



Knowledge of Risk Factors and Perceived Effects of Vesicovaginal Fistula among Primigravida Attending Antenatal Care in Mater Misericordiae Hospital Afikpo North of Ebonyi State, Nigeria

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ABSTRACT

Introduction: Vesicovaginal fistula (VVF) is a major cause of severe morbidity and potential mortality, which can result in marital disruption, rejection, and eventual destitution. The problem of vesicovaginal fistula (VVF) remains a ravaging scourge in Nigeria. The study was designed to determine the knowledge of risk factors and perceived effects of vesicovaginal fistula among primigravida attending antenatal care in Mater Misericordiae Hospital Afikpo North of Ebonyi State, Nigeria. **Objective:** The objectives of the study were to determine the level of awareness of risk factors, assess perceived psycho-social effects, and determine the preventive measures of vesicovaginal fistula risk factors. **Methods and materials:** A descriptive survey design was used for the study among 138 pregnant women. Data were collected using a structured questionnaire and analyzed using descriptive and inferential statistics. The data was presented in tables using frequency and percentages. **Results:** The result shows that 51 (40.8%) of pregnant women have below the level of knowledge of the risk factors of vesicovaginal fistula. Majority of respondents 118 (94.4%) mentioned depression as a psycho-socio effect of vesicovaginal fistula, respondents have a good perception of vesicovaginal fistula preventive measures with a mean score of 3.56+0.58. **Conclusion:** It was concluded that intensified health education should be directed towards discouragement of early marriage, and religious gathering should be used to enhance education on vesicovaginal fistula risk factors, health implication, and preventive measures.

Keywords: Vesicovaginal fistula, Knowledge of risk factors, Antenatal care, Primigravidae

INTRODUCTION

Vesicovaginal fistula (VVF) is a form of genital fistula resulting from the process of delivery. It is an abnormal communication between the female genital tract and the lower urinary tract forming the urogenital fistula with consequent leakage of urine through the vagina [1]. Historical understanding of VVF has shown that the condition is not a new phenomenon, as this condition has been a common scourge throughout the globe [2]. Due to improved and advanced obstetric care in areas such as Europe and North America, the scourge is relatively unknown in these geographical regions of the world [3,4].

In Nigeria, there is a VVF rate of 350 cases per 100,000 deliveries at the teaching hospitals [5]. The ministry stated that the country accounts for 40% of the global burden of VVF. For each maternal death that occurs, 15 to 20 other women suffer either short or long term maternal morbidities and prominent among these morbidities are obstetric fistula among which the major one is the VVF.

VVF has many causes and risk factors with variations depending on the social and educational status of the people [5]. Similarly Ahmed, et al., observed the possible causes and risk factors of VVF to include prolonged obstructed labor, trauma during operative delivery, infections and irradiation necrosis from the treatment of cervical carcinoma [6]. Numerous factors contribute to the development of vesicovaginal fistula in developing countries especially among cultures that promote marriage and conception at a young age often before full pelvic growth has been reached [7]. Thus early childbearing, poor physical growth, and health of the mothers, and poor medical facilities contribute to the development of obstructed labor, hence leading to VVF condition among women in low social economic status. Other

risk causes of vesicovaginal fistula include poverty, illiteracy, ignorance, poor obstetric care, cultural, and religious practices [1].

VVF has psychosocial consequences despite the medical consequences [8]. Most women that are affected are ostracized from their local community, divorced from their spouses, abandoned and remain childless. Also since urination is uncontrollable, the affected women always remain wet and smelly leading to discomfort and humiliation from people around them. VVF victims often work alone, eat alone, sleep in separate huts and may end up on streets begging for survival [9]. Similarly, the study revealed that VVF is a condition that can be prevented in order to reduce the incidence [10]. The preventive measures include health promotion and education, formal education particularly for the girl child and women. Health education on planning for all pregnancies by the use of contraceptives, birth spacing and easy access to family planning information and services is advocated [10]. Also, Ingwu, et al., observed that monitoring of women in labor with partograph to identify women at risk of prolonged labor should be intensified and information on the availability of fistula treatment services should also be provided [11].

In Afikpo North Local Government Area of Ebonyi State, the researchers observed that VVF has brought about broken homes, social isolation, psychological burden, incontinence and abandonment, loss of coordination, stigmatization and even death. Irrespective of these problems arising from VVF, no care or affection is rendered to the affected women by their families and friends. This is a cause of concern that motivated the researchers to investigate the knowledge of risk factors of VVF, its perceived psycho-social effects and preventive measures among the primigravida attending antenatal clinics. This is imperative because an awareness of the risk factors and the perceived effect will spur women to take on actions which will help in preventing VVF and its ugly consequences.

