

Knowledge and Perception towards Uterine Fibroids among Ante-Natal Clinic Attendees in Two Sub-Urban Communities in Delta State, Nigeria.

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Abstract

Uterine fibroid is a common cause of recurrent bleeding and pain in women of reproductive age and it can have a severe impact on a woman's quality of life. The aim of this study was to assess the knowledge and perception of women in suburban communities toward uterine fibroid. It was a cross-sectional descriptive study, using an interviewer-administered questionnaire to assess the knowledge and perception of ante-natal clinic attendees towards uterine fibroid in Delta State. A total of four hundred ante-natal clinic attendees were selected using a multistage sampling technique. Data analysis was done using Statistical Package for Social Sciences Version 23 with statistical significance set at $p < 0.05$. Results obtained indicate that the mean age of respondents was 31.0 (± 8.5) years. Overall, 16% of respondents had good knowledge of uterine fibroid. About, 73% of study participants had a positive perception of uterine fibroid. There was no statistically significant association ($p > 0.05$) between the socio-demographic variables with knowledge and perception towards uterine fibroid among our study respondents. Majority of respondents, 99.0% were aware of uterine fibroid, however, overall knowledge of uterine fibroid was poor. Study respondents had a positive perception towards uterine fibroid. Although study respondents had a positive perception towards uterine fibroid, there were many misconceptions concerning uterine fibroid among these respondents. There is a need for health professionals to disseminate accurate information about fibroids. Also educational programs should be carried out in sub-urban areas in order to increase their knowledge and perception of uterine fibroid. These programs can be sponsored by the community non-governmental organizations and the Government.

Keywords: *Uterine fibroid, Respondents, Knowledge, Perception, Delta State, Nigeria.*

INTRODUCTION

Uterine fibroid are leiomyomas, which are benign uterine tumors (Marsh *et al.*, 2013). About 70% of women have one or more uterine fibroid by the age of 50, with roughly 30% of patients experiencing symptoms (Baird *et al.*, 2003). Uterine fibroid is a serious public health issue and one of the most prevalent benign gynecologic tumors affecting premenopausal women, it is

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frequently accompanied with significant morbidity (Sarkoide *et al.*, 2016). The actual cause of uterine fibroids is unknown; however, there are a lot of risk factors namely; age, family history, low parity and obesity. Most women with fibroids were previously undiagnosed because they were asymptomatic (Andrea *et al.*, 2013).

Fibroid symptoms include abnormal uterine bleeding, pelvic pain, dyspareunia, bladder or rectum obstruction, and infertility (Zimmermann *et al.*, 2012). These symptoms appear to be the outcome of myometrium change caused by specific physiological and pathological circumstances. Bowden *et al.*, (2009) and Ezeama *et al.*, (2012) found that about 80% of women with fibroids are aware of the issue and have a basic comprehension of it; nonetheless, they all have different perspectives on it. The view of individuals regarding uterine fibroid can have a big impact on how quickly they get treated if it arises as several women in rural areas have a mythology regarding uterine fibroid that inhibits them from getting medical help when identified Family members of those who get this illness may believe that it means they are sterile. (Othman and Al-Hendy, 2008). According to Othman and Al-Hendy (2008) the mere mention of the word "fibroid" gives most African women of reproductive age the shivers and correlates to bad luck. According to a study by Ghant *et al.*, (2015) women's ability to successfully manage their condition is significantly hampered by a lack of general information regarding fibroids. If women are unable to distinguish between normal and atypical menstrual blood and are uninformed of fibroid (and consequently associated symptoms), they cannot be expected to seek treatment for illnesses they are unaware of. The healthcare delivery system and health education curriculum both clearly need to talk about uterine fibroid the more (Marissa *et al.*, 2015). Thus this research was carried out to assess the knowledge and perception towards uterine fibroid among pregnant women attending ante-natal clinic in two sub-urban communities.

MATERIALS AND METHODS

Study Area

The study was conducted at two semi-urban communities located in Delta North and Delta South senatorial districts namely Oghara (Latitude: 5°56'09"N Longitude: 5°40'44" E) and Obiaruku. (Latitude: 5° 50' 59.99" N Longitude: 6° 08' 60.00" E.)

