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AWARENESS OF VESICOVAGINAL FISTULA AMONG HEALTH WORKERS IN SOME HEALTH FACILITIES OF ZAMFARA STATE, NORTHWEST NIGERIA

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Abstract

The prevalence of obstetric fistula in Nigeria was found by 2008 National Demographic Health Survey (NDHS) to be 0.4%, suggesting there are approximately 150,000 women of reproductive age currently living with, or who have previously had, obstetric fistula. Fistula prevalence is higher in Northern than in Southern Nigerian zones. For instance, the prevalence of fistula in North Central Nigeria is 0.8%, followed by 0.5% in the North East and 0.3% in North West Nigeria. This study aimed at understanding the knowledge and level of understanding of Health workers in some selected hospitals and clinics in Zamfara State, North West Nigeria. The study was both a descriptive cross sectional and qualitative study of health personnel working in some health facilities in Zamfara State to gain an insight of their understanding and practice about vesicovaginal fistula (VVF) which is a common obstetric and maternal health complication among women in Nigeria during or after delivery. 68.3% of the respondents were females while 31.7% were males. There is no specialist consultant or fistula surgeon among the health personnel interviewed as only 11.7% of them were medical doctors while the remaining are nurses, midwives or community health extension workers. On their knowledge of fistula, 97.6% of them have heard of VVF, and 87% of them were of the opinion that early marriage causes complications during delivery or giving birth. Also 88% of them were aware of VVF as one of the problems associated with early girl-child marriage while only 61% of them knew that obstructed or delayed labour causes VVF. It is important to train and equip the lower cadre health and clinic personnel on VVF and how to prevent it as the management of VVF requires a specialized knowledge and expertise.

Keywords: vesicovaginal fistula, maternal health, maternal mortality, North West Nigeria.

Introduction

The northeast and the northwest Nigeria have considerably higher rates of maternal mortality and morbidity when compared to the southeast and southwest. The risk of dying during childbirth for a Nigerian woman is 1 in 24, one of the highest even in sub-Saharan Africa. In a survey conducted by the Society of Obstetricians and Gynaecologists of Nigeria (SOGON) across the country's six geopolitical zones indicated that mortality rate in the northeast was 727 per 100000 live births, northwest had 3,974 while north central had 846 per 100,000 live births. The data was obtained from review of mortality from 1999 to 2003 in selected secondary and tertiary health facilities in the zones [1]. The maternal mortality and morbidity rates are highest in the Northern states making the national average of 800 deaths per 100,000 total births, one of the highest even in the Third World in 2005 to date. In Kano, another study shows shocking increase in maternal mortality, the figures recorded at three hospitals was 3,974 maternal deaths per 100,000 live births in 2010 [2].

The reason for this high maternal mortality figures is not unconnected with socio-cultural barriers and factors, which among them is the teenage marriage and early child-bearing which is a tradition among the Hausa and Fulani whom are predominant in the northern part of Nigeria and in Zamfara State [3]. Adolescent pregnancy has its risks as experts posit that the young girl who is not fully physically and emotionally developed is at greater risk of developing complications during pregnancy and childbirth than a woman of 20 or 24 years. Early marriage has health implications such as obstructed labour and delay in seeking quality obstetric care which could lead to trauma, vesicovaginal fistula (VVF) and other complications. Majority of the VVF cases which is about 70% of the 200,000 patients are in the Northern states [4-5]. The low socio-economic status and lack of education have been identified as the major causes of obstetric fistulas [6-7]. VVF centres for the repair of fistulae and rehabilitation of patients are sited in Sokoto, Kano, Katsina, Zamfara and Jos [8] and in Bauchi, Jigawa in the north and in Oyo, Kwara in the south west and Abakaliki in Ebonyi in the southeast and Calabar in Cross-rivers in the south-south [9].

