PERCEIVED CAUSES, PREVALENCEAND EFFECTS OF VESICO VAGINA FISTULA AMONG HAUSA/FULANI WOMEN IN KANO STATE

BY

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ZARIA.

JULY, 2011

DECLARATION

I hereby declare that this thesis is a record of my own research work. It has not been written and presented partially or wholly in any previous application for a higher degree to the best of my knowledge. All quotations have been clearly indicated by quotation marks or indentations and sources of information are duly acknowledged by means of references.

_____	_____	_____
Name of Student	Signature	Date

CERTIFICATION

This thesis entitled "Causes and Prevalence of Vesico Vagina Fistula among Hausa/Fulani Women in Kano State" has met the regulations governing the award of the degree of Master of Education in Health Education of Ahmadu Bello University, Zaria and it is approved for its contribution to knowledge and literary presentation.

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DEDICATION

This thesis is dedicated to Almighty Allah for giving me the strength to complete my study. To my dear parents who gave me the opportunity to be educated but did not live to see me through. May your gentle souls rest in peace, Amin. I miss you all. To my dear husband Ibrahim Musa, my brother Isah Muhammad and to my beloved daughter Zainab Ibrahim Musa for giving me all the support.

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ABSTRACT

This study investigated the perceived causes, prevalence and effect of VVF among Hausa/Fulani women in Kano State. The study looked into the stigmatization effects as well as the treatment facilities of Vesico Vagina Fistula in Kano State. An ex-post facto research design was used and the population was the victims of the disease, and health Personnel. Stratified and Purposive sampling techniques were used and three hundred (300) questionnaires were used to collect data for the study, of which 242 responded to the questionnaire. Descriptive statistic of frequency means and percentages were used to analyze the demographic characteristics of the respondents. The hypotheses of the study were tested using one way Analysis of Variance (ANOVA) and two sample t-test was used to analyze the data at 0.05 level of significance.

The results of the study revealed that:

1. Prolonged obstetric labour and the use of traditional birth attendants were the major causes of VVF.
2. It was discovered that the victims suffered divorce and social restrictions by their husbands as a result of VVF and RVF.
3. Facilities/equipment for treating VVF was available and adequate within the state. The researcher, therefore, recommended public enlightenment programmes and proper education of tradition birth attendants in conducting labour.
4. Most of them have been rendered destitute, begging in the streets, motor parks and market to make ends meet.
5. Based on the above findings, it was recommended that female education up to secondary level should be encouraged. Any father that withdraws his daughter from school should be dealt with by the law through the local chief of Mai Angwa.
6. Advocacy and community mobilization should be used to sensitize people on the issues of VVF or RVF, to inform people that services are available and were to get them, dispelling negative rumors and generating favorable attitudes towards responsible parenthood.

Based on the results of the study, the following conclusions were drawn:

1. Prolonged labour, early marriage, traditional birth attendants and home delivery are the major causes of VVF among the victims in Kano State.
2. Ignorance, lack of knowledge and rural dwelling are among the factors responsible for the prevalence of VVF in Kano State.
3. VVF victims suffer considerable divorce and discrimination in Kano State.

4. It was discovered that VVF treatment facilities and equipments are adequately available and utilized in Kano State.

On the basis of results and conclusion, it was recommended that:

1. Future cases of VVF should be prevented and controlled through a legislation preventing early of marriage.

2. There is need for awareness creation and public enlightenment on the dangers of early marriage, child hawking, the importance of ante natal services, as well as, hospital delivery.

3. Micro-Credit Scheme should be put in place to empower the women economically. This will enable them have access to medical care, and control the issue of non patronage resulting from the high level of poverty, as well as the dependency of women on their husbands and other relations.

4. Government of Kano State should discourage a total withdrawal of girl-child from for the purpose of giving them out in marriage by their parents. This is because of the popular saying that “he who educates a woman educates a nation”.

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LIST OF ABBREVIATIONS

R. V. F:	Recto Vaginal Fistula-an abnormal connection between the rectum and the Vagina a stool fistula.
T.B.A:	Traditional Birth Attendant
V. V. F:	Vesico Vagina Fistula- An abnormal connection between the bladder and the vagina. A urine Fistula.
E.D.D	Expectant date of delivery.
S.T.D	Sexual transmitted diseases.
AIDS	Acquired immune deficiency syndrome.
WHO	World health organization
CS	Cesarean section.

OPERATIONAL DEFINITION OF TERMS

Early Marriage: Marriage before the age of 15 years among Hausa/Fulani girls in Kano State.

Girl Child: She is a Hausa/Fulani female child below the ages of 15years.

Vulva: Excoriation- Ammonia in concentrated urine causes dermatitis and skin breakdown.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

Vesico vaginal fistula has been a health problem of women worldwide. This abnormality is mostly as a result of childbirth, home delivery, early marriage, obstructed labor, unskilled birth attendant, economic and socio-cultural factors to mention but a few (Kees, 1994). To meet one of these mothers is to be profoundly moved into mourning the still birth of their baby, incontinence of urine, shame of their offensiveness, often spurned by their husbands, homelessness, unemployment, trauma, stigmatization and rejection in the society.

An obstetric fistula is the breakdown of tissue in the vaginal wall extending into the bladder (Vesico Vaginal Fistula V.V.F.) or to the rectum (Recto Vaginal Fistula R.V.F.) or both. It is one of the most degrading morbidities resulting from pregnancy and childbirth. Maternal morbidity as a result of V.V.F. or R.V.F. is particularly high in Nigeria. Out of an estimated 200 case, 70 percentage occur in Northern Nigeria (Kuti, 2001).

The profile of Vesico Vaginal Fistula victims according to Ward, (1945) and Amiru (2004) is that of a destitute, illiterate, unemployed, divorced and smelly teenager, who has lost control of her bladder functions, and is constantly wearing rag in between her legs during the day and wetting her bed at night. Therefore, all efforts must be put on ground to eliminate this condition in women – especially in the light of the recognition advocated for women in the present dispensation. Vesico Vaginal Fistula occurs all over Nigeria, but more worse in some areas. There are areas that caught public attention especially the far northern area.

The true incidence of Vesico Vaginal Fistula in Nigeria is unknown because most of the victims are not registered in hospitals, clinics and maternity centers, due to fear of stigmatization and rejection. VVF has physical, physiological, social and economic effect on the victim. According to United Nations Population Fund (UNFPA, 2005), obstetric fistula is the most devastating of all pregnancy disabilities, while Njoku (2006), stressed that more than two million women in developing nations of the world are suffering from this conditions in the world and about fifty thousand to one hundred thousand new cases are recorded yearly.

The effects of VVF are life shattering, while women with fistula are perceived as unclean and thus shunned by their husband, family and the community, they are frequently blamed for their conditions and forced to live in isolation (Ejembi & Kees, 2001).

The health status of Nigerians is very low compared to other developing countries and their improvement are taking place at a slow rate. The determinants of health status are still bio-medical in nature. However, there is an increasing recognition of the underling effect of socio-economic factors on ill-health. Lack of education and high rate of illiteracy result in existence of ignorance and resistance to the use of health facilities particularly to women of child bearing age. Other cultural and religious practices such as early marriage and superstitious beliefs, have continued to remain major obstacles to the attainment of higher health status. There have continued to be major differences in health status between the north and south, rural versus urban, poor versus rich, educated versus uneducated. The lower status of women in Nigeria is said to be the major reason for the differences in the health status of females compared to males. Women are exposed more to harmful traditional practices and are uneducated and they generally have limited access to health facilities which results in the restriction in the decisions in matters affecting their family life and welfare. These coupled with

existing high fertility rate, with little or no use of family planning further reduces the health status of women (Masha, 1994; Kuti, 2001, Kees, 2001, Kabir, 2004).

A National Workshop on V.V.F. organized by the national task force on Vesico Vaginal Fistula in collaboration with grass root health organization in Nigeria in 1993, noted that there is no true survey of Vesico Vaginal Fistula in Nigeria particularly as regards the extent on areas of concentration, but is estimated that 200,000 cases are presently in existence and 10,000 new cases are seen annually (Njoku, 2006).

Chuike (1994) submitted that from the present knowledge, the areas of high prevalence are Kano, Katsina, Sokoto, Bauchi, Maiduguri, Zaria, Kaduna, Malumfashi, Funtua and Daura. In light of the above, the choice of Kano State as seat for this study is quite appropriate as this study intends to establish a reliable base data in reference to women in Kano State.

Vesico Vaginal Fistula is a preventable condition and hence, the problem of VVF should not be allowed on a large proportion especially among women of Kano State. Also considering the fact that most of the women affected are teenagers, that shows the danger it constitute to the future mothers of this our great nation, Nigeria.

Government and its citizens cannot afford the wastage of these groups of (young women). Our young women who are mostly affected must be alive and healthy to meet the challenging perception of women and the important roles they play within the society. The new millennium has bright opportunities for the feminine gender and any health problem which tends to stay in their way to accomplishing these opportunities must be amply tackled from medical point of view.

Most of the causes of Vesico-Vaginal-Fistula are the end result of a prolong obstructed labor at child bearing during which the bladder, the anterior vaginal wall and the urethra are compressed between the foetal head and the maternal pubis; thus causing the tear (Kees, 2001). Labor usually becomes obstructed, when the pelvis is too small for the passage of the baby. It is pathetic to observe that some women especially in the rural areas are left to labor for days without medical intervention; the implication of this is that an atmosphere conducive for the development of Vesico-Vaginal-Fistula is created. Those social conditions require Government intervention through public enlightenment and campaigns as it needs to be treated with the utmost urgency it requires, because of its socio-economic, psychological and physiological consequences. It has achieved this status not only because of the high death or diseases rate of these women living with the condition they suffered from but because of the trauma these victims undergo (Kuti, 2001).

It is indeed a social calamity to mankind, in spite of this knowledge especially the knowledge that Vesico-vaginal fistula is a preventable condition; yet, it continues to remain a public health menace with its prevalence. Apparently intervention strategies have failed to make any appreciable impact on the incidence of the disease. This may not be unconnected to the fact that no community based studies has been conducted to ascertain the causes and prevalence of VVF among Hausa/Fulani women in Kano State (Kees, 1992).

It is in the light of the above that there is urgent need for studies of this nature with proper understanding; to the factors which all together contribute to the occurrence of vesico-vaginal-fistula among women in Kano State. Probably, besides, Ethiopia, there is no other country in Africa, where V.V.F. is of such public health importance as in Nigeria. According to Bandipo (1994) there are no community data based, but from hospital records and studies at

Kano, and Kaduna states the incidence rate has been estimated at a minimum of 2 per-1000 deliveries.