Study Design

It was a descriptive cross-sectional study assessing the knowledge and perception of women on uterine fibroid.

Inclusion and Exclusion criteria

All women of childbearing age who were in attendance at the clinic and who agreed to participate in the study by signing a written informed consent form were recruited and interviewed

Women below the age of 18 and those who needed immediate medical attention did not participate in the study.

Sample Size and Sampling Technique

The sample size was calculated by using the Cochran formula for descriptive studies (Cochran, 1963)

$$n = Z^2 p (1-q) / d^2$$

Where n = Minimum sample size, Z = confidence level, p = prevalence, approximate proportion of the event in the population, and d = margin of error.

Assuming a 95% confidence level with a 5% margin of error and a prevalence rate of 33.9%, (Olotu and Michael, 2021). The sample size will be as follows:

Z=95% Confidence Interval (1.96)

P= 33.9%, 0.339

q= 1-P, 1-0.339= 0.661

d= 5%, 0.05

$n = 1.96^2 \times 0.339 \times 0.661 / 0.05^2$

=0.861 / 0.0025

n= 344.4

10% attrition

= 10%, 0.1

X 344 = 3.44

3.44+328 = 348

Minimum sample size =348

A total of 461 questionnaires were administered in order to take care of possible non-response.

A multistage sampling method was used for the study. The first stage involved selection of senatorial districts. Two of these senatorial districts were selected using simple random sampling by balloting, Delta Central and Delta North were selected. One sub-urban community from each senatorial district was selected using simple random sampling by balloting through which Oghara and Obiaruku were selected. Second stage involved the selection of the health facility, there is only one secondary health facility in each of the communities thus they were purposively selected for this study. All Ante Natal Clinic (ANC) attendees in each of these facilities were selected for this study. The attendees were sampled over a period of three (3) months.

Data Collection Instrument

This study made use of a pre-tested structured and self-administered questionnaire that assessed respondents' level of awareness, source of information, knowledge about uterine fibroid, and perception toward uterine fibroid as well as socio-demographic variables. The questionnaire was pretested in Delta State University Teaching Hospital Oghara, ante-natal clinic among twenty five attendees.

Data Analysis

Data analysis was done using the Statistical Package for Social Sciences (SPSS, version 23). Descriptive statistics (frequency and percentage) was used. Inferential statistics (chi-square) was used to assess the association between socio-demographic and level of knowledge, perception. Statistical significance was considered at a value where $P < 0.05$.

Participants' awareness was assessed by asking if they had ever heard of uterine fibroid, response was "yes" or "no", those whose response was yes were asked the source of their information. On participant's knowledge of uterine fibroids, nineteen questions were asked; each correct answer was scored as one, wrong choice as zero; the total score was converted to a percentage, after which those who scored below 60% were considered as having poor knowledge while those who scored 60% and above as good knowledge. For perception, a total of twenty five (25) questions were used to determine participant's perception and 60% was also used to categorize those with a positive or negative perception.

Ethical approval was granted by the Research and Ethics Committee, Delta State University Teaching Hospital, HREC/PAN/2022/060/0517. A written informed consent form was obtained from all study participants.

RESULTS

Four hundred usable questionnaires were retrieved out of the 461 distributed giving a response rate of 86.8%. All study respondents were females. The ages of respondents ranged from 15-49 years. The highest age group was 30-34 (25%), followed by 25-29 (16%) and 35-39 (15%). The mean age of respondents was 31.0 (\pm 8.5). Majority of the respondents were Christians 98.3%, 88.5%), were married, and 45.5% were traders. More than half of the respondents, 57.0% had secondary education. Two hundred and thirty-one, 57.8% respondents had 0-2 children, while 40.8% had 3-5 children, (Table 1)

Table 1: Socio-demographic characteristics of study participants (N = 400)

