UNIVERSITY OF NAIROBI

DEPARTMENT OF SOCIOLOGY AND SOCIAL WORK

SOCIAL CONSTRUCTION AND MANAGEMENT OF MALE INFERTILITY AMONG THE AKAMBA PEOPLE: A CASE OF MUVUTI/KIIMA KIMWE, MACHAKOS COUNTY, KENYA.

BY

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DECLARATION

This research project is my original work and that it has not been submitted to any other college for academic credit.

Signature ……. ……..

Brenda Nduku Oloo Date

Reg. No.: C50/8488/2017

This research project has been submitted with my approval as the university supervisor.

Signed …… Date…..…….

Prof. Charles Nzioka

University Supervisor

DEDICATION

This work is dedicated to my husband Oloo for his love and support. To my children Neema, Amani and Shangwe for their love and understanding. To my Parents Esther and Edward, Nereah and Haggai for their love and their prayers.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS AND ACRONYMS

FGDs	Focus Group Discussions
ICPD	International Conference on Population and Development
KIIs	Key Informants Interviews
KOGS	Kenya Obstetrical and Gynecological Society
MCIDP	Machakos County Integrated Development Plan
NGOs	Non-Governmental Organizations
NRTs	New Reproductive Technologies
TBAs	Traditional Birth Attendants
WHO	World Health Organization

ABSTRACT

The World Health organization, estimates that 60-89 million couples are infertile. Africa has the highest number of infertility rates of between 20%-35%, male factor infertility accounts for 40% of the 60% of all infertility cases. Male infertility rates in Kenya have reached epidemic level yet the gendered nature of infertility obscures male infertility. This is because infertility is socially and culturally perceived as a woman's problem. Hence, the main objective of the study was to establish how male infertility is defined, understood and managed among the Akamba people. The study adopted a cross-sectional research design and a mixed method strategy in data collection. Quantitative data were collected from a randomly selected sample of 210 respondents while qualitative data were assembled from a purposively selected sample of 28 Key Informants. Additional augmentative data were obtained from 4 Focus Group Discussions. Quantitative data were analyzed using Statistical Package for Social Sciences (SPSS) while qualitative data were analyzed using thematic analysis using the QR-NUDIST.

The study found that male infertility is conflated with virility, and that infertile men are deemed weak and less masculine. Infertile men are stigmatized and ridiculed, and infertility is construed as a personal failure and a social failure. Male infertility is also alluded to witchcraft, the will of God, drug abuse, and incompatible blood. Traditional herbs and tying medicinal charms around the waist are the most common methods used to cure male infertility. In addition, a brother or a cousin to the infertile man is expected to sire children for the infertile man with the infertile man's wife as a way of propagating the family of the infertile man. Male infertility is therefore not experienced as a bio medical problem but it is stigmatized and understood as a failure on the part of the man. The study recommends that the Ministry of Health should come up with strategies that incorporate men in reproductive health, and engage in campaigns that aid in debunking the myths associated with male infertility. The study recommends further research on the experiences and coping strategies of infertile men.

CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

Infertility is a reproductive health issue affecting both men and women. The World Health organization estimates infertility rates to be between 60 to 80 million. One in every ten couples are battling infertility (Butler, 2003). Africa has the highest number of infertility cases ranging from 20- 35% (Eze & Okofunua, 2015). It is estimated that 49 – 186 million persons suffer from infertility and that men contribute to more than half of all the cases of infertility (Inhorn, 2015).

Male factor infertility accounts for 40% of the 60% of all infertility cases, it is also associated more with primary infertility than secondary infertility (Araoye, 2003). Ironically, even with this evidence, the gendered nature of infertility has resulted to a marginalized approach, whereby; infertility discourses both indigenous and contemporary focus more on women than men.

Non-Governmental Organizations (NGOs) working in Africa do not prioritize infertility as an area of support, and even when it is acknowledged the focus is on women and girls, men are only seen as contributing to women's health problems (Wentzell and Inhorn, 2014). Academics, health professionals and other professionals have been obsessed with fertility and fertility rates with little focus to infertility and the suffering of the infertile individuals (Inhorn, 1994).

International Conference on Population and Development (ICPD) held in Cairo in 1994 recognized infertility as part of the International public health program, in spite of this there are gaps in; awareness creation and the absence of well documented and implementable action plans (Fathalla, 2007), inadequate training, inadequate infrastructure and poor sensitization of infertility issues (Boivin et al, 2007). Consequently, very little attention has been devoted in addressing male infertility (Irvine, 1998; Lyoyd, 1997).

The interpretation of illnesses is influenced by the social cultural context in which illness occurs (Farmer, 1992). It is important to understand the meaning of a disease and its significance from various social and cultural perspectives (Treichler, 1987). Studies by (Leke, 2002) indicate that the social, cultural and traditional management of infertility have not been well addressed. While, (Greil et al, 2012) argues that beliefs and attitudes attached to health conditions are more salient in infertility in comparison to other illnesses. Kodzi et al, (2012) points out that, it is important to take cognizant of local perception and cultural interpretations when addressing infertility. This is because phenomenon is socially constructed and language and culture play a vital role in forming perception (Blur, 1996).

The magnitude of suffering of an illness is influenced by the cultural meaning attached to the illness (Kleinman, 1988). The social construction of infertility is manifested by the absence of children (Pearce, 1999). The perception that witchcraft causes infertility helps people rationalize their condition as the work of witchcraft hence pursue divination and offer sacrifices to assuage the powers of witchcraft and achieve fertility (Renne,1997). People's perception of infertility is aligned to their health seeking behavior. This explains the persistence of traditional healers and ethno-medicine as a preferred strategy among infertile people (Van Balen & Ihnorn, 2001).

The pronatalist culture of most African societies magnifies the importance of children (Nkunya, 2003). Having children has been identified as the most fundamental reason why individuals enter the marriage institution in the traditional African society (Mburugu & Adams, 2004). A study by Gehard et al, (2014) noted that men who are unable to fulfil their reproductive obligations in the society are not respected and become objects of ridicule. Sekadde, Kigondu et al, (2002) cogently observed that, infertile men suffer from feelings of inadequacy, low self-esteem, psychological torture and frustration.

1.2 Statement of the Research Problem

There exists a knowledge gap in sexuality, infertility and reproductive health matters in Africa (Walraven et al 2001) even though Africa has the highest prevalence rates of infertility (Larsen, 200). Infertility studies have focused largely on women (Savage, 1992) while Studies on male infertility are relative inadequate (Greil, 1997). The information gapon management of infertility must take on board peoples' perception regarding health and disease (Atkinson & Farias, 1995).

Many African communities have ingrained traditional beliefs and these beliefs influence their perceptions, hence there is need to focus on infertility as a socially constructed reality (Greil, 1997). The experience of infertility is influenced by gender and role expectations (Berge et al 1991). The English definition of male is based on the ability to produce spermatozoa and the ability to fertilize ovum, this definition of male based on the ability to procreate is emasculating for an infertile man and poses an identity challenge.

The failure to understand the social and cultural context in which male infertility occurs means that men will be at the periphery of infertility discourses and research. A survey conducted by the Ministry of Health in Kenya in 2005/2006 on the magnitude of infertility in Kenya observed that infertility was a significant problem that affected all communities in Kenya. However, it was noted in the survey that most research work on infertility in Kenya is hospital based and women based ignoring the plight of infertile men and that the social and traditional aspects of infertility have been ignored (M'imunya et al, 2007). The 43rd Kenya Obstetrics and Gynecologist's Association in its annual conference held in February, 2019 observed that male infertility rates are currently at epidemic levels in Kenya, data from Kenya Demographic Health Survey (KDHS, 2014) highlighted Machakos County as being among the counties with declining fertility rates.

There is therefore need for research to be conducted in communities to understand the traditional and cultural management of male infertility as observed below:

> "The social and cultural aspects of infertility including the traditional management have been largely ignored. Little is known about knowledge and perceptions of communities regarding definition, causes and meaning of infertility and how it is managed in traditional settings……. This has resulted in delays in initiating investigation for infertility that have been observed in Africa and in Kenya in particular" (Ministry of Health, 2007).

This observation by the Ministry of Health forms the basis of this study. This study therefore sought to establish the perceptions of the Akamba regarding knowledge and causes of male infertility and how the community manages male infertility in the social and cultural settings.

1.3 Research Questions

The research addressed itself to the following research questions,

i. How is male infertility socially constructed among the Kamba?
ii. What are the perceived causes of Male infertility among the Kamba?
iii. What are the social and cultural implications of male infertility among the Kamba?
iv. How does the Kamba community socially and culturally manage infertile men?

1.4 Main Objective

The main objective of the study was to explore the social, cultural and traditional management of male infertility in the Kamba community.

1.4.1 Specific Objective

The study was guided by the following specific objectives;

i. To understand the social construction of male infertility among the Akamba
ii. To identify the perceived causes of male infertility among the Kamba

iii. To identify the social and cultural implications of male infertility in the Kamba community
iv. To investigate the way in which male infertility is socially and culturally managed in the Kamba community.

1.5 Significance of the Study

The study will contribute significant knowledge on how communities perceive infertility and the social and cultural interventions used to manage male infertility. Such information is relevant in explaining the health seeking behavior of individuals in the society, such as why individuals prefer to consult traditional health systems on infertility matters first, or why individuals consult both traditional and modern health systems concurrently.

Sekkade and Machoki, (2005) opined that, there is a knowledge gap on male and infertility and a knowledge gap on how infertility is managed in the traditional setting hence this study will help to bridge this knowledge gap which is needed so as to have a comprehensive approach in the management of infertility in Kenya.

Previous studies indicate that infertility has socio-psychological and socio-cultural implications (Helman, 2007; Ihorn, 1997; Van Balen, 1995) hence this study will provide knowledge on the social and cultural barriers that impact on infertile persons and that militate against the acknowledgement of infertility as a problem for both men and women and not a problem of women alone. Bringing to light the community's perspectives on male infertility will help to demystify the traditional beliefs associated with infertility hence organizations that deal with infertility matters take on board such perspectives when formulating community strategies targeting infertility matters.

The study will also help community health personnel to come up with ways that incorporate men in reproductive health matters. The study will also help in raising awareness on male infertility which is rarely discussed in many communities because culturally the woman bears the blame of infertility and childlessness (Shobary, 2002). The

findings of this study will help enlighten the society about infertility and this enlightenment may aid in changing the negative perception individuals attach to infertility.

1.6 Assumptions of the Study

The study assumed that male infertility is real, but also socially constructed and experienced in different ways and that the Kamba people have social-cultural beliefs, practices and causes underlying male factor infertility. There is also the assumption that the community has socially meaningful ways and practices of maintaining family stability, protecting the dignity of the infertile male and continuing family lineage in the event of male factor infertility. Even though infertility is a bio medical disease the hypothesis of the study was; there exists significant social and cultural knowledge and ways of managing male infertility.

1.7 Scope and Limitation of the Study

The study is framed within the Kamba patriarchal socio-cultural framework. Within this framework, male fertility is cherished and siring children is a social normative, and anything in the contrary is frowned and despised. Although infertility affects both men and women, the primary concern of the study was male infertility and how it is socially and culturally perceived in the Kamba community. The study focused on how the community defines, understands and manages male infertility. Hence the study was not hospital based and did not target infertility patients. The study was limited to the Kamba ethnic group living in Muvuti/ Kiima Kimwe ward of Machakos County. Even though the study employed both quantitative and qualitative approaches, the study put more emphasis on qualitative data because of the ethnographic nature of the study.

1.8 Definition of Key Terms

Infertility: The inability for an adult male to impregnate a woman or for a woman to conceive after twelve months of unprotected sex.

Involuntary Childlessness: This is a situation where an individual/couple would like to have a child but cannot.

Lay Knowledge: Refers to the ideas and beliefs an individual/community holds regarding a phenomenon, this ideas and beliefs may not be scientific.

Primary Infertility in men: This applies to a situation where a man has never impregnated a woman after twelve months of unprotected sex.

Secondary Infertility: This applies to a situation where a man has been able to impregnate a woman before, but he is however unable to impregnate a woman anymore.

Social Construction: It is how the society perceives and understands phenomenon.

Voluntary Childlessness: This is where an individual/couple choose not to have a child.

CHAPTER TWO
LITERATURE REVIEW

2.0 Introduction

The chapter contains a review of published works by scholars who have done similar work or research relevant to the topic under investigation. The aim of the literature review is to identify gaps in previous research and find ways of bridging the same. The relevance of this chapter is to also identify points of departure and convergence from other scholars who have published literature related to the topic under research.

2.1 The Social Construction of Infertility

Social construction can be defined as ways in which societies define, interpret or the notions they have and the connotations they attach to events and objects in their environment (Steinberg, 2001). It is the society's social reality. The social construction of infertility is influenced by the importance the community attaches to childbearing, and the community's knowledge and attitude towards infertility (Audu et al., 2013).

The scientific construction and social construction of male infertility may be different hence there is need to focus on both while addressing the issue of male infertility. This is because social construction of reality is passed through socialization and social cultural beliefs play a central role in influencing how individuals perceive reality. Infertility may be defined as the inability to bear a child, the inability to bear the desired number of children (Obeisat et al., 2012) or the inability to sire children of a particular gender (Poote, 2009).

2.1.1 Gendered Nature of Infertility

The social construction of male infertility in many cultures exonerates men from the blame of infertility. Male infertility is culturally invisible and according to Barnes, (2014) there is social nervousness when addressing male infertility. Barnes in her research work *Conceiving Masculinity* observed that even doctors shy away from using the term infertility when handling their male clients and instead use jokes and metaphors to describe their condition. Doctors are torn between protecting the masculinity of their male

clients and undoing social myths that assign infertility to women (Barnes, 2014). Most infertility clinics are held in gynecology clinics or housed in maternity buildings whereas most infertility specialists are men trained in gynecology a fact that has entrenched the gendered perspective of infertility and compromised efforts of the few men willing to consult on infertility issues (Hayness & Miller, 2003).

The perception of male infertility in the Yoruba community has been expressed in a Yoruba proverb that says *Ko si agan okunrin* meaning there is no infertile man, (Araoye, 2003). This notion by the Yoruba is widely shared by many traditional patriarchal societies explicitly and implicitly by medical personnel such that many clinicians continue to focus their attention and investigations for infertility on the female (Machoki & Sekadde, 2005)

2.1.2 Global Prevalence of Male Infertility

The World Health Organization estimates that 60-89 million couples are infertile. It is observed that Africa has the highest cases in infertility rates of between 20% - 35%. The United Kingdom at 10-15% and United States of America at 6% (Eze and Okonofua, 2015). Egypt has high infertility rates at 76% (Inhorn, 2003) while Nigeria has 45% (Ikechebelu et al, 2003). There is a general trend of decreased infertility and this has been associated with sperm problems sperm abnormalities and low sperm count (Okonufua, 2003). Studies highlight the seriousness of male factor infertility to be responsible for 40% of the 60% cases of infertility cases. Male factor infertility is associated more with primary infertility than secondary infertility (Araoye, 2003).

Several observations were made at the 43$^{rd.}$ Kenya Obstetrical and Gynecological Society (KOGS) Annual Scientific Conference held in February 2019 regarding the infertility status in Kenya. The first observation was that infertility rates in Kenya have reached epidemic levels. Yet infertility has not been recognized as a disease. The Secretary General of the society pointed out that studies done at the largest referral hospital in Kenya, Kenyatta National Hospital, revealed that three quarters of the gynecological consultations were due to infertility issues. The chairperson of KOGS further observed that there is a

general decline in the average sperm count and raised concerns with the high cost of infertility treatment, shortage of experts and infrastructure.

2.1.3 Challenges in Calculating the Distribution of Male Factor Infertility

There are several challenges in calculating the distribution of male factor infertility around the world as identified by (Agarwal et al, 2015). First is the culture and patriarchal nature of many African societies that impedes on accurate statistics on male infertility. Men in such societies rarely seek medical help for infertility and this leads to underreporting. Second is polygamy and practices such as *Kupindira and Chiramu* in Zimbabwe where the wife of an infertile man can have children with another man. Such practices militate against accurate reporting of male infertility. The fact that infertility has not been recognized as a disease is also a setback back in data collection. Collecting data based on the men who attend fertility clinics can be misleading because the few men who attend fertility clinics are not a representative sample of the population.

2.2 Perceived Social Cultural Causes of Male Infertility

In African traditional societies the meaning of infertility is influenced by beliefs and practices inherent in those societies. The most dominant perception is that infertility has both traditional and religious causes (Gerrits, 1997) Witchcraft, evil spirits and the will of God as the cause infertility in many African societies (Tabong & Adongo, 2013).

In West African, in the traditional Ghanaian society, the most common causes of infertility have been identified as; voodoo, curses by ancestors' evil spirits and witchcraft (Richards, 2002, Yebei, 2000). A similar belief in West Africa is held by the Nigerians who belief that *juju* is to be blamed for infertility (Nieuwenhuis et al, 2009). In southern Africa, in Zimbabwe, the Shona tribe attribute *uroyi* witchcraft, *vadzimu* unhappy ancestors and unsettled disputes to male infertility (Moyo & Muhwati, 2013). In the Southern East Coast of Africa, the Macua of Madagascar believe that a witch can use pubic hair to make and individual infertile (Greil et al, 2010). In East Africa, the Luo of Kenya believe that a witch *janawi*, aggrieved ancestors *juogi* and unsettled disputes cause infertility (Odek, 2017).

Other causes of infertility in other parts of Africa are; a dirty womb, incompatible blood, weak sperms (Dyer et al, 2004). Marriage in the African traditional societies is exogamous, this is because it is believed marriage between close relatives causes infertility (Odek, 2017). Consanguineous marriages increase the chances of passing on genetic conditions (Bittles & Matson, 2000). Consanguineous marriages put men at a risk of male infertility (Thomas & Jamal, 1995). Physical characteristics such as body size are attributed to both male and female infertility such as being slim, being too fat, not breaking voice for men (Sekadde & Machoki, 2005).