Bandipo (1995) also observed that the victims of Vesico-vaginal-fistula in Northern Nigeria are usually in their mid-teens that had been married at 12 - 13 years of age. The women with Vesico-vaginal-fistula are often rejected by their families and communities impoverished and divorced. The consequence of this condition is that the Vesico-vaginal-fistula victims are stigmatized. The society most often develops negative attitudes in response to Vesico fistula conditions.

There is the need for victims to struggle with these negative attitudes and develop strategies for handling the V.V.F. condition. On the other hand, if a victim fails to do this, they may not be able to function adequately in the society. These and other factors have prompted the researcher to carry out the present study to assess the causes and prevalence of VVF among Hausa / Fulani women in Kano State.

1.2 Statement of the Problem

Vesico Vaginal fistula is one of the most disturbing health problems of women of child bearing age in our communities today. It is fast becoming one of the most debilitating factors hindering the development of the womenfolk. The disease incapacitates victims for months and sometimes for years, causing untold hardships to the victims, their families and the community at large. This terrible health condition often leads to isolation of the victim in a way that may cause social and psychological consequences.

The menace of Vesico vaginal Fistula could be arrested or tackled if proper care is taken to understand the nature, causes and consequences of the disease. It is pathetic to observe that some women especially in the rural areas are left to labor for days without medical intervention, thereby creating a conducive atmosphere for the development of Vesico vaginal fistula. Efforts should be made to eliminate this dehumanizing health condition of women in our society, since it is preventable.

Because of the physiological, social and psychological consequences of the disease among the Hausa/Fulani women in Kano State, there is the need to find out the causes and prevalence of the disease in Kano State with a view to curbing the menace.

1.3 Research Questions

This study sought answers to the following research questions.

1) What are the causes of VVF among Hausa/Fulani women as perceived by the respondents of different status in Kano State?
2) Are there differences in the prevalence of VVF among Hausa/Fulani women as perceived by the respondents of different status in Kano state?
3) What are the effects of VVF among Hausa/Fulani women as perceived by the respondents of different status in Kano state?
4) Are there differences in adequacy of facilities / equipment for VVF treatment as perceived by the respondents of different status in Kano State?

1.4 Purpose of the Study

The purpose of this study was to:

1) Identify causes of Vesico Vaginal Fistula among Hausa/Fulani women in Kano state.
2) Identify factors responsible for the prevalence of Vesico vaginal fistula among Hausa/Fulani women in Kano State.
3) Identify the stigmatizations that Hausa/Fulani Women victims of Vesico Vaginal Fistula suffer in Kano State.
4) Determine the availability and adequacy of facilities and equipment for the treatment of Vesico Vaginal Fistula in Kano State.

1.5 Basic Assumption

This study was based on the following assumptions:

1) The causes of Vesico Vaginal Fistula among Hausa/Fulani women in Kano State are related to early marriage, prolonged labor and cultural beliefs of the patient.
2) The prevalence of Vesico vaginal fistula among Hausa/Fulani women in Kano State are related to place of residence and knowledge of the patients.
3) Hausa/Fulani women victims of Vesico vaginal Fistula suffer stigmatization.
4) Facilities and equipment for treatment of Vesico vaginal fistula are not adequately available in Kano State.

1.6 Hypotheses

Based on the research questions and assumptions, the following hypotheses were raised for this study.

Major Hypothesis

There is no significant difference between the respondents of different status in their perception on the causes, prevalent, effect and adequacy of facilities on VVF among Hausa/Fulani women in Kano State.

Sub-Hypotheses

1) There is no significant difference among the respondents of different status in their perception of the causes of Vesico vaginal fistula among Hausa/Fulani women in Kano State.
2) There is no significant difference among the respondents of different status in their perception on the prevalence of vesico vaginal fistula among Hausa/Fulani women in Kano State.
3) There is no significant difference among the respondents of different status in their perception on the effect of vesico vaginal fistula among Hausa/Fulani women in Kano State.
4) There is no significant difference among the respondents of different status in their perception on the adequacy of facilities / equipment for the treatment of vesico vaginal fistula patients in the health care centers in Kano State.

1.7 Significance of the Study

The outcome of this study would be significant in the following respects:

1. The findings of this study would provide information on the causes and prevalence of VVF among Hausa / Fulani women in Kano State, with a view to curbing the menace.
2. The findings of the study would motivate government and non-governmental organization that are interested in women and child development to formulate health

policies that will help rehabilitate VVF patients as well as eradicate the disease in Kano State as well as other states were the disease is prevalent.

3. The study will motivate the enactment and enforcement of legislation on age at first marriage for girls to prevent the effect of early marriage in the development of VVF among women.

1.8 Delimitation of the Study

This study was delimited to the causes and prevalence of Vesico Vaginal Fistula among Hausa/Fulani women in two VVF centers in KANO. It was also delimited to the availability of facilities and equipment for the treatment of Vesico vaginal Fistula in the sampled local government areas.

1.9 Limitation of the Study

This study had the following limitations:

1. Some of the Vesico-vaginal fistula patients could not be reached due to leaking urine and stool.
2. Some of the respondents were not willing to give accurate information on the statements in the questionnaire. However, these limitations were taking care of through the research assistants who helped in translating the intention of the research to the respondents in their own native language. Also, the limitations were given adequate consideration during the analysis and interpretation of the results of the study.

CHAPTER TWO

2.0 REVIEW OF RELATED LITERATURE

2.1 Introduction

Vesico Vaginal Fistula (VVF) and Recto vaginal Fistula are considered as serious reproductive health problems in women in the developing countries of the world. According to the United Nations Funds Population Agency (UNFPA) (2005), in Nigeria one out of 18 women will die from complications of child birth. Njoku (2006) further reported that fistula usually occurs when a labor lasts several days and cannot assess a caesarean section on time, the baby usually dies as the woman is left with extensive tissue damage to her birth canal that renders her incontinent, the result of this are however life shattering although studies revealed that Vesico vaginal fistula, and RFV have been practically eliminated in the developing countries of the world, but the large majority of women who suffers from this condition are young, poor and uneducated rural women in the developing world.(Amina 2003, Hassan 2003, Imelda 2005, Isiah 2006)

Ejembi (1994) and Kabiru (2004), stressed that surgical repair can have success rates as high as 89 to 90 percent restoring a full and reproductive life of dignity to most women. Attentive post operative care, for a minimum of 10 to 14 days is critical to prevent infection while the wound heals. Amina (2003) highlighted that fistula has been a relatively hidden problem because it affects some of the most marginalized members of the society; young, poor and illiterate women living in remote areas, far from health care facilities.

He further stressed that the campaign by UNFPA is providing support to more than twenty five countries in Africa, the Arabs state and South Asia to prevent further future cases,

expand medical expertise, and treatment services to help women restore their lives once healed, studies conducted (Haspel 1988, Morphy 1992, UNFPA 2005). Studies conducted through the campaign indicated that there is acute shortage of Doctors, and Nurses qualified to provide Fistula care and a lack of equipment, operating theatres and recovery wards to treat patients, thereby resulting in a back log of fistula patient in need of surgery. (Ejembi, 1994) attributes the causes of rejection of VVF victims to ignorance about the cause of their condition. Many believe that it is as a result of venereal diseases or retribution due to marital infidelity.

The presence of VVF victims becomes offensive to others because of stoinky smell that constantly oozes out from them. Morphy (1992) further expressed that the victim goes to sleep at night and wakes up to find their beddings wet and soaked, and that they feel so ashamed and humiliated, in addition, Ejembi (1994) noted that the women whose first babies were still born may never get married nor have children again. Husband usually divorce them while parents and friends normally abandon them, they finally end up with no money to feed themselves and pay for the cost of their treatment. Hence, most of them end up begging and prostitution.

This study, therefore, aimed at investigating causes and prevalence of vesico vaginal fistula among Hausa/Fulani women in Kano State. To achieve this objectives, available relevant literature were reviewed in the following order.

1. History of vesico vaginal fistula
2. The concept of fistula
3. The concept of vesico vaginal fistula and recto vaginal fistula
4. Direct and Indirect causes of fistula
5. Socio-Cultural and Economic factors affecting vesico vaginal fistula
6. Reasons for the rise in VVF

7. Consequences of vesico vaginal fistula
8. Areas affected by VVF/RVF in female reproductive organ.
9. Prevention of VVF/RVF in women.

2.2 The Concept of Fistula

The word fistula is a collective medical term for any abnormal connection between two bodily organs. In the causes of obstetric fistula, it is the result of pressure exerted by the foetal head in the pelvis during obstructed labor; a force that interrupts the blood flow of nearby tissues in the mother's pelvis.

Fistula is a hole that is created between the vaginal wall and the bladder. (Vesico Vaginal Fistula (VVF) and holes created between the walls and the rectum (Recto Vaginal Fistula R.V.F.) has severe physical and social consequences and is one of the most degrading morbidities resulting from pregnancy and child birth. As these holes are formed as a result of pregnancy and child birth are the term obstetric fistula commonly as an umbrella term. It can be caused by obstructed labor. In Northern Nigeria, maternal morbidity as a result of fistula is particularly high, with an estimated 70percent of 150,000 cases in Nigeria occurring in the North. Forward has been working on a project in Nigeria in Kano State (Bandipo, 1998). Working with girls and women who have suffered this condition.

2.3 The Concept of V.V.F. and R.V.F.

The World Health Organization (WHO) in (1947) described fistula as the single most dramatic aftermath of neglected childbirth. Vesico vaginal fistula (VVF) occurs when the blood supply to the tissue of the vaginal and the bladder is restricted during prolonged labor, the tissue die between these organs, forming holes through which urine can pass uncontrollably.

Recto Vaginal fistula R.U.F. occurs in a similar way to V.V.F. however, holes form between the tissue of the vaginal and rectum leading to uncontrollable leakage of feaces. Vesico vaginal fistula and Recto vaginal fistula are breakdowns in the tissue between the vaginal wall and the bladder or rectum.

The consequences of such damage are urinary or fecal incontinence and elated conditions such as dermatitis and erosion of the skin and other tissues in the value and vaginal from the constantly leaking urine or feaces. In extreme cases the urethra, bladder and vaginal wall can be completely eroded. Vesico vaginal fistula and Recto Vaginal Fistula causes acute social problems. Due to constant leaking of urine or faeces and the accompanying smell, most communities consider these women become outcast and cut them off from all social activities. If the fistula is not repaired, the women are divorced by their husbands as they cannot return to their families the outlook for them is bleak.

