health-care providers towards the provision of emergency contraception in Lagos, Nigeria [13]. Such casual knowledge by doctors is attributed to lack of education in specific disciplines, and such a development has been shown to lead to negative attitude towards the provision relevant health information and services to the populace [14] [15].

The fact that only 15.7% of respondents were able to define sexual and reproductive health correctly has confirmed the need for formal education of practicing doctors in our environment in order to equip them for the task of providing relevant information and services to promote sexual and reproductive health [9] [16]. Major sources of information about sexual and reproductive health were journals, colleagues, lectures and conferences, whereas respondents were less likely to obtain such information from friends, similar to findings from a survey of adolescents' knowledge about reproductive health in Ile-Ife, Nigeria and Arusha, Tanzania, where respondents' friends were less likely sources of health related information [17] [18].

Even though most of the respondents knew that sexual and reproductive health was related to the United Nations' Millennium Developmental Goals (MDGs) 3 and 5, and that gynaecologists were involved, only an abysmal proportion knew that it also was related to MDGs 4 and 6, and that oncologists were equally involved in the promotion of sexual and reproductive health. This is a demonstration of the knowledge-gap, which could be filled through continuing medical education of doctors [9] [16] [19].

Interestingly, respondents who worked in health facilities situated in educational institutions were more able to define sexual and reproductive health correctly for reasons which have not been adduced by this study; notwithstanding, reading journals, attending lectures and conferences and interaction with colleagues, which were major sources of information for respondents in this study, could have been more prevalent among doctors in this group.

Although the majority (79.8%) of the respondents are adjudged by the study to have moderate to high level of knowledge about sexual and reproductive health, they still need to learn more from any formal education programme targeted at equipping them with the needed knowledge and skills to provide information and services to promote sexual and reproductive health to the populace. The finding that the occupational profile of respondents did not significantly affect their level of knowledge has learnt credence to the need for doctors of all ages and designations to be educated on sexual and reproductive health.

In conclusion, there was a knowledge-gap among doctors practicing in the Niger delta region of Nigeria about sexual and reproductive health as 20.2% of them demonstrated low level of knowledge about the concept and only 15.7% of them were able to define sexual and reproductive health correctly. Such deficit in knowledge undermines the ability of these practicing doctors to provide needed information and services to promote sexual and reproductive to the populace. The need for the Medical and Dental Council of Nigeria (MDCN) to draw up a curriculum for the continuing medical education of practicing doctors in Nigeria on sexual and reproductive health has become imperative.

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Abbreviations Used in the Paper

OGM: Ordinary General Meeting;

NMA: Nigerian Medical Association;

MDCN: Medical and Dental Council of Nigeria;

MDG: Millennium Developmental Goals;

WHO: World Health Organization;

UN: United Nations;

ICPD: International Conference on Population and Development;

STIs: Sexually Transmitted Infections;

HIV/AIDS: Human Immunodeficiency virus infection/Acquired Immunodeficiency Syndrome.