2.2.1 Perceived Religious Causes of Infertility

The Medieval European churches held different views on infertility. Some perceived infertility as a punishment from God (Oren-Magidor, 2016) while others felt it was a malediction that needed to be borne in grace and overcome through prayer, there was the view that children are blessing from God and therefore being infertile was a Curse from God. And there was the perception that infertility was caused by God and witchcraft (Evans, 2012). Potions and incantations were also seen as possible causes of infertility and casting out the devil who is responsible for infertility was done through prayers. (Origo, 1986). In the medieval Europe some of the interventions sought by Christians included; drinking holy water, calling the virgin three times and wearing a belt with prayers written on it (Crabb, 2015).

In the Muslim religion, the Qur'an states that children are gift from Allah and its Allah who gives both male and female children, it is also Allah who leaves others barren (The Qur'an 42.49-50). Infertility is therefore viewed as caused by the will of God. These religious perspectives mediate the meaning of infertility and influence an individual's help seeking behaviour. Since infertility is seen by most religions as having a divine cause. Petitioning the divine is the preferred solution for infertility (Mc Vaugh, 1993).

2.2.2 Infertility Risk Factors for Men and Scientific Causes of Male Infertility

There are factors that predispose men to infertility according to the University of California, San Francisco, health website. These factors can be categorized into four categories; the first category is, physical factors such as increased temperatures, the second category is chemical factors, such as excessive use of alcohol, cocaine, marijuana, cigarette smoking, the third category is occupational such as accidents, pesticides, heavy metal etc. and the fourth category is lifestyle such as poor diet and stress (UCSF, 2019)

According to the Urology care foundation website, the causes of male infertility are; (i) Sperm disorders, (ii) Varicoceles , these are swollen veins in the scrotum (iii) Retrograde ejaculation a condition where sperm goes back to the bladder instead of going out through the penis (iv) Immunologic infertility this is a rare cause of infertility where the body makes antibodies that attack the sperms (v) Hormones, low hormones can inhibit the growth of sperms (vi) Chromosomes, changes in DNA that interfere with fertility and (vii) Medication, some medications interfere with the production, function and delivery of sperms (Urology Care Foundation, 2019).

2.3 Social Cultural Implications of Male Infertility

Infertile persons experience difficulties during social networks, especially around friends and family who have children. Well-meaning but mean remarks often renders communication difficult in social gatherings such as birthday parties (Greil 1991, Schmid, 2006). In social events infertile persons suffering from involuntary childlessness are confronted with questions such as; when are you naming us? What are you waiting for? Among many other questions.

While studying the impact of infertility on infertile men and women in Ibadan, Nigeria (Nieuwenhuis et al, 2009) reported that society exerts a lot of pressure on married couples to have children, and when couples are perceived to have delayed having a baby derogatory names are hurled at them such as; witch, empty baskets, such names are humiliating. Social pressure mounted on couples experiencing infertility is such that they are supposed to do anything to get a child including visiting traditional healers even if it

goes against their faith or personal beliefs. This study further observed that the psychological turmoil that infertile men and women undergo is usually caused by the social consequences that they face. The social impact on infertility was ranked as the first and the most difficult to navigate by infertile persons, followed by the psychological and economic.

Infertile individuals are stigmatized and socially isolated (Gerrits, 2002, Kleiman, 1998) this is because childlessness in the traditional and many cultural settings is associated with witchcraft and an evil eye (Meyer, 1994). Childless persons are not welcome in events such as childbirth, marriage or rites of passage (Gerrits, 2002). A Kamba song *Ngungu na Muoi* translated a barren woman and a witch sang by a famous Kamba musician, 'Kakai Kilonzo and Les Kilimambogo brothers' available on You tube, argues that both a barren woman and a witch share a common goal. That they do not wish people well, and they do not wish others to acquire anything.

Among the Yoruba a home is only a home if there are children. Homes without children are rarely visited in the Yoruba community (Araoye, 2003). Isolation also occurs during the performance or non-performance of some traditional rites, for example, among the Luo of Kenya a childless person is buried away from the family grounds, so that the infertility spirit does not afflict the family of the deceased and get passed on to another member of the family (Denga, 1982; Odek, 2017).

Inhorn (2005) observes that in the Middle East and other societies there is a lack of differentiation between infertility and virility and thus men who are infertile are labeled as impotent or homosexuals. Half the fertile men interviewed in Uganda in a study by Fisher et al, (2012) said that they would rather have HIV than be infertile. These men argued that when one has HIV/AIDS, they can still sire children but when one is infertile, they cannot have children, hence cannot be remembered. Male infertility is viewed as having more serious consequences than HIV/AIDS.

2.3.1 Economic Implications of Infertility

In African traditional societies children provide labour, they help to take care of younger sibling and elderly parents. Those who do not have children are economically disadvantaged. The lack of children means that one will not have social and economic support (Van Balen, 1995). The second economic disadvantage emanates from the cost of pursuing fertility treatments which are very often out of the rich of the low- and middle-income earners and in poor resource areas in third world countries (Ihnorn and Van Balen, 2002).

2.3.2 Social Cultural Significance of Children

The value attached to childbearing and parenthood is stratified across cultures and societies. The epitome of an African marriage is procreation, and parenthood is normative. In western developed societies to have or not have a child is considered a personal choice while developing societies having children is of cultural and social significance (Hsu & Kuo, 2002). Perceptions, attitudes and consequences towards voluntary and involuntary childlessness differs from society to society (Bruce, 2009).

Children in the African traditional society are a source of pride and a proof of manhood and womanhood (Christensen, and Holstein, 2005). The main and the most important goal for men in patrilineal societies is to sire sons and continue their lineages (King & Linda stone, 2010) Men who do not meet this important social obligation are viewed negatively as inferior and unproductive (Van Balene & Gerrits, 2000). Africans believe in the living dead and having someone to carry a name is important, children are named after departed relatives. However, for an infertile man it means they have no one to carry their name, hence when they die, they are not remembered (Nzioka, 2000).

Having children signifies full development of a Person, this is according to a study conducted on Rural Northern Ghana by (Fortes, 1978) the ramifications of this view is that an infertile person is not a fully developed person. Adulthood in the African culture is attained through having biological offspring, those without children are perceived to be children. There is a certain amount of respect associated with childbearing as reported in

a study done in Cameroon (Johnson Hanks, 2006). Children are a source of labour, older children assist in educating their younger siblings and taking care of their elderly parents. Children aid in intergenerational flow of wealth (Caldwell, 1976).

Ihnorn and Van Balen (2002) summarized the significance attached to children into three. The first reason is that children are social security; they help in taking care of their young siblings and their elderly parents. The second reason is that children are a source of power especially for women in patriarchal societies. Lastly children are important for continuity of society and for linking past and future generations. The importance of children has been highly magnified by religious beliefs that speak in favor of parenthood. Motherhood and fatherhood are viewed as a mark of correct spiritual standing (Caldwel & Caldwell 1987:421).

2.3.3 Experiencing Male Infertility

The Oxford English Dictionary defines male as the sex that produces spermatozoa that can fertilize female gametes to produce offspring. This definition poses a challenge to the identity of men who are incapable of begetting offspring. Associating the definition of male with ability to procreate affects the identity of man (Nahar, 2007). This is confirmed by feelings of infertile men in America who participated in a research done by (Web and Daniluk, 1999). Some respondents felt that they were not real men, words like; am a failure, defective, garbage *inter alia* were used to express their feelings.

Other studies have confirmed that infertility causes emotional and psychological distress, marital strife and difficulties in interpersonal relationships (Greil, 1991). In a different study in Israel infertile men expressed feelings of embarrassment and anomie others felt that if their condition is exposed then they may become subjects of ridicule (Carmeli & Birenbaum, 1994). In an interview with infertile men (Sherrod, 2006) found out that, infertile men avoid disclosing their condition to protect their dignity and cushion their partners from suffering. Dudgeon and Inhorn, (2003) concluded that infertility is humiliating and emasculating to men and is more stigmatizing for men than it is for women,

they further argued that men conflate infertility with virility, and this attracts feeling of inadequacy.

Grief and feelings of sadness are universally reported among infertile person (Greil 1997, Van Balen and Inhorn, 2002). Because both men and women may grow up believing that they are fertile, it is shocking when an individual is confronted with the reality that they are incapable of having children. Involuntary lack of biological offspring attracts feelings of low self-esteem (Dyer et al, 2004). Previous studies on male infertility have identified a link between infertility and feelings of stress, psychological problems and hostility (Abbey et al, 1991).

It is also noted that men without children due to male factor infertility suffer from poor mental health compared to men with children and that men who desire to have children and are incapable of having as a result of male factor infertility suffer from feelings of grief and a chronic state of sorrow (Fisher et al, 2010). These consequences may differ from society to society and may be aggravated by cultural significance attached to having children.

2.4 Social Cultural Management of Male Infertility

Infertility is socially constructed, and culture plays an important role in shaping ideas in a society. Culture distinguishes members of one society from others (Hofstede, 1994) Culture consists values, beliefs, attitudes and behaviors which are passed from generation to generation (Maisumoto, 1996). Present beliefs and practices regarding male infertility have a cultural frame of reference.

Information on a WHO bulletin titled "Maasai seek safer solutions to infertility" confirmed that infertility is not a new phenomenon among the Maasai. If a woman failed to conceive among the Maasai the husband allowed her to have sex with other men but the children born out of such unions belonged to the husband and not the men who sired them, similar practices have been found among the Luo, Kikuyu (Kamau, 2011) and the Nandi community (Odek, 2017).

Moyo and Muhwati, (2013) identified social cultural methods used to manage male infertility among the Shona such as; traditional medicine, rituals and *Kupindira* this was a tradition were a wife of the infertile man would be allowed to sleep with the husbands' young brother or nephew to sire children. The children born out of this arrangement would belong to the husband and not the biological father.

A study carried by Inhorn in Egypt revealed that many men suffering from infertility dared not reveal their condition to anyone for fear of being labeled "*ana mish raagil*" meaning "I am not a Man". For such men secrecy is key in managing their condition. In Nigeria Male infertility is considered as a taboo that ought to be handled discreetly to protect the dignity of the man (Larsen, 1995) Some women married to infertile men prefer to pass themselves as the ones who are infertile to cover for their husbands and maintain family stability (Ihnorn, 2003b).

Superstitious and traditional beliefs shape the community's and individual perception of infertility. It is imperative to note that as long individuals and societies socially construct infertility as the work of supernatural deities, they will consequently pursue remedies in tandem with their beliefs. Such beliefs are the reason why traditional remedies and other non-biomedical remedies are most preferred when dealing with infertility as reported by (Machoki & Sekadde, 2005).

Because of the way in which male infertility is perceived. Despite the great advancement in modern medicine, traditional medicine is given priority by individuals seeking treatment over modern medicine (Okonofua, 1996, Nahar, 2007). This is because these traditional interventions relate with the traditional perceived causes of infertility (Mariano, 2004). For example, where an individual believes they are cursed by their ancestors, they will perform rituals to appease their unhappy ancestors. The other reason why traditional interventions are preferred over modern medicine and technology in infertility intervention, is because male patients are required to perform tests that might label them as infertile (Nahar, 2007).

2.5 Theoretical Framework

Theory helps in understanding, describing and predicting phenomena. The study will be guided by two theories; Connell's Hegemonic masculinity and symbolic interactionism theory. These theories are important in explaining how individuals respond to and interact with their condition.

2.5.1 Hegemonic Masculinity

Hegemonic Masculinity is a sociological gender theory postulated by Connell R. (2005) the theory draws from Gramsci's cultural hegemony theory that looks at how power is exercised in a society. The theory has roots in feminist's theory that explains the dominance and subjugation of women by men. The core argument of the theory is that hegemonic masculinity defines a 'real man'. Masculinity is about domination and power (Connell, 2005). Hegemonic Masculinity is the epitome of masculinity that exudes confidence, strength, achievement and success. Hegemonic masculinity rejects any form of weakness and failure and forbids men from exhibiting any attribute considered feminine. This theory is important in explaining male infertility because infertility demeans masculinity (Griel et al, 2012). Infertility goes against what is expected of an ideal man. The social construction of infertility therefore attracts feelings of failure, despair and social stigma.

There exist cultural stereotypes of manhood in many societies to which men in those societies try to emulate (Rogozen-soitar, 2009). These stereotypes are set bars that every man must meet; for example, patriarchal culture expects that a man will produce biological family and establish a family lineage. Any man deviating from the norm is seen as transgressing hegemonic masculinity and is construed as abnormal. Infertility threatens the self-identity of a man and his social standing. Masculinity like Gender is a response to an individual's cultural and structural situation (Mead, 2011).

The traditional Kamba set up consist of clans and these clans are made of families, continuing family lineage and becoming an elder is dependent on fathering biological offspring's and sons to a larger extend. And because the Kamba community is patrilineal

men's hegemonic goals are to produce sons and establish patriarchal power. Linda, (2010) argues that continuing patriarchal power is the hegemonic requirement of every man in patrilineal culture.

In summary according to this theory an infertile man is not a real man because they have failed in the most fundamental role of procreation. Hegemonic masculinity is synonymous with power and achievement hence infertile persons are deemed as failures who do not meet the ideal man created by hegemonic masculinity. Consequently, an infertile man must find new ways of living out their maleness divergent from cultural stereotypes. The theory is not without criticism, the theory is critique for being ambiguous in failing to define who represents hegemonic masculinity (Whitehead & Stephen, 2002) further it fails to define who a hegemonic masculine man is. (Brod, 1994) it is further noted that Connell in explaining hegemonic masculinity failed to take cognizant of women and call for a gender relational approach when analyzing masculinities. It is also disturbing to note that hegemonic masculinity associate's men with negative characteristics such as aggressiveness and unemotional and fails to highpoint positive characteristics needed for men to be fathers (Coler, 1998). However, the theory helps in explaining infertility in the social cultural context because men are supposed to conform to cultural stereotypes of masculinity.

2.5.2 Symbolic Interaction Theory

This theory was founded by Mead (1863-1931) and advanced by Blumer (1969). The theory seeks to explain how individuals in a society relate and interact with each other using language and symbols. The basic argument of symbolic interactionism is that the social world acts on individuals (Reynold, 1994). The social environment influences the behavior of individuals and defines roles expected of the individuals. This theory is important in explaining infertility because much of what happens in an infertile person's life is influenced by the social environment the individual lives in and the importance attached to procreation.

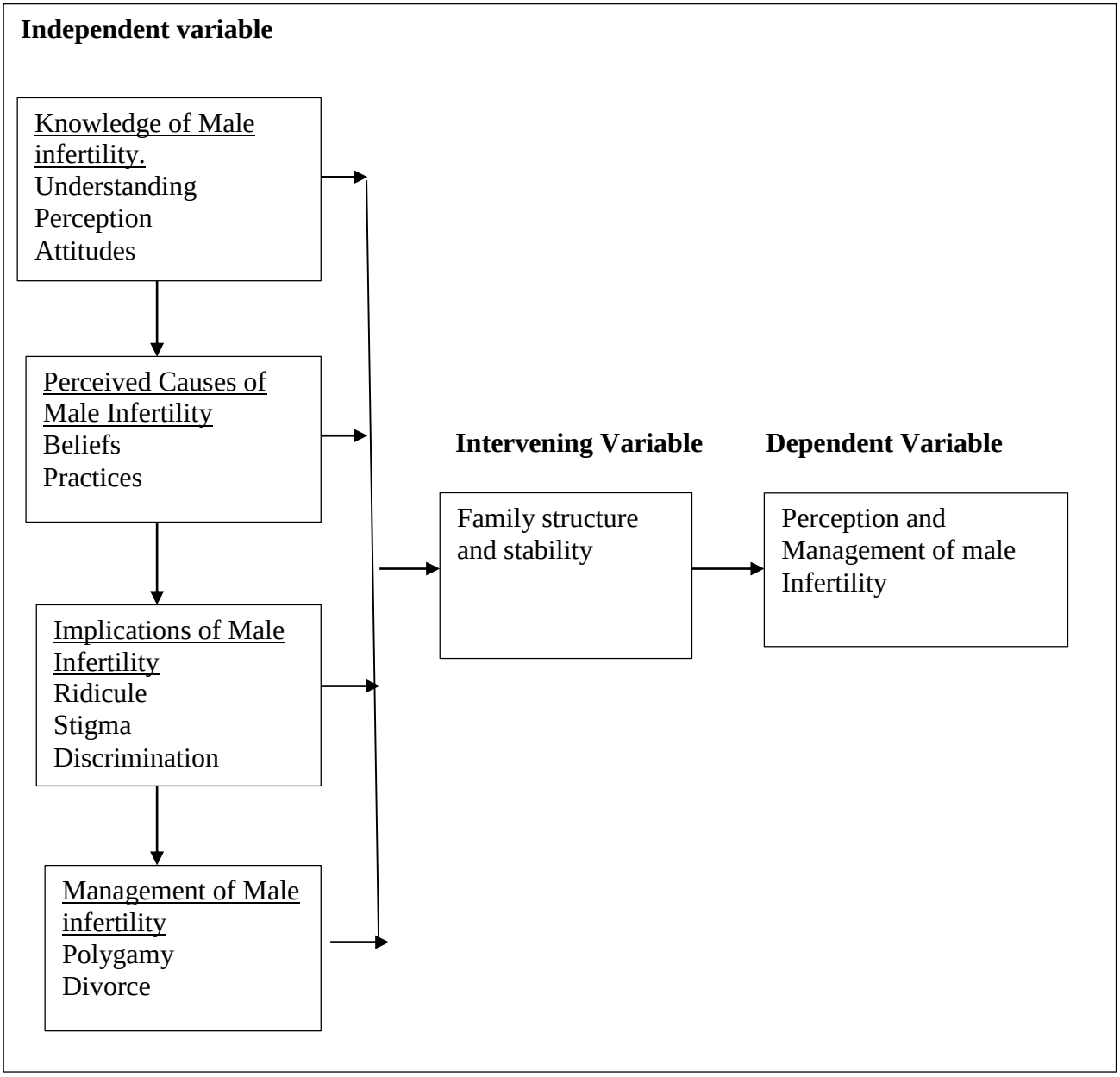
Human interactions are based and shaped by the meaning and interpretations assigned to things and circumstances (Blumer, 1969). The value and meaning attached to biological offspring in a society will influence how the society interacts with an infertile person. Much of the psychological and mental anguish that infertile persons experience is as a response to the social environment. Feelings of meagerness and failure emanate from the meanings and value attached to family continuity through procreation. This is so because social construction of the society defines gender roles (Griffin, et al, 2015) in a pronatal patrilineal society it is the norm that a man will procreate and continue the family lineage, the meaning attached to maleness is conflated with the ability to bring forth offspring. The theory has a weakness of focusing on the immediate environment of an individual and tends to ignore the role of macro-level structures (Audu et al, 2013). Technology, education and Macro- level institutions have a role to play in infertility matters.