2.4 Types of Fistula

According to Kees (1995) a renowned medical practitioner and Nigerian foremost surgeon of vesico vaginal fistula based here in Kano, said that the fistula takes a particular name based on the particular organ(s) it affects.

a. Vesico vaginal fistula (VVF) means the fistula that connects the urinary bladder and the vaginal.

b. Recto Vaginal Fistula (RUF) is the fistula that connects the rectum and the vaginal.

c. Urethra: vesico vaginal fistula (UU.VF) are the fistula that connects the urethra urinary bladder and the vaginal.

d. Juxta - Cervical fistula (J.C.F) is the fistula that occurs side by side by the cervix.

e. Vesico Cervical Vaginal Fistula (UCVF) means the fistula that connects the urinary cervix and the vaginal.

f. Uretho - Vesico vaginal fistula (U.V.V.) is the fistula that connects the urethra urinary bladder and vaginal.

g. Urethra cervical fistula (U.C.F.) means the fistula that connects the urethra and cervix.

h. Genitor urinary fistula (G.R.F.) means the fistula that connects the genital and the urinary tract.

i. Genitor - Rectal fistula (G.F) is the fistula that connects the genitals urinary tract and rectal canal.

j. Genitor urinary rectal fistula (G.V.R.F.) is the fistula that connects the genitals urinary tract and rectal canal.

k. Urine fistula (U.F.) means the fistula that leads to the constant leakage of urine.

1. Stool fistula (S.F) is the fistula that leads to the constant leakage of stool.

m. Obstetric fistula (G.F) is one that occur at childbirth,

n. Surgically produced fistula (S.P.F.) is the one that occurs as a result of the surgical operation such as removal of the uterus (total hysteotomy).

2.5 Causes of Fistula

According to Kees (2006), approximately 80 percent of fistula cases reported in Nigeria are due to unresolved obstructed labor during childbirth. Obstructed labor is directly related to the custom of early marriage in Nigeria frequently between the ages of 13 years and sometimes before the onset of menstruation as early as 11 years. Early marriage invariably leads to early sexual contact and subsequent pregnancy at a time when a young girl is not adequately physically developed to permit the passage of the baby with relative ease.

This can lead to a prolonged and obstructed labor and damage leading to the misery of fistula. The same phenomena also occur in women whose growth has been stunted as a result of poor nutrition or malnourishment. Ward (1998) is one of the top VVF repair surgeons in Nigeria, site runs a care centre in Uyo, Southeastern Nigeria said about 15percent of fistula cases are caused by the harmful practice of female genital mutilation. The gishiri cut, a form of female genital mutilation is commonly practiced in Nigeria amongst the Hausa people. This traditional practice performed by untrained traditional birth attendants is used in the treatment of wide variety of gynecological ills and is commonly employed during pregnancy and labor.

2.6 History of Vesico Vaginal Fistula (VVF)

Numerous factors that contributed to the development of Vesico Vaginal Fistula in developing countries common in areas where the culture encourages marriage and conception at young age. According to oral interview with Aminu, a Gynecologist with Murtala Mohammed Specialist Hospital, Kano; Nigeria is one of such developing countries that encourages such practices often before full pelvic growth has been achieved (Ejembi, 1994).

Chronic malnutrition further limit pelvic dimension, increasing the risk of cephalopelvic disproportion and mal-presentation. In addition, few women are attended to by qualified health care professional and have access to good medical facilities during child birth; their obstructed labor may be protracted for days or weeks. The effect of prolonged labor impadian of the fetal presenting part in the pelvis is one of the causes of wide spread tissue edome, hypoxia, necrosis and sloughing resulting from prolonged labor, pressure on the soft tissue of the vaginal bladder base and the urethra.

According to Murphy (1992) and Ejembi (1994) numerous authors highlighted the risk of various types of bladder trauma at pelvic such injuries include unrecognized intra-operation, laceration of bladder. Kees 1994. According to Mori (1967) said Ninety-five years ago in a town of Montgomery in Alabama State stood a small hospital. This was reckoned as one of the most remarkable hospitals at all time. It accommodated seven women all Negro Slaves who suffered this abnormality where the thin wall that separates the bladder from the vaginal was damaged. This is one of the fearful consequences of childbirth at early age. Dr. J. Moris (1967) was responsible for building a hut for this, mainly as an opportunity to prove that Vesico Vaginal Fistula previously considered as incurable could be remedied by simple surgical procedure.

According to Kees (1996) was of the opinion that Vesico Vaginal Fistula was as old as mankind and has always been a source of misery to the women affected. Zacharin (1988) stated that recorded earliest reference dates back in 1550 BC, the Kalin papyrus from Egypt revealed that Vesico Vaginal Fistula has earlier been identified as an abnormal communication between the bladder and the vaginal. This is basically associated with women as earlier stated. The victim looses the contractual ability to control the flow of urine. According to World Health Organization (WHO) (1958) Vesico Vaginal Fistula is one of the worst morbidities associated with delivery. An obstetric fistula is one of the most degrading morbidity resulting from pregnancy and childbirth. Maternal morbidity as a result of Vesico Vaginal Fistula is particularly high in Northern Nigeria. Bandipo, (1994).

An article in the New Nigeria Newspaper Friday, August 20th (2001) reviewed by Lamara Garba titled Vesico Vaginal Fistula (V.V.F.) is to be wiped out in 4 years be the Federal Government. The then Minister for Women Affairs and Youth Development, Aisha Ismail and her counterpart Minister for State with Ministry of Health, Haj. Amina Ndalolo said that 4 years target was set by the Federal Government for total elimination of Vesico Vaginal Fistula in Nigeria. Reviewed by Lamara Garba.

The then Minister of Women Affairs, Aisha Ismail expressed great concern over increasing rate of Vesico Vaginal Fistula disaster, particularly among the rural dwellers. The Minister for State in the ministry of Health, Ndalolo said over 4 million young girls suffering from the disease are between 11-35 years.

These groups of people from the reproductive group of the society but unfortunately, their lives are in serious danger, but not completely in ruin. She added, she advocated a mass girl education saying that ignorance, illiteracy and lack of available medical care are the key

factors in the emergence of the disease. (Ejembi, 2000). Dr. Amina Ndalolo suggest providing Health Clinics at any 10 kilometres interval throughout the federation. The Federal Government will provide these clinics the goal of eliminating Vesico Vaginal Fistula and pregnancy related diseases will be a reality. The then Kano State Governor, Dr. Rabi'u Musa Kwankwaso who was represented by his Deputy, Dr. Umar Abdullahi Ganduje who identified lack of adequate enlightenment and socio-economic problems as the major causes of the disease among women especially those in the rural areas.

Lamaran, (2000). Later the team visited the VVF Specialist Clinic at Dambatta local Government, Kwali Rehabilitation Centre and finally, Murtala Mohammad Specialist Hospital VVF Centre, where the two ministers spoke to the victims Lamara (2000). Research and observations has shown that patients with fistula are particularly disadvantaged group in relation to birth, socio-economic status and education. The majority of patients are from rural areas, low literacy level, and lack of physical and economic access to medical care, serious problems in creating chance for Vesico Vaginal Fistula. Since many pregnant women do not attend antenatal clinic, high risk condition and medical obstetric complication endangering the life or impairing the health of expectant mothers and baby will not be detected early enough to adopt precautionary measures.

Most women in rural community are taken to hospital only when the situation is most hopeless and often too weak. Amina (2002). Better use of existing obstetric service and increased provision of effective health services in rural area will lower the incidence of V.V.F. However, in the longer term there is a need for an holistic approach to address both the direct and indirect causes of Vesico Vaginal Fistula and other maternal morbidities. Ultimately improving the education and economic empowerment of young women will move to seek safer

obstetric practices, including the use of Family Planning, delay child bearing and seek prenatal and antenatal care during pregnancy. In most several traditional practices which cuts across social and geographical boundaries, seventy-four (74) million girls and women are mutilated. Many hold to the belief that circumcision is a custom decreed by ancestors and therefore, must be complied with.

These practices are further reinforced by the fear of a terrible fate if defied (Kees, 1996). (Sambo, 1995) identified certain points has the causes of Vesico Vaginal Fistula. These points includes poverty, early marriage, low status of women, the non acceptance and poor utilization of Healthcare services, prolonged obstructed labor and the traditional (Gishiri" cut. further elaborated that most victims do not have Western or Qur'anic Education.

Kees (1998) is of the opinion that socio-cultural pattern and lack of Health facilities, manpower and professional skills were factors inhibiting the check of victims of Health facilities, manpower and professional skills were factors inhibiting the check of victims with the abnormality. Vesico Vaginal Fistula is believed to be a continuous major or social and medical problem in the developing countries. This is a successful vesico vaginal fistula repair will contribute a great deal in alleviating the social embarrassment victims face.

Tanko (1994) also identified certain factors in etiology of vesico vaginal fistula. These include the nutritional status of the mothers and age at fist birth. According to Ward (1993) in a workshop presentation on Vesico Vaginal Fistula scourge; a preventable social tragedy, aptly described a typical VVF victim as a destitute, illiterate, unemployed, divorced, smelly, ostracized teenager, who lost control of body functions and is constantly wearing rags between her legs and wetting her bed at night. Based on information presented in a drama sketch as recorded by

Amaechi (1996) over 200,000 Nigerian women suffer from this ailment. It is also estimated that about one million suffered the ailment worldwide.

2.7 Direct Causes of Vesico Vaginal Fistula (VVF)

According to Kees (1998), the direct causes of vesico vaginal fistula is unrelieved obstructed labor, when the mother's pelvis is too small to allow free passage; the baby's head pushes against the pelvic bones. If the obstruction is not relieved by caesarean section, the blood supply to the tissues and nerves of the vaginal and the bladder is cut off. This causes damage to the tissues. In most cases, the baby dies. If the remains are expelled, the mother may live, depending on her strength, the length of the time she has endured the obstructed labor due to damage it has caused and the availability of medical help. Obstructed labor is one of the principal causes of reported maternal death in Nigeria and there are probably many more unreported deaths in the rural areas. Fistula can also be caused by traditional surgery.

Gishiri cut, carried out in attempt to widen the anterior vaginal wall during obstructed labor also causes V.V.F. According to Dr. Ann Ward one of the top V.V.F. repair surgeon in Nigeria (2000) about 8 out of every 10 cases of Vasco Vaginal fistula reported in Nigeria are due to prolonged obstructed labor whereby the foetal head is not able to pass through the pelvis which may be two small due to poor nutrition and stunted grossly in children or because the pregnancy occurred at a tender age before the complete growth of the pelvic are a direct cause of V.V.F. are caused by the following:

a. Prolonged obstructed labor

b. Frequent child-birth

c. Traditional birth attendant

d. Malnutrition

e. Inadequate medical attention

1. Prolonged Obstructed Labor:

According to Kees (1994) one of the causes of prolonged labor is when the fetus' head becomes too big for the birth canal that it has to pass through. Others include maternal abnormalities like pelvic tumour stenosis. Kuti (2001) said causes of obstructed labor may arise from maternal fetal conditions or both. Some of the causes of foetal condition include:

a. Brow presentation

b. Breach presentation

c. Shoulder presentation

d. Large presentation.

