Socio-Cultural Beliefs and Practices Associated with Infertility in Kenya: A Case of Kisumu County

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Abstract

Infertility in men and women is a widespread global phenomenon. However, socio-cultural beliefs and practices have been associated with failed reproduction processes in Africa. The study specifically aimed at establishing socio-cultural beliefs and practices associated with infertility. Similarly, the study relied on a mixed method design which involves integratingboth qualitative and quantitative techniques. Thereafter, the data were organized, tabulated, interpreted and described. In particular, the study employed the use of semi-structured questionnaires to gather information from 200 respondents. In addition, six Focus Group Discussions (FGDs) comprising of 10-12 individuals and thirty six (36) Key Informant Interviews (KIIs) comprising 20 health officers/practitioners, 4 religious leaders, 4 herbalists and 8 Traditional Birth Attendants (TBAs) were conducted. The study disclosed that the concept of infertility has strong social, cultural and economic undertones. From the perspectives of childless couples, health practitioners, traditional birth attendants, herbalists and religious leaders, the respondents have limited knowledge about causes of infertility. In particular, infertility is given negative labels embedded in the community's socio-cultural set up. In Kisumu County, children are quite vital and not predictive of the residents' experiences but also their future. The study recommends for a comprehensive education program within Kisumu County aimed at filling the existing knowledge gap about infertility and any myths associated with it. The study concludes that low level of knowledge is a threat to management of infertility in Kisumu county.

Key words: ***Social-cultural, beliefs, Infertility, Kisumu County.***

Background

Infertility is a major world problem. The world highest rates of infertility is found in the non-Western societies, especially those in the "infertility belt" of Central and Southern Africa (Petraglia, Serour and Chapron, 2013; WHO, 2013). In resource poor countries, the problem is said to affect up to 30% of couples, causing huge suffering (Dhot et al, 2011). More specifically, one in every four couples in these countries is affected by involuntary infertility (WHO, 2013). This high prevalence of infertility is partly due to limited resources, over-emphasis on policies aimed at reducing population growth and the high cost of modern infertility treatment (WHO, 2013). In the African context, infertility more often than not, presents itself in a marriage situation. In this case, child bearing is really valued; it is the essence of marriage within the African Community (Mburugu &Adams, 2004). As such, the inability to have children causes much distress and trauma among couples. It has been made worse due to various socio-cultural beliefs and practices among ethnic groups. For instance, in a previous study on an adult population in Pakistan, majority of participants associated infertility with evil forces and supernatural powers (Ali & Sami, 2007). The interaction between socio-cultural beliefs and practices, and infertility is slowly gaining momentum in Africa.

Statement of the Problem

Infertility is a major problem that affects families in Kenya including Kisumu County. The inclusion of infertility management in the Kenyan National Reproductive Health Strategy (KNRHS) denotes the value that the government attaches to infertility problems (Nyagol, 2012). Despite this, the problem of infertility still persists especially in Kisumu County.

According to gynaecological records, there were 484 cases of infertility among females and males between 2006 and 2008 (KDH, 2008). These statistics paint a worrying trend hence the need for an urgent attention. The problem of infertility is compounded by various myths, practices and beliefs about its causes. The outcome of this is delays in treatment and care for persons experiencing infertility problems. So far, there is little empirical research to confirm existing social cultural beliefs and practices which surrounds infertility in Kisumu County. Early studies by Ocholla-Ayayo (1976) explain how a breach to a given community norm may prevent an individual from giving birth to children or may prevent a family from producing one sex; female or male children.However, the study fails emphirically test as it is based on secondary data. This study is an attempt to fill such a void.

Objective of the study

The study aimed at establishing socio-cultural beliefs and practices associated with infertility.This study was multi-disciplinary in nature, and based on firm methodological approaches, theories and conceptual framework and attempts to add to the body of knowledge besides informing policy decisions in so far as community understanding of causes of infertility is concerned.

Literature review

The used both published and unpublished documents, primary and secondary sources, were vital in this study. The primary and secondary information have been useful in capturing socio-cultural beliefs and practices that men and women associate with childlessness.