Hegemonic masculinity and symbolic interaction theories will guide the study in understanding how infertile persons relate with an emasculating condition and how he navigates the social world of hegemonic masculinity that is magnified by cultural and social stereotypes. The theories will help identify the meaning that individual and society attach to those who do not transcend societal norms. Further, it will shed light to the use of language and symbols in the social cultural world in relation to infertility. And how these language and symbols impact on the individual who is infertile.

2.6 Conceptual Framework

The conceptual framework of the study focuses on the main objective of the study by identifying the variables that form the social construction of male infertility. The conceptual framework illustrates variables that influence male infertility in the community. The level of knowledge on male infertility is influenced by the understanding and perception inherent in the community regarding male infertility. Based on held knowledge, the community has perceived causes of male infertility mediated by commonly held beliefs and practices such as witchcraft which in turn influences how infertile persons are treated socially and culturally. The community therefore has social and cultural ways of managing male infertility so as to maintain family structure and stability and ensure continuity of family lineage.

Figure 2.1 Conceptual Framework. Source, (Author, 2019)



2.7 Summary of Literature Review

From the literature reviewed infertility is a biological, psychological and social condition that causes serious psychological and social distress among couples and the person affected. Literature reviewed also alludes that infertility is stratified across regions and even within regions. Infertility is experienced differently in advanced societies than in developing societies. But even in advanced societies there are minorities who still experience difficulties in navigating infertility due to the cost of infertility treatment.

It is also evident from previous studies that infertility is more hidden in advanced societies because of the acceptance of child free life which is gaining popularity in advanced societies. Most studies reviewed agree that infertility is viewed more negatively in developing nonwestern societies. The value attached to biological offspring in patrilineal societies is immense hence the consequences of infertility vary from society to society.

There are gaps that are glaring in most of the studies because most of the studies reviewed focus on women's infertility problem and very few studies have attempted to look at the social construction of male infertility and how society interprets male infertility. Interventions on infertility are women oriented such as men taking more wives. This study seeks understands how the Kamba community understands male infertility, identify what the community seeks to be causes of male infertility and how the community socially managed male infertility to ensure stability of the family and the community at large.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

The chapter describes the methodology that was employed in the study. It discusses the way the research was carried out. Maina, (2012) defines methodology as the "analysis of principles of methods, rules and postulates employed in a discipline". Methodology is the theory of methods that guide the researcher on the way in which to conduct the study (Kothari, 2005). The chapter outlines the site description, the study design, the sample and sampling techniques and discusses in detail how data was collected and analyzed.

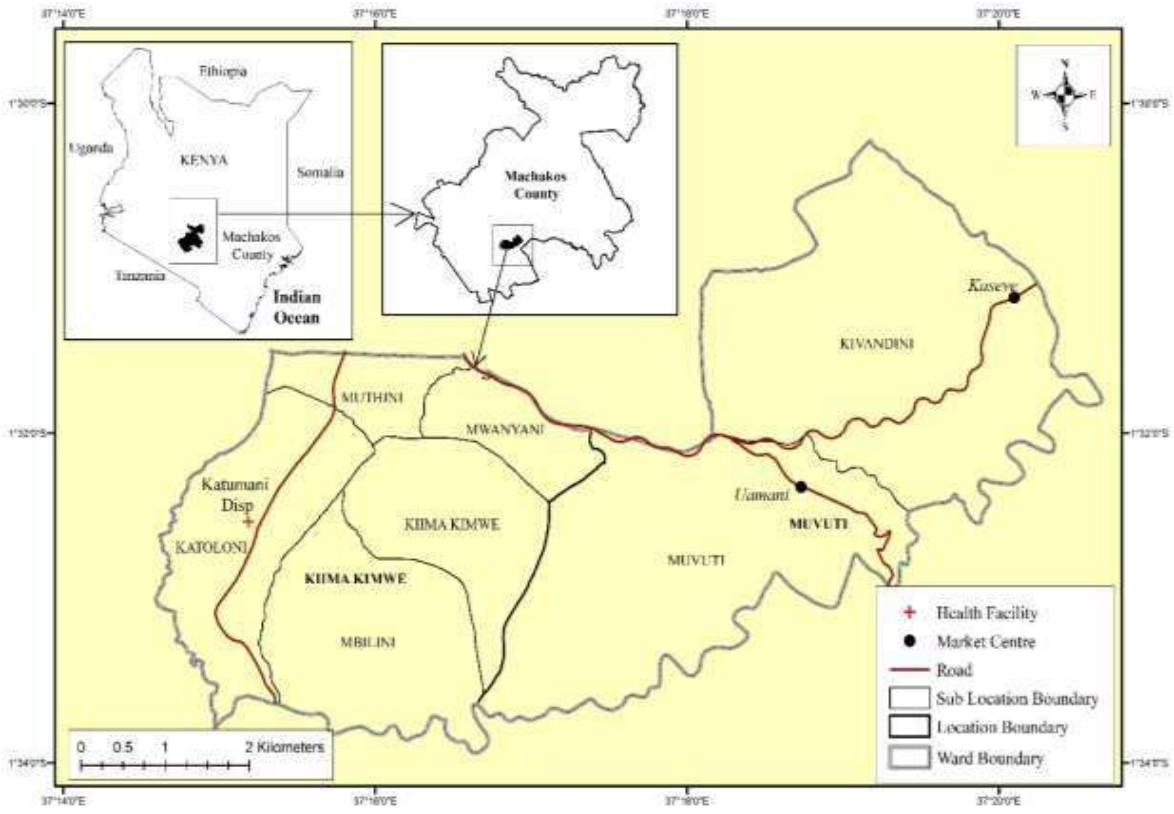
3.2 Site Description

The study was conducted in Muvuti/Kiima Kimwe ward in Machakos County (see Appendix V). Machakos County borders Nairobi and Kiambu counties to the west, Kitui to the East, Embu to the north, Murang'a and Kirinyaga to the North West and Kajiado to the Southwest. Muvuti/Kiima Kimwe ward borders Machakos central ward that houses the county headquarters. Machakos is named in honor of the late Chief Masaku, who was a Kamba prophet, a medicine man, rain maker and political leader during colonial times. However, the British could not pronounce the name Masaku thus they referred to the town as Machakos.

Muvuti/Kiima ward comprises of seven sub locations; Muthini, Mwanyani, Katoloni, Kiima Kimwe, Mbilini, Muvuti and Kivandini, and is predominantly inhabited by the Kamba Ethnic group. The Akamba are bantus and have mythological stories about their origin. The Kamba believe that *Mulungu* creator created *mundu* man and *kiveti* wife. *Mulungu* then dropped *mundu, kiveti* with their cattle and a stool for the man from heaven to earth. They all landed on a rock in a place called Nzaui in Kitui County and started their family, according to this myth the footsteps are still visible. The Kamba believe in *Mulungu* the creator and use ancestors as their intermediaries to pray to *Mulungu* (Mutunga, 1989). Kambas traditional place of worship *ithembo* shrine was used to offer sacrifices and pray to *Mulungu* in times of calamities, offer sacrifices of thanksgiving during bounty harvest (Mutunga, 1989).

Geographically Muvuti/Kiima Kimwe ward like many parts of Ukambani experiences low and unreliable rainfall. The area is semi-arid and characterized by frequent crop failure, drought and famine. The Akamba practice subsistence farming, livestock keeping and engage in trade. The ward has lowlands and hills. Kiima Kimwe Hill is of sacred value to the community because it is where the shrine (Ithembo) of chief Masaku stands. The shrine is surrounded by sacred trees such as the fig trees. The Kamba believe in the living dead and locals report of hearing whistling and mooing of livestock in the shrine. On the upper side of the ward lies part of the Iveti hills (women hills), hills that are of traditional significance to the community, the hills were a place of refuge for women and children in times of war, between the Kamba and their neighboring Maasai community.

Figure 3.1 Selected Research Area, Muvuti/Kiima Kimwe Ward in Machakos County



3.3 Descriptive Research Design

The study adopted a cross sectional study design. A cross sectional study is observational in nature and is also known as descriptive research. The rationale was, descriptive research can utilize elements of both qualitative and quantitative research methodologies within the same study. Using a mixed method approach therefore allowed the researcher to augment and supplement data obtained from both methods to enhance validity and reliability of the study. Descriptive research was ideal for the study because it allowed the researcher to conduct a survey as well as collect in-depth information through FGDs and KIIs. In addition, data could be presented in tables, graphs and charts which provide an efficient way of communication and reduces information overload.

Quantitative data helped to identify statistical patterns that would result in statistical conclusions. This data was obtained through survey method using a structured questionnaire. One advantage of this research design is that it helps present data in tables and pie charts that are easy and quick to read. However, one limitation of quantitative research is that it presents responses in yes and no, whereas human nature is more complex and requires more explaining. This limitation was overcome by using qualitative research design.

Qualitative research design was used to explore the perception of the Kamba people regarding male infertility, which includes the community's knowledge, attitude and practices underlying male infertility. The study employed the design because of its appropriateness in expounding subjective interpretations of participants (Gibbs, 2002). The qualitative research design was preferred because helped the researcher discover themes, themes are abstract constructs which investigators identify before, during and after data collection (Creswell, 2003) These themes obtained from qualitative data come from among many other things; personal experience with the subject matter (Maxwell, 1996). Qualitative research tools such as KIIs and FGDs will be used to capture the community's understanding of male infertility, these tools helped the researcher to delve deeper into the community social and cultural management of male infertility.

3.4 Target Population

Target population is a specified set of people which are being investigated to generalize results (Ngechu, 2004). The target population were individuals from the Kamba ethnic group aged 18 years and above. The study also targeted key informants such as; clan elders, TBAs, traditional healers and traditional herbalists. Mugenda and Mugenda (2003) defines a target population as a group of people with the same characteristics.

3.5 Sample Size

Kiima Kimwe/Muvuti ward has an approximate population of 32,413. Using Fisher et al, (1998) formula of calculating the desired sample size;

Where:

$$n \quad \frac{N}{1 \; N(e)^2}$$

n is the sample size

N is the population size e is the margin of error

Based on Fisher et al (1998) Formula

$$n \quad \frac{32{,}413}{1 \; 32413(0.05)^2}$$

Based on the formula the sample *n* is 395. However, due to time and financial constraints the study used a sample of 210 respondents that is 30 respondents drawn from each of the 7 sub locations in Muvuti/Kiima Kimwe ward. According to Maina, (2012) it is important to make considerations when it comes to the desired sample size against the resources required such as time and finances.

3.6 Sampling Techniques

Sampling is the process of selecting units from the population of interest so that results can be generalized back to the population from which they were used (Maina, 2012).

3.6.1 Selection of Households

Line transect sampling was used in this study to identify households to be sampled for the survey. Line transect is a sampling technique used to identify objects of interest in a given population. The researcher moves along a travel path to select and record the objects. The line can be a road or a travel path (Mack & Quang, 1998).

In our case, the local roads in each of the seven sublocations were used as the travel path and the researcher chose a household at random as a starting point. The researcher would then skip two households on each side of the road and interview the third set of households on each side of the road. This process was repeated until the sample of 30 households was attained.

3.6.2 Selection of Survey Participants

Purposive sampling was used to recruit participants at the household level. In each of the selected households, a list of all eligible participants was made and a sampling framework created based on a legibility criterion; that the respondent was from the Kamba ethnic community, were 18 years and above, were a resident of Muvuti/Kiima Kimwe ward and were willing to participate to constitute a sampling frame.

In a household were there were more than one individual eligible for the survey based on the four criteria, the researcher assigned numbers one to the nth (nth being the last number) Pieces of paper bearing all the numbers were put in a bag and the members were asked to pick a piece of paper from the bag, only those with papers bearing even numbers were interviewed. Where only one member was available in the selected household and the member met four set criteria, that member was automatically selected. This process was used to achieve the desired sample size of 210 respondents.

3.6.3 Selection of FGD participants

Members of the Focus group discussions were identified from the seven sublocations using the sampling framework created at the household level. The researcher picked members who were homogenous based on age, sex, location, marital status, ethnicity and were conversant with the topic under investigation. The researcher prescreened the members to ascertain their suitability and knowledge of the research problem.

3.6.4 Selection of Key Informants

The researcher purposively selected Key informants such as traditional healers, TBAs, witchdoctors, village elders, religious leaders and elderly members from each subcounty in the ward because such members possessed vital knowledge regarding the communities' customs, beliefs and social cultural practices. Purposive sampling allowed the researcher to pick cases that had the required characteristics in respect to the objectives of the study (Maina, 2012). Purposive sampling helps to eliminate people who do not meet the requirements of the study hence, it saves on time and costs.

3.7 Methods of Data Collection and Tools

The study used primary data that was collected from the Kamba community residing in the rural ward of Kiima Kimwe/Muvuti ward of Machakos town constituency. Interview schedules and Key informant guides were used to examine the perceptions of the community regarding male infertility. Primary data provide raw data which had not been interpreted and helped to capture the opinions of the community (Cooper & Schindler, 2003).

Data was be collected by the researcher with the help of three research assistants. Purposive sampling and snowball sampling were used to identify participants in the study. The researcher then sought the consent of the respondents after which the researcher informed the respondents that their responses would be taped so as not to miss any important information. Data was tape recorded and each interview guide coded. Secondary data which is existing published work was used to provide background

information on study. Such data included, printed journals and online journals, published and online books and previous studies on infertility.

3.7.1 Survey

A survey was carried using a semi structured questionnaire to collect data regarding the knowledge and the perception of the respondents regarding male infertility. The questionnaire was administered to 210 respondents selected randomly from the study site. Maina, (2012) posits that this is a low-cost method that can be used to collect a lot of diverse information. The disadvantage is that respondents may be reluctant to answer questions about things they consider private, while others may not have the time to respond to the questions.

3.7.2 Key Informant Interviews

The researcher conducted a total of 28 key informants drawn from the seven sub locations of the Muvuti/Kiima Kimwe Ward. Key informants are people who have expert knowledge on the subject under investigation (Aral et al, 2007). The key informants were purposively identified and drawn from people considered to be custodians of cultural practices and beliefs such as Traditional healers, traditional herbalists, clan elders and village elders, traditional herbalists and TBAs. The rationale was to gain a deeper understanding of cultural and traditional beliefs and practices that have been passed from generation to generation regarding male infertility. The researcher used a Key informant interview guide to obtain data from key informants, the responses were recorded, and notes taken during the interview.

KIIs were important because they provided in-depth information, they were also a fast and a cheaper way of gathering data. KIIs are flexible and can be used to collect a large amount of data, another advantage is that when interviewing a key informant, the researcher can explore issues and probe as the situation requires, unlike questionnaires the researcher is available to clarify and explain questions further. One of the challenges of KIIs is that some key informants may feel uncomfortable during the interview due to certain factors such as age difference and gender difference. The researcher will endeavor

to overcome such barriers when dealing with key informants by observing the community's accepted behavioral norms such as the acceptable and respectable way of dressing and observing culturally acceptable ways of talking to elders.

3.7.3 Focus Group Discussions

The researcher conducted four (4) FGDs comprising of 10 members recruited purposely based on age (18 years and above), Location (a resident of Kiima Kimwe/Muvuti ward), Ethnicity (Kamba) and willingness to participate. An FGD interview guide was used to collect data. The researcher moderated the discussions and had a qualified research assistant who was taking notes. Discussions were tape recorded to check the notes against the audio records to ensure effectiveness. Discussion were held in Kamba vernacular language.

The advantages of FGDs are; they offer spontaneous and unrestricted interactions among respondents which help in providing thoughts, feelings and honest which cannot be elicited on one on one interviews (Maina, 2012). Kitzinger, (1995) highlights other advantages of FGDs such as; they are interactive and encourage participation, they are also good where reading and writing is a challenge. One of the disadvantages of FGDs is, one may experience difficulties in identifying the participants and gathering them in a location.

3.8 Pilot Test

A pilot test was conducted at the research site before the main study to check validity and reliability of the questionnaires, Key informant guide and Focus group interview guide. The questionnaire was tested using a smaller sample in the study site, two Key informants were interviewed and one FGD was conducted with an aim of identifying the ability of the respondents to answer the questions, clarity of the questions, the logical flow of the questions and the amount of time each session would last. The researcher with the help of the supervisor corrected errors identified in the pilot test.

3.9 Data Analysis and Techniques

Quantitative data collected from survey questionnaires was edited, coded and descriptive statistics used to analyze the data using (SPSS) for presentation in form of pie charts and tables. Qualitative data collected through note taking and audio taping was transcribed, translated and typed. The researcher followed the six steps of thematic analysis as postulated by (Virginia Brann and Victoria Clarke, 2006) to analyze the data. The first step is familiarization, this stage involves going through the data and marking preliminary ideas for codes. The second step is to generate initial codes by organizing the data into meaningful groups. The third step is to search for themes. A code is a brief description of what is being said while themes are broader and involve active interpretation of codes. The fourth step is to Review the themes by reading extracts related to codes to see how well they support the theme. This stage helps to rectify any contradictions or overlaps to come up with a coherent and distinctive theme. The fifth step involves defining and naming themes, at this stage the researcher described the themes and explained how they related to the overall research question. The final stage was writing the report, it is the process of writing the results of the research project.

3.10 Research Ethics

Research ethics demands that respondents are not affected negatively by research activities. In order to safeguard the researcher respondent relationship, the researcher explained to the respondents the aim of the research, the benefits of the research and any risks associated with participating in the research. Participation was only be voluntary and by consent. Participants were allowed to opt out of participation if they felt uncomfortable.