PATIENTS AND METHODS

The descriptive survey method was used for the study. A total of 130 primigravidas who attended antenatal services from January 2017 to June 2017 at Mater Misericordiae Hospital Afikpo, Ebonyi state-Nigeria formed the population for the study. Purposive sampling was used to select participants who were primigravida, willingly, emotionally and physically stable were selected for the study. The instrument used for data collection was a questionnaire developed by the researchers and structured in 4 sections. Section A covered demographic data, Section B awareness of risk factors of VVF; Section C perceived the psycho-social effects of VVF, and Section D was on preventive measures of risk factors of VVF. The questionnaire was made up of close-ended questions. Ethical clearance was obtained from the Research Ethical Office Ministry of Health Abakaliki, Ebonyi State. Informed consent, voluntary participation, confidentiality, and anonymity were ensured all through the study period. Also, the administrative permit was obtained from the antenatal clinic authorities. The questionnaire was administered during the antenatal session and lasted for a period of 6-months. The data obtained were collated and subjected to descriptive statistics of frequency, percentage, mean score and standard deviations.

RESULTS

Table 1 shows the socio-demographic data of the respondents. The mean and standard deviation of the respondent's age is 25.26 and 4.62 years. Few 30.4% (38) of the respondents are within the age range of 36-45 years. The majority, 111(88.8%) of the respondents are married while only 11 (8.8%) are single. Less than average 19 (15.2%) of the respondents have a tertiary education while 15 (12.0%) have no formal education while majority 117 (93.6%) are Christians.

Table 1 Socio-demographic data of the respondents (N=125)

Category	Option	Frequency	Percentage
Age	Mean	25.26	
	Std. Deviation	4.62	
	16-25 years	82	65.6%
	26-35 years	32	25.6%
	36-45 years	8	6.4%
	46-55 years	3	2.4%

Marital status	Single	11	8.8%
	Married	111	88.8%
	Divorced	3	2.4%
Occupation	Trader	49	39.2%
	Farmer	15	12.0%
	Civil servant	32	25.6%
	Housewife	29	23.2%
Educational qualification	No formal education	15	12.0%
	Primary	28	22.4%
	Secondary	76	60.8%
	Tertiary	19	15.2%
Religion	Christianity	117	93.6%
	Islam	8	6.4%

Table 2 shows the respondent’s understanding of VVF, all 125 (100%) of the respondents have heard of VVF. Majority 93 (74.4%), of the respondents, heard about VVF from the medical health professionals while 72 (57.6%) understood VVF as a condition that occurs with prolonging labor leading to the discharge of urine.

Table 2 Knowledge of VVF among the respondents (N=125)

Category	Option	Frequency	Percentage
Have heard of VVF	Yes	125	100.00%
	No	0	0.00%
Source of information (multiple options)	Media (Radio/Television)	78	62.40%
	Health professionals	93	74.40%
	Friends/Relative	45	36.00%
	School	33	26.40%
	Marketplace	27	21.61%
	Handbills/Posters.	14	11.20%
Understanding of VVF (multiple options)	A disease of the genital area	43	34.40%
	An abnormal communication between the bladder and vagina	43	34.40%
	A condition that results in the leakage of urine	45	36.00%
	An abnormal condition that affects the bladder	59	47.20%
	A condition that occurs with prolonged labor leading to the discharge of urine	72	57.60%

From Table 3, the significant risk factors identified are prolonged labor with p=0.002, early marriage p=0.000, poor obstetrics care p=0.000 and handful traditional practices with p=0.000.

Table 3 Knowledge of VVF risk factor among the respondents (N=125)

Option	Correct Frequency (%)	Not correct Frequency (%)	p-value
Prolonged labour	72(57.6%)	53(42.4%)	0.002
Instrumental delivery	56(44.8%)	69(55.2%)	0.004
Cesarean section	57(45.6%)	68(54.4%)	0.001
Infection of the genito-urinary tract	34(27.2%)	91(72.8%)	0.000
Radiotherapy	34(27.2%)	91(72.8%)	0.000
Poverty	48(38.4%)	77(61.6%)	0.012
Illiteracy	52(41.6%)	73(58.4%)	0.074
Early marriage	20(16.0%)	105(84.0%)	0.000
Poor obstetric care	95(76.0%)	30(24.0%)	0.000
Cultural or religious belief	61(48.8%)	64(51.2%)	0.858
Malnutrition	47(37.6%)	78(62.4%)	0.007
Abuse of medications	72(57.6%)	53(42.4%)	0.107
Smoking	45(36.0%)	80(64.0%)	0.107
Harmful traditional practices	84(67.2%)	41(32.8%)	0.000

Table 4 shows the respondent’s awareness of perceived psycho-socio effects of VVF. Majority 118(94.4%) of the respondents mentioned correctly that depression is an effect of the psycho-socio effect of VVF. Also, 118(94.4%)

revealed that anxiety/emotional breakdown while 121(96.8%) opined discrimination and 120(96.0%) mentioned social avoidance.