Variable	Frequency	Percentage (%)
Age		
15 - 19	39	9.8
20 - 24	61	15.2
25 - 29	66	16.5
30 - 34	102	25.5
35 - 39	63	15.8
40 - 44	44	11.0
45 - 49	25	6.3
Religion		
Christianity	393	98.3
Others	7	1.7
Ethnicity		
Ukwuani	190	47.5
Urhobo	117	29.2
Isoko	23	5.7
Itsekiri	9	2.3
Ijaw	5	1.3
Others	56	14.0
Marital Status		
Married	354	88.5
Widow	27	6.7
Divorced	10	2.5
Separated	9	2.3
Education		
None	21	5.3
Primary	41	10.2
Secondary	228	57.0
Tertiary	110	27.5
No. of Children		
0 - 2	231	57.7
3 - 5	163	40.8
Above 5	6	1.5
Occupation		
Trading	182	45.5
Tailor	82	20.5
Hair dresser	57	14.2
Teacher	9	2.3
Farming	3	0.8
Others	67	16.7

Knowledge of respondents about Uterine Fibroid

Majority, 99.0% have heard of uterine fibroid. Half of the respondents stated that their major source of awareness of uterine fibroid was family and friends 50.0%. Two hundred and ninety 72.5% respondents had seen or heard of someone with uterine fibroid while 61.0% of respondents had seen someone treated for fibroids. The most recurring symptom of fibroids mentioned by almost half 47.4% of respondents was increased abdominal enlargement. The least mentioned symptoms of fibroids by the respondents include constipation (4.8%) and difficulty voiding urine (8.8%). The statement that fibroids cannot be treated was correctly faulted by 80.3% respondents. Nearly half, 49% of the respondents were correct in stating the menopause period of least incidence of fibroids. Nine in 10 of the respondents rightly stated that fibroids can be managed surgically. Majority, 94.5% of respondents rightly identified the uterus to be the site of origin for fibroids. Irregular menstrual flow, a common symptom of fibroid was correctly mentioned by 86.7% of the respondents, (Table 2).

Perception of Respondents towards Uterine Fibroid

More than half, 68.3% of the respondents faulted the statement that envy/witchcraft can cause fibroids and 69.0% of respondents rightly indicated that uterine fibroid cannot be inherited. More than half of respondents, 60.0% did not agree with the statement that hysterectomy is the only solution to cure uterine fibroid. Nearly one quarter, 22% of respondents wrongly assumed that fibroids only affect infertile women. Nearly three quarters, 72.0 and 78.0 % of respondents respectively perceived trado-medicine and prayers as a possible treatment for uterine fibroid. A little above half, 55.5% stated that women diagnosed with uterine fibroid cannot easily get married, (Table 3).

Table 2: Knowledge of Uterine fibroid among the study respondents (N = 400)

Item	Frequency (n)	Percentage (%)
Symptoms of fibroids		
Increased abdominal enlargement	190	47.5
Heavy bleeding	171	42.3
Bleeding between periods	57	14.2
Frequent urination	44	11.0
Backache or leg pains	37	9.3
Pain during sex	37	9.3
Difficulty emptying the bladder	35	8.8
Constipation	19	4.8
Don't know	65	16.3
Point when the burden of the disease decreases		
Early menarche	26	6.5
Menopause	196	49.0
Don't know	178	44.5
Fibroids are tumors from the uterus		
Yes	377	94.3
No	23	5.7
Fibroids can cause painful menstrual flow.		
Yes	347	86.7
No	52	13.0
Obesity can lead to uterine fibroid		
Yes	160	40.0
No	240	60.0
Fibroids can cause death of a baby (fetus) in the womb		
Yes	304	76.0
No	96	24.0
Fibroids can be treated with surgery		
Yes	360	90.0
No	40	10.0
Fibroids will dissolve on its own		

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Yes	123	30.7
No	277	69.3
Fibroids cannot be treated		
Yes	79	19.7
No	321	80.3
Fibroids can lead to childlessness/infertility		
Yes	321	80.3
No	79	19.7
Fibroids can lead to miscarriage		
Yes	344	86.0
No	56	14.0

Mean knowledge score = 8.60 ± 2.12

Table 3: Perception of respondents towards uterine fibroid (N=400)