Respondents who could read and write signed a consent form, those who could not read and write were given a verbal explanation and the researcher ensured that they only proceeded after they had understood and consented to participate. The researcher also adhered to strict confidentiality and anonymity of the respondents. The researcher obtained research approval from the University of Nairobi and a research license from the National Commission for Science, Technology and Innovation (NACOSTI).

CHAPTER FOUR
DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.0 Introduction

The chapter describes in details how the data collected was presented, analyzed and interpreted.

4.1 Response Rate

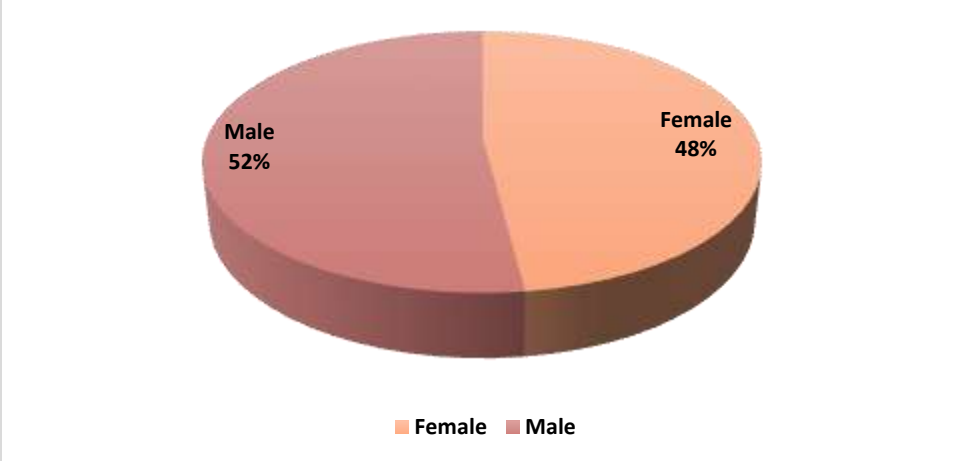
The study targeted a sample of 210 respondents but recorded a response rate of 70% (148). The response rate is excellent and representative of the population of study. According to Mugenda and Mugenda (1999) a response rate of 50% is adequate for analysis and reporting, a rate of 60% is good and a response rate of 70% and above is excellent.

4.2 Respondents' Social and Demographic Characteristics

4. 2.1 Gender of the Respondents

On gender male respondents were in the majority at 52% while female respondents were 48%. The large representation of male respondents may be due to the patriarchal nature of the community where men take precedence, or due to the involvement of females in household chores.

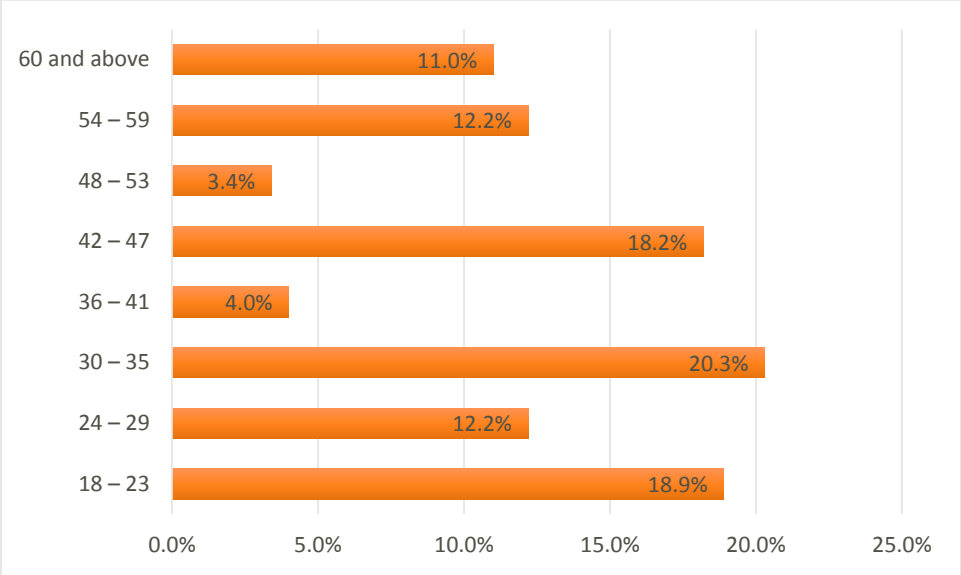
Figure 4.1 Gender of the Respondents



4.2.2 Age of the Respondents

The distribution of respondents by age was relevant in obtaining diversity of views from people of different age brackets.

Figure 4.2 Distribution of Respondents by Age



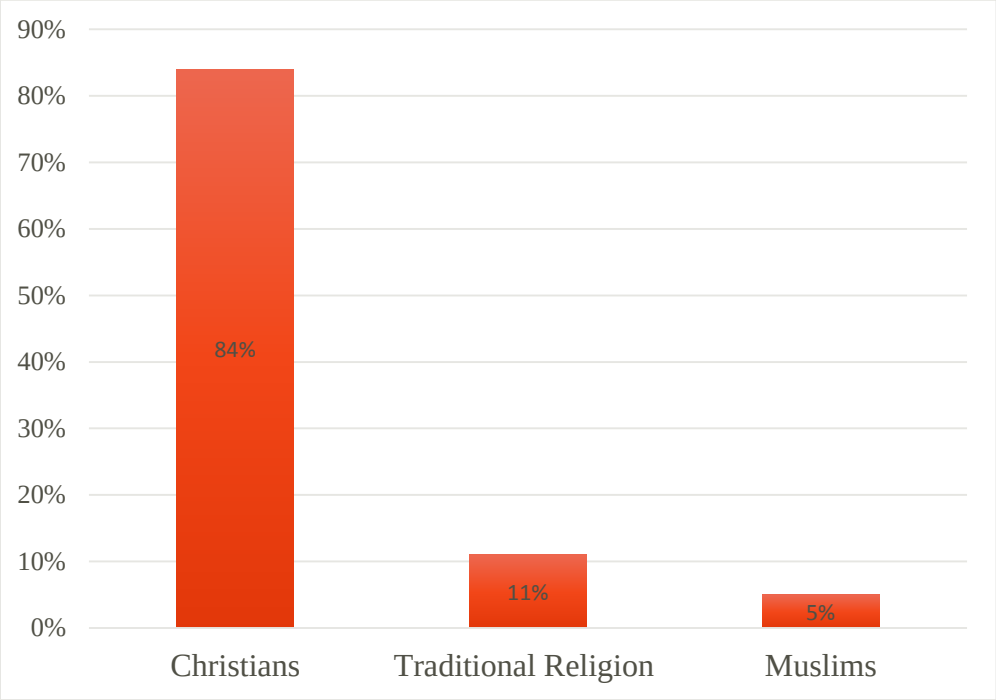
All the respondents were in the reproductive age category according to the Kenya demographic health survey classification by age of 15-49 for women and 15-54 for men. All the respondents were 18 years and above, these were adults in the reproductive age, likely to be married and knowledgeable of local customs and culture.

4. 2.3 Religion of the Respondents

According literature reviewed, infertility is attributed to divine causes (Mc Vaugh, 1993). Religion defines people's moral values, and how communities perceive and interpret events and objects in their environment. It influences how individuals interpret health and sickness and directs health seeking behavior. After examining the distribution of respondents by religions, the study established that majority of the respondents were Christians; this is because of early missionary work that was established in Ukambani region in the early 19th century by missions such as the Africa Inland Mission and the Scottish Mission which are close to the study site and the fact that majority of Kenyans are

Christians and Muslims are in the minority (Mbiti, 1991; Kenny, 2000) The decline in traditional religion can be attributed to colonialism, Christianity and modernization (Mbiti, 1991).

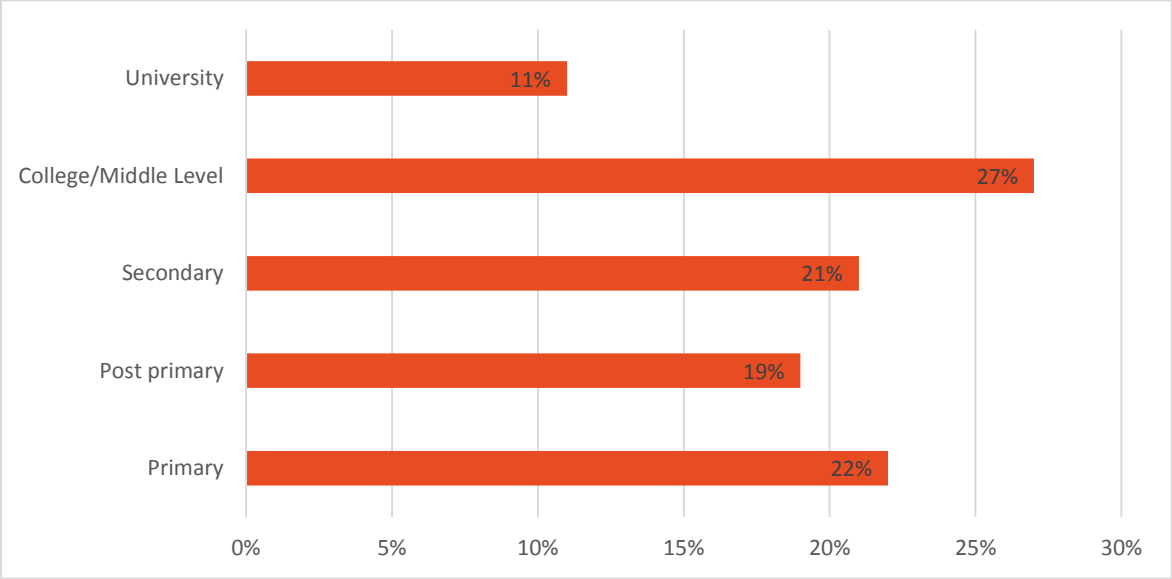
Figure 4.3 Distribution of Respondents by their Religion



4. 2.4 Education Level of Respondents

As observed in past studies, there exists a knowledge gap in sexuality, in fertility and health matters in Africa (Walraven et al 2000). It is evident that the level of education influences the perceptions of individuals have regarding male infertility.

Figure 4.4 Education Level of Respondents

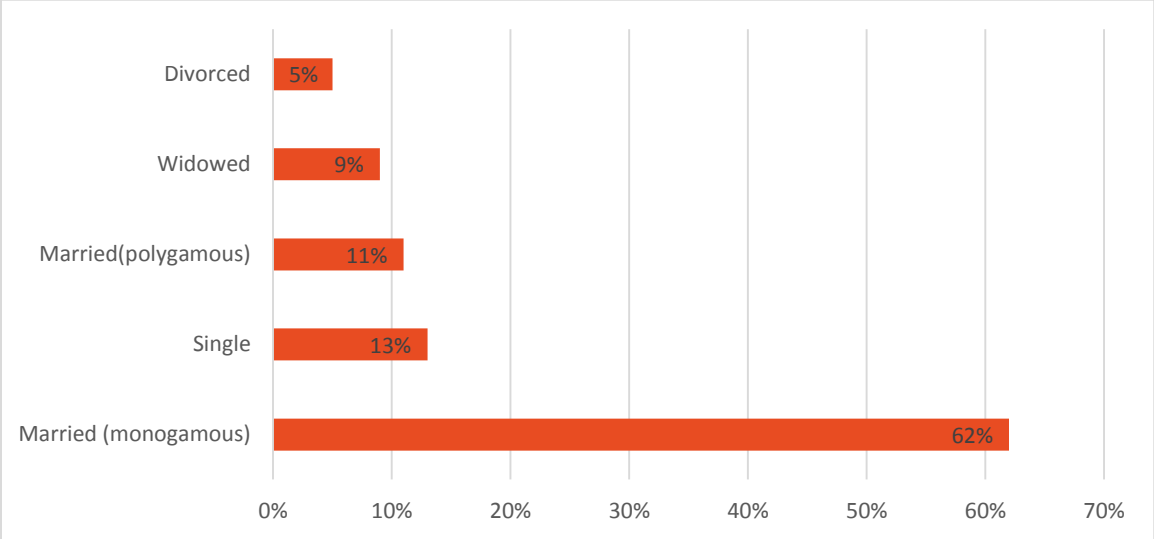


All the respondents had some form of schooling. The highest proportion of respondents had college/middle level education (27%). This means the respondents were literate and capable of comprehending and answering all the questions. Machakos County has relatively high levels of literacy at 82.3%. Majority (91.8%) of the total population in the country can read and write and only 7.6% are unable to read and write (MCIDP, 2015) The high literacy levels can be attributed to continued investment in education and free primary and secondary education and adult literacy programs in the county, offered by the government.

4.2.5 Marital Status of the Respondents

Children are the most fundamental reason why individuals enter into a marriage in the African traditional society (Mburugu & Adams, 2004) Infertility is a shared problem between couples. An analysis of the data confirmed that majority (87%) of the respondents had been in some form of marriage and were knowledgeable of infertility issues. Only 13% were single as illustrated in figure 4.5

Figure 4.5 Marital Status of the Respondents



4.2.6 Respondents Form of Employment, Income Level per Month and Number of Children

It is evident from the analysis that majority (73%) of the respondents were in some form of employment. Establishing they were either casual laborer's, self-employed or in salaried employment. Those who were unemployed were 20%, while 7% of the respondents were students.

Figure 4.6 Respondents Type of Employment

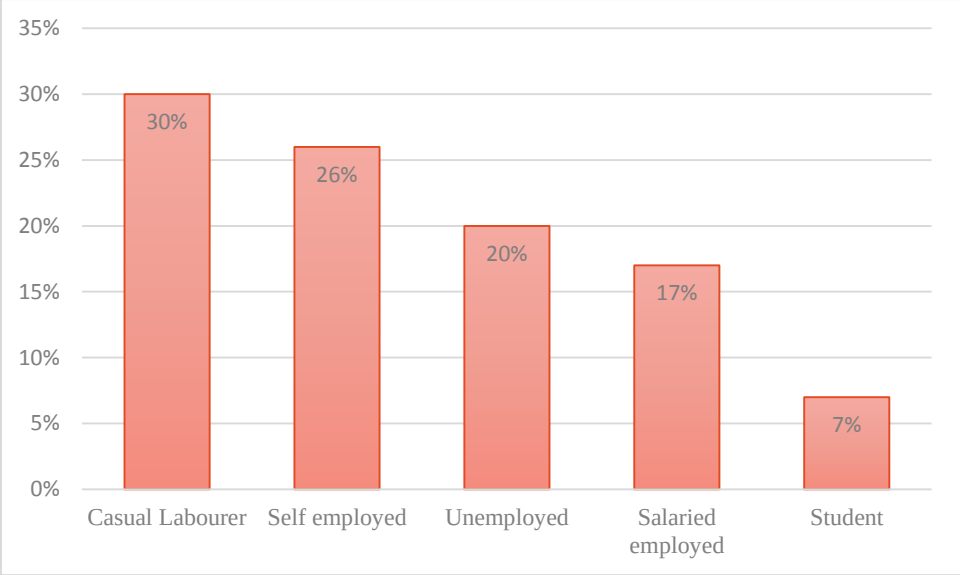


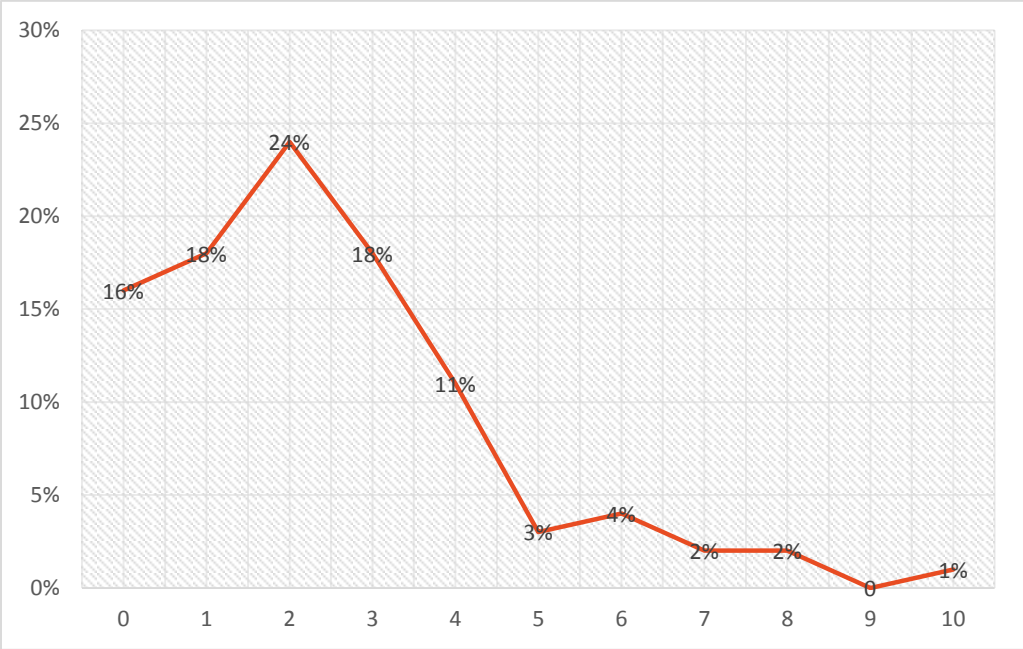
Table 4.1 Age of the Respondent, Versus Occupation

Age of the Respondents	**Occupation**					
	Unemployed	**Self-employed**	**Salaried employment**	**Causal laborer**	**Student**	**Total**
18 – 23	6	0	0	11	11	28
24 – 29	2	5	1	10	0	18
30 – 35	2	7	13	8	0	30
36 – 41	0	3	0	3	0	6
42 – 47	1	9	10	7	0	27
48 – 53	1	3	0	1	0	5
54 – 59	6	7	1	4	0	18
60 and above	11	5	0	0	0	16
Total	29	39	25	44	11	148

Further analysis revealed that majority 30% of the respondents were casual laborer's and 65% of the casual laborers were in the age bracket 18yrs- 35yrs, this is the youthful age of the population in Kenya. 26% of the respondents were in self-employment, majority 69% of those in self-employment were aged 36 years and above. Majority 92% of those in salaried employment were aged between 30yrs and 47yrs. 20% of all the respondents were unemployed majority 65% of those unemployed where aged 36yrs and above, while 34% of those unemployed were in the age bracket 18yrs – 35yrs.