Most of the abnormalities can be detected during early pregnancy and adequate antenatal care, early treatment can correct the abnormalities said Kuti (2001). Chamberlain (1997) identified the following types of pelvic and the abnormal are that make dealing delivery difficult.

2 Frequent Child Birth

According to an oral interview with Amiru, family planning. The knowledge of family planning is moderate (54.4percent) but there are still negative attitudes towards its use among those that are aware. Frequent child birth can create space for VVF.

There is every tendency that repeated birth can weaken the organic tissue to an extent that they can lean and result to so many complications.

3. Traditional Birth Attendant Care

Kees (1992) said Gishiru cut: This is the traditional surgical treatment for obstructed labor in Northern Nigeria. He further said the traditional birth attendant (TEA) cut the antennal wall of the vaginal with local blade, if this cut is made, too deep holes is created between the bladder and the vaginal resulting in vesicula vaginal fistula (VVF) since access to the hospital is very remote, the traditional method is always available to assist and the blade is there to do the job.

The gishiri cut, a form of female genital mutilation is commonly practiced in Nigeria amongst the Hausa Fulani people. This traditional birth attendant is used in the treatment of a wide variety of gynecological ills and is commonly employed during pregnancy and labor. The rationale for the gishiri cut defies scientific explanations. Traditional surgery can damage the urethra or bladder during a badly managed delivery. Gishiri cut carried out in an attempt to widen the anterior vaginal wall during obstructed labor also causes Vesico Vaginal Fistula (VVF). An un-sterilized sharp instrument is used to make this cut. Cotal injury is another cause of K.V.F. in child brides.

4. Inadequate Medical Attention

According to Kees (1998): Lack of medical facilities is one of the causes of Vesico Vaginal Fistula. Some women lack access to good health centre where enough facilities and poor infrastructure such as good roads, communication, transportation, unfriendly attitude of health workers may be another factors.

According to Kemi (1998): Among other reasons given are the distance of the facilities from the communities, the high demands of hospitals in the form of delivery items as well as the opposition of some men. This reflects more of the situation. It is possible that the women respondents were hesitant in mentioning these factors for fear of the authorities.

5. Malnutrition

According to Amiru (2004):, Malnourished body lacks the essential elements required to be strong and from nutritional status, poor nutrition has been identified as one of the major causes of vesico vaginal fistula.

Imelda (2005) and Kanu (1995) improved girls nutrition to prevent stunted growth which can leave the mother's pelvis small in relation to the baby's head.

2.8 Indirect Causes of V.V.F.

According to Kees (1994) an important authority on Fistula is of the view that fistula has nothing to do with age or early marriage. He traces the causes and prevalence of the disease to the lack of medical facilities and ignorance of women on the need to seek early medical attention.

The indirect causes of VVF are as follows:

a. Early marriage

b. Teenage pregnancy

c. Home delivery

d. Unfavorable government policies

e. Ignorance

f. Poverty

g. Healthcare

h. Socio economic factors

i. Illiteracy (lack of education)

1. Early Marriage:

The data relate the University of Marriage and its occurrence at an early age the ideal age of marriage is as low as 11 years. The decision on when to get married was taken by parents because they were mostly too young to decide by themselves. The reasons cited for the choice of age of marriage are mainly dictated by cultural values and norms according to one Alhaji Ibrahim Musa a village head in Kumbotso local government. Some of the reasons mentioned according to Mallam Ibrahim are parents choice (22.6percent), tradition (18.4percent). Other reasons mentioned are financial

reasons (2.6percent), fear of pregnancy (1.6percent) and the fact that it is the norms in the area.

According to Lettenmare (1988), research has shown that 8percent of fistula occurs due to marriage among girls of between 10 to 14 years but that it is not to say that early marriage itself causes the fistula. The tendency for this age bracket to suffer a high incidence of the fistula is in the fact of the inexperience by being married. It is expected that they should take in, that is to say become pregnant for their husband. It is expected that they have small pelvic bones which naturally limits the size of the birth passage they are yet to understand the task of motherhood and they lack the maturity to understand human anatomy and how it functions.

It is the accumulation of these factors that weigh heavily against the early marriage. According to Kyari (1991), distinguished between sexual maturity according to him can be attained between the age of 12 and 13 but physical maturity is not completed until the age of 18 years.

It is a known fact that many communities especially in the Northern Nigeria and some parts of south-eastern Nigeria gave their daughters out for marriage between the ages of 12 and 13 are usually immature. If they become pregnant and go into labor, the pelvic bones are not fully developed to allow the passage of the baby's heads. Therefore, this result to obstruct labor. According to Amiru (2005), in Nigeria 30percent of vesico vaginal fistula patients were girls who got married between the ages of 12 and 13 years.

2. ***Teenage Pregnancy***

Teenage pregnancy is one of the causes of VVF. This is because the teenager is not mature physically and her reproductive organs are not fully developed especially the pelvic bones. Therefore, the baby's head find it difficult to pass through the birth canal and is sometimes trapped inside, leading to the possible death of the child and sometimes of the mother as well as the situation of obstructed or prolonged labor (Kees, 2005).

3. ***Home Delivery***

Due to culture, tradition and poverty, a large percentage of women in developing countries gave birth in their own homes without any assistance from a qualified birth attendant. There is no one able to identify problems or decide when medical help is needed.

Bako (1998) conducted a research on a number of pregnant women to ascertain those who visited the hospital for either ante-natal care or delivery of their babies. Surprisingly, there are even a high number of women who received ante-natal care at the hospital and yet deliver their babies at home instead of the hospital. He further said those categories of women were rated as constituting 61percent of the overall number of women who delivered their babies at home.

Ironically, among women who opted for home delivery some of them failed in their attempts to successful deliver their babies at home and so rushed to the hospital. According to Dr. Amiru Imanu said in an oral interview have this to say: Home delivery despite its unpleasant consequence can first be attributed to lack of education, second

it is as a result of culture of extreme shyness (kunyan in Hausa language) in which a woman is expected to be naked during delivery. Third it is the religious culture of purder whereby the woman is entirely forbidden from going out of her matrimonial home, especially in the day time except with the permission of the husband.

4. Unfavorable Government Policies:

Bako (1998) and Sambo (1998) said all the direct and indirect causes of fistula may be traced to one unifying source which is bad system of government. While it is true that government doesn't by its own policies go about intacting unfortunate citizens with the VVF. Government cannot exonerate itself from blame for the poor state of health of its citizens on the preponderance of a certain ailment or epidemically afflicting its citizen. Government does not provide appropriate staffing and resources of equitable, adequate, acceptable and affordable quality of ante-natal delivery and family planning services.

5. Ignorance

According to Bako (1998) any government that keeps a teaming populace in ignorance without conscious attempts to provide them with sound education is liable to be blamed for the poor state of health of its citizens.

Myke (1957) mentioned: that ignorance is the major causes of many ailments in the society as ignorant people lack the basic knowledge on how to prevent themselves

from being afflicted with some kind of diseases for instance so many religious and cultural practices that causes some ailments or a function of ignorance of the victims of vesico vaginal Fistula (V.V.F.).

6. Poverty

Poverty and gender discrimination within the family lead to under nourishment and poor physical development particularly of girls in countries where early marriage is the norm many girls became pregnant in their early teens before the pelvic has fully developed. These girls have high risk of obstructed labor leading to VVF or maternal death. The rural dwellers who constitute 65percent of the population are mainly farmers of whom a majority may never rise above the level of subsistence farming to increase their economic base and financial position. (Census, 1991)

Poverty is the state whereby people cannot afford the basic necessities of life such as food, clothing, good shelter, formal education, healthcare etc, poverty is likely to affect the ability to reach a health facility during the obstructed labor, that can eventually lead to V.V.F. often living in rural areas far from healthcare centre, where such people must walk up to about 15 kilometers or there about to reach a medical health facility.

The condition as is more common among the rural poor communities where malnutrition and infection especially in childhood is the watch word, which help in affecting its growth of children resulting in small pelvic bone. (Kees, 2005).

7. Healthcare

Even if obstacles of lack of education and information on the need for healthcare are overcome, many women in developed countries do not have access to medical service due to poor coverage of the primary healthcare network, lack of obstetric care physical isolation or lack of transport where MCH services are not the many women lack funds to pay for medical costs particularly for caesarean section which can be expensive.

According to Sambo (1995) poor communication network causes delay in taking women with labor complication to hospital in good time. Adequate medical facilities should be available as well as full competent healthcare staff.

Above all, its fees charged for Healthcare should be as improved as possible so as to reach out to all segments of the society. Government should provide healthcare free to its citizens especially its young underprivileged pregnant girls.

8. Illiteracy/lack of education

According to Kees (2005) lack of education coupled with the low status and powerlessness of young wives means they rarely use antenatal centers services. Even if services are available girls do not realize the importance of using them and may be inhibited by their own inability or by restriction on their freedom of movement improved by their husbands. The dangers of early pregnancy are often not understood by the girls' health, her husband, her family, her community or even the traditional birth attendant. High risk pregnancies are not therefore identified in time.

Sambo (1998) said that the causes of ignorance among people for the absence of sound modern education such education is achieved through literacy and innumeracy. It is the duty of government to provide compulsory qualitative education to its citizens; particularly at its primary level which at least attract no fees from parents. Where government fails in its duty to provide free education at the basic level, it certainly must take blame. Moreso when the fistula victims appear to be in the majority at tender age. In other words where such parents prefer sending their daughter to only Quranic / Arabic schools, then the government must take active interest in how such schools are ran, so as to assist them financially and designing modern syllabuses for them.

2.9 What is Obstetric Fistula?

According to Bandipo (1998) an obstetric fistula is the breakdown of tissue in the vaginal wall commonly into the bladder. (Vesico Virginal Fistula) it is one of the most degrading morbidities resulting from pregnancy and child birth maternal morbidities as a result of V.V.F. is particularly high in Nigeria out of an estimated 150,000 cases of vesico virginal fistula in Nigeria 70percent occur in Northern Nigeria amongst Hausa/Fulani. He further said that vesico virginal fistula in northern Nigeria are usually in the mini teens that had been at 13 - 13 years of age.

According to (UNFPA 2005B) the World Health Organization (WHO) had estimated that more than 2 million women in developing countries are living with fistula and an additional 50 - 100 new cases occur each year. Vesico virginal fistula (V.V.F.) or (R.U.F.) are problems of under development as such the best solution will be by putting in place appropriate integrated development programme that are commonly based and sustainable. Such approach should be

one that will strengthen the local capacity available to women to improve their health and social environments through the implementation of coordinated model programme. Such programme should include those that addressed the social and economic status of the community as a whole with focus on the girl child education, adult literacy and income generating skills development for women of child bearing age.

Appropriate affordable and accessible health service provision at the grassroots level. Intervention should be such that will integrate the socio-economic aspects of women's health. This approach and also highlighted the contribution that women make to the quality of life within the community.