Item	N (%)	
	YES	NO
Envy/Witchcraft can cause Fibroids	127 (31.7)	273(68.3)
Spiritual Problem can cause fibroids	182(45.5)	218(54.5)
Fibroid is a normal medical disease condition like malaria.	174(43.5)	226(56.5)
Poor food intake can cause fibroids	111(27.7)	289(72.3)
Fibroids is a family inherited disease	124(31.0)	276(69.0)
Lack of sexual activity can cause fibroids	73(18.2)	327(81.8)
Treatment for fibroids is a waste of time and money	46(11.5)	354(88.5)
Removal of uterus through surgery is the only solution/cure for uterine fibroid.	160(40.0)	240(60.0)
Fibroids are remnant blood from menses.	194(48.5)	206(51.5)
Fibroids only affect aged/elderly women.	125(31.3)	275(68.7)
Fibroids only affect infertile women.	88(22.0)	312(78.0)
Fibroid is a curse.	50(8.0)	350(92.0)
Fibroids can only develop during pregnancy.	82(20.5)	318(79.5)
I can get fibroids from someone who already has fibroid.	39(9.8)	361(90.2)
Fibroids affect both genders (male/female).	113(28.3)	287(71.7)
When I think of fibroids, I immediately think of death	131(32.8)	269(67.2)
Fibroids can be treated with Herbal tonics/Trado-medicine	288(72.0)	112(28.0)
Fibroids can be treated with Drugs	300(75.0)	100(25.0)
Fibroids can be treated with prayers	312(78.0)	88(22.0)
Fibroids does not have treatment	76(19.0)	324(81.0)
Fibroids can lead to death	149(37.3)	251(62.7)
Fibroids can lead to other diseases	168(42.0)	232(58.0)
People with fibroids cannot easily get married	222(55.5)	178(44.5)
There is social stigma associated with diagnosis of fibroids	98(24.5)	302(75.5)
Fibroids can be passed from parents to offspring	94(23.5)	306(76.5)

There was no statistically significant ($P>0.05$) association between demographic variables and respondent's knowledge or perception of fibroids, (Tables 4 and 5).

Table 4: Association between socio-demographics and level of knowledge of uterine fibroid

Socio-demographics	Level of Knowledge*		X ²	p-value
	Good	Poor		
Age				
15 – 19	7 (17.9)	32 (82.1)	4.113	0.661
20 – 24	6 (9.8)	55 (90.2)		
25 – 29	14 (21.2)	52 (78.8)		
30 – 34	18 (17.6)	84 (82.4)		
35 – 39	8 (12.7)	55 (87.3)		
40 – 44	7 (15.9)	37 (84.1)		
45 – 49	5 (20.0)	20 (80.0)		
Religion				
Christianity	64 (16.3)	329 (83.7)	0.020	1.000
Others	1 (14.3)	6 (85.7)		
Ethnicity				
Urhobo	13 (11.1)	104 (88.9)	8.353	0.138
Ukwuani	39 (20.5)	151 (79.5)		
Isoko	4 (17.4)	19 (82.6)		
Itsekiri	1 (11.1)	8 (88.9)		
Ijaw	2 (40.0)	3 (60.0)		
Others	6 (10.7)	50 (89.3)		
Marital Status				
Married	53 (15.0)	301 (85.0)	6.602	0.086
Divorced	4 (40.0)	6 (60.0)		
Separated	1 (11.1)	8 (88.9)		
Widow	7 (25.9)	20 (74.1)		
Education				
None	3 (14.3)	18 (85.7)	1.897	0.594
Primary	5 (12.2)	36 (87.8)		
Secondary	42 (18.4)	186 (81.6)		
Tertiary	15 (13.6)	95 (86.4)		
No. of Children				
0 – 2	32 (13.9)	199 (86.1)	2.346	0.309
3 – 5	32 (19.6)	131 (80.4)		
Above 5	1 (16.7)	5 (83.3)		
Occupation				
Farming	0 (0.0)	3 (100.0)	2.075	0.839
Trading	31 (17.0)	151 (83.0)		
Tailor	15 (18.3)	67 (81.7)		
Hair dresser	10 (17.5)	47 (82.5)		
Teacher	1 (11.1)	8 (88.9)		
Others	8 (11.9)	59 (88.1)		
Town				
Oghara	25 (12.5)	175 (87.5)	4.133	0.057
Obiaruku	40 (20.0)	160 (80.0)		