The level of income influences infertility health seeking behavior. Literature reviewed indicates that the cost of infertility treatment is way above the rich of many low-income earner s in Kenya (KOGS, 2019). The study findings revealed that the minimum income level per month was Kshs. 4000 while the maximum was 50,000. The median income per month was Kshs 15,000, this is to mean half of the respondents with an income have an income less than or equal to Kshs 15,000 and half of the respondents with an income have an income greater than or equal to Kshs. 15,000. This would suggest that the vast majority would not easily afford conventional medical ways of managing infertility. This implies that majority would most likely resort to traditional or social ways of managing infertility.

Figure 4.7 Number of Children Per Respondent



The significance attached to children influences the way individuals and communities perceive male infertility. Children are important marks of gender identification in both adult men and women (Dyer, 2007). Literature reviewed highlighted the epitome of an African marriage is procreation and children are a proof of manhood (Christensen and Holstein, 2005) hence infertile men are viewed as inferior (Van Balen & Gerrits, 2000). The findings of the study therefore indicate that children are highly valued generally and in the Kamba community in particular, 84% of the respondents had children, with majority 24% of the respondents having 2 children. The highest number of children was 10.

4.3 The Social Construction of Male Infertility

4.3.1 Symbolic Meaning of Male Infertility

All the respondents (100%) acknowledged having knowledge of male infertility. However, 52% of the respondents argued that male infertility was the inability to impregnate a woman while 48% saw it as the inability to sire a child. All the respondents implied that an infertile man was weak, less masculine and lacking in strength. This observation is similar to Thiessen, (1999) who posited that the notion of strength cannot be divorced from sexuality and reproduction. Similar observations were further made by Barnes, (2014) who observed that masculinity is constituted by infertility and that infertile men have to use some traditional aspects of masculinity to reconstruct a version of masculinity away from reproduction. Inhorn, (2003) opined that, infertility is conflated with infertility, and that infertility is emasculating and attracts feeling of inadequacy. Findings are highlighted in the following responses:

> *"An infertile man has no strength to impregnate a woman. He is weak, his sperms are weak." (*FGD participant. Male 41 years, 2019)

> *"An infertile man is weak, there are those who cannot erect, those ones are just flat they do not have even the strength to erect. But there are those who can erect but then their sperms are weak" (FGD participant, Female, 55 years, 2019)*

> *"I have three girls with my wife and I love them very much. The problem is with my friends and my mother. Whenever we go drinking my friends always ridicule me that I am weak that is why I sire girls only. My mother on the other hand is putting pressure on me to get a wife who can give birth to boys. I am afraid because I had an extra marital affair that resulted to the birth of another girl. I do not even want to try for another child I can't stand having another girl. I am depressed" (FGD participant, Male 51 years, 2019)*

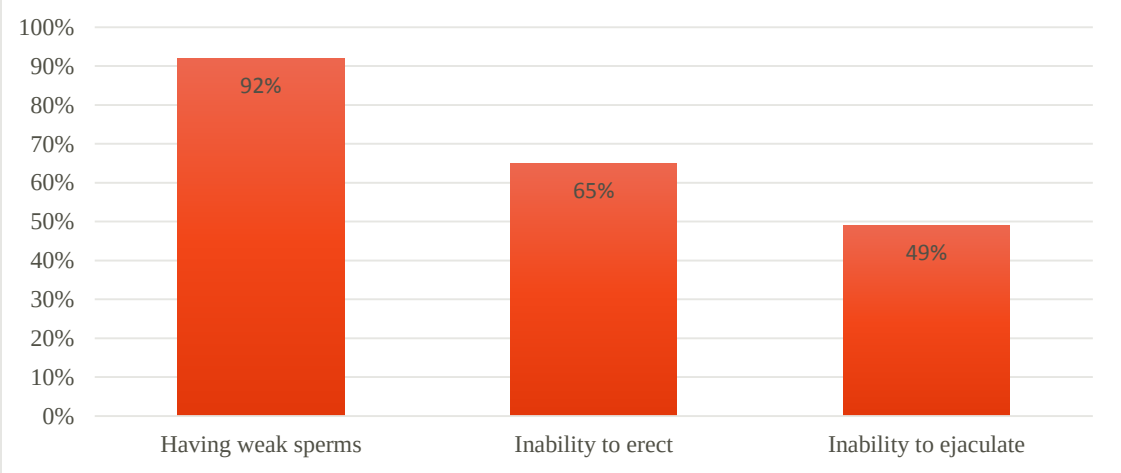
> *"Most of the cases that I handle involve men who beat their wives for giving birth to girls only" (An administrative officer, 53 years, 2019)*

From the above narrative, it is clear that various meanings are attached to male infertility. The first is that infertility is synonymous with weakness, the second perception is that male infertility is perceived as the inability impregnate, and thirdly as the inability to sire a male child. Similar observations were made by (Thiessen, 1999; Inhorn, 2013; Obesisat et al, 2012; Poote, 2009) respectively.

4.3.2 Lay Ways of Diagnosing Male Infertility

In seeking to understand the community's knowledge on how male infertility manifests and how the community diagnoses male infertility, respondents pointed out that infertility is manifested in three ways as shown in figure 4.8, one is having weak sperms at (92%), two is the inability to erect at (65%) and three is the inability to ejaculate at (49%). Having weak sperms was however the most outstanding perception, a belief that is shared by findings from a study conducted by Inhorn, (2003) in Egypt, where sperms are referred to as "worms" and male infertility metaphorically referred to as "the worms are weak". The Kamba also use the term "eggs" to refer to sperms and commonly refer to male infertility as a man with weak eggs. Early, (1993) observed that culturally the term weakness is commonly used in reproductive discourses to refer to male infertility.

Figure 4.8 Perceived Symptoms of Male Infertility



N=148**,** Multiple Response, total % >100**.** Source: Field Results, 2019

The following are responses from data collected from the study site;

> *"I got a baby when I was 16 years old, I later got married at the age of 21years, however five years into the marriage I did not get pregnant, villagers where gossiping that my husband is weak he cannot impregnate a woman, I persuaded my husband that we should visit the doctor, he was reluctant, he only agreed to visit the doctor because I threatened to divorce him. It is in the hospital that the doctor confirmed to him that his sperms are weak"* (FGD participant, Female, 45yrs, 2019*)*

> *"My ex-husband has "weak eggs" we stayed married for six years, he performed his sexual duties well, but I could not get pregnant, I went for all manner of ethno medical treatments but still could not conceive. My friends advised me to try conceiving with another man, I started an affair with a man, I became pregnant and left the marriage to marry the father of my child"* FGD participant, Female 39 years.

> *"From an early age a mother can tell, a boy who cannot erect, they are taught by TBAs or older women on how to check if their male children can erect. If it is established that a male child cannot erect, then it is also known that such a man cannot impregnate a woman" (*Key informant, Male 83 years, 2019*)*

> *"Some men can have problems such that they cannot ejaculate, such men cannot sire children" (*Traditional herbalist, Male, 76 years, 2019*)*

> *"Traditionally, members of the same age group would perform initiation rites together such as circumcision, they would go for discos, date and marry at around the same time, peers were therefore able to identify who among them had infertility issues" (*Clan Elder, Male 81 years, 2019)

The Kamba community has knowledge on how male infertility is manifested, and even has their own ways of diagnosing and establishing male infertility. TBA's play a key role in advising mothers on ways of scrutinizing their male children. Members of the same age set would also tell who among them was infertile because traditionally initiation rites such as circumcision were performed communally for members of the same age set and it was also common to find these members marrying at around at almost the same time.

4.3.3 Social and Cultural Beliefs and Associated with Male Infertility

Because social and cultural perceptions influence infertility (Kodzi et al, 2012) the study established four categories of factors that cause male infertility; the first category is beliefs associated with male infertility, the second is behaviors associated with male infertility and the third is congenital causes of male infertility. The dominant cause of male infertility is the belief that witchcraft causes male infertility and the belief that male infertility is the will of God. Lifestyle choices associated with infertility are; long term use of Muguka (a stimulant plant similar to khat whose leaves are chewed, alcoholism and poor diet. Thirdly congenital causes of associated with male infertility is *Malinda* meaning intersex and lastly accidents, such as those leading to injury in the groin area and ones that leads to paralysis.

Table 4.2 Perceived Causes of Male Infertility

Perceived cause	**Frequency(n)**	**Percentage (%)**
Beliefs		
Witchcraft	137	93
The will of God	124	84
Lifestyle choices		
Long term use of Muguka	119	80
Alcoholism	114	77
Poor diet	111	75
Congenital		
Malinda (intersex)	67	45
Accidents		
Accidents leading to paralysis	67	45
Accidents in the groin area	37	25

Multiple response total % > 100, *n=148* Source: Field Results, 2019

4.3.4 Social and Cultural Labelling of Infertility

The social and cultural way of identifying and labelling infertility is the absence of children in a marriage after a prolonged period, according to majority of the respondents. Majority of the respondents (80%) associated infertility with weakness and less masculine characteristics. 42% of the respondents believe that an infertile man shows no sexual interest in females right from teenage hood. The social and cultural labelling of male infertility is influenced by cultural stereotypes of manhood that exist in many societies (Rogozen-soitar, 2009)

"If you see a couple who have stayed for long let's say like five years and they have no child, and the man is not making an effort to marry another wife, then you know the man has a problem. Because when a man is certain that they can father a child they will go ahead and marry to prove their manhood". (Key Informant, traditional healer, Male 57 years)

"In this community some men prefer to marry a girl who has at least one child, because she has proved that she can bear children. So, if a man marries a woman who has a child from a previous relationship and he never sires another child with the woman then you know that man is infertile" (FGD participant, Male 45 years)

"Members of the same age set, traditionally did things together, circumcision, hunting, going to discos etc. it was easy to notice if one had a problem because he would not seem attracted or interested to the females, and eventually all his peers marry and he is left out (FGD participant, Male, 37 years)

"A man is not supposed to display feminine characteristics, if a man does not break their voice, does not grow beard and physically they look like female, such a man does not have energy like other men and cannot function sexually like a man" (FGD Participant, female 24yrs, 2019)

"During our times it was expected that when a girl got married then after three (3) months she would begin to show signs of pregnancy"
(Key informant, former TBA Female 91yrs, 2019)

Infertility is identified through the absence of a desired result, that is the absence of biological children in a marriage. The purpose of marriage is procreation among the Akamba, parallel to many African communities. Mburugu & Adams, (2004) observed that children are the fundamental reason why individuals enter into a marriage in the traditional African society. In the traditional set up children validate a marriage, thus a marriage without children is incomplete, and the traditional definition of a family is father, mother and children. The Kamba similar to the Yoruba of Nigeria (Araoye, 2003) definition of a home is not complete without children. *Mbai which* means clan is made of several families, and so continuing the family lineage is important in strengthening the clan. The belief that a man who is infertile is weak is because of the cultural hegemonic masculinity that demands certain ideals from a man such as the ability to procreate.

4.3.5 The Gendered Nature of Infertility

Majority 98% of the respondents had knowledge of individuals suffering from infertility within a marriage and they also observed that in all the cases it is the woman who is blamed for infertility. Similar observations were made by (Inhorn 1994, 1996) who argued that women continue to be blamed for infertility even in situations of confirmed male infertility. Reasons advanced by majority of the respondents (98%) on why women bear the burden of infertility are; reproductive issues are culturally a woman's business, it is the woman who carries a pregnancy and gives birth, so culturally a woman is blamed for infertility.

Respondents views are highlighted as follows;

> "*Infertility is blamed on women because, some start using family planning methods in their teenage hood, others procure abortions that spoil their uterus"*(FGD Respondent, Male, 56yrs)
>
> *"Women are blamed because it is women who carry the pregnancy, and men's infertility is hidden in their bodies, it is not easy to tell that a man is infertile and as long as a man can perform sexually it is assumed, he is fertile"* (Key informant, male traditional healer, 60yrs)
>
> *"Men think as long as they are capable of performing sexual intercourse, they are fertile, that is why they always think it is the woman with the problem" (*FGD Respondent, female, 45yrs)
>
> *"After one year in marriage and no signs of pregnancy, my in-laws started abusing me for not giving their son a child. Two years passed but still no pregnancy, my husband accused me of taking contraceptives, after seeking help from our church we were advised by the pastor to go the hospital, the doctor performed some tests and it was confirmed that my husband had a low sperm count"(*FGD Respondent, Female, 31yrs)
>
> *"Sometimes abortion can go wrong leading to the removal of the uterus, a man cannot tell that a woman has no uterus just by looking" (*FGD Respondent, female 28yrs)

A further analysis of data showed that 90% of the respondents believe that women are blamed for infertility because of reasons such as; abortion and use of family planning methods and the cultural presumption that men are fertile. A similar finding was reported by Odek, (2017) in his study on how residents of Kisumu County perceive infertility. Previous studies by (Allen, 2001; Mgalla & Boerma, 2001) have also cited abortion and

the use of contraceptives as reasons why women bear the blame of infertility. According to Inhorn, (2003) blaming women for infertility is influenced by the entrenched patriarchal system which is influenced by local beliefs.

4.3.6 The Labelling Process

Studies in other parts of the world indicate that infertility attracts derogatory names. Among the Ibadan of Nigeria, the infertile are called names such as a witch and an empty basket (Nieuwenhuis et al, 2009) while in Egypt infertile men are labelled "*ana mish raagil"* meaning "not a man". This study sought to establish names used to refer to infertile men, all the respondents (100%) reported that an infertile man is referred to as "*Ndewa"* meaning a "castrated cow". Dyer et al (2004) made similar findings while conducting a study in South Africa, respondents in the study reported that they would be called names such as 'incabi' meaning a castrated cow, and 'tjokee' meaning a failure. Referring to an infertile man as a castrated cow insinuates that some external force is responsible for the man's infertility hence the man is a victim who is not to be blamed for infertility but who is to be assisted.

> "*An infertile man is called "Ndewa" meaning a castrated cow. He cannot procreate just like a castrated cow"(*FGD Respondent, Male, 27yrs)
>
> *"A man who cannot impregnate a woman is called "Ndewa" because just like a castrated cow he cannot reproduce"* (FGD Respondent, Female 61yrs)
>
> *"An infertile man is known as "Ndewa". Because like Ndewa he cannot impregnate a female*" (Key informant, Clan elder male, 73yrs*)*
>
> *"An infertile man is also called "Mbwithi" meaning a blunt object*" (Key informant, TBA Female 56yrs)
>
> *"An infertile man is Mbwithi because he is just blunt and unproductive* "(Key Informant, traditional healer 50yrs)

A further majority 80% of the respondents indicated that another name used to refer to an infertile man is "*Mbwithi"* a derogatory name associated with unproductiveness and a blunt object. Similar demeaning names were reported in a study in Northern Ghana by (Tabong & Adongo, 2013) were names we such as *Lankpolosoba* (man with rotten testes)

or *Yokuusoba* (man with a dead penis). Names associated with infertility have served to intensify the stigma associated with infertility. Such names are demeaning and emasculating and portray an infertile man as an inadequate man. The names insinuate that a male is only male if he can impregnate a female, hence infertility can pose an identity challenge to infertile men.

4.4 Perceived Causes of Male Infertility

4.4.1 Social and Cultural Beliefs Associated with Male Infertility

According to the study findings, the Akamba like many African societies have beliefs they associate with infertility. The most dominant determinant beliefs of male infertility held by majority of the respondents 56% to 94% are; witchcrafts, rituals performed with a cloth, the will of God, rituals performed with pubic hair, husband and wife blood not mixing, aggrieved ancestors and evil eyes. These beliefs are largely held by many African societies such as the Luo of Kenya (Odek, 2017), the Shona of Zimbabwe (Moyo & Muhwati, 2013), the Macua of Madagascar (Greil et al, 2010) and the Ghanaians (Yebei, 2000) as highlighted in the literature review. The findings of this study are similar with previous studies that have underscored that infertility is attributed to punishment from God and that infertility has a divine cause (Mc Vaugh, 1993)

The study established some gender differences in perceptions, the belief that drug abuse can cause male infertility is held by all the female respondents and only by 44% of the male respondents. Majority of the male respondents (97%) and only 28% of the female respondent's belief that poor diet can cause male infertility. Majority (79%) of the male respondent's belief that aggrieved ancestors can cause male infertility while only 44% of the female respondents hold a similar view.

Table 4.3 Gender Differences in Perception on Social Cultural Beliefs Associated with Male Infertility

Perception	**Female N=71**	**Male N=77**	**Total N=148**	**Percentage %**
Incorrect burial of Umbilical cord	15	9	24	16
Having many sexual partners	20	7	27	18
Curse from parent	23	27	50	34
Sleeping with a close relative	26	24	50	34
Unresolved disputes	22	42	64	43
Evil spells	29	42	71	48
Evil eyes	23	50	83	56
Aggrieved ancestors	31	61	92	62
Poor diet	20	75	95	64
Husband and wife blood not mixing	48	52	100	68
Ritual performed with pubic hair	53	52	105	71
Drug Abuse	71	34	105	71
The will of God	59	64	123	83
Rituals perfumed with a cloth	66	70	136	92
Witchcraft	62	77	139	94

Multiple response total % > 100. N = 148. Source: Field Results, 2019

Responses on social cultural beliefs underlying male infertility;

> *One of my female colleagues wanted to have a relationship with me, when I declined her offer, she stretched her hand and touched my private parts, I felt so cold in my private parts like ice cold water had been poured on me. I did not think much of it at that moment. When I went home, I realized I could not sleep with my wife because I could not erect, I was flat. I kept on trying but I realized I could not erect at all. I tried sleeping with other women but still I could not erect. I visited a witchdoctor who told me that my female colleague had bewitched me, the witchdoctor performed some rituals to undo the witchcraft.* (FGD respondent male, 57yrs)

Witches, steel undergarments and use them to make an individual infertile, they cut the middle section of the undergarment and use it to cast infertility spells on the owner of the undergarment (FGD Respondent, Male 39yrs)

Witches visit people at night, they shave the pubic hair of their victim and use it to bewitch them, the individual wakes up in the morning to find that patches of their pubic hair have been shaven (Key informant, traditional healer, Female 78yrs)

"Children are gift from God, and so to have or not to have children is the will of God" (FGD Respondent Male 42yrs*)*

"Some people are also born infertile and that is the will of God. For example, "Malinda" the Kamba word for the intersex people, they are infertile they cannot impregnate and cannot also conceive. That is the will of God" (Key informant, TBA female 56 yrs.)