VVF, also called as obstetric fistula, is caused by prolonged or obstructed labour and is by far the most common form of genital fistula, constituting an estimated 85-90% of all genital fistula cases. Obstetric fistula is usually caused by several days of obstructed labour, without timely medical intervention or caesarean section. During this time, the soft tissues of the pelvis are compressed between the baby's head and the mother's pelvic bones. The lack of blood flow causes tissue to die, creating a hole between the mother's vagina and bladder or between the vagina and rectum, or both, and resulting in leakage [10-11]. Therefore left with chronic leaking, women with obstetric fistula are often, but not always, abandoned or neglected by their husbands and families, unable to work, and ostracized by their communities. Women who develop obstetric fistula usually have had a stillbirth, so they must also deal with the loss of a baby. Women with fistula are often among the most impoverished and vulnerable members of society [12-13]. Women with fistula are stigmatized among their peers and by society in general [14]. The fistula patients suffers social stigma attached to their condition and therefore leading to psychosocial trauma and stress due the state of the fistula situation of uncontrolled urinary incontinence and in some cases leakage of faeces due to the fistula [15]. Socio-cultural and traditional beliefs among the society are that it is caused by witchcraft or a sign of punishment by God to those who engaged in infidelity or extra marital sex [16].

The prevalence of obstetric fistula in Nigeria was found by 2008 National Demographic Health Survey to be 0.4%, suggesting there are approximately 150,000 women of reproductive age currently living with, or who have previously had, obstetric fistula. Fistula prevalence is higher in Northern Nigeria than in Southern Nigerian zones. For instance, the prevalence of fistula in North Central Nigeria is 0.8%, followed by 0.5% in the North East and 0.3% in North West Nigeria. In contrast, the highest prevalence in Southern zones is found in South South Nigeria (0.5%), followed by South East Nigeria (0.3%) and South West Nigeria (0.2%). The prevalence for all Northern zones combined is 0.5%, compared to 0.3% for the Southern zones. Almost one-third of women surveyed (30.7%) had heard of fistula symptoms, with knowledge considerably higher in the North East and North West zones (49.6% and 66.2%, respectively) than in other zones of the country [17].

According to the National Population Commission, 2013 NDHS, the antenatal care attendance (ANC), skilled birth attendants (SBA), and contraceptive prevalence rate (CPR) for Zamfara State are one of the worst in the northwest geopolitical zone. Also there are few human resource for health in the state [18-19]. Zamfara State has one of the highest prevalence and number of cases of VVF in north western Nigeria with an average annual fistula repaired cases of about 163 cases. The state has one of repair facilities in the north with a bed capacity of 30 beds. The facility dwells and serves as both the Farida General hospital and the VVF centre. The repairs are conducted in collaboration between the State Government and a United States Agency for International

Development (USAID) funded program ACQUIRE Fistula Care Project implemented by Engenderhealth Project. So far through the activities of the project, a total of about 5,400 patients were repaired between 2007 and 2010 while thrice that number are awaiting repairs at various VVF centres across the country [20]. In Zamfara State, a total of about 815 patients were successfully repaired from 2004 to 2011 through the combined efforts of the state government and that of other development and implementing partners such as the USAID supported fistula care project and a federal government fistula surgeon and consultant effort. In all, there is more than 98% success rate and less than 0.05% casualty with only two deaths recorded in the last ten years. However, there are not enough skilled health personnel to handle and manage the fistula cases in the north and across the country.

According to Umoiyoho and Inyang-Etoh (2012), there is a high level of misconception in the rural areas of northern Nigeria about the cause of obstetric VVF and how the condition can be corrected. This development calls for a systematic and comprehensive health enlightenment programme to educate the people on the aetiopathogenesis and treatment of obstetric VVF. Knowledge of the causation of obstetric fistula could help rural women to make a decision for antenatal care and hospital stay, which has the potential to reduce the increasing incidence of obstetric fistula in Nigeria [21].