*Note: .Above 60%=Good knowledge. Below 60 % = Poor Knowledge

Table 5: Association between socio-demographics and perception towards uterine fibroid

Socio-demographics	Perception*		X ²	p-value
	Positive	Negative		
Age				
15 – 19	30 (76.9)	9 (23.1)	4.773	0.573
20 – 24	45 (73.8)	16 (26.2)		
25 – 29	49 (74.2)	17 (25.8)		
30 – 34	81 (79.4)	21 (20.6)		
35 – 39	43 (68.3)	20 (31.7)		
40 – 44	30 (68.2)	14 (31.8)		
45 – 49	16 (64.0)	9 (36.0)		
Religion				
Christianity	291 (74.0)	102 (26.0)	3.435	0.083
Others	3 (42.9)	4 (57.1)		
Ethnicity				
Urhobo	87 (74.4)	30 (25.6)	1.828	0.872
Ukwuani	137 (72.1)	53 (27.9)		
Isoko	18 (78.3)	5 (21.7)		
Itsekiri	8 (88.9)	1 (11.1)		
Ijaw	4 (80.0)	1 (20.0)		
Others	40 (71.4)	16 (28.6)		
Marital Status				
Married	266 (75.1)	88 (24.9)	4.852	0.183
Divorced	7 (70.0)	3 (30.0)		
Separated	5 (55.6)	4 (44.4)		
Widow	16 (59.3)	11 (40.7)		
Education				
None	18 (76.2)	5 (23.8)	4.894	0.180
Primary	26 (63.4)	15 (36.6)		
Secondary	164 (71.9)	64 (28.1)		
Tertiary	88 (80.0)	22 (20.0)		
No. of Children				
0 – 2	169 (73.2)	62 (26.8)	0.203	0.904
3 – 5	121 (74.2)	42 (25.8)		
Above 5	4 (66.7)	2 (33.3)		
Occupation				
Farming	3 (100.0)	0 (0.0)	7.544	0.183
Trading	124 (68.1)	58 (31.9)		
Tailor	62 (75.6)	20 (24.4)		
Hair dresser	42 (73.7)	15 (26.3)		
Teacher	7 (77.8)	2 (22.2)		
Others	56 (83.6)	11 (16.4)		
Town				
Oghara	153 (76.5)	47 (23.5)	1.848	0.174
Obiaruku	141 (70.5)	59 (29.5)		

*.Note: Above 60%=Good perception; Below 60 % = Poor perception

DISCUSSION

Although the level of awareness of uterine fibroid was high among the respondents, overall knowledge was sub-optimal as only a little above one-tenth of the respondents had good knowledge about uterine fibroid. This poor knowledge may be due to the fact the major source of information for these respondents can be linked with their family and friends. The quality of information from these sources can be poor and/or inadequate. This finding is similar to studies carried out by Adegbesan, *et al.* (2014) and Akpenpuun, *et al.* (2019) which also found that a high level of awareness among respondents did not translate to a good level of knowledge. In contrast, majority of the participants in a study conducted in Kerala, India had good knowledge of uterine fibroid (Sarojini *et al.*, 2020; Neelima *et al.*, 2020).

Additionally, according to Neelima et al. (2020), almost two-thirds of respondents said they knew enough about uterine fibroids. This difference may be because the studies were carried out in different geographical settings.

Increased abdominal enlargement, heavy bleeding and bleeding between periods were the most commonly identified symptoms of uterine fibroid by the respondents. This may be attributed to the fact that abdominal enlargement and bleeding are visible features of the condition and the sight of blood may be frightening to many persons, therefore easier to recall. One tenth of respondents linked frequent urination to uterine fibroid. This finding is in line with a study carried out in India by Neelima *et al.*, (2020), where more than a third responded that heavy bleeding, frequent urination and enlarged abdomen are the symptoms of uterine fibroid. Also in a study carried out in the year 2020, nearly half of the total respondents identified heavy bleeding, frequent urination and enlarged abdomen as symptoms of uterine fibroid (Sarojini *et al.*, 2020).