Infertility is commonly defined as the inability or failure to conceive a clinical pregnancy despite having frequent, unprotected and timed intercourse for at least one year (Bhattacharya, Porter, Amalraj, Templeton, Hamilton, Lee and Kurinczuk, 2009).There is a distinction between primary and secondary infertility. Primary infertility describes a woman who has never conceived or given birth to a live child.

Scientists believe that there are many causes of infertility in both women and men. In women, ovulation disorders affect an estimated 25% of women experiencing infertility (Larsen, 2001). Ovulation disorders are a condition where a woman may ovulate irregularly or not ovulate at all. This can be caused by flaws in the regulation of reproductive hormones by the hypothalamus or the pituitary gland, or by problems in the ovary itself. Some common conditions that fall under ovulation disorders include hypothalamic dysfunction, premature ovarian insufficiency and excessive prolactin (Larsen, 2001).

Damage to fallopian tubes also known as tubal infertility is responsible for many cases of infertility in developing countries. Fallopian tube is a pair of thin ducts found on both sides of the uterus. The tubes connect the ovaries with the uterus and the eggs are transported from the ovaries to the uterus for fertilization to take place. Damaged or scarred fallopian tubes can be caused by the infection, pelvic inflammatory disease (PID), previous surgery on the pelvis or nearby areas, or pelvic tuberculosis.

Such damages hinder eggs from ovary from being transferred to the uterus and in the same hinder sperms from swimming through uterus and fallopian tube for fertilization to take place (Ericksen and Brunette, 1996; Lechner et al., 2006). Uterine or cervical infection can interfere with implantation or increase the likelihood of miscarriages. These include fibroids, polyps, uterine abnormalities present from birth, cervical stenosis and mucus problems in the cervix (Battreman, 1995).

Male infertility refers to inability to attain pregnancy in a fertile female. Male infertility factors account for 40-50% of infertility in human (Larsen, 2004). Men tend to face sperm production problems in the testes. In some cases men tend to experience low numbers of sperms. Mumps viral infection in men can make 30% of men to fail to attain pregnancy in females. Chromosomal abnormalities or errors can also lead to azoospermia which is a condition where a man completely lacks sperms hence is not able to contribute to conception (Ferlin, Raicu, Gatta, Zuccarello, Palka and Foresta, 2007).

Worldwide, 10 to 15% couples are unable to conceive a child, at some point during their reproductive lives (Reproductive Health Outlook, 1999). The World Health Organization (WHO) estimates that 60 to 80 million couples worldwide currently suffer from infertility (Adamson, Krupp, Freeman, Klausner, Reingold and Madhivanan, 2011).

According to other reports, infertility affects between 60 million and 168 million people worldwide and this represents one in ten couples who experience either primary or secondary infertility (Butler, 2003). A more recent and shocking statistic reveals that one out of six couples face infertility related complications worldwide (Pittman, 2013).

From the available literature, infertility is surrounded by many mistaken beliefs about its causes, such as witchcraft and possession by evil spirits, and these beliefs negatively affect its management. In Africa infertility is attributed to two factors grouped as traditional factors and Western biomedical factors. Traditional factors are categorized as mystic and natural factors (Gerrits, 1997). Mystic factors involve interpersonal conflicts and manipulation by witches and traditional healers.

There is a strong connection between mystic and biomedical factors. Some societies believe that spiritual forces can be invoked to hinder a woman from ovulating and hence unable to conceive. There seems to be a very thin line between the natural and biomedical explanations on infertility. Further literature reveals those only a small proportion of people are able correctly identifies when infertility is pathological and know about the fertile period in women's cycle (Ali *et al.,* 2011).

In a previous study on an adult population in Pakistan, only 25% correctly identified when infertility is pathological and only 46% knew about the fertile period in a woman's cycle, (Nwobodo & Isah, 2011). Evil forces and supernatural powers were widely held as causes of infertility. In Kuwait, the most educated women blamed infertility on nutritional, marital, and psychosexual factors, but those who were not literate blamed their infertility on supernatural causes, such as evil spirits, witchcraft, and God's retribution (Waterton &Wynne, 1999).