"Infertility can occur if the blood of the husband and wife are incompatible, blood is life and if the bloods cannot mix life cannot be formed" (Key informant, Traditional healer, 64yrs)

"*Aggrieved ancestors can visit infertility upon an individual as a way of expressing their unhappiness, when that happens elders of the clan offer sacrifices, such as slaughtering a goat, a meal prepared with millet and milk and honey to appease the ancestors"* (Key informant, Clan elder male, 71 yrs.)

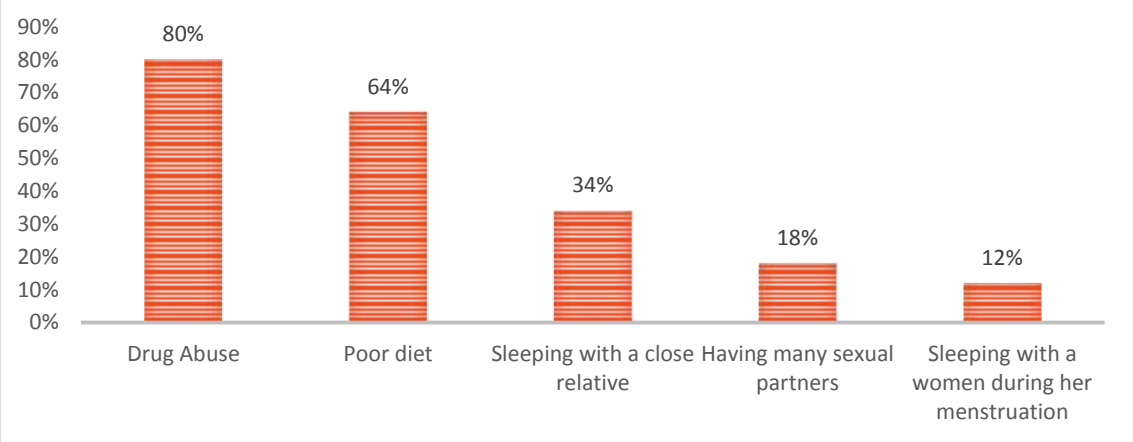
"There are people who have "kyeni kya kita"meaning an evil tongue. Such people can cast a spell on a person to become infertile. Such a spell can be undone by people who have "healing saliva". This is done by visiting the person with "healing saliva" very early in the morning before the healer ate or drank anything. The traditional healer would spit their saliva on the affected person, it is believed that the healer's saliva had power to undo the spell cast by a person with an evil tongue. (Key informant, Clan elder, Male 73yrs)

Observations from the data, show that, the Kamba have social and cultural beliefs and causes underlying male infertility. The causes of infertility are largely associated with evil, such as people with evil powers, evil intentions and evil practices. Male infertility is also believed to be the will of God, who chooses who to bless and who not to bless with children.

4.4.2 Behavioral Practices Perceived to Cause Male Infertility

The Kikuyu community in Kenya attribute male infertility to practices and taboos (Kamau, 2011). Similarly, the Kamba according to findings of our study attribute certain behavioral practices to male infertility. Majority 80% of the respondents observed that drug abuse causes male infertility, 64% said poor diet, 34% sleeping with a close relative, 18% having many sexual partners while 12% believe that sleeping with a woman during her menstruation causes male infertility. The most commonly held belief is that drug abuse causes male infertility as highlighted in the responses from FGDS and Key informant. A similar observation was made by (Kimani & Olenja, 2001) where illicit brews were cited as a cause of infertility among the Mijikenda of the coast region in Kenya.

Figure 4.9 Behavioral Practices Associated with Male Infertility



Multiple response total % > 100. N=148. Source: Field Results, 2019

The following are some of the findings on behavioral practices associated with male infertility;

> *"I have one son and I don't see myself having another child with my husband unless I look for a man outside my marriage to impregnate me. My husband started chewing muguka with his peers, at first he said it gave him "steam" so he could perform well sexually, but with the long term use of chewing muguka he has realized that he is unable to erect all and now we sleep in different beds, I have a man in the house but he is just garbage because he cannot perform at all*" (FGD Respondent, Female 30yrs)

> *"Muguka and alcohol have destroyed my marriage. I don't know what is in muguka and the alcohol these men are drinking, it has finished my husband completely, he cannot erect and when he tries, he cannot even ejaculate*"(FGD Respondent, Female 42yrs)

> *"Muguka has castrated our sons, walk around in the village and see how many young men who should be having wives and children are just loitering around in the village kiosks chewing muguka. They do not even look at girls because they do not have the urge to have sex. Many of the family problems that are brought to my attention revolve around men who have ceased functioning as men in matters bedroom and in all the cases these men are using muguka"* (Key Informant, Village elder, 65yrs)

> *"When it's time to sleep my husband sits outside with his peers chewing muguka, when I wake up in the morning, he jumps to bed to sleep, that has been our life for last three years*" (FGD respondent, female 35 years)

> *"Who is eating cassava, sorghum, millet and pumpkins anymore? Instead men are eating foods t[1]hat are processed and that do not give them strength and energy to procreate, you see in our generations cases of infertility were very few because people ate well, but nowadays infertility is has become common because men have forsaken traditional foods that give them energy and have no chemicals"* (Key informant, Clan elder, Male 88yrs old)

> *"Our young men are not marrying, there are very few children being born nowadays, our young men have been consumed by Muguka and cheap liquor. There is just a generation of young men which will just get lost and not be remembered" (*Key informant, Government administrator, Male 45yrs)

[1] *Muguka is a stimulant plant similar to khat whose leaves are chewed*

> *"Men are castrating themselves with the foods they eat, they no longer eat the foods that our forefathers used to eat and that is why they have no energy to procreate, instead our young men are now chewing muguka and they [2]have no families and no future"* (Key informant, Male 80yrs

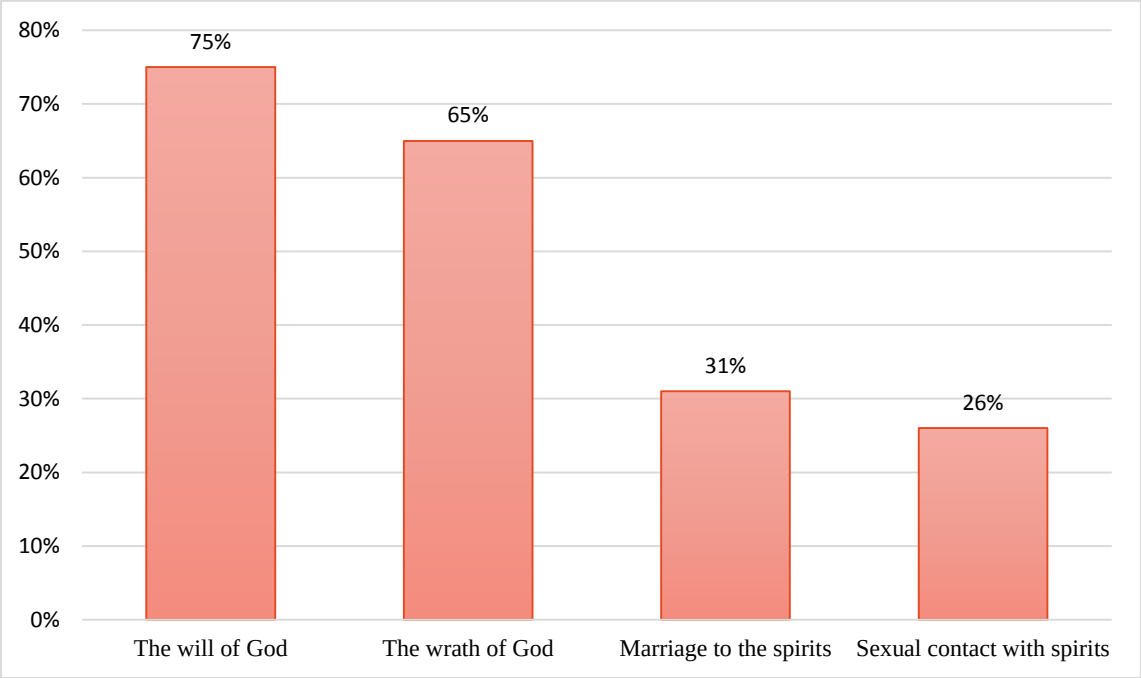
From the narratives on behavioral practices, respondents have the view that male infertility can be self-inflicted, through the use of drugs, poor diet and lifestyle choices that go against societal norms such as sleeping with a close relative, having many sexual partners and sleeping with a woman during her menstruations.

4.4.2 Religious and Supernatural Factors Perceived to Cause Male Infertility

In examining religious and supernatural factors attributed to male infertility, majority 75% of the respondents attribute male infertility to the will of God. A further 65% of the respondents view infertility as a result of the wrath of God. Similar views were expressed by infertile men in South Africa who believed that male infertility was as a result of God's will or God's punishment (Dyer et al, 2004). This observation is reinforced by the biblical perspective that children are a gift from God and are a reward from him (Psalms 127:3) hence the lack of children due to infertility can attract feelings of guilty and incorrect spiritual standing with God.

[2] *Muguka is a stimulant plant similar to khat whose leaves are chewed*

Figure 4.10 Religious and Supernatural Causes of Male Infertility



Multiple response total % > 100. N=148. Source: Field Results, 2019

> *"Children are a gift from God, it is his will to bless whoever he wants and we cannot question his will" (*FGD participant, Male 40yrs.)
>
> *"God can punish an individual by not giving them a child, after all the bible says children are a reward from God and rewards are given to good people"* (FGD participant, Female 27yrs)
>
> *"If a spirit falls in love with a man, then they prevent him from having any sexual contact with human beings, hence they possess him and make him infertile" (Key informant, Clan elder, 76yrs)*
>
> *"Spirits roam around in the night and can have sexual contacts with human beings. Once a man has sexual contact with a spirit, his fertility is taken away by the spirits" (Key informant, Traditional healer, 82yrs)*

Further findings are that marriage to the spirits (31%) and sexual contact with spirits (26%) cause male infertility. The belief that spirits influence activities in the world of living permeates many cultures (Mbiti, 1990). As highlighted in participants responses spirits can fall in love with the living, or have sexual contact with the living hence this causes the

individual to be infertile. Similar observations have been found among the Pakistan, who believe that supernatural powers such as *jinis* and evil spirits cause infertility (Ali et al, 2011).

Attributing religious and spiritual causes to male infertility is influenced by beliefs held dear by people in a community. Those who believe in monotheism, attribute the will of God and the wrath of God to male infertility, whereas spiritualists believe that the spirits of the dead cause male infertility.

4.4.3 Physical Characteristics Perceived to Cause Male Infertility

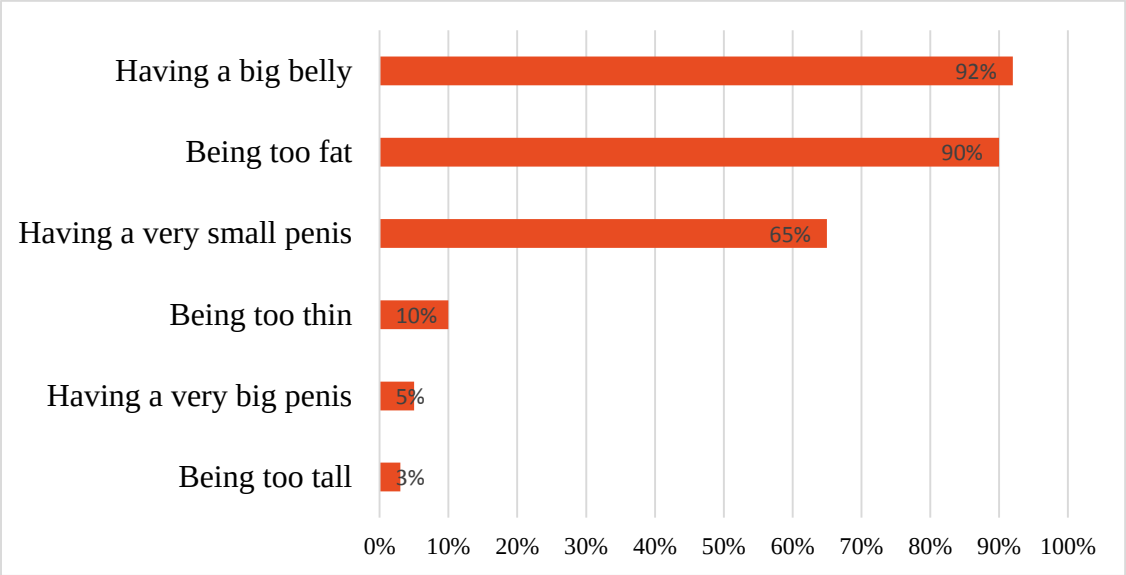
Physical characteristics such as body size and body development has been attributed to both male and female infertility (Sekadde et al, 2002). This study sought to establish what physical characteristics are associated with male infertility, the findings were 92% of the respondents believed having a big belly causes infertility, 90% believed being obese can cause infertility while 65% believe that having a small penis could also cause infertility. However, majority of the respondents did not think that having a big penis, being too thin or being too tall could cause male infertility. These perceptions are corroborated by views from participants in the study as highlighted below;

"A big belly can hinder a man from performing sexual intercourse therefore making it difficult for him to impregnate a woman"
(FGD participant, Male 50yrs)

"Being obese makes one lazy. This makes a man's sperms weak"
*(*FGD participant, Male 61yrs)

"A man who has a very small penis can face challenges impregnating a woman. Such men tend to ejaculate outside the vagina. This can cause infertility"
(FGD participant, Female, 43yrs)

Figure 4.11. Physical Characteristics Associated with Male Infertility



Multiple response total % > 100. N=148. Source: Field Results, 2019

From the observations of the study it is evident that society expects that a man ought to be physically fit and agile hence the perception that being obese and having a big belly inhibits a man from fulfilling his procreational roles. The Akamba traditionally are long distance runners and warriors and so men in this community are generally expected to be physically fit to perform family and community obligations such as defending the family and providing family stability and continuity.

4.4 Infertility Risk Factors for Men and Scientific Causes of Male Infertility

The study sought to examine the knowledge of respondents on selected risk factors that predispose men to male infertility, and selected causes of male infertility. This is because, knowledge level plays a vital role in preventive healthcare (Bunting & Bolvin, 2007). Survey respondents were asked to tick as many factors as they believe cause male infertility. Majority (59%) of the respondents had knowledge that having a history of sexually transmitted diseases could cause male infertility, followed by 51% of the respondents who believe that sperm abnormalities cause male infertility. However less than half of the respondents had knowledge of other risk factors, only 45% of the respondents had knowledge that exposure to poisonous chemicals puts men at risk of infertility, only

37% of the respondents believed that hormone disorders cause male infertility, a further 36% of the respondents had knowledge that Erectile dysfunction and exposure to poisonous chemicals (36%) predispose men to male infertility. While 30% of the respondents knew that exposure to radiation was a risk of male infertility and only 26% of the respondents had knowledge that wearing tight underwear exposed men to infertility.

Table 4.4. Highest Level of Education versus Knowledge of Infertility Risk Factors for Men**.**

Level of Education	Frequency	Infertility risk factors for men							
		Having a history of STDs	Sperm abnormalities	Wearing tight underwear	Hormone Disorders	Exposure to poisonous chemicals	EDF	Use of certain medication	Exposure to radiation
Primary	32	15	13	6	8	15	7	11	11
Post Primary	29	16	10	5	8	7	7	8	4
Secondary	31	20	17	8	13	15	10	11	9
College/ Middle Level	40	27	29	11	19	18	22	18	13
University	16	10	6	8	7	11	8	6	7
Total	148	88	75	38	55	66	54	54	44

Multiple response total >100%. Source: Field Results, 2019
STDs: Sexually Transmitted Diseases.
EDF: Erectile Dysfunction

Those in tertiary institutions had more knowledge at 49% each of the causes of male infertility, followed by those who had attained secondary education at 41%. There is low awareness of causes of male infertility among those with post primary (33%) and primary education (31%). The average score for all respondents was 40% translating to a below the average mark on awareness risk factors of male infertility. Consequently, this implies that there is a low awareness of risk factors of male infertility and respondents lack important

knowledge that could help them utilize preventive measures. Bunting &Bolvin, (2007) opined that ignorance of infertility risk factors is directly associated with incidences of infertility. While, increased level of awareness has been linked to decreased prevalence of infertility (Abolfotouh et al, 2013)

4.5 Social and Cultural Implications of Male Infertility

4.5.1 Burial Rites

In many African societies' children are a proof of manhood, men in these societies have the social obligation to sire children and continue the family lineage (King and Stone, 2010). Men who do not fulfil the normative role of procreation are viewed negatively as inferior and unproductive (Van Balen & Gerritis, 2000).It has been widely observed that infertility has many social and cultural ramifications, which differ from society to society and is influenced by the significance attached to children in a particular society (Hsu & Kuo, 2002).

Study findings from respondents and key informants have revealed that in the Kamba community every adult man is expected to marry and have children. A man who grows old without ever siring a child in the Kamba community according to key informants is considered foolish and a disgrace to the society. All the respondents (100%) observed that there are burial rites specifically for adult men who grow old and die without marrying and having children. These burial rites involve covering the anus of the dead man with ash, the significance is to prevent the birth of a child who might take after the dead man.