2.10 Socio-Cultural Factors affecting VVF

The prevalence of vesico vaginal fistula VVF is high but the actual incidence is not known and very little is being done to those patient in developing countries. According Kees (1998), health services are inadequate in area where cases are most prevalent. There is an increase relationship between the number of V.V.F. cases and availability of healthcare services e.g. skilled medical manpower and adequate medical facilities. Though the V.V.F. is preventable it will be prevalent in developing countries with the limited resources.

Therefore, it will remain a major public health problem for many years to come and challenge to future generation.

2.11 Social-Economic Factors

According to World Health Organization (WHO, 1947), It further argues that the standard health hazards such as malnutrition and infertility remains largely what health services are deficient. Ministry for Women in Kano State records (1987) in Kano, Katsina, Sokoto and Kaduna States are the largest percentage with V.V.F. cases.

2.12 Consequences of Vesico Vaginal Fistula

The immediate physical consequences of VVF are urinary incontinence or faecal incontinence due to RUF and related conditions, such as dermatitis. If nerves to the lower limbs are damaged, women may suffer from paralysis of the lower half of the body.

The social consequences for those who suffer from VVF are also severe. Many victims of obstructed labor in which the fistula subsequently occur will also have given birth to still born baby, thus leaving the women childless. If the fistula is not repaired and the woman remain incontinence and childless she is likely to be abandoned by her husband, on whom she is economically dependent. In addition, she may be ostracized by society as being considered to have brought shame on her family. Victims, therefore become social outcasts. Fistula leaves such women physically, emotionally and socially traumatized with no education, no vocational training, no gainful employment or visible means of livelihood. They travel a long road of rejection and pain.

2.13 Reasons for the Rise of V.V.F.

Njoku (2006) said general awareness of accessibility to medical services is much higher in urban centers. Ever rising cost of such services not withstanding it is equally true that the

economic situation in the country has made it exceedingly difficult for most urban poor women to avoid the exorbitant fees for adequate ante-natal cost; consequently when the poor urban women go into labor the tendency is for them to first try to deliver at home where they will pay less amount of money to the (T.B.A.).

According to New Nigeria of 18/1998 page 12, Kensely (1998) attributed the rise in V.V.F. to early marriage and lack of education. He went further to say that the disease which is an abnormal communication between the urinary bladder and the vaginal or uterus and which ends up in continuous wetting, has become a social problem. Parents should allow their daughter to reach 18 years of age before marriage.

2.14 Areas Affected by VVF / RVF in Female Reproductive Organ

Reproductive system is the process of producing young ones, that is from to offspring. The organs associated with the system are bladder, pelvis, rectum, vaginal and the lot. According to Chamberlain (1997) who described the rectum as extending from the level of the third sacral vertebra to a point 2.5cm in front of the coccyx, where it passes through the pelvis floor to become continuous with the anal canal.

Waught and Grant (2001) gave a very description of vaginal as one of the areas affected by the fistula monster. They claimed that the vaginal is a fibro muscular tube lined with stratified squamous epithelium connecting the external and internal organs of reproduction. Chamberlain (1997) further asserts that the average capacity of the bladder is 400m; the bladder is lined with transtial epithelium. The voluntary muscles of its wall are arranged in an inner longitudinal layer and middle circular layer and an outer longitudinal layer.

2.15 Prevention of Vesico Vaginal Fistula

Vesico vaginal fistula (V.V.F.) is old as mankind and has always been a constant source of misery to women affected. Due to constant dripping urine down their legs and accompanying by smell. Most communities consider these women as outcasts.

Kees (1998) said something should be done in order to prevent long term disabilities associated with this horrible disease. Kees in 1999 outlined the following immediate measures to prevent V.V.F.

- Community Education to raise awareness of the risk and reduce the number of teenage pregnancies raises women status and educational level, and increase the use of M.C.H. services.
- The service should include education and training in VVF prevention and care. Avoid prolonged labor especially in the case of young and old women who should always deliver in the hospital and not at home.
- Immediate transportation to hospitals when in labor within 24 hours is very essential.
- Regular ante-natal care, many dangers of pregnancy and childbirth can be avoided if the women go to health centers.

2.16 Prevalence of VVF

Though the obstetric VVF has disappeared from the industrialized world, it is still very prevalent in developing countries. The number of VVF patients is at least 500,000 in the world.

As calculated from an obstructed labour rate of 5 percent and the fact that obstetric unit, the annual incidence rate is estimated at a minimum of 100,000. Through the VVF is preventable, it will be prevalent in the developing countries for many years to come considering the limited resources. Therefore, it will remain a major public health problem for the coming 50 years and a challenge for future generations of surgeons (Chamberlin, 1997).

According to Tanko, 1994 and sambo 1995, it is possible to close the fistula in 93.0% of the VVF patients: with continence and complete resocialization of the patient in 85% and with incontinence of the patient in 8%. It is estimated that there are two million VVF suffer worldwide, with a considerable proportion in sub-saharan Africa. According to Chamberlin, (1997), a large number is also to be found in poor areas of Asia and South America where health facilities are inadequate, transportation systems are poor or absent, harmful traditions exit and women are accorded poor socio-economic status. Medical work on VVF has concentrated exclusively on fistulae repair, which is carried out in specialist hospitals by highly qualified surgeons (Kuti, 2001).

2.17 Facilities and Equipments

Surgical procedures and equipment needs have been well documented by Kuti (2001). Hospitals need a simple operating theater and normal vaginal surgery instrument together with a few addition items. A hydraulic operating table is essential. Natural light can be used although lamps are desirable. Some hospitals catheters to promote spontaneous healing of small fistulae but this is not always practiced. High standards of hygiene, plenty of running water and sufficient space in post-operatives wards is essential (Sambo, 1995). If facilities are not overcrowded (for example, in the Uyo and Kano Hospitals) there is no reason why VVF

treatment could not be carried out in a normal hospital facility rather than a specialist unit (Tanko, 1995; Sambo, 1995).

The specialist hospitals train general doctors in repair of simple fistula, however, few of the trainees go on to carry out repairs in their own medical units due to lack of equipment and facilities. General medical practitioners are often not aware of the possibility of prevention through the use of indwelling catheters. Many VVF suffers need pre-operative rehabilitation to overcome infections caused by the neglected leakage of urine and feaces or to build up their strength, which has been sapped by malnutrition and extended labour. This rehabilitation is often carried out in the VVF hospitals, as women have nowhere else to go. No cure cases where the fistula is too advanced for repair or the patient suffers from permanent incontinence require special rehabilitation, accommodation with access to medical care and alternative means of income generation (Sambo, 1995). The little social rehabilitation work, which has been done, has concentrated on providing alternative for no-cure patients outside their original communities. These include small income-generation or employment projects. There has been no work to help girls regain their self-esteem and reintegrate into their communities after the psychological trauma of being social outcasts and no efforts at community level to promote post – operative care and community support mechanisms.

2.8 Summary

The review of literature on causes and prevalence VVF among Hausa / Fulani women in Kano State, were reviewed under 15 Sub-headings. V.V.F. was identified as a major public health problem in Nigeria because of its severe social, economic, and physical and psychological consequences.

Kees (1989) said the prevalence has been estimated at a minimum of 500,000 (VVF) victims in the world. The prevalence of VVF in the country is between 100-150 - 000 cases. It is estimated that about 70percent of the cases come from the Northern Nigeria which is from Hausa/Fulani speaking areas. The chapter paid attention to the areas such as the concept of VVF, types of fistula, direct and indirect causes of fistula and how to prevent fistula among Hausa / Fulani women in Kano State.

CHAPTERTHREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

The essence of this chapter was to describe the research design, population sample and sampling technique, instrument for collecting the data validity of the instrument, procedure for collecting data and the statistical techniques used in the study.

3.2 Research Design

The focus of this research was to examine the causes, prevalence, effect and adequacy of facilities on VVF among Hausa/Fulani women in Kano State as perceived by respondents of different status. The ex – post – facto research design was used. This design was deemed appropriate due to the fact that no independent variable was manipulated by the researcher. Also, the information required are already with the respondents.

3.3 Population of the Study

The population for this study consisted of all the VVF women at the two (2) VVF centers in Kano State. These patients are victims of vesico vaginal fistula and recto vaginal fistula. The health personnel include the doctors, nurses, health educators and the community members.

The targeted population for the study consisted of those VVF patient who stayed in the hospital and hostel at VVF centers in Kano State. According to fistula survey of 1996 – 2006, the population of patients suffering from VVF was 3,241 and RVF was with the total number of 3,588.

3.4 Sample and Sampling Technique

For the purpose of this study, stratified and Purposive sampling techniques were used. In this technique, the two VVF centers were formed from the strata. Each stratum i.e. the two VVF centers were purposely selected based on the high prevalence cases of VVF. The Medical Doctors, Nurses and Health Education Officers as well as the community members were also selected based on the purposely selected local governments.

3.5 Research Instrument

A researcher developed questionnaire on the perceived causes, prevalence, effects and adequacy of facilities/equipments for treatment of Vesico Vaginal Fistula (VVF) among Hausa/Fulani Women in Kano State was used as an instrument for data collection in this study. A questionnaire is suitable because it is an instrument that can elicit the required information beyond the physical reach of the researcher with the shortest possible time. (Asika, 2001) The questionnaire has six sections.

Section A was based on the demographic characteristics of the respondents which included the Age, level of education, and the status of the respondents was made of six (6) statements. Section B contained nine (9) statements on Causes, prevalence, stigmatization and

evaluation of treatment facilities of VVF 'Section C' contained nine (9) statements on effects of VVF. Section D contained six (6) statements on prevalence of VVF. Section E contained six (6) statements on stigmatization against victims of VVF and section F contained six (6) statements on VVF treatment facilities and equipment. The statements were based on a five-point likert scale.

3.6 Validation of the Instrument

In order to establish face validity of the instrument, it was subjected to vetting by six experts in Health Education and Community Medicine in the departments of Physical and Health Education and Community Medicine of Ahmadu Bello University, Zaria. A final copy was developed based on their inputs and corrections. There was no pilot testing to get

3.7 Procedure for Data Collection

The questionnaire was administered on the respondents with the use of introductory letter signed by the Major Supervisor to solicit the cooperation of the respondents. 2 research assistants were used to help in administering the questionnaire on the respondents. A total number of 300 questionnaire were administered.

3.8 Statistical Analysis Technique

The data collected were computed using descriptive statistics of percentage, mean, and standard deviations. The results obtained were analyzed using a two sample t-test at 0.05 level

of significance (for hypotheses 3) while one-way analysis of variance was used because of the multiple levels of the independent Variables involved (Hypotheses 1, 2 and 4).