Methods

Study Area

Zamfara State was created on 1st October 1996 by late General Sani Abacha's government. The State has a total population of 3,677,789 based on the 2006 population census. It is located in the hinterland of the north-western part of Nigeria and covers a land area of 38,418 km² representing about 4% of the land mass of Nigeria. It is situated towards the extreme North West portion of Nigeria, lying between latitudes 10 degrees 52' and 13 degrees 10 to the north, as well as longitudes 4 degrees 40 and 7 degrees 10' to the east. It is bordered by Katsina State to the south, Niger State and partly Kebbi State on the west by Sokoto State and on the north by republic of Niger (sharing about 70 kilometers of border area). The ethnic groups indigenous to the State are: Zamfarawa, Burmawa, Fulani, Alibawa, Gobirawa, Kabawa, Katsinawa and Kambarin Barebari. The Hausa language is the universal language in the State. While other Nigerian ethnic groups such as Igbo, Nupe, Edo and Yoruba peacefully coexist and conduct their economic and commercial activities.

Study Design

The study used mixed method of both quantitative and qualitative approaches. In quantitative approach, it was a descriptive cross-sectional survey involving clinical and medical health workers based on a structured questionnaire format. This study was carried out in some selected health facilities in Zamfara State. While for the qualitative study, an interview guide was used with open-ended questions to gain more insight into the matter under study from the participants. Data for the quantitative study were inputted and analysed using Statistical Package for Social Science (SPSS version 19.0). While for the qualitative part of the study, the recorded data was transcribed and translated where the interview was conducted in Hausa language. The data was then analysed based on content analysis using specific themes for the study in order to augment or decipher the findings of the quantitative study.

Study Population

The study populations were clinical and health personnel working in health clinics and hospitals in Zamfara State. 60 of them who fulfilled the inclusion criteria were selected to be included in this cross-sectional survey. This study was conducted in the period from June 2013 to November 2014.

Inclusion criteria:

Clinical and health personnel working in some selected health facilities in Gusau Metropolis of Zamfara State, both males and females who were willing to participate in the study.

Exclusion criteria:

Non-clinical, administrative and other departmental staff in the selected health facilities.

Survey Instrument:

The questionnaire was administered by trained interviewers to the individual respondents - the health workers in some selected health facilities in Gusau, Zamfara State and in some cases the respondents completed and returned the questionnaire with their answers. The questionnaire was divided into sections. The first section asked for demographic data including age, gender, ethnic group and educational level and post of the health personnel. In the second section, questions about knowledge, attitude and perception about VVF and early child marriage were asked. While for the qualitative

aspect of this study, an interview guide was used to interview some of the selected health workers.

Results

The socio-demographic factors of the participants are shown in Table 1. 68.3% of the respondents are females while 31.7% are males. There is no specialist consultant or fistula surgeon among the health personnel interviewed as only 11.7% of them are medical doctors while the remaining are nurses, midwives or community health extension workers. On the other hand, as shown in Table 2 on their knowledge of fistula, 97.6% of them have heard of VVF, and 87% of them were of the opinion that early marriage causes complications during delivery or giving birth. Also 88% of them were aware of VVF as one of the problems associated with early girl-child marriage while only 61% of them knew that obstructed or delayed labour causes VVF. When the respondents were asked on some of the medical causes of maternal death, many of them were not sure as only 49.2% of them mentioned haemorrhage and 62.7% of them mentioned postpartum haemorrhage as common causes of deaths of women during delivery or child birth. However, most of them believed that the illnesses and deaths as a result of pregnancy can be reduced. Though, more than 50% of the respondents agreed that their health facilities were not adequately equipped or staffed to cater for VVF cases or complications as a result of child birth.

Qualitative Results:

All the health workers were affirmative in their response on knowledge of VVF but however, some of them have never seen a VVF case in their health facility.

> *"I only heard of it but have never seen a case of fistula"* (Health worker 1).
>
> *"In the hospital I was there were a lot of them (VVF) patients but I have not been in their ward"* (Health worker 2).
>
> *"It's quite a pity; I never worked in the VVF or fistula clinic"* (Health worker 3).

Most of the health workers expressed their readiness to work in the fistula ward or with the patients, however there are some of who expressed negative attitude towards that:

> *"I wouldn't want to work in VVF ward, it's so scary"* (Health worker 4).
>
> *"If I am posted to the Fistula ward I may seek redeployment"* (Health worker 5).
>
> *"I am ready to work anywhere I am posted to including the VVF ward"* (Health worker 6).