> *"Every man who is of age should marry and have children (whether biological or not) to continue the family name, then such a man is an outcast and during his burial his anus is covered with ash so his spirit does not come back to influence another person to live like he did"*
> (FGD respondent, Male 52 yrs.)

> *"Ash signifies dead end, that is why it is used in the ritual to signify the end"* (Clan elder, Male, 61yrs old)

> *"If the ash ritual is not performed, the Kamba believe that such a disgrace would persist in the family and generations to come"* (Key informant, Traditional healer, Female 77yrs)

Drawing form past studies, childless adult men and women are denied some burial rites (Daar & Merali, 2002) or have specific rituals performed on them to ward off the spirit of barrenness, for example childless married individuals among the Luo of Kenya are buried away from the homestead. (Odek, 2017). In Northern Ghana a childless couple upon their death are denied burial rituals that give them membership into the ancestral world (Tabong & Adongo, 2013).

4.5.2 Infertility and Leadership

On leadership, majority of the respondents 89% felt that an infertile man is not fit for leadership. They opined that leadership was about authority. A man gains authority by being a father, he has authority over his wife and children. And so, a man starts leadership in his own home. An infertile man is not honored so it is not possible for him to occupy a position of leadership. Men without children are excluded from leadership roles in their community (Tabong &Adongo, 2013) this is because a man is valued in the society through marriage and siring children (Cumming, 1991)

> "*There is no difference between an infertile man and a boy. How can a boy lead a man*?" (FGD respondent, Male 46yrs)

> *"An infertile man is like an uncircumcised man it is not possible for him to lead adults who look at him like a child" (*FGD respondent, Male 38yrs)

> *"Leadership commands a certain level of respect, and an infertile man does not command such level of respect, there is stigma, disrespect and ridicule associated with infertility which makes it difficult for infertile persons to ascend to leadership positions within the community"*
> (Key informant, religious leader, Male 55yrs)

There are two reasons that militate against uptake of leadership roles by infertile individuals as exemplified by respondents and key informant in the study, one is the belief that an infertile man if not a "full adult" and two because an infertile man is not honored in the community. In Rural Northern Ghana an infertile person is viewed as a person who is not fully developed (Fortes, 1978) because there is a certain amount of respect that is associated with childbearing (Johnson, 2006).

On inheritance rights of an infertile man, all respondents unanimously observed that an infertile man gets equal share of inheritance with the rest of the siblings. This may be so because of the patriarchal and patrilineal nature of the Akamba community where men are the custodians of family wealth.

> *"Yes, an infertile man will enjoy equal inheritance because "ni mwana wa musyi" he is a son of the homestead "*
> *(*Key informant, Clan elder, Male 62yrs*)*

> *"He is expected to have a family to inherit from him so yes, he gets an equal share like the rest of the siblings"*
> *(*Key informant, village elder, Male, 49yrs*)*

Findings that infertile men are not discriminated upon in terms of inheritance differ from findings of studies conducted on their female counterparts who are denied the right to inherit on account of their infertility (Sundby 1997; Alemnji &Thomas, 1997; Papreen et al, 2000). These observations illustrate the gendered nature of infertility.

4.6 Social and Cultural Management of Male Infertility

4.6.1 Broaching Male Infertility

Drawing from literature reviewed, it has been observed that society suffers from social nervousness when addressing male infertility (Barnes, 2014). The study sought to establish how the community handled the subject of male infertility. Majority, 85% reported that male infertility was not openly discussed in the community. Respondents gave four reasons why male infertility was not openly discussed; (i) 85% of the respondents cited the fear of rejection, (ii) 79% reported that it is a taboo, (iii) 77% fear of ridicule (iv) while 61% argued that men do not wish to discuss male infertility.

Other studies have expressed similar observations; In Nigeria male infertility is considered a taboo that is discreetly handled to protect the dignity of the man (Larsen, 1995). Men who are unable to fulfil their reproductive obligation in the society become objects of ridicule (Gehard et al, 2014). However, 15% of the respondents observed two contexts

when male infertility would be discussed, the first is when individuals are gossiping and second when peers are ridiculing one of their own for being infertile.

Further analysis of the findings reveal that infertile men do not wish to discuss their condition because of fear of rejection. They fear that they will be rejected by their fellow men, because adulthood is not only attained through advancement of age but also through initiation rites such as circumcision and acquiring new roles such as parenting and new status such as fatherhood. Siring a biological child is approve of manhood and so infertility is considered as an absolute failure; failure of self, failure to fulfil the most fundamental duty of man, and failure to fulfil a social role. It is this failure that breeds fear of rejection, infertile men fear that they will be rejected by their fellow men who will not look at them as equals but like inferiors. Infertile men also fear that they will be rejected by women, who will look at them as fellow women because society defines a male as one who impregnate a female.

The following are some of the views from respondents;

> *"I would rather die than admit that I cannot father a child, then how will I tell people that am a man if I cannot impregnate a woman"* (FGD Respondent, Male 38yrs)

> *"If people know you are infertile, women will reject you, no woman would want to be married by an infertile man, even fellow men will ridicule you and treat you like a lesser man" (*FGD Respondent, Male, 51yrs)

> *"When people know a man cannot sire a child, they ridicule him and call him "ndewa" meaning a castrated cow" (FGD Participant, Male 22yrs)*
> *"I stayed in a marriage for 7 yrs. without a baby. I tried discussing our childlessness with my husband but he was not willing to discuss it. I believed I had a problem until one day I overheard women gossiping that my husband was infertile. That is how I learned about my husband's infertility".* (FGD respondent female, 45yrs)

The findings of the study are, male infertility is not a subject that is openly discussed for fear of rejection, for fear of being ridiculed, because of the sensitive nature of the topic and lastly because men do with to discuss infertility. Throsby & Gill, (2004) summarized reasons why men do not wish to discuss their infertility, the first reason is that they do not

wish to draw attention to themselves and become subjects of pity, the second reason is the fear of being ridiculed and the last reason is the fear of being viewed incapable, this fear emanates from the manner in which infertility, impotence and sexuality are culturally intertwined. Dolan, (2014) observed that men do not wish to discuss their health problems and more specifically infertility because it portrays them as weak.

4.6.2 Managing Male Infertility among the Kamba

Evidence from past literature has identified ways in which male infertility was socially and culturally management in African traditional societies, among the Maasai of Kenya, a wife to an infertile man was allowed to have sex with other men so as to sire children for the husband (WHO, 2010). One of the study's specific objective was to establish how male infertility was socially and culturally managed among the Kamba. Respondents were asked to identify from a list of options what they believe were options pursued in case of male infertility in a marriage. Majority of the Respondents (94%) revealed that, the wife could sire children for the husband with another man. Similar observations were made during the FGDs and responses from Key informants.

Detailed discussions with key informants illustrated how the community ensured that an infertile man would have a stable marriage and children to carry his name. When a woman failed to conceive within a year of marriage, both husband and wife were summoned by the husbands' parents seeking to know if they were having sexual intercourse. The parents would then ask their son if he had fathered any child prior to marrying the wife, this question was asked to ascertain the man's fertility. Both husband and wife would separately be asked acquire new sexual partners, the wife would be asked to have sex with a brother or cousin to the husband. While the husband was free to sleep with a woman of his choice. This significance of this process was made to ascertain who between husband and wife was infertile. If the man did not impregnate any woman, it was confirmed that he was infertile. Meanwhile, if the wife conceived with the husband's brother or cousin, then all the three would be summoned by trusted elders and parents to be advised on how to maintain family stability for the infertile man's family. Key informants observed that this arrangement was a secret that was kept within the family to protect the dignity of the infertile man. The wife

would continue to sire children for her infertile husband with his brother or cousin. Children born out of such arrangements belonged to the infertile man not to the biological father. Similar practices are found within the Luo of Kenya, the Nandi (Odek, 2017), the Kikuyu (Kamau, 2011) and the Shona of Zimbabwe (Moyo & Muhwati, 2013).

> "*When it was established that a man was infertile, then a brother or cousin would be nominated to sire children with the wife of the infertile man"*
> (Key informant clan elder, Male 74yrs)

> *"The choice of brother or cousin was so that the child would have blood ties with the father. Siring children with distant relatives or maternal cousins or non-relatives was not allowed*"
> (Key Informant, TBA, Female, 69yrs)

> "*The infertile man would go on a long journey to visit his relatives, or go hunting to allow the designated man to impregnate his wife"*
> (Key informant, Elderly Female, 82yrs)

> "*Nowadays it's hard to dictate to a woman whom they should sleep with to sire a child, so managing male infertility within a marriage has become very complicated*" (FGD participant, Male, 35yrs)

> *"With HIV Ads this is practice is not tenable anymore, there are too many sexual partners involved and this puts one's life at risk"*
> *(*FGD participant, Female 41yrs old)

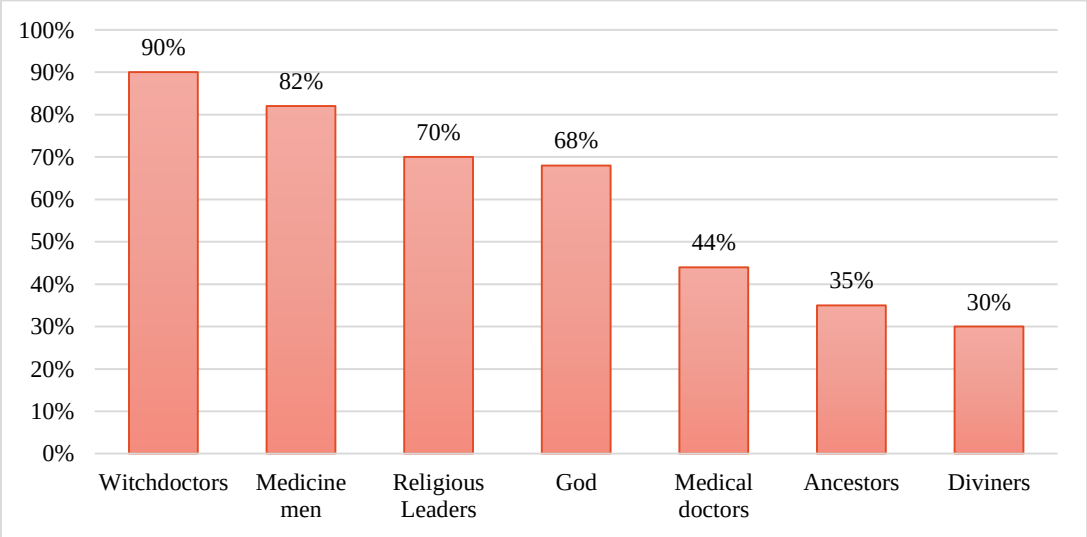
It is important to note from discussions obtained from both female and male FGDs such practices are diminishing because of the threat of HIV/AIDS, enhanced women's rights and the freedom of women to choose whom to sire children with. Further findings from Key informant were that male infertility was not a ground for divorce since society had laid down procedures that cushioned the infertile man and ensured family stability, similar findings were noted in Pakistan were male infertility is not a ground for divorce (Ali et al, 2011), and among the Nandi of Kenya (Mburugu & Adams, 2001)

4.6.3 Helps Seeking Preferences for Male Infertility

Help seeking choice for infertility is influenced by the perceived cause of infertility (Sundby, 1997). In seeking to establish the preferred help provider in cases of male infertility, respondents were asked to identity from a list of help providers likely to be consulted by people seeking help for infertility. A majority (90%) indicated a desire to consult a witchdoctor. while 82% reported to consult medicine men, and others 70% religious leaders followed by 68% indicating believe that infertile men should seek help from God. It is worth to note that only 44% of the respondents reported that infertile individuals seek help from conventional medical practitioners.

The Kamba, as observed earlier in the study also have cultural beliefs that are highly attributed to male infertility. The most dominant beliefs are witchcraft, rituals performed with a cloth and the will of God. Pursuant to their beliefs the Kamba seek help from providers who match their perceived cause of infertility such as witchdoctors, medicine men, god and religious leaders. Because male infertility is not perceived as bio medical condition, only 44% of the respondents reported that infertile men visit medical doctors. Studies by (Gerrits, 1997; Sundby, 1997) reported that only less than half of infertile persons consult medical doctors.

Figure 4.12. Help Seeking Preference for Male Infertility



Multiple response. Total % >100. N=148. Source: Field results, 2019

Respondents highlighted responses,

> *"Sometimes one is infertile because some jealous person has tied them, so when they visit a witchdoctor, he is able to untie their fertility"*
> *(*Key informant, traditional healer, Female 82yrs*)*

> "*Infertile men prefer visiting witchdoctors and medicine men because they do not make them go through procedures like surgery or those many lab processes"* (FGD Respondent, Male 55yrs)

> *"It is cheaper to consult a witchdoctor or a medicine man. You can pay them using a hen or a goat unlike the hospital where you have to pay using money" (*FGD Respondent, Male 35yrs)

> *"Medicine men use indigenous plants to make medicine which they use to treat infertility, or give one charms to tie around the waist to boost infertility, and these do not have side effects like modern medicine"*
> *(*FGD Respondent, Female 40yrs)

> *"Men prefer to visit witchdoctors because of confidentiality, one can even visit a witchdoctor under the cover of darkness"* (Key informant, traditional healer, Female 63yrs)

> *"Because it is God who gives children, infertile men seek the help of their pastors and religious leaders to petition God for a child*"
> (Key informant, Religious leader, Male 49yrs)

> *"The Bible says that children are a gift from God, so infertile men should spend time to repent and ask God to give them a child"*
> *(*FGD participant, Female, 27yrs)

> *"The Bible is full of examples of people who prayed to God to give them children so the infertile also pray to God to have children"*
> *(*FGD participant, Male, 24yrs*)*

The field results indicate that witchdoctors, medicine men and religious leaders are preferred (a) because majority believe that infertility is caused by witchcraft and the will of God (b) because it is relatively cheaper than modern medicine (c) because they do not subject their clients to a lot of procedures like medical doctors (d) clients can choose to

consult a person of their preferred gender (e) because of confidentiality. Moyo & Muhwati, (2013) had similar findings among the Shona of Zimbabwe who preferred to consult with traditional healers and religious leaders because of confidentiality.

4.6.4 Social Cultural Methods of Treating Male Infertility

One of the research objectives was to investigate ways in which male infertility was managed among the Kamba. The study sought to establish methods and practices used to treat male infertility. Traditional herbs were chosen by 96% of the respondents, followed by 82% of the respondents who believed in tying medicinal charms around the waist, 79% of the respondents reported that wearing wrist charms cured male infertility, a further 65% chose drinking holy water while 58% believe sacrificing to ancestors was an effective method.

> *Sometimes when am sleeping someone wakes me up in the wee hours of the morning and guides me into the forest or river banks to pluck some medicinal herbs. I just don't do guess work; I am guided by the spirits to pick only the herbs that cure and not harm. During this exercise I am not allowed to talk to anyone, until the task is over*" (Traditional herbalist, Male 64yrs)

> *"Traditional herbs are cheap; I prefer to use them than modern medicine. They are especially very effective in boosting a man's fertility. I know of people who had fertility issues who got children after using traditional herbs"* (FGD respondent, Male 60yrs)

> *"Drinking holy water saved me from the shame of infertility, when my first wife left me because of childlessness, I suspected that I might have infertility issues, I consulted with my religious leader who gave me holy water to drink and prayers to recite and now am married with one child"*(FGD respondent, Male 34yrs)

> *"The process of tying medicinal charms around the waist is known as" kwovwa milia" the medicine man ties the charms around waist while casting out any evil spells and installing special powers that are supposed to give the man strength to procreate." (Traditional healer, Male, 79yrs)*

> *"Tying medicinal charms around your waist for a short period of time is not like having someone performing some intrusive procedures, men with infertility issues prefer using herbs or charms than modern medicine"* (FGD respondent, male 29yrs)

> *"Wrist charms contain special powers that ward off evil spirits that cause infertility" (*FGD respondent, male 71yrs)

The methods used to cure male infertility are preferred because they resonate with the community's social construction of infertility. It is evident that individuals have faith in herbal medicine, because it is derived from trees and plants they can relate with or trust. In conclusion it is evident that traditional medicine triumphs over conventional medicine because it is acceptable, available, affordable and accessible. Dyer et al (2004) observed that traditional herbs are more preferred by infertile men to clean blood and boost fertility.

CHAPTER FIVE
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

The chapter presents summary of findings, conclusions and recommendations.

5.1 Summary of Findings

5.1.1 Demographic Characteristics

The participants were 52% male and 48% female. All the respondents were 18yrs and above, while majority (87%) were 30yrs and above. Majority (84%) of the respondents were Christians. Only 13% of the respondents were single with the majority being married, widowed, or divorced. 84% of the respondents had at least one child while the highest number of children was ten. All the participants had some form of education, the lowest level of education was primary while the highest was university. 73% of the respondents were in some form of employment.

5.1.2 The Social Construction of Male Infertility

All the respondents acknowledged male infertility. However, the first observation is that infertility is perceived to be synonymous with weakness, and absence of strength required to procreate. The second finding is that respondents defined infertility as the inability to impregnate and lastly as the inability to sire a male child. The notion of strength is deeply associated with reproduction as observed in previous studies. (Thissen, 1999). Infertility as constructed among the Kamba signifies inadequacy in an infertile man hence it is emasculating (Inhorn, 2013) while failure to sire a male child is viewed through cultural lenses as infertility (Poote, 2009). Findings from respondents and key informants revealed that an infertile man is referred to as a man with "weak eggs" this is because the Kamba refer to sperms at eggs. Similar to the Egyptians who refer to male infertility as "weak worms" (Ihnorn, 2003).

The community had lay methods of diagnosing and establishing male infertility. TBAs played a key role in teaching a mother how to examine their male children for signs of infertility. Peer observation was used among members of the same age group among young adults who had attained the age of marrying. Peer observation was important because initiation ceremonies were traditionally conducted at the same time for members of the age group. Respondents identified three ways in which male infertility manifested; having weak sperms, inability to erect and inability to ejaculate.

Beliefs, such as witchcraft and the will of God where attributed to male infertility. Lifestyle choices such as alcoholism, long term use of "muguka" and poor diet were identified as practices that caused male infertility. Congenital causes such as being born intersex and accidents leading to paralysis and injury to the groin area were acknowledged as causes of infertility.