CHAPTER FOUR

4.0 RESULTS AND DISCUSSION

4.1 Introduction

Five groups of respondents were involved in this analysis of perceived causes, prevalence, effects and adequacy of facilities for vesico vaginal fistula (VVF) among Hausa/Fulani women in Kano state. The groups were the Doctors who are responsible for the medical treatment, the Nurses in the Hospital, the other health educators in the hospital, the VVF patients, and members of the communities where the patients are. The demographic characteristics of the respondents selected were based on a general selection but in the analysis, specific variables were more associated with certain groups especially age at first pregnancy and place of delivery.

Apart from the demographic characteristics of the respondents which were analyzed in frequencies and percentages, other variables analyzed in relation to the perceived causes, prevalence and effect of vesico vaginal fistula (VVF) among Hausa/Fulani women in Kano State were causes of VVF, perceived prevalence of the disease, stigmatization as part of the effect of VVF and the available facilities for the treatment of the disease in Kano state.

Each of these variables was analyzed using mean scores and standard deviation. The mean scores used in the analysis are based on the five point interval scale. The decision on each of the item was determined with a mean score of 3.5 as the basis for agreement with the expressed notion of the item or variable while mean score lower than 3.5 were regarded as disagreement. In the last two sections of the chapter, the study's hypotheses and discussions of the finding were treated respectively.

4.2 Results

Presentation of Demographic Characteristics of the Respondents

The five groups of respondents involved in the study were Doctors, Nurses, Health educators, the VVF patients and members of the community. The demographic characteristics of the respondents selected for analysis along with their expressed opinion on the causes, prevalence and effects were age, highest level of education, place of delivery, marital status and age at which first pregnancy occurred. A total of 74 VVF patients, 54 Nurses, 30 Doctors, 46 health educators and 38 community members were involved in the study. Table 4.1 showed the classification of the selected demographic characteristics of the groups in frequencies and percentages. The percentage scores are enclosed in brackets along the observed frequencies. In the discussions of the variables, the patients were given much emphasis since they were the subject of the investigation.

Table 4.1: Classification of the respondents by demographic characteristics

Variables	Options	Patients	Nurses	Doctors	Health workers	Community
Age	10-17years	24(32.4)	0(0.0)	0(0.0)	0(0.0)	0(0.0)
	18-21years	26(35.1)	0(0.0)	0(0.0)	5(10.9)	7(18.4)
	Above 21years	23(35.5)	54(100.0)	30(100.0)	41(89.1)	31(81.6)
	Total	74(100.0)	54(100.0)	30(100.0)	46(100.0)	38(100.0)
Education	Quranic	43(58.1)	0(0.0)	0(0.0)	8(17.4)	13(34.2)
	Primary	19(25.7)	2(3.7)	0(0.0)	11(23.9)	6(15.8)
	Secondary	11(14.9)	8(14.9)	1(3.3)	20(43.5)	5(13.2)
	Tertiary	1(1.4)	44(81.5)	29(96.7)	7(15.2)	14(36.8)
	Total	74(100.0)	54(100.0)	30(100.0)	46(100.0)	38(100.0)
Place of delivery	Hospital	37(50.0)	-	-	-	-
	Home	33(44.6)	-	-	-	-
	Not stated	4(5.4)	-	-	-	-
	Total	74(100.0)	-	-	-	-
Marital status	Married	54(73.0)	-	-	-	-
	Separated	6(8.1)	-	-	-	-
	Divorced	11(14.9)	-	-	-	-
	Widowed	2(2.7)	-	-	-	-
	Single	1(1.4)	-	-	-	-
	Total	74(100.0)	-	-	-	-
Age at first pregnancy	Below 17years	18(24.3)	-	-	-	-
	17-20years	32(43.2)	-	-	-	-

Above 20years	24(32.4)	-	-	-	-
Total	74(100.0)	-	-	-	-

From the classification in table 4.1, only VVF patients were found to be within the age bracket of 10 and 17years. This age range accounted for 32.4percent of the patients involved in the study. Patients who were within the age bracket of 18 and 21years were 35.1percent while the remaining 35.5percent were above 21years of age. The other groups (doctors, nurses, health educators and members of the community have the age range of 18 and 21years or above as indicated in the table. Another particular peculiarity among the patients of VVF observed in the study is that most of them are relatively of very low educational background. This is indicated in the table where 58.1percent of them said their highest educational qualification is the Quranic education while 25.7percent said their highest educational qualification is the primary school certificate.

Half or 50.0percent of the patients said their births took place in the hospital and still had VVF due to delayed cesarean sections while 44.6percent of them said they delivered at home but 5.4percent of the patients did not state where they delivered their babies. 14.9percent of the medical personnel said they have secondary education and only 1.4percent had tertiary education. Of the total number of patients involved in the study, 73.0percentsaid they were married, 8.1percent said they were separated from their spouses even though not divorced, while 14.9percent said they were divorced. Only 2.7percent said they were widowed and 1.4percent said they were single. Patients who had their first pregnancy at below 17years of age were 24.3percent while 43.2percent of

them had their first pregnancy between 17 and 20years of age. Only 32.4percent of the patients had their first pregnancy when they were above 20years.

Assessment of the Perceived Cause of VVF among Hausa/Fulani Women in Kano State

Among the major objectives of this study was the identification of the causes of VVF among Hausa/Fulani women in Kano state. The research question formulated to guide this investigation was: What are the causes of VVF among Hausa/Fulani women as perceived by the respondents of different status in Kano state? The scores of the items in Table 4.2 expressed the opinions of the five groups on the perceived causes. Possible differences in opinion are investigated in the related hypothesis. The expressed opinions are scored in means and standard deviation along the five point interval scale.

Table 4.2: Mean scores of the respondents on the perceived causes of VVF among Hausa/Fulani women in Kano State

Causes of Vesico vaginal Fistula	**Mean**	**Std. Dev**
1. Prolong labor causes Vesico Vaginal Fistula	4.51	0.785
2. Early marriage causes Vesico Vaginal Fistula	4.19	0.891
3. Home delivery causes Vesico Vaginal Fistula	3.86	1.071
4. Traditional Birth Attendants causes Vesico Vaginal Fistula	3.71	1.035
5. Carelessness of midwives causes Vesico Vaginal Fistula	3.67	1.026
6. Cultural beliefs of not eating balanced diet causes Vesico Vaginal Fistula	3.43	1.088
7. Financial difficulties contribute to causes of Vesico Vaginal Fistula	3.03	1.443
Aggregate mean score	3.58	1.090

The mean scores in the table indicated that prolonged labor was rated as the highest factor among the causes Vesico Vaginal Fistula among women in Kano state. The mean score for this item is 4.51. The next most perceived cause of VVF is early marriage. This factor was ranked as the second among the causes of Vesico Vaginal Fistula listed in the table. Next in hierarchy of these factors is home delivery which in most cases does not take adequate medical care into consideration. Others of similar but of less effect were the use of Traditional Birth Attendants (TBA) and carelessness on the part of the midwives while taking delivery. Cultural beliefs, lack of nutritional balance and financial difficulties or poverty were not perceived as major factors of VVF among the women in Kano state.

Assessment of the Perceived Prevalence of VVF among Hausa/Fulani Women in Kano State

The second objective of the study was the determination of the perceived prevalence of VVF among women in Kano State. The research question raised to assist this investigation was: Are there differences in the prevalence of VVF among Hausa/Fulani women as perceived by the respondents of different status in Kano State? The items used in this assessment are listed in Table 4.3. The opinions of the respondents on the items were scored in means and standard deviations in Table 4.3 along the five point interval scale used in the study.

Table 4.3: Mean scores of the respondents on the perceived prevalence of VVF among Hausa/Fulani women in Kano State

Prevalence of Vesico vaginal Fistula	Mean	Std. Dev
1. Cases of Vesico Vaginal Fistula are commonly evident in my locality	3.31	1.274
2. Most victims of Vesico Vaginal Fistula are from rural areas	3.65	1.154
3. Most Vesico Vaginal Fistula cases are not often reported to hospitals for treatment	3.63	1.078
4. Cases of Vesico Vaginal Fistula are related to lack of knowledge about the problem	3.48	1.162
5. Knowledge of Vesico Vaginal Fistula makes the victims to be aware of the problem	3.56	1.107
6. Ignorance about Vesico Vaginal Fistula escalate the occurrence of the problem	3.47	1.345
Aggregate mean score	3.52	1.87

ndents were of the opinion that most the vesico vaginal fistula cases are not often reported to the hospitals for treatment and that the disease is very common among Hausa/Fulani women in rural areas in Kano State. These are indicated in item3 and 2 of the table respectively. But Most of the respondents did not agree that the disease could be said to be common in their localities. This could be due to the fact that most respondents were selected in the hospitals which in most cases were in urban setting in Kano State. From the aggregate mean score of 3.52, it could be said that the respondents agreed that the prevalence rate of VVF among Hausa/Fulani women in Kano State could be high.

Assessment of Perceived Effects of VVF among Hausa/Fulani Women in Kano State

The third objective of the study is the assessment of the effects of VVF on Hausa/Fulani women in Kano State. The research question raised in this connection is: What are the effects of VVF among Hausa/Fulani women as perceived by the respondents of different status in Kano State? Among the effect assessed in this section is stigmatization, the psychological effect of VVF on Hausa/Fulani women in Kano State. The rejection and social interaction resulting from the disabilities and other negative effect on the patients. The items used for the assessment are scored in means and standard deviations in Table 4.4 along the five point interval scale.

Table 4.4: Mean scores of the respondents on the perceived effect of VVF on Hausa/Fulani women in Kano state

Effect of Vesico vaginal Fistula on patients	Mean	Std. Dev
1. Vesico Vaginal Fistula makes husbands to divorce their wives	3.58	1.481
2. I isolate myself because people stigmatize me of vesico vaginal fistula	3.26	1.205
3. Parents eject victims because of vesico vaginal fistula	2.33	1.217
4. Vesico vaginal fistula causes everyone to hate the victim	2.62	1.095
5. Because of shame victims cannot travel to anywhere	3.16	1.188
6. Nobody comes near the victim because of smell of urine and stool	3.10	1.424
Aggregate mean score	3.01	1.268

The most outstanding effect that had a consensus agreement among the respondents in the table is the result in which some husbands divorced their wives suffering from VVF. The lower mean score observed for the effect of VVF in the table could be associated with the fact that all the respondents involved in the study could not possibly comprehend the enormity of the effects suffered

by such victims. This would be address when the related hypothesis relating this variable is tested. This will unveil the possible difference in the opinion of the actual patients and the other groups of respondents whose opinion may have becloud that of the victims.