In Madagascar, a breach of a given taboo was believed to cause infertility. In the same way, infertility was attributed to a husband's and wife's blood failing to mix, a woman's marriage to a spirit, or burial of pubic hair (Greil, Blevins & McQuillan, 2010). Among the Macua of Madagascar, the initiation rites conducted after menarche[1], involves the burial of pubic hair.

[1]Menarche as used in this paper refers to the occurrence of first menstruation

If this is tampered with by a witch, there is a belief that infertility may result. In Nigeria, there is a strong belief in the phenomenon of *Ogbanje* where infertility is determined by destiny; women giving birth to a child who is not destined to live beyond the first birthday (Okonofua *et al.* 1997). Among the Yoruba of Nigeria, it is believed that all women have a fibroid (*iju*) which is natural and allows conception to take place. It only causes infertility when the fibroid becomes big, blocking out the sperms or causing hotness, thus preventing the sperm from fertilizing the female eggs. Another commonly held belief among the Yoruba is that all women have a worm called *aranginisa* which has some teeth, but causes no harm to the baby in the womb. Infertility can only take place when this worm, "*aranginisa*," gets cruel (Oyekan, 1999:19).

A number of communities in Kenya such as the Luos and Luhya believe that breaking traditional rules can lead to childlessness. For instance, among the Luos, if a girl delivers at home while her mother is still fecund, the mother should not cook for her until she is over puerperium [2]and get her first period. If the mother cooks for her before this period is over, the girl will not conceive again (Kimani, 2001). Among the Luhya, one is referred to in a derogatory manner as *india avana,* literally, transmitted to mean, 'the greedy baby eater'.

Among the Agikuyu, the contant loss of pregnancies and babies is often associated to the woman's past promiscuity including induced abortions. Such a woman receives very little sympathy, especially from her in-laws, who considers themselves the aggrieved party, as they feel cheated. Maithya (2006) asserts that childbearing is both a biological and a cultural affair and that due to its biological nature; childbearing has health implications for both the mother and the child. Furthermore, biomedical and demographic negative effects related to reproduction are maternal age, marital status, and birth intervals (Bledsoe, Banja & Hill, 1998).

[2]puerperium refers to the period between child-birth and the return of the uterus to its normal size.

According to Bledsoe et al., (1998), the cultural construction of reproduction leads to depletion of bodily resources in a person. Therefore, the cultural meanings and people personal interpretations of behaviour and events related to childbearing may give more insights into the meaning of reproduction and well-being.

A study by Thiessen (1999) concludes that the notion of strength is closely related to gender, sexuality and reproduction. Based on the Akamba culture, the notion of *vinya* (strength) is linked with reproduction and marriage. Among the Kamba community, a man without strength is viewed as a person who is unable to fulfill his reproductive and sexual duties like being able to impregnate a woman or having daughters only. A man who has reached the marriage age must marry so that he can earn respect in the community and attain full adulthood. Moreover, not being able to marry after reaching marriage age may shows that a man has sexual complications such as being infertile. Male gender identity is mainly understood in relation to one's sexual and reproductive strength.

Infertility is the greatest misfortune, especially in African cultures, that a woman can experience. Kawango (1995) says that barrenness is a painful and humiliating state for which there is no source of comfort in traditional life. Women are affected more by infertility because they have few resources under their control as compared to men who have many resources under their control. Boivin et al (2007) conclude that the age of the mother is the main determinants of infertility.

They acknowledge that for women below 26 years of age, cumulative conception rates is 60 per cent at six months and 85 per cent at a year of regular sex, but conception rates are more than halve by age 35. After 35 years there is a decrease in the number of eggs which ovulate as well as a decrease in the quality of eggs (Boivin *et al*, 2007).