Table 4 Knowledge of the perceived psycho-social effect of VVF (N=125)

Option	Yes Frequency (%)	No Frequency (%)	p-value
Depression	118(94.4%)	7(5.6%)	0.000
Suicidal thoughts	84(67.2%)	41(32.8%)	0.152
Shame	115(92.0%)	10(8.0%)	0.000
Anxiety/ Emotional breakdown	118(94.4%)	7(5.6%)	0.002
Fear	104(83.2%)	21(16.8%)	0.332
Divorce	91(72.8%)	34(27.2%)	0.000
Stigmatization	99(79.2%)	26(20.8%)	0.044
Discrimination	121(96.8%)	4(3.2%)	0.000
Loss of sexual intimacy	105(84.0%)	20(16.0%)	0.483
Erosion of social interaction	99(79.2%)	26(20.8%)	0.012
Rejection	106(84.8%)	19(15.2%)	0.010
Isolation	116(92.8%)	9(7.2%)	0.000
Social avoidance	120(96.0%)	5(4.0%)	0.000

Table 5 shows the respondent’s awareness of preventive measures of vesicovaginal fistula. More than average 99(79.2%) and few 5(4.0%) strongly agreed and disagreed that compulsory formal education for girl child and women is a preventive measure of VVF with a mean of 3.75+0.52. Also, 83(66.4%) and 10(8.0%) strongly agreed and disagreed that prohibition of early marriage is a preventive measure of VVF with a mean of 3.58+0.64. Majority 90(72.8%) while 29(23.2%) and 6(4.8%) strongly agreed and agreed that birth preparedness and facility readiness is a preventive measure of VVF with a mean of 3.67+0.56. In addition, 86(68.8%) and 6(4.8%) strongly agreed and disagreed that knowledge and identification of possible problem during pregnancy is a preventive measure of VVF with a mean of 3.64+0.57. In general, the respondent’s awareness of VVF preventive measures is good with an overall mean of 3.56+0.58.

Table 5 Respondents awareness of VVF preventive measures (N=125)

Options	Strongly Agree Frequency (%)	Agree Frequency (%)	Disagree Frequency (%)	Mean	S.D
Compulsory formal education for girl child and women	99(79.2%)	21(16.8%)	5(4.0%)	3.75	0.52
Childhood and women nutrition	58(46.4%)	52(41.6%)	15(12.0%)	3.34	0.69
Prohibition of early marriage	83(66.4%)	32(25.6%)	10(8.0%)	3.58	0.64
Birth spacing and easy access to family planning information services	91(72.8%)	27(21.6%)	7(5.6%)	3.67	0.58
Overcoming cultural barriers that subjugate women	63(50.4%)	58(46.4%)	4(3.2%)	3.47	0.56
Functional pre-natal care	98(78.4%)	18(14.4%)	9(7.2%)	3.71	0.59
Birth preparedness and facility readiness	90(72.0%)	29(23.2%)	6(4.8%)	3.67	0.56
Knowledge and identification of possible problem during pregnancy	86(68.8%)	33(26.4%)	6(4.8%)	3.64	0.57
Easy access to basic and comprehensive emergency obstetric care	89(71.2%)	36(28.8%)	-	3.71	0.45
Skilled professional attendance	93(74.4%)	26(20.8%)	6(4.8%)	3.69	0.56
Easy and quick means of referral when need arises	76(60.8%)	36(28.8%)	13(10.4%)	3.5	0.68
Use of catheter for 7-14 days for women who had prolonged labor	27(21.6%)	76(60.8%)	18(14.4%)	3	0.7
Women empowerment towards safe motherhood	73(58.4%)	46(36.8%)	6(4.8%)	3.53	0.59
Advocacy for free and subsidized ante-natal and obstetric care	78(62.4%)	44(35.2%)	3(2.4%)	3.6	0.54
Promotion of fistula awareness and prevention	110(88.0%)	15(12.0%)	-	3.88	0.32
Overall mean				3.56	0.58

Decision Rule: mean<2.5=Poor knowledge of preventive measures; 2.5 and above=Good knowledge of preventive measures

DISCUSSION AND CONCLUSION

From the findings, respondents have below average awareness of the risk factor associated with vesicovaginal fistula. The poor awareness of the women regarding the risk factor associated with vesicovaginal fistula could be as a result of their inability to recall what they might have been taught regarding VVF. This conforms to the fact that majority of the women-only heard of vesicovaginal fistula during their antenatal care sessions which implies that they are limited to what the nurses taught them. Commonly among the risk factors which the women identified correctly are poor obstetric care, harmful traditional practices such as genital mutilation, instrumental delivery and chronic steroid use [12]. This further shows that the women's awareness resulted in the degree of what the healthcare personnel might have taught them as the major factors identified are health-related. In other words, this could be the ones the health personnel considered more relevant. The findings of this study are in line with the findings by Igwe, *et al.*, where it was reported that the women vesicovaginal fistula were due to cultural belief (17%) [13]. Research has shown that VVF patients are usually young girls who have no formal education, no means of livelihood, and given out in marriage by their poverty-stricken parents to poverty-stricken husbands. As a result, patients like that are normally malnourished in pregnancy and no personal income to take care of them and to attend antenatal clinic [14].