Assessment of the Facilities/Equipment for the Treatment of VVF Patients as Perceived by Respondents of Different Status in Kano State

The fourth objective of the study was aim at the identification of the available facilities in the respective health care centers for the treatment of patients of VVF in Kano State. The research question formulated to assist in the investigation was: Are there differences in adequacy of facilities for VVF treatment as perceived by the respondents of different status in Kano state? The opinion of the respondents on the required facilities for the treatment of patients with VVF in Kano State are scored in means and standard deviations in Table 4.5

Table 4.5: Mean Scores on perceived adequacy of facilities/equipments for treatment of VVF women in Kano State

Facilities for treating vesico vaginal fistula	Mean	Std. Dev
1. There are available Vesico Vaginal Fistula treatment facilities in hospitals in Kano state	3.87	1.242
2. Facilities and equipment of Vesico Vaginal Fistula treatment are easily	3.71	1.261

accessible in Kano state		
3. There are suitable location of Vesico Vaginal Fistula treatment facilities and equipment in Kano state	3.95	1.067
4. Most of the Vesico Vaginal Fistula treatment facilities in Kano State are standard	3.30	1.196
5. Vesico Vaginal Fistula treatment facilities and equipment are properly utilized in Kano State	3.50	1.079
6. There is proper supervision of Vesico Vaginal Fistula treatment facilities and equipment in Kano state	3.51	1.223
Aggregate mean score	3.64	1.178

The score for item 1 in the table clearly indicated that the available facilities in the various hospitals in the state could not be considered adequate for the treatment of Vesico Vaginal Fistula patients. This is affirmed by the respondents in the second item in the table where respondents were of the opinion that facilities and equipment for Vesico Vaginal Fistula treatment are easily accessible. In item 4, the respondents disagreed with the opinion that the available facilities/equipment for the treatment of women with VVF in Kano State were up to standard. This implied inadequacies and inaccessibility of the available facilities and equipment in the state. Coupled with the inadequacies, is the accessible location of centers for patients with VVF in Kano State.

However, the respondents agreed that the existing facilities/equipment for the treatment of women with VVF were properly utilized in hospitals/VVF centers in Kano State. This is indicated with a mean score of 3.50 for item 5 in the table. In item 6, the respondents were of the opinion that there were adequate supervision of Vesico Vaginal Fistula treatment facilities and equipment in the hospitals/centers where they existed in Kano State. From the aggregate mean score of 3.64, the

respondents could be said to have agreed with the need for more adequate facilities for treatment of women with VVF in Kano State.

Test of Hypotheses

Four null hypotheses were formulated for this study for establishing possible difference in the opinion between the different groups of respondents on the causes prevalence, effects and adequacy of facilities / equipment as perceived by the respondent of different status on VVF women in Kano State. These hypotheses were tested as follows:

Hypothesis I:

There is no significant difference between the respondents of different status in their perception of the causes of vesico vaginal fistula among Hausa/Fulani women in Kano State.

This hypothesis was tested with the mean scores of the respondents on the perceived causes of VVF assessed in Table 4.2. To test the hypothesis, the one way analysis of variance was used because of the multiple levels of the independent variable (status of respondents). The status of the respondents was explained in the presentation of the demographic characteristics. The result of the analysis of variance model is summarized in Table 4.6.

Table 4.6: One way analysis of variance on the causes of VVF among women in Kano State by status of the respondents

Source	Sum of Squares	DF	Mean Square	F	Sig.	Decision
Between Groups	.966	4	.242	.605	.659	Not Significant
Within Groups	94.607	237	.399			
Total	95.573	241				

F-critical = 2.37, (P > 0.05)

The result in the table revealed that the respondents did not differ significantly in their opinion on the causes of VVF among women in Kano State. This is indicated with an observed F-value of 0.605 and observed level of significance of 0.659 (P > 0.05) in the table. The mean scores by the different groups of respondents on the causes of VVF among women in Kano State is presented in Table 4.7.

Table 4.7: Mean scores of the respondents on the causes of VVF among women in Kano State

Status of respondents	N	Mean	Std. Deviation	Std. Error
Patients	74	3.5661	.56211	.06534
Nurses	54	3.5679	.70856	.09642
Doctors	30	3.6481	.54518	.09954
Health workers	46	3.6643	.70292	.10364
Individuals in the community	38	3.4678	.61684	.10006
Total	242	3.5799	.62974	.04048

The mean scores in the table are all within the same range and within the agreement bracket of the five point scale used in the study. This accounted for the no significant observation in the test. By this development, the hypothesis that there is no significant difference between respondents of different status on the causes of VVF among women in Kano state is therefore rejected.

Hypothesis II:

There is no significant difference between the respondent of different status in their perception on the prevalence of vesico vaginal fistula among Hausa/Fulani women in Kano State.

The prevalence of VVF among women in the state was assessed in Table 4.4. In the test of this hypothesis, the opinion of all the groups was compared using the one way analysis of variance. The one

way analysis of variance was used because of the multiple levels of the independent variable (Statuses of respondents). The result of the test is summarized in Table 4.8.

Table 4.8: One way analysis of variance on prevalence of VVF among women in Kano State by status of the respondents

Source	Sum of Squares	DF	Mean Square	F	Sig.	Decision
Between Groups	20.272	4	5.068	6.923	.000	Significant
Within Groups	172.761	236	.732			
Total	193.033	240				

F-critical = 2.37

The result of the test revealed significant difference in the opinion of the respondents with respect to the prevalence of VVF among women in the state. In the test, the observed F-value of 6.923 is higher than the critical value of 2.37 at the same degree of freedom and the observed level of significance (0.000) is lower than the fixed level of 0.05 ($P < 0.05$). This means that the null hypothesis that there is no significant difference between the respondents of different statuses on the prevalence of VVF among women in Kano state is therefore rejected. The mean scores by the respondents with the different statuses are presented in Table 4.9.

Table 4.9: Mean scores of the respondents on the perceived prevalence of VVF among women in Kano State

Status	N	Mean	Std. Deviation	Std. Error
Patients	74	3.3196	1.08680	.12720

Nurses	54	3.3735	.86204	.11731
Doctors	30	3.2833	.58255	.10636
Health workers	46	3.6594	.79656	.11745
Members of community	38	4.1184	.51830	.08408
Total	241	3.5180	.89683	.05777

The above mean scores were subjected to a mean separation test to determine the group that was significantly different from the others in the opinion on the prevalence of the disease in Kano State. The Scheffe post hoc procedure was used in the test and the result is summarized in Table 4.10.

Table 4.10: Scheffe procedure on mean scores by respondents on the perceived prevalence of VVF among women in Kano State.

(I) status	(J) status	Mean Difference(I-J)	Std. Error	Sig.
Patients	Nurses	-.05382	.15357	.998
	Doctors	.03630	.18555	1.000
	Health workers	-.33979	.16106	.351
	Members of the community	-.79879(*)	.17115	.000
Nurses	Patients	.05382	.15357	.998
	Doctors	.09012	.19483	.995
	Health workers	-.28596	.17167	.597
	Members of the community	-.74496(*)	.18116	.003
Doctors	Patients	-.03630	.18555	1.000
	Nurses	-.09012	.19483	.995
	Health workers	-.37609	.20079	.478
	Members of the community	-.83509(*)	.20896	.004
Health workers	Patients	.33979	.16106	.351
	Nurses	.28596	.17167	.597
	Doctors	.37609	.20079	.478
	Members of the community	-.45900	.18756	.204
Members of the community	Patients	.79879(*)	.17115	.000
	Nurses	.74496(*)	.18116	.003
	Doctors	.83509(*)	.20896	.004
	Health workers	.45900	.18756	.204

* The mean difference is significant at the .05 level.

From the result of the post hoc test on the means scores, the observed significant difference in the test was between the member of the community and the rest of the respondents except the health workers who held the same opinion with them. Between the Doctors, Nurse and the patients, no significant difference was observed. From the mean scores in Table 4.10, only the members of the community were of the opinion that the prevalence was high in the state. This is expected since most cases were not generally reported to the hospitals.

Hypothesis III:

There is no significant difference between the respondents of different status in their perception on the effect of vesico vaginal fistula among Hausa/Fulani women in Kano State.

This hypothesis was tested with the mean scores of the respondents on the perceived effect of VVF on Hausa/Fulani women in Kano State. in Table 4.4. The other groups (Doctors, Nurses, Health educators and members of the community) were combined as one group for the test of this hypothesis. This is because of the inherent perceived effect of VVF among Hausa/Fulani women which may not be exposed to others who are not directly affected. The result of the test is summarized in Table 4.11.

Table 4.11: Two sample t-test on pattern of life by VVF patients by status of respondents

Status-grouping	N	Mean	Std. Dev	Std. Error	t-value	DF	P	Decision
Patients	74	2.4910	1.15952	.13479	3.989	240	.000	Significant
Other groups	168	3.1012	1.06753	.08236				

t-critical = 1.96

The result of the test, as indicated in the table reveal that the VVF patients were significantly different in their opinion on the effects from what the other groups of respondents perceived it to be among VVF women in Kano State. The observed t-value of 3.989 at a degree of freedom of 240 is higher than the critical value of 1.96 at a significant level of 0. 05. The observed significant level for the test is 0.000 ($P < 0.05$). This means that the hypothesis which states that there is no significant difference between the respondents of different status in their perception on the effect of vesico vaginal fistula among Hausa/Fulani women in Kano State in is therefore rejected.

Hypothesis IV:

There is no significant difference between the respondent of different status in their perception on the adequacy of facilities/equipment for the treatment of vesico vaginal fistula patients in the health care centers in Kano State.

The adequacy of the facilities and equipment for the treatment of VVF were the dependant variable in this test. The independent variable used here did not involve the VVF patients in the study. Their exclusion is based on the fact that they were not in good position to determine the adequacy of the available facilities and equipment for the treatment of the disease because of their limitation in terms of education and other factors as observed in the discussion of Table 4.1. The one way analysis of variance was used because of the multiple levels of the independent variable (Statuses of respondents). The result of the test is summarized in Table 4.12.

Table 4.12: One way analysis of variance on facilities and equipment for the treatment of VVF in Kano State health centers by status of the respondents

Source	Sum of Squares	DF	Mean Square	F	Sig.
Between Groups	29.876	3	9.959	8.167	.000
Within Groups	199.988	164	1.219		
Total	229.864	167			

F-critical = 2.60

The result of the test revealed significant difference in the opinion of the respondents with respect to the adequacy of the facilities and equipment for the treatment of VVF patients in Kano State health care centers. The observed F-value of 8.167 for the test is higher than the critical value of 2.60 at the same degree of freedom and the observed level of significance (0.000) is lower than the fixed level of 0.05 ($P < 0.05$). This means that the null hypothesis that there is no significant difference between the respondent of different status in their perception on the adequacy of facilities/equipment for the treatment of vesico vaginal fistula patients in the health care centers in Kano State is therefore rejected. The mean scores by the respondents with the different statuses are presented in Table 4.13.