The tag of infertility was used on individuals in childless marriages, this is because in the Kamba traditional society the purpose of marriage is to bring forth children (Mbiti, 1991). An adult male who portrayed feminine characteristics or showed no interest in females was perceived as infertile. Such perceptions are underpinned in cultural hegemonic masculinity that forbids men from displaying any characteristics that are deemed feminine.

Despite the acknowledgement of male infertility, respondents still held the view that a woman was responsible for couple infertility. Reasons postulated for heaping the blame of infertility on women were; the presumed male infertility, abortion and the use of contraceptives. Similar findings were reported by (Allen, 2001; Mgalla & Boerma, 2001).

Male infertility attracts derogatory names as per literature reviewed. The Kamba refer to an infertile man as 'Ndewa' meaning 'castrated cow'. A similar name was reported in South Africa where infertile men are referred to as 'incabi' meaning a castrated cow. In conclusion male infertility is mediated by social and cultural beliefs inherent in a particular society.

5.1.3 Perceived Causes of Male Infertility

Similar to many African traditional societies, the study came up with four categories of factors associated with male infertility. The first category is cultural beliefs, the belief held by majority of the respondents is that witchcraft, rituals performed with a cloth, the will of God, ritual performed with pubic hair husband and wife blood not mixing, aggrieved ancestors and evil eyes cause male infertility. This social cultural causes reported in previous studies by (Yebei 2000; Greil et al, 2010; Moyo & Muhatwi, 2013; Mc vaugh, 1993).

The second is behavioral practices such as Drug abuse and poor diet as similarly observed by (Sharma et al, 2013). The third is religious and supernatural factors such as, the will of God and the wrath of God. Both Christians and Muslims hold a similar view as indicated in literature review. And lastly Physical characteristics such as having a big belly, being obese and having a small penis. (Sekadde & Machoki, 2005).

The study further sought to investigate the knowledge of respondent regarding risk factors for male infertility. The findings revealed that majority had low awareness of risk factors that predispose men to infertility. Factors such as wearing tight underwear's was the least known by all the respondents. The poor awareness level imply that respondents are at risk of infertility because they do not have important and necessary knowledge important to practice preventive healthcare.

5.1.4 Social Cultural Implications of Male Infertility

The normative role of an adult male in the Kamba community is to marry and sire children to continue the family lineage and provide family stability. Respondents and key informants reported that a man who dies old without ever marrying or siring a child, is deemed as a failure and a disgrace to the society. When such a man dies during his burial his anus, is covered with ash, this ritual is performed to prevent the dead man's spirit from returning to the community. The Kamba believe in the living dead, and so the ritual is meant to prevent the birth of an individual who might turn out like the deceased man. The

Luo of Kenya performs burial rituals on childless couples to chase away the spirit of infertility (Odek, 2017).

An infertile man is perceived unfit for leadership role in the society reasons cited by respondents are one, an infertile man is not honored and two he lacks authority and respect required for leadership. Such authority and respect are gained through child bearing (Johnson, 2006). And lastly adulthood is attained through acquiring new roles such as being a father and a husband. Key informants further expounded that leadership is demonstrated and acquired from the smallest unit of society, the family.

Field data from all respondents reveals that an infertile man enjoys equal share of inheritance with his sibling. The Kamba community is patriarchal, and so authority lies with the men, it is also patrilineal so children identify and inherit from their father. Consequently, men in this community are the custodians of family wealth. Men are not discriminated in terms of inheritance women who are disadvantaged on account of their infertility (Papreen et al, 2000, Sunby, 1997).

5.1.5 Social and Cultural Management of Male Infertility

Male infertility was not openly discussed as reported by majority of the respondents. Few respondents observed that male infertility was only openly discussed when people were gossiping or ridiculing the infertile. Participants postulated four reason why infertility was not a subject to broach; the fear of rejection, because it is a taboo, fear of ridicule and lastly because men do not wish to discuss their infertility (Throsby & Gill, 2004).

Similar to other African communities, the Kamba had social and culturally accepted standards of maintaining family stability and continuity in the event of male infertility. All respondents, reported that when a couple was affected by male factor infertility, a cousin or brother to the infertile man was chosen to sire children for the infertile man. This practice was done with uttermost respect and secrecy to guard the dignity of the infertile man. This arrangement was done with the consent of the parties involved, traditionally the infertile would go on a long journey or on a hunting trip to allow time for the designated man to

impregnate his. Children born out this practice belonged to the infertile man and not their biological father. Similar arrangements have been reported in past studies. (Shona & Muhwati, 2013; Odek, 2017; Kamau, 2011).

Seeking to understand how infertility was managed, the study investigated who among a given list the infertile preferred to consult; witchdoctors, medicine men and religious leaders were the most preferred by infertile individuals seeking help. Further probing with Key informant established low cost, absence of hospital like procedures, the ability to choose the gender of the person to consult and confidentiality where key considerations.

Traditional herbs were the most preferred method as reported in the study findings, followed by practices such as tying medicinal charms around the waist, wearing wrist charms, drinking holy water and sacrificing to ancestors. These findings coincide with the findings that traditional herbs were the most preferred by infertile men (Dyer et al, 2004) infertile people seeking help give priority to traditional medicine over modern medicine (OKonufua, 1996; Nahar, 2007) and that traditional interventions resonate with perceived traditional causes of infertility (Mariano, 2004).

5.2 Conclusion

Traditional and cultural beliefs mediate the interpretation of health and disease. These beliefs persist despite the advancement of society. Individuals and communities use social and cultural lenses to construct their own reality. A reality firmly grounded in folk knowledge that is not transcended by modern knowledge. The definition, perception and understanding of male infertility among the Akamba is dictated by cultural stereotypes of hegemonic masculinity. Because an infertile man transgresses hegemonic masculinity, he is perceived to be weak and less masculine. Hence the help of a hegemonic man to assist him in the most fundamental role of procreation.

5.3 Recommendation

5.3.1 Policy Recommendations

There is low awareness on risk factors of male infertility. The Ministry of Health should come up with policies that seek to enhance reproductive health education and create awareness that will aid debunk myths underlying male infertility. Majority of reproductive health policies and reproductive health campaigns focus largely on women. There is need to re-focus on men at all levels from policy planning to policy implementation.

5.3.2 Programmatic

The government should have interventions that target men such as reproductive health clinics that are men friendly and that are spread at the grassroots not concentrated in the major towns.

5.3.2 Research

The cost of treating male infertility is out of reach for many low-income earners. The government should consider providing these services under the Universal Healthcare service.

5.4 Areas of Further Research

Further research should focus on addressing the experiences of couples affect by male infertility and their coping strategies.

Further studies should investigate the knowledge and attitude of infertile men towards Assisted Reproductive Technologies

Studies should also address marital stability of marriages affected by male factor infertility.

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APPENDICES

APPENDIX I: SURVEY QUESTIONNAIRE

My name is Brenda Nduku Oloo. I am a student at the University of Nairobi, Department of Sociology and Social Work. As a prerequisite of my degree programme, I am carrying out a study titled: **Social Construction and Management of Male Infertility Among the Akamba People. A Case Study of Muvuti/Kiima Kimwe Ward in Machakos County, Kenya.** The study will contribute significant information that will help in managing male infertility. You have been randomly selected from the community to participate in the study by responding to the questions asked, with honest and to the best of your knowledge regarding the topic. Your opinion is highly regarded. You are under no obligation to answer all the questions and you are free to opt out should you choose to do so. Information obtained will be kept confidential and will only be used for academic purpose. Your identity is anonymous, please do not indicate your name on the questionnaire for confidentiality purposes. Please tick (√) the response that you think is appropriate.

Consent of Respondent

I hereby voluntarily consent to participate in the study. I acknowledge that the nature of the study has been explained to me, and I understand that my participation is voluntary, and I can withdraw my participation at any point.

Signature of the Respondent_____Date_____

Signature of Researcher/Assistant_____Date_____

SECTION A: SOCIO DEMOGRAPHIC INFORMATION

1. What is your gender?

1. Female [ ] 2. Male [ ]

2. What is your age bracket?

1. 18 – 23	[ ]	5. 42 – 47	[ ]
2. 24– 29	[ ]	6. 48 – 53	[ ]
3. 30 – 35	[ ]	7. 54 – 59	[ ]
4. 36 – 41	[ ]	8. 60 and above	

3. What is your religion?

1. Christian [ ] 2. Muslim [ ]

3. Others…….

4. What is your highest level of school attended?

1. Primary [ ]

2. Post primary/vocational [ ]

3. Secondary [ ]

4. College/middle level [ ]

5. University [ ]

6. Others…….

5. What is your marital status?

1. Married (monogamous) [ ]

2. Married (polygamous) How many wives_____ [ ]

3. Single [ ]

4. Widowed [ ]

5. Divorced [ ]

6. Others……..

6. What is your type of employment?

1. Unemployed [ ]

2. Self-employed [ ]

3. Salaried employment [ ]

4. Casual labourer [ ]

5. Student [ ]

6. Others……..

7. What is your income level per month?.....

8. How many children do you have?.....

9. What is your sub location?

1. Katoloni	[ ]	5. Muthini	[ ]
2. Kiimakimwe	[ ]	6. Muvuti	[ ]
3. Kivandini	[ ]	7. Mwanyani	[ ]
4. Mbilini	[ ]	8. Others(specify)	_____

SECTION B: SOCIAL CONSTRUCTION OF MALE INFERTILITY

10. Have you heard of male infertility?

1. Yes [ ] 2. No [ ]

11. If yes what do you understand it to be?

……

……

……

12. How is male infertility manifested?

……

……

13. What do you think causes male infertility?

……

……

14. How can you identify an infertile man?

……

……

15. Do you know of a couple in your community that has tried having a child but has not managed?

1. Yes [ ] 2. No [ ]

16. If yes who is perceived to be responsible for the inability to have a child and why?

1. Woman [ ] 2. Man [ ]

3. Others indicate……..….

Explain your answer

……

……

17. Are there any local names for men who are infertile?

1. Yes [ ] 2. No [ ]

If yes please indicate
them……

18. Are there specific Kamba names for infertile men?

1. Yes [ ] 2. No [ ]

If yes please
specify……..

……

SECTION C: PERCEIVED CAUSES OF MALE INFERTILITY

19. What social and cultural factors are perceived to cause male infertility?

1. Curse from parents [ ]

2. Sleeping with close a relative [ ]

3. Husband and wife blood not mixing [ ]

4. Witchcraft [ ]

5. Evil spells [ ]

6. Unresolved disputes [ ]

7. Rituals performed with pubic hair [ ]

8. Aggrieved ancestors [ ]

9. Having many sexual partners [ ]

10. Poor diet [ ]

11. Evil eyes [ ]

12. Rituals performed with a cloth [ ]

13. Sleeping with a woman during her menstruation [ ]

14. Incorrect burial of umbilical cord [ ]

15. Others (specify)…….

……

20. What supernatural factors are perceived to cause male infertility?

1. The will of God [ ]

2. Marriage to the spirits [ ]

3. Wrath of God [ ]

4. Sexual contact with spirits [ ]

5. Others specify……..

21. What physical characteristics are perceived to cause male infertility?

1. Having a big belly [ ]

2. Having a very small penis [ ]

3. Having a very big penis [ ]

4. Being too tall [ ]

5. Being too fat [ ]

6. Being too thin [ ]

7. Others
(specify)……..……

……

22. What medical factors are perceived to cause male infertility?

1. Having a history of sexually transmitted diseases [ ]

2. Sperm abnormalities [ ]

3. Wearing tight underwear [ ]

4. Hormone disorders [ ]

5. Exposure to poisonous chemicals [ ]

6. Erectile Dysfunction [ ]

7. Use of certain medications [ ]

8. Exposure to radiation [ ]

9. Others (specify)……

……

SECTION D: SOCIAL AND CULTURAL IMPLICATIONS OF MALE INFERTILITY

23. Are there any activities that an infertile person is forbidden from participating?

1. Yes [ ] 2. No [ ]

If yes which ones and why……..

……

……

24. Are there some burial rites that are performed specifically on an infertile man?

1. Yes [ ] 2. No [ ]

If yes which ones and why……..

……
.

25. Can an infertile man assume position of leadership in the community e.g. clan or village elder?

1. Yes [ ] 2. No [ ]

If not why…….

……

……

26. Does an infertile man enjoy equal inheritance with other siblings?

1. Yes [ ] 2. No [ ] If not please explain……

……

SECTION E: SOCIAL AND CULTURAL MANAGEMENT OF MALE INFERTILITY

27. Is male infertility a subject that is openly discussed?

1. Yes [ ] 2. No [ ]

If yes in what context……..

……

If no, why……

……

28. Please indicate by ticking on the social cultural ways of dealing with male infertility in a marriage?

1. The wife leaves the marriage [ ]
2. The man chases the wife [ ]
3. The man marries another woman [ ]
4. The wife can sire children for the husband with another man [ ]
5. The wife marries another woman *iweto* [ ]
6. The couple adopts children [ ]
7. Others (specify)……

……

……

29. Please indicate by ticking who among the following is consulted by infertile men seeking children

1. Witchdoctors [ ]

2. Diviners [ ]

3. Ancestors [ ]

4. Medicine men [ ]

5. God [ ]

6. Religious leaders [ ]

7. Medical doctors [ ]

8. Others (specify)……

……

……

30. Which of the following social cultural methods is used to cure male infertility?

1. Traditional herbs [ ]

2. Sleeping with a virgin [ ]

3. Drinking holy water [ ]

4. Dancing to a fig tree [ ]

5. Sleeping with a witchdoctor [ ]

6. Sleeping in a shrine [ ]

7. Tying medicinal charms around the waist [ ]

8. Wearing wrist charms [ ]

9. Sacrificing to the ancestors [ ]

10. Others (specify)……

……

……

The end

Thank you for participating

APPENDIX II: IN-DEPTH INTERVIEW GUIDE

My name is Brenda Nduku Oloo. I am a student, at the University of Nairobi, Department of Sociology and Social Work. As a prerequisite of my degree programme, I am carrying out a study titled: **Social Construction and Management of Male Infertility Among the Akamba People. A Case Study of Muvuti/Kiima Kimwe Ward in Machakos County, Kenya**. The study will contribute significant information that will help in managing male infertility. You have been purposely selected from the community to participate in the study by responding to the questions asked, with honest and to the best of your knowledge regarding the topic. Your opinion is highly regarded. You are under no obligation to answer all the questions and you are free to opt out should you choose to do so. I will be asking some questions and my assistant will be taking notes. I will audio tape the interview, so I do not miss your responses. The interview will take 15 minutes. Your name and identity will not be included in the notes and recordings. The information obtained will be confidential and will be used for academic purpose only.

Consent of Respondent

I hereby voluntarily consent to participate in the study. I acknowledge that the nature of the study has been explained to me, and I understand that my participation is voluntary, and I can withdraw my participation at any point.

Signature of the Respondent_____Date

_____

Signature of Researcher/Assistant_____Date

_____

INTERVIEW QUESTIONS

1. Have you heard of male infertility?

2. What is male infertility in your own understanding?

3. How is male infertility manifested?

4. Do you know of any infertile man in the community?

5. How do you know they are infertile?

6. Are there any Kamba specific names for male infertility?

7. What causes male infertility?

8. Are there any activities that infertile men cannot participate in?

9. Are there specific burial rites for infertile men?

10.Can an infertile man assume a position of leadership?

11. Can an infertile man enjoy equal inheritance with his siblings who have children?

12. What happens in a marriage when a man is infertile?

13. Who does an infertile man consult when seeking for a cure?

14. What methods are used to cure infertility?

The end

Thank you for participating

APPENDIX III: INTERVIEW GUIDE FOR KEY INFORMANTS

My name is Brenda Nduku Oloo. I am a student, at the University of Nairobi, Department of Sociology and Social Work. As a prerequisite of my degree programme, I am carrying out a study titled: **Social Construction and Management of Male Infertility Among the Akamba People. A Case Study of Muvuti/Kiima Kimwe Ward in Machakos County, Kenya**. The study will contribute significant information that will help in managing male infertility. You have been purposely selected from the community to participate in the study by responding to the questions asked, with honest and to the best of your knowledge regarding the topic. Your opinion is highly regarded. You are under no obligation to answer all the questions and you are free to opt out should you choose to do so. I will be asking some questions and my assistant will be taking notes. I will audio tape the interview, so I do not miss your responses. The interview will take 15 minutes. Your name and identity will not be included in the notes and recordings. The information obtained will be confidential and will be used for academic purpose only.

Consent of Respondent

I hereby voluntarily consent to participate in the study. I acknowledge that the nature of the study has been explained to me, and I understand that my participation is voluntary, and I can withdraw my participation at any point.

Signature of the Respondent _____ Date _____

Signature of Researcher/Assistant _____ Date _____

INTERVIEW QUESTIONS

1. Have you heard of male infertility?

2. What is male infertility in your own understanding?

3. How is male infertility manifested?

4. Do you know of any infertile man in the community?

5. How do you know they are infertile?

6. Are there any Kamba specific names for male infertility?

7. What causes male infertility?

8. Are there any activities that infertile men cannot participate in?

9. Are there specific burial rites for infertile men?

10. Can an infertile man assume a position of leadership?

11. Can an infertile man enjoy equal inheritance with his siblings who have children?

12. What happens in a marriage when a man is infertile?

13. Who does an infertile man consult when seeking for a cure?

14. What methods are used to cure infertility?

APPENDIX IV: RESEARCH LICENSE

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Date of Issue: **30/July/2019**

RESEARCH LICENSE

This is to Certify that Ms.. BRENDA OLOO of UNIVERSITY OF NAIROBI , has been licensed to conduct research in Machakos on the topic: SOCIAL CONSTRUCTION AND MANAGEMENT OF MALE INFERTILITY AMONG THE AKAMBA PEOPLE: A CASE STUDY OF MUVUTI/KIIMA KIMWE WARD IN MACHAKOS COUNTY, KENYA for the period ending : 30/July/2020.

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