On the magnitude of the problem, most of the respondents felt that it's on the rise and that there were many untreated cases of the fistula as observed by one of the respondents:

> *"There are so many new cases of this disease especially when you go to General Hospital A"* (Health worker 7).

And when further probed on the manpower and skills to manage the VVF cases in the State, the respondents were of the view that there is not enough manpower and skills in the state to manage the number of cases of VVF in the state or in the northern region. A few of the respondents had these to say:

> *"I don't think we have enough staff and those who are well trained to manage fistula cases in this state"* (Health worker 8).
>
> *"There are few skilled and trained doctors or nurses who can take care of the VVF patients, you know, one needs a special training for that"* (Health worker 9).
>
> *"Not all doctors can repair VVF even if they are surgeons but you need a specialized training to perform such an operation"* (Medical doctor 1).

Discussion

The exact figures of the number of the fistula cases is still unknown in Nigeria, however estimates by various groups and organizations such as USAID, UNFPA and the National Population Commission puts it at about 150,000 to 200,000 cases while in some quarters it is said to be roughly about 500,000 in Nigeria, anyhow it is put the number of cases and incidence of the VVF is indeed high [22].

This study is aimed to understand the level of awareness and perception of health workers on the causes and management of VVF. From the results above it is evident that frontline heath personnel need to be educated more about VVF and awareness on the life threatening situation as well as the causes of VVF be created to all health personnel both in the rural and urban areas. Knowing and understanding the danger signs that can lead to VVF are the key to prevention of its occurrences among women of child-bearing age especially to those who are pregnant and in labour. Most of the health workers interviewed have some knowledge about VVF though when further probed, some of them mentioned of not having seen any case yet. Almost all of them have heard about VVF in the health facilities interviewed except for a few, which indicates that there is still need for awareness creation on VVF even among health personnel, moreover in the general community.

However, about 50% of the health workers interviewed in Zamfara State said that their hospital or clinic doesn't have the adequate staffing or even the equipment to manage VVF cases which is further corroborated by the qualitative in-depth interview. There is indeed a dearth of qualified and skilled personnel to attend to the current backlog of fistula cases in northern Nigeria and in Nigeria at large. Only 33 surgeons were providing fistula repairs in Nigeria with about 2286 cases repaired. While among the health personnel interviewed only seven of them are medical doctors or physicians representing 11.7% and 50% of them are nurses or nurse-midwives. On a further investigation it was confirmed that there were less than five qualified surgeons in the state to attend to VVF repairs. This situation is reflected all over the northern Nigeria as corroborated [23]. Due to the peculiar nature of the VVF phenomenon, not every health personnel can handle or manage it, thus the need for trained health care personnel to manage it [24]. As mentioned by some of the respondents in the interviews, some of the health personnel were not even aware of the VVF cases, its causes or etiology and its management [25].

The health personnel interviewed in this study were mostly from the secondary and primary health centers, with only two tertiary health facilities and only one VVF repair center in the state. Management and repair of fistula needs some specialization, so not all health or clinical health personnel can attend to VVF care. Most of the fistula surgeons operate at tertiary level health facilities in the country such as the teaching hospitals where very few women seek care for VVF [26]. Therefore making it difficult to other health personnel such as theatre nurse and even some doctors to understand how to manage and treat VVF cases. VVF is a specialized area or speciality in the field of Medicine and public health that needs to be given special attention.