The study provides very insightful ideas and background. However, it is not true that age is the main factors influencing infertility. There are other numerous factors that make people to be vulnerable to infertility which needs to be explored. The current study put more emphasis on social –cultural beliefs and practices which explain infertility in Kisumu County.

Methodology

To pursue the objectives, this study adopted a combination of quantitative and qualitative approaches which included the use of questionnaires, Focused Group Discussions (FGDs) and Key Informant Interviews. This was quite useful in investigating the socio-cultural beliefs and practices associated with infertility. Through the inclusion of both quantitative and qualitative data, the researcher was able to generate a wider or more complete picture of the phenomenon under study, while avoiding the biases common in using single method.This study was conducted in Kisumu County. Specific areas which were covered included: Winam, Kadibo, Maseno and Kombewa which all fall within Kisumu County. According to the 2010 census, Kisumu County has a population of 968,909 people, with male 48.9% and the female 51.1% (CBS, 2011).

In total, 200 respondents were selected using simple random sampling. The first 100 people were selected from Kisumu County gynecological records while the rest were randomly picked from the main divisions of the study.

The sample was also made up of 36 key informants comprising 20 health officers/practitioners, 4 religious leaders, 4 herbalists and 8 Traditional Birth Attendants (TBAs). In selecting the health practitioners, purposive sampling was used. However, in recruiting TBAs and Herbalists, the researcher relied on snowball sampling where information from the previously identified

participants referred the researcher to other people who they thought were knowledgeable about cultural issues and infertility (Neuman, 2007).

8 TBAs and 4 herbalists were selected. FGDs were also conduced to compliment the data collected. There were 6 FGDs comprising of 10-12 individuals selected purposively based on gender, locations and experiences of childbearing problems as well as health seeking behaviours at Rabuor (Winam), Kombewa (Kisumu Rural), Joel Omino (Kisumu Town) and Maseno health centres.

Both Quantitative and qualitative methods of analysis were used in this study. Statistical Package for Social Science (SPSS) software was quite useful for the purposes of graphical representation of the raw data especially quantitative data. Thematic analysis was used in analysing the qualitative data from FGDs and Key Informants Interviews (KIIs). This involved familiarization with the data, scanning and scrutiny of the data followed by identification of emerging themes for interpretation. Kisumu County was considered an appropriate research site because it exhibits serious infertility and general reproductive health challenges. There are many cases of infertility. The County has highest unemployment rates (15.4%) and the highest HIV prevalence rate of 27.1% (Owino et al., 2012). The challenges are compounded by poor health services and high poverty index as illustrated by a large proportion of people living below the poverty level.

Findings and Discussions

The revealed that several socio-cultural values, norms and practices such as witchcraft associated with infertility and these include a combination of religious, cultural and health reasons.

Socio-economic Characteristics

A total of 200 respondents took part in this study. Majority were married (80%), females (54%), and aged between 30-34 years (39%). In addition, slightly more than a third (32%) attained primary level of education except for 28% and 19% with tertiary college and university education respectively.Table 1 below displays the results.

Table 1: Socio-Economic Characteristics of the Respondents

Description	Frequency	%
Gender		
Male	92	46
Female	108	54
Total	200	100
Age(yrs.)		
20-24	28	14
25-29	62	31
30-34	78	39
35-39	30	15
40-44	2	1
Total	200	100
Education		
Primary	64	32
Secondary	42	21
Tertiary college	56	28
University	38	19
Total	200	100
Marital status		
Married	160	80
Single	22	11
Divorced	16	8
Widowed	2	1
Total	200	100

(Source: Field Results, 2012)

Female views about causes of Infertility in Women

Table 2 shows that 88% of the female respondents linked infertility problems to God's plan. About 55% of the females interveiwed were of the opinion that having multiple sex partners predispose women to infertility.

However, about 70% attributed infertility to premarital sex, 71% to witchcraft while 69% believed infertility was as a result of bad omen from evil person. Accordingly, about 66% of female participants linked infertility to inner vows while, others, 79% claimed it was as a result of parental curse and 74% believed that women ended up with infertility problems if their spouses worked far.

