CHAPTER III

RESEARCH METHODOLOGY

3.1   Research Design

A Cross- sectional descriptive study design was conducted using both quantitative and qualitative method, regarding knowledge and attitude amongst the married women of reproductive age towards Vesico-Vaginal fistula in Birnin Kebbi LGA of Kebbi State, Nigeria.

3.2   Study Area

The report from the National population commission (NPC) (2008) indicate that, Birnin Kebbi LGA a capital city of Kebbi state, is the most highly density populated LGA having the largest number of political wards in the State. As of December, 2012 the LGA has an estimated population of 532,979 and out of the total 117,256 are women of reproductive age (Ministry of Health, Department of PHC, 2012). This study was carried out among the marriage women of reproductive age (15-49) years in Birnin Kebbi Local government area of Kebbi State, Nigeria.
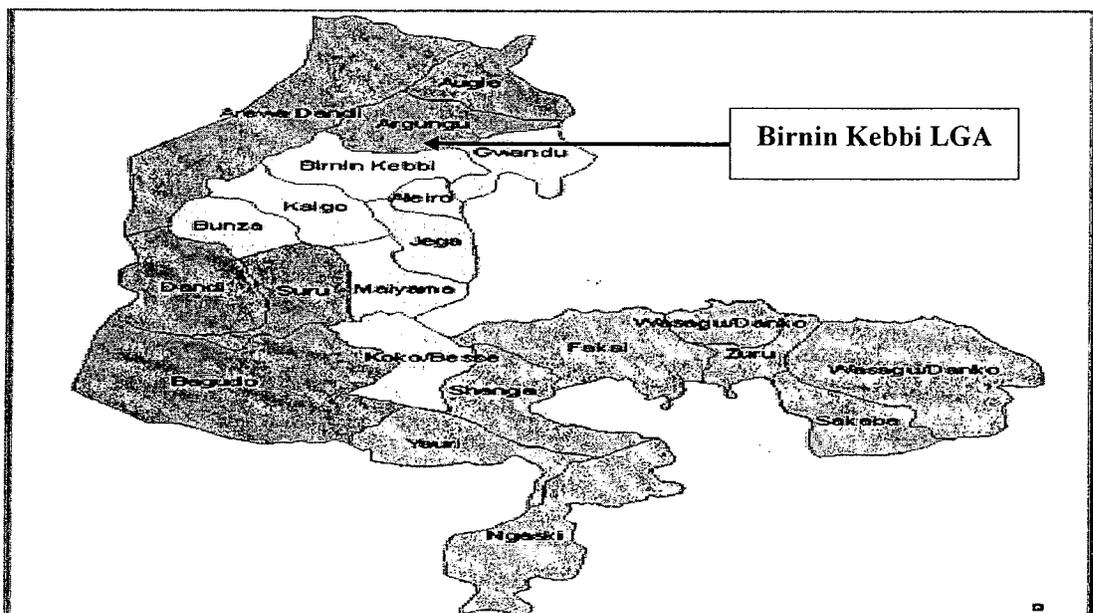

Figure 5 Map of Kebbi State Showing Birnin Kebbi LGA

Source: National population commission, 2008: online;

http://www.population.gov.ng

3.3   Study Population

The study population were married women of reproductive age who were between 15-49 years of age.

Inclusion criteria

- Married women of reproductive age whom are between 15-49 years old living in Birnin Kebbi LGA of Kebbi State.

- Married women of reproductive age with VVF and without VVF who has the interest to participate in the study.

Exclusion criteria

- The respondents who are unable to communicate verbally and orally to interview appropriately.

- Women with mental or psychological disorder

3.4   Sample size calculation

The study population are the marriage women of reproductive age (15-49) years old. According to the data from the Department of Public Health (DPH); AS OF December 2012; there were 117,256 women of reproductive age in Birnin Kebbi LGA (MOH, DPH, 2012).

Taro Yamane formula, (1973) was used for calculating the sample size during the study. According to the estimated population in the LGA, this study look at the rate of the responses that is likely to response during the study. Therefore Taro Yamane 1973, determination of sample size table was used to estimate the response rate.

- Based on the estimated total population, 400 respondents was required to use to get the actual estimated variance in population.

- We divide 117,256 by 400 where 0.34 was determining to be used for estimating the variance for calculating the sample size.

$$n = \frac{z^2\, p(1-p)}{(e)^2}$$

$$n = \frac{(1.96)^2 \times 0.34\, (1-0.34)}{(0.05)^2} = 345$$

Where,

n = sample size required

p = estimated variance in population

e = Marginal error or accepted error

z = Standard value of normal distribution associated with 95% confidence interval of 1.96.

With estimated 10% was added in case of the missing data, 345 responded were required + 10% (34) = 379

Therefore, approximately 380 respondents will participate during the study.