The results revealed that in 121(96.8%) the major perceived psycho-socio effect of vesicovaginal fistula is discrimination. This may be due to the culture of the people as VVF is been perceived as punishment from the gods, hence the people discriminate as well as socially avoid women with vesicovaginal fistula. It was subsequently identified that the women who suffer from VVF often experienced anxiety/emotional breakdown which might be in part as a result of the social isolation which the women experience. The social consequences for the vesicovaginal fistula patients are very severe. Wall L described the gravity of this problem and quoted "The affected woman suffers from a continuous and uncontrollable stream of urine or feces coming out of her vaginal. This is both a physical and a social catastrophe. No escape is possible from the constant trickle of urine, the constant ooze of stool, 24 hours a day [12]. These women become physically and morally offensive to their husband, their families, their friends, and their neighbors. Indelibly stigmatized by their condition, they are forced to the margins of society where they live a precarious existence, unable to earn a living except through begging or by the cheapest and most degrading acts of prostitution".

Hence, the study revealed that women who suffer vesicovaginal fistula are economically isolated as they cannot work because they are shunned by the society as they are considered to have brought shame and dishonor to themselves and their families. Also in the area under study, it was identified that the women experience depression which is possibly due to the isolation in which they suffered, as friends and family members desert them, thus there is nobody to share their health challenges [15]. This finding agrees with Yenenesh TG in 2014 study in Addis Ababa, Ethiopia where it was reported that women with VVF isolate themselves, had suicidal thoughts, negative interpretation of the future and avoidance and struggle to keep going to accept their challenged reality and change their perspective of life [16]. In addition, in a study conducted in Akwa Ibom State Nigeria, revealed a significant influence of isolation and depression as coping strategies of the women affected by VVF with higher mean scores of 87% and 96% respectively which results into rejection, shame, loss of sexual intimacy and loneliness. They are often spurned by their husbands, homeless, unemployable except in the fields, they endure; they exist without friends, without hope [17].

The result further indicates that the women have a good perception of VVF preventive measures. This finding coincides with the common belief or perception of people in showing a good attitude towards any preventive measure that could help avert any illness that poses danger to their well-being. As it was reported in a study in Ebonyi State, Nigeria by Kimberly, *et al.*, that 80% of the women suggested suffering in the hospital from the commencement of labor, 30% suggested educating other women and 8% discouraging early marriage [18]. The study further revealed that a vast majority of the respondents positively affirmed that compulsory formal education for girl child and women will help solve the problem of VVF. Lack of girl child education which is one of the reasons for the increasing VVF was rightly and wholly accepted by the respondents as a sure cause of VVF. This shows that the women attach high value to education which is seen indeed as a great factor in curbing VVF menace.

In addition, the study revealed that promotion of fistula awareness and prevention is a great preventive measure that could be adopted in ensuring eradication of VVFs among the population; such awareness could be achieved by the use of health care personnel in the healthcare setting. Prior studies have shown that faith-based settings are a feasible and

acceptable venue in which to provide health information to black audiences. Churches play a prominent role in many African communities and represent a trusted, credible institution that addresses both spiritual and physical health. Faith-based organizations represent a promising community setting in which to implement informed decision-making interventions targeting black [19]. In other words intensifying the awareness of vesicovaginal fistula, through faith-based organization, health care personnel, mass media such as radio, newspaper, and internet, could reduce the rate of VVF to the barest minimum.

The Implication for the Nurses

Based on the findings of this study, all the respondents have heard of vesicovaginal fistula, this implies that to a reasonable extent the nurses responsibility of creating awareness of vesicovaginal fistula is reduced, thus the nurses have to go further from creating awareness of vesicovaginal fistula to possible detailed education on various preventive measures as the women have a high tendency of adopting vesicovaginal fistula preventive measures. This study finding also laid demand on the nurses to further engage in a community-wide educational campaign to promote harmony between the women suffering from vesicovaginal fistula and the other community member.

Recommendations

It is recommended that intensified health education particularly be directed towards discouragement of early marriage should be initiated by the healthcare professional. Also, religious gatherings and other societal associations should be used to enhance education on vesicovaginal fistula risk factors, health implication, and prevention.

DECLARATIONS

Conflict of Interest

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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