Table 4.13: Mean scores of the respondents on the adequacy of facilities and equipment for the treatment of VVF in Kano State health centers

Status	N	Mean	Std. Deviation	Std. Error
Nurses	54	3.0988	1.32763	.18067
Doctors	30	4.3278	.99855	.18231
Health workers	46	3.6393	1.01570	.13005
Members of the community	38	3.4420	.84628	.17646
Total	168	3.5615	1.17322	.09052

The above mean scores were subjected to a mean separation test to determine the group that was significantly different from the others in the opinion on the adequacy of the facilities and equipment for the treatment of the disease in the health care centers. The Scheffe post hoc procedure was used in the test as summarized in Table 4.14.

Table 4.14: Scheffe procedure on mean scores by respondents on the adequacy of facilities and equipment for the treatment of VVF in Kano State health centers.

(I) status	(J) status	Mean Difference (I-J)	Std. Error	Sig.
Doctors	Members of community	-1.22901(*)	.25146	.000
	Nurses	-.54058	.20633	.080
	Health workers	-.34326	.27496	.669
Members of community	Doctors	1.22901(*)	.25146	.000
	Nurses	.68843	.24625	.054
	Health workers	.88575(*)	.30605	.042
Nurses	Doctors	.54058	.20633	.080
	Members of community	-.68843	.24625	.054
	Health workers	.19732	.27020	.911
Health workers	Doctors	.34326	.27496	.669
	Members of community	-.88575(*)	.30605	.042
	Nurses	-.19732	.27020	.911

* The mean difference is significant at the .05 level.

From the result of the post hoc test on the means scores, the observed significant difference in the opinions of the respondents on the adequacy of facilities and equipment for the treatment of VVF in the health care centers was between the members of the community and that of the health workers involved in the study. Between the doctors, Nurses and the health workers, no significant difference was observed in their opinion.

4.2 Discussion

The findings of this study showed that, the causes, prevalence, effects and facilities/equipment for Vesico Vaginal Fistula among Hausa/Fulani Women in Kano State was investigated.. From the analysis of the data and the test of the first hypothesis, it was found that there is no significant difference between respondents of different status on the causes of Vesico Vaginal Fistula among women in Kano State. This finding is in agreement with Kees (1994) who reported, the causes of Vesico Vaginal Fistula among women are prolong labor, early marriage, teenage pregnancy, home delivery and ignorance. The finding agreed with Bandipo (1995) who reported that victims of Vesico Vaginal Fistula (VVF) in Northern Nigeria were mostly in their mid teens. The finding of this study was also in agreement with Ejembi, (1994) and Kabiru (2004), who stressed that prolonged obstructed labour, frequent child birth, traditional birth attendant, malnutrition and inadequate medical attention are the major causes of VVF among women in the Northern part of .Nigeria.

The findings of this study also revealed that the VVF patients were significantly different in their opinion on the prevalence with other respondents in Kano State. This study is in line with the study of Kees (2001), who stated that there is high prevalence of VVF among women in sub-Saharan Africa, which he associated with a direct result of prolonged labour, early child

birth and ignorance. The results of this study further revealed significantly difference in the opinion of the respondents with respect to the prevalence of VVF among women in Kano State. The significant difference however was due to the fact that most cases of VVF were not often reported because they occur in the rural areas of the state. Scheffe's post-hoc test revealed that health workers and members of the community hold different views with other respondents on this problem. This finding is in line with Chuike (1994) who reported that Kano State was listed among the state with the highest prevalence rate of VVF in Nigeria.

The study also found that, the major effects of VVF is the restricted life pattern it imposed on the victims. Apart from social restrictions, the disease often leads to divorce of the victim and stigmatization. This is in accordance with Kyari (1991) that the lifestyle of victims with VVF is mostly stigmatization among the communities they live in. This finding also agrees with Bandipo (1994) who reported that VVF patients were particularly disadvantageous in relation to both socio-economic and educational opportunities.

Results of the study showed significant difference between the patients of VVF and other groups involved in the study on the effects of VVF on victims in Kano State. Victims of VVF expressed higher effect response when compared with the other groups of respondents. This is in line with Ward (1998) who reported that victims of VVF suffered both internal and external psycho-social discrimination in the community.

It was observed that the facilities required for the treatment of VVF diseases were not adequate in the health care centers of Kano State. In the test of the last hypothesis of the study, only the community members involved in the study was of the opinion that the state health care centers have the necessary facilities for the treatment of victims of VVF. But the medical

personnel who are really in the vantage position did not agree with the opinion hence the significant difference observed between the groups in the test.

This finding is consistent with Bako (1998) and Sambo (1998) where the direct and indirect causes of VVF was said to be traceable to bad government policies which tend to make the provision of health care services unaffordable to the users.

CHAPTER FIVE

5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

This study was conducted to investigate the causes, prevalence, effects of VVF on Hausa/Fulani women and adequacy of facilities/equipment as perceived by respondents of different status in Kano State. Literature was reviewed on the variables investigated in the study. An ex-post-facto research design was used for this study and the population consisted of the victims of VVF, Nurses, Doctors, Health Education officers and members of the public in the community. A stratified and purposive sampling technique was used for the study. A researcher developed questionnaire that contained forty two items (42) under six sections was developed, validated and used for the study. The results were computed using descriptive statistics of mean, standard deviations and percentages. While inferential statistics of two sampled t-test and one way analysis of variance were computed. All scores were compared at critical alpha value of 0.05 level of confidence.

The results of the study showed that;

1. The respondents were of the view that prolonged labor, and early marriage were the major factors responsible for VVF among women in Kano state.

2. The prevalence rate of VVF in Kano state could be higher than the known rate because the respondents were of the opinion that most cases were not usually reported in the state hospitals or health care centers.

3. Victims of VVF do not live a normal life because of stigmatization and their rejection in the community. The major effects of VVF on the victims included divorce, restricted socialization and stigmatization.

4. The Facilities and equipment available for the treatment of VVF patients in Kano State health care centers are adequate.

5.2 Conclusion

Based on the findings of this study, the following conclusions were made:

5. Prolonged labour, early marriage, traditional birth attendants and home delivery are the major causes of VVF among the victims in Kano State.
6. Ignorance, lack of knowledge and rural dwelling are among the factors responsible for the prevalence of VVF in Kano State.
7. VVF victims suffer considerable divorce and discrimination in Kano State.
8. It was discovered that VVF treatment facilities and equipments are adequately available and utilized in Kano State.

5.3 Recommendations

Based on the findings above, it was recommended that:

1. Future cases of VVF should be prevented and controlled through a legislation preventing early of marriage.

2. There is need for awareness creation and public enlightenment on the dangers of early marriage, child hawking, the importance of ante natal services, as well as, hospital delivery.

3. Micro-Credit Scheme should be put in place to empower the women economically. This will enable them have access to medical care, and control the issue of non patronage resulting from the high level of poverty, as well as the dependency of women on their husbands and other relations.

4. Government of Kano State should discourage a total withdrawal of girl-child from for the purpose of giving them out in marriage by their parents. This is because of the popular saying that “he who educates a woman educates a nation”.

5.4 Recommendation for Further Studies

Similar research work should be conducted on psycho-social effects of vesico vaginal fistula among women in Kano State.

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Appendix "A"

QUESTIONNAIRE

PERCEIVED CAUSES, PREVALENCE AND EFFECT OF VESICO VAGINAL FISTULA AMONG HAUSA/FULANI WOMEN IN KANO STATE

Department of Physical and Health, Education,

Faculty of Education,

Ahmadu Bello University, Zaria.

Dear respondents,

I am currently conducting research on causes and prevalence of VVF among Hausa/Fulani women in Kano State, in partial fulfillment of the requirement of my Master Degree in Health Education.

I therefore solicit for your assistance by completing the attached questionnaire purposely designed for the study, your cooperation is highly appreciated.

Thanks

Yours faithfully,

Mrs. Jummai Fatima Muhammed

INSTRUCTION

You are required to tick ( ) in the boxes the appropriate.

1. Age group

   a. 10-17 [ ]

   b. 18-21 [ ]

   c. 23 above [ ]

2. Level of Education

   b. Quranic [ ]

   c. Primary [ ]

   d. Secondary [ ]

   e. Higher Education [ ]

3. Place of Delivery

   a. In the Hospital [ ]

   b. At home [ ]

   c. No response [ ]

4. Status

   a. Patient [ ]

   b. Nurse [ ]

   c. Doctors [ ]

   d. Health workers [ ]

   e. Public in the community [ ]

5. Marital Status

   a. Married [ ]

   b. Separated [ ]

   c. Divorced [ ]

   d. Widow [ ]

   e. Single [ ]

6. Age at which you got pregnant

   a. 14 -16 [ ]

   b. 18 – 20 [ ]

   c. 21 above [ ]

SECTION B: Causes of Vesico Vaginal Fistula

		SA	A	U	D	SD
1	Prolonged labor causes VVF					
2	Early marriage causes VVF					
3	Home delivery causes VVF					
4	Traditional Birth attendant causes VVF					
5	Carelessness of midwives causes VVF					
6	Cultural belief of giving birth at home contributes to VVF					
7	Traditional beliefs of not eating balanced diet causes VVF					
8	Inadequate nutrition and proper feeding causes VVF					
9	Financial difficulties contributes in causing VVF					

Section C: Effects of Vesico Vaginal Fistula

		SA	A	U	D	SD
1	VVF causes stigmatization and withdrawal of people from me					
2	Husbands and Friends flee from me because of smell of urine and stool					
3	I live at the VVF centre because people alienate me					
4	Permanent disability renders me socially debased					
5	Her parents and relations reject her because of VVF					
6	Rejection by everyone causes a lot of social trauma to me					
7	Because of shame I cannot interact with people					
8	Vesico vaginal fistula deprives the victims of normal life as a mother or wife					
9	Financial difficulties contributes in causing VVF					

SECTION D: Prevalence of Vesico Vaginal Fistula

		SA	A	U	D	SD
1	Cases of VVF are commonly evident in my locality					
2	Most victims of VVF are from rural areas					
3	Most VVF cases not often reported to hospitals for treatment					
4	Cases of VVF are related to lack of knowledge about the problem					
5	Knowledge of VVF makes the victims to be aware of the problem					
6	Ignorance about VVF escalate the occurrence of the problem					

SECTION F: Vesico Vaginal Fistula Treatment Facilities and Equipment

		SA	A	U	D	SD
1	There should be available VVF treatment facilities in hospitals in Kano State					
2	Facilities and equipment of VVF treatment should be easily accessible in Kano State					
3	There should be suitable location of VVF treatment facilities and equipment in Kano State					
4	Most of the VVF treatment facilities in Kano state are standard					
5	VVF treatment facilities and equipment are properly utilized in Kano State					
6	There is proper supervision of VVF treatment facilities and equipment in Kano State					