3.5   Sampling Technique

Selection of sample sites

According to the annual statistics from the Department of Public Health 2012, there were 321 settlements in Birnin Kebbi LGA (MOH, DPH). However, based on the records of high incidence of maternal morbidity and mortality rate in the LGA, a pre-selection of 120 settlements was carried out in 15 wards and out of which 2 to 3 settlements/sites were purposively selected in each ward making sure that there is one rural and one urban settlement /site in all there were 30 settlements selected as sample sites for the study.

A systematic random sampling was carried out for data collection. The total population of the selected settlements was divided based on the sample size; respondents were selected according to systematic random sampling method.

3.6   Measuring Tools

A constructed questionnaire (Appendix A) was prepared in English language and translated into Hausa Language. The study will be assessed quantitatively through a household questionnaire. The questionnaire consists of six parts:

Part 1: Socio-demographic/Socio-Cultural characteristics

There are 8 questions in this part asking about general information such as age, religion, education, occupation, marital status, age at first marriage and number of living children

Part II: Access and utilization of the health services

There are 11 questions, 3yes/no questions and 9 statement questions in this part. The questions are about access and utilization of health services by the women in the last 12 months.

Part III: Maternal health status of the women

In this part, there are about 19 questions regarding the maternal health status of women. The questions consist of 14 statements and 5yes/no.

Part IV: Knowledge

The focus about knowledge on vesico vaginal fistula among women whom have VVF and those who do not have VVF regarding the risk factors, signs and symptoms and preventive measures towards VVF.

The score was set as 1for correct answer (Yes) and score for incorrect answer and don't know is 0. The total score is 12 which vary from 0-12. The knowledge score for the respondents were ranged into 3 levels as follows (Bloom's cut off point), (Bloom, 1965):

•	Low knowledge level	0-6 points (<60%)
•	Moderate knowledge level	7-9 points (60-80%)
•	High knowledge level	10-12 points (>80%)

Part V: Attitude

The respondent attitude towards vesico vaginal fistula was stated in this part in order to assess their behaviors towards the VVF and the occurrence of VVF.

There are 8 statements which are combined in positive and negative statements. The respondents were asked to rate their level agreement or opinion statement in three- score (LIkert's scale), (Likert et al., 1934)

Likert's scale distribution for positive and negative statements score

- Positive statement   - 3 for agree, 2 for uncertain and 1 for disagree

- Negative statement   - 3 for disagree, 2 for uncertain and 1 for agree

The total score were ranges from 8-24. The respondents' attitudes were categories into 3 levels as follows:

- Negative attitude   8-13 points (<60%)

- Moderate attitude   14-18 points (60-80%)

- Positive attitude   19-24 points (>80%)

Part VI: Preventive measures

This part is about the knowledge on preventive measures towards vesico vaginal fistula. There are 4 questions and all are statement questions.

A qualitative guideline was prepared for the focus group discussion. The discussion facilitate in assessing the knowledge, attitude and understanding in preventive measures towards vesico vaginal fistula among women. The content of the guideline is as follows:

- How can you describe VVF?

- What do you think are the contributing for VVF?

- What are the attitudes of community towards VVF?

- Will you be able to take any preventive measures?

- If no, what are your reasons for not taking any preventive measures?

3.7 Data Collection

This was used through quantitative and qualitative method. Primary data were collected from community based household questionnaire used for the survey while, the qualitative component was collected through focus group discussion.

A total of 10 Female data collectors and 5 women mobilizer were hired for the survey. Two day orientation training was organized and conducted for the data collectors at Gwadangaji State secretariat conference hall. They were given a brief introduction on the concept of vaginal fistula, detailed administering of data including basic IPC skills (Interpersonal communication skills). Practical demonstration on data collection was also carried out using two settlements for the practical. Feedback discussion was made after the practical demonstration in order to discuss on the issues encountered and the way to overcome them during the study. This will boost their interest and participation on the study.

Data collectors were divided into 5 groups, each group is composed of 3 person i.e 1Midwife, 1 female Community Health Extension worker and 1 female community mobilizer. Each group was deployed to work in 2 wards within (2 -3 settlements /ward). Five senior community health workers including the researcher were attached to a group as supervisors.

3.7.1 Method of data collection

Data collection was conducted from 20th February 2013 to 11th March, 2013. The structured questionnaire was used to collect data and these questionnaires were translated into Hausa Language. Quantitative data was also collected by using face to face interview with the subject.

Advocacy was conducted to Birnin kebbi LGA and Ministry for Women Affairs prior to the commencement of data collection. These facilitate for easy access to the community and gaining full co-operation during the survey. Letters to all wards and selected settlements were circulation to the respective ward and village heads. Data collection was done by creating a serial number and settlement including the

household number, but there was no any household number placed. We therefore used the name of the house hold for easy reference.