Almost half of the study respondents believed that the burden of fibroids decreases at menopause. This is understandable given the fact that high estrogen levels promotes growth of uterine fibroid. After menopause, this hormone level drastically decreases which in turn reduces the risk of having fibroids (Ulin *et al.*, 2020). Majority of the respondents in this study correctly identified fibroids as tumors from the uterus that can cause painful menstruation. Although several reasons have been suggested as the cause of uterine fibroid and the exact etiology is not yet known, uterine fibroid are actually non-malignant tumor of women's uterus (Olive, 2011).

More than a third of the respondents identified obesity as a risk factor for developing uterine fibroid. This is in harmony with a study conducted by Neelima *et al.*, (2020.)

More than a sixth of the respondents felt fibroids cannot be treated and that having a proper or complete cure/treatment for uterine fibroid is a real challenge. This is true as available treatment options range from limiting symptoms of this disease, shrinking the tumor to surgery (Taulikar and Manyonda, 2012). A majority of the respondents identified fibroids as a disease that can lead to miscarriage and childlessness/infertility. This agrees with findings from a study carried out by Subramaniam *et al.*, 2020 which suggests that uterine fibroid impair child bearing. It has also been shown that uterine fibroid have a negative effect on pregnancy (Sliva *et al.*, 2016).

Majority of the respondents had a positive perception towards uterine fibroid. Nearly one third of respondents perceived fibroids as resulting from envy/witchcraft, while almost half of respondents perceived uterine fibroid as a spiritual problem. Similar findings were reported in a study in Lagos (Adegbesan *et al.*, 2014). A little below one-third of the study population agreed that fibroids are hereditary. In a study conducted in Lagos, Nigeria, about a fourth (26%) of the study participants were aware that uterine fibroid run in the family (Adegbesan *et al.*, 2014).

A little above one-tenth of the study respondents believed that lack of sexual activity was a cause of fibroids. This finding is similar to that obtained from a study conducted in Benue State, Nigeria (Akpenpuun *et al.*, 2019). Majority of the study respondents did not believe that fibroid treatment was a waste of time and money. This is in line with a study carried out in India (Neelima *et al.*, 2020). More than half of respondents did not believe that the only cure of uterine fibroid is total hysterectomy. Treatment options for fibroids include oral

contraceptives, painkillers, and iron supplements (Olive, 2011). However the choice of treatment depends on the condition of the uterine fibroid and the symptoms presented by the patient (Olive, 2011). . Over half of the respondents did not perceive fibroids as remnant of menstrual blood and majority did not agree that fibroids affect only infertile women. These findings are similar to those obtained from a study conducted among Tiv women of Benue State (Akpenpuun *et al.* 2019). Majority of the respondents were of the opinion that herbal tonics, traditional medicines and spiritual therapy /prayers can be used for the treatment of uterine fibroid. This contrasts with a study conducted among Indians in which less than one third of total population reported that fibroids can be managed with local herbs (Neelima *et al.*, 2020). These findings are significant because belief in alternative therapy outside orthodox channels can sometimes lead to complications as a result of late presentation to health facility (Adegbesan, *et al* 2014). More than half of respondents opined that people with fibroids cannot get married easily. This is corroborated by findings from a study carried out in Ilorin, which reported that men were discouraged from marrying women who had fibroids due to the fear that they might not bear children (Aboyeji and Ijaiya, 2002).

Regarding factors associated with knowledge and perception of uterine fibroid, there was no statistically significant association between social demographic variables and level of knowledge coupled with perception.

CONCLUSION

Majority of the respondents were aware of uterine fibroid, however this did not translate to good knowledge as the overall knowledge (16%) of uterine fibroid was poor. Although our study respondents had a positive perception about uterine fibroid, there were many misconceptions. There was no statistically significant association between the social demographic variables and level of knowledge coupled with perception towards uterine fibroid among the respondents.

It is recommended that, educational programmes be carried out in sub-urban areas to increase knowledge of uterine fibroid among the rural populace. A good knowledge base should drastically improve health seeking behavior and reduce complications resulting from late presentation of patients to medical facilities. These programmes can be sponsored by the community, non-governmental organizations and the Government.

Conflict of interest

No conflict of interest is associated with this work

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