As agreed by most of the respondents that both complications and common causes of maternal deaths can be reduced, which confirmed that fistulas are both preventable and treatable [27], but due to lack of qualified personnel, training, capacity building, infrastructure as well as public health programs that would address the occurrence of VVF, it is still prevalent among the northern Nigerian society [28]. In which most of the healthcare workers are of the opinion that there is the need for health education and health promotion activities that are targeted at pregnant women and the general community informing and educating them of danger signs during labour. Community level providers are important stakeholders as the knowledge and confidence of the first person who examines the woman during labour is necessary to identify potential dangers signs [29-30]. Even for the fistula surgeons, not all VVF cases are manageable to them as some fistulas are difficult to be managed or repaired thus require a specialized treatment or surgical operation and even its management after repairs, which is one reason why the attitude of the health personnel is worthy of understanding in order to help VVF patients. Therefore both preoperative and post operative care of VVF patients need specialized training from the auxiliary nurses to the surgeons [31-32] as such the need for better understanding and knowledge about VVF among healthcare personnel especially at the secondary and primary care health levels in developing countries where fistulas are rampant and common. In its report, as of September 2013 (since October 2007), ACQUIRE Fistula Care Project funded by the United State Agency for International Development (USAID) is said to have carried out a total of 10,284 fistula repair surgeries and trained 53 doctors and 405 nurses in fistula repair surgery and its pre- and postoperative care, with two surgeons reaching "advanced trainer" status (Master trainers) and more than 386 health care workers have also been trained in family planning counseling and in obstetric care [21] which is encouraging in order to manage fistula in northern Nigeria and Nigeria at large.

In Nigeria, there is the National Strategic Framework and Plan for VVF (2005) which was reviewed in 2010, which implementation needs to be achieved if VVF is to be reduced in Nigeria. Thus the lower cadre health workers, nurses, midwives and even the community health workers need to be better trained, informed and educated on VVF as part of the Nigeria's VVF Strategic Framework For the Elimination of Fistula (2012-2017) plan's thrust is the capacity building, training and retraining of health work force [14].

Ethical Considerations in data collection:

Ethical consideration is essential in any form of data collection especially in this type of study. This study was cleared by the Zamfara State Health Research Ethics committee and the research committees of the participating health centers or clinics. Collecting information for any purpose, including monitoring, assessments or surveys, can put the respondents at risk not only because of the sensitive nature of the information collected, but also because most the clinics and hospitals that the study was conducted are government owned health facilities. Therefore the confidentiality of the respondents was guaranteed as non disclosure was agreed upon.

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Table 1: Socio-demographic characteristics of respondents.

No	Demographic Variable	n	%
1	**Age**		
	20-30 years old	43	46.7
	31-40 years old	24	26.1
	41-50 years old	19	20.7
	Above 50 years old	6	6.5
2	**Gender**		
	Male	28	30.4
	Female	64	69.6
3	**Professional qualifications**		
	Consultant O & G	1	1.1
	Medical doctors	12	13.0
	Registered Nurse-Midwife	27	29.3
	Registered Nurse	12	13.0
	CHO[a]	1	1.1
	SCHEW[b]	17	18.5
	JCHEW[c]	7	7.6
	Others	15	16.3

[a]CHO=Community health officer
[b]SCHEW= Senior community health extension worker
[c]JCHEW= Junior community health extension worker

Table 2: Knowledge on maternal health issues among health workers in selected health facilities.

Does early marriage lead to complications during delivery or even death of the girl?	**(N=60)**
Yes	86.7%
No	13.3%
Don't Know	.0%
Knowledge on early marriage and pregnancy indicator	
Death of the baby	41.7%
Death of the mother	48.3%
VVF	88.3%
Prolonged labour	61.7%
Ruptured uterus	46.7%
Other	21.7%
Health education and other counselling services to pregnant women	
Yes	98.3%
No	1.7%
Familiy planning counselling & services to pregnant women attending clinic	
Yes	96.7%
No	3.3%
Health promotion or Education campaigns targeting the pregnant women and community	
Yes	76.7%
No	23.3%
Knowledge on common causes of maternal death	
Haemorrhage	49.2%
Infection	32.2%
Obstructed labour	40.7%
Ruptured uterus	39.0%
Post partum haemorrhage	62.7%
Have you heard of vesicovaginal fistula?	
Yes	96.7%
No	3.3%
Can pregnancy- related illnesses and deaths be reduced?	
Yes	91.7%
No	8.3%