Questionnaires were administered by simple random sampling method with inclusion criteria as stated. Respondent were informed of research purpose and were asked to for their consent (by signing on the consent form) to participate in the research. All respondent were informed on the research ethics and the information gather from them will also be kept with confidentiality. Due to fact that the researcher and data collectors were from the region and could speak the local language there was no problem encounter in communication with the respondents. The time per one set of questionnaire was 20 minutes for 62 question items. All respondent were interview on the same questions from the same pattern of questionnaire. Completed questionnaires were cross checked by the supervisors at the end of each day for data quality and later sealed and kept for data processing and incomplete or error questionnaire was revisit in the following day.

Recruiting of Participants for the focus group discussion was carried out along with the key influential woman leader who is familiar with the women in the selected settlement based on the following criteria.

• Participants were selected based on their willingness to participate voluntarily, and also has the ability to respectfully share their opinions.

• Each participant selected, consent for her availability to participate was secured from her husband and the community leader two days prior to the discussion.

• For women with VVF, selection was done at the VVF center Birnin Kebbi where some of the affected women from the sample site were admitted along with the Matron in charge of the center.

• Random selection was done to ten women, where 8 participants were selected in each group based on the selection criteria.

Focus group discussion session took place simultaneously for both women with VVF and women without VV participants. The women with VVF discussion typically took place at the VVF center while, women without VVF had their session in the village head premises. All protocols for the discussion were done before the

commencement of the session, and discussion session was conducted in the local language (Hausa).

The main objective of the discussion was to assess their knowledge and attitude towards Vesico vaginal fistula and also to find out their behavior influencing preventive measures related to vesico vaginal fistula. In the focus group discussion amongst women with VVF, the participants were between 25 to 35 years and women without VVF group, were less than 35 years.

The discussion was carried out by two female health workers of the research team, one served as the moderator while the other performed the task if note-taker and observer along with the researcher. A standard guideline was prepared by the researcher. The duration of the discussion was 45 minutes.

3.8 Data Analysis (Statistics)

Result of the Household questionnaire

- Questionnaire was coded and cleaned before entering into the computer

- Data was analyzed using SPSS window software program version 17.0 (licensed for Chulalongkorn University)

- Descriptive statistic was used in analyzing data which describe the frequency, percentage, mean and standard deviation

- Bivariate analysis: - Chi-square and fisher exact test was used in statistical measurement which determine the association among independent and dependent variables.

- The questionnaire in section 1 1-8 of social-demographic/Socio-cultural characteristic are 8 questions

Knowledge questions consist of risk factors, sign and symptoms and preventive measures toward vesico vaginal fistula, this comprises 12 questions in total. The score was 1 for YES (correct answer) 0 for incorrect answer (No, don't know) (Bloom's cut off point). Knowledge score was ranges as high (>80%), moderate (60-80%) and low level (<60%).

Attitude questions were 8 in total and comprises of both Positive and Negative statements. The variables were divided into three categories agree, disagree and uncertain (Likert Scale, 1934). For positive statement, the scoring scale was 3 for agree, 2 for uncertain and 1 for disagree while for negative statement, scoring scale was 3 for disagree, 2 for uncertain and 1 for agree. Mean standard deviation was used for the attitude.

Result for the focus group discussion

In-depth interview was analyzed by content analysis using thematic analysis to discover key ideas pattern and relationships from the interview result.

3.9   Reliability and Validity test

3.9.1   Reliability test

A pre-test was carried out amongst 30 women from Kalgo ward which is

10 Kilometer away from Birnin Kebbi LGA for the reliability of the questionnaire. The area has the same population and characteristics. The Chronbach's Alpha score for the knowledge level was 0.76, and for the attitude level is 0.74.

3.9.2   Validity test

Validity test was done for the questionnaire by 3 experts from Nigeria, the director of Public Health in the Ministry of Health and two gynecologists from the Teaching Hospital. Some changes on the measuring tools were made based on their observations and recommendations.

3.10   Ethical Consideration

The study proposal and questionnaire was reviewed and approved by Kebbi-State Health Research Ethics Review Committee, (KSHREC) from Ministry of Health (MOH).

Informed consent from the respondent was taken after the objectives of the study were clearly understood. It is a voluntary participation and respondents were assured of confidentiality, which they were also told that they can be withdraw from the research at any time without any reason. They were also informed that, data collected will only be used only for academic purposes.

Audio recording during the focus group discussion was only limited to the research team members. While confidentiality of the participants was kept by ensuring that any identifiable personal information will not appear in the report.

3.11 Limitation

The study was conducted in 15 political wards of Birnin Kebbi LGA though this will not represent the whole population of Kebbi State and the country. The prevalence of vesico vaginal fistula recorded was as a result of sensitization meeting held with traditional birth attendants from 30 sampled settlements and clinical diagnostic case of self-report for examination. Though a lot are hidden and will not want to report for examination this resulted not getting the actual prevalence figures.

Also due to the stigmatization of Vesico vaginal fistula some women do not want to participate for the interview because they think we trying to expose them. Focus group discussion conducted, women without fistula indicate that some aspect of preventive measures were taken but the actual practice will not been recorded due to the nature of the study (cross section study).