Table 2: Females' Views on Socio-Cultural Beliefs and Practices Associated with Infertility in Women

N=107

	Disagree		Not Sure		Agree	
Views and Practices	Freq.	%	Freq.	%	Freq.	%
Having many sexual partners	29	27	19	18	59	55
Having sex before marriage	22	21	10	9	75	70
Witchcraft	9	8	22	21	76	71
A bad omen from evil person	8	8	25	23	74	69
Rituals performed with a cloth[3]	18	17	7	7	82	77
God's plan or decision	5	5	8	8	94	88
A vow never to have a child	18	17	18	17	71	66
A parental curse	8	8	15	14	84	79
Blood does not rhyme[4]	14	13	14	13	79	74
Spouse works far	18	17	11	10	79	74

Multiple response total %>100

(Source: Field Results, 2012)

Male views about infertility in Women

Table 3 shows that 42% of the male respodents were of the opinion that having multiple sex partners predispose women to infertility. About 70% believed premarital sex was responsible for infertility, 60% witchcraft while another 66% were convinced that infertility was caused by bad omen from evil people.

[3]Rituals performed with a cloth refers to the hiding a cloth with a female's menstrual flow on it

[4]Blood does not rhyme simply means blood incompatibility between the husband and his wife

The table further reveales that 74% of male respondents claimed it was as a result of parental curse and 68% believed infertility was a consequences of spouses working far and staying apart from each other.

Table 3: Males' Views on Socio-Cultural Beliefs and Practices Associated with Infertility in Women
n=93

Socio-Cultural factors that Predispose Women to infertility	Disagree		Not sure		Agree	
	Freq.	%	Freq.	%	Freq.	%
Having many sexual partners	29	31	25	27	39	42
Having sex before marriage	24	26	4	4	65	70
Witchcraft	12	13	25	27	56	60
A bad omen from evil person	13	14	19	20	61	66
Rituals performed with a cloth	18	19	12	13	63	68
God's plan or decision	2	2	6	7	85	91
A vow never to have a child	21	23	19	20	53	57
A parental curse	8	9	16	17	69	74
Blood does not rhyme	10	11	13	14	70	75
Spouse works far	19	20	10	11	63	68

Multiple response=total % >100

(Source: Field Results, 2012)

As shown in Table 4, there was a considerable proportion of males, 91%, were of the views that infertility was due to God's plans. However, 75% of the males indicated that infertility result from blood incompatibility. About 70% and 42% of the males interviewed believed that multiple sex partners and premarital sex predisposed infertility in women respectively.

Other socio-cultural beliefs and practices that predisposed females to inferitility according to male respondents were as follow: spouse works far by 68%, 68% attributed infertility to rituals performed with a cloth while 74% indicated parental curse, 66% bad omen from evil person and 60% believed that infertlity was as a result of witchcraft.

Table 4 also reveals that 91% of the men believed that too much work predisposed them to infertility while 79% thought it was because of too much cycling. A relatively high number of male participants, that is 89%, believed infertility was a result of God's plan and 65% related it to circumcision. Infertility was least associated with rituals performed with a cloth according to 52% of total males interviewed.

Table 3 summarizes the findings.

Table 4: Males' Response on Socio-Cultural Beliefs and Practices Associated with Infertility in Men

N=93

Socio-Cultural factors that Predispose Men to infertility	Disagree		Not Sure		Agree	
	Freq.	%	Freq.	%	Freq.	%
Male having too many sexual partners	29	31	7	8	57	61
Having sex before marriage	29	31	2	2	62	67
Witchcraft	8	9	33	36	52	56
A bad omen from an evil person	10	11	21	23	62	67
Being circumcised	27	29	6	7	60	65
Rituals performed with a cloth	24	26	21	23	48	52
God's plan or decision	1	1	8	9	83	89
Vowing never to have a child	7	8	23	25	62	67
Parental curse	8	9	18	19	67	72
Blood not rhyming	12	13	18	19	63	68
Sex with older women	18	19	20	22	55	59
Using sperms for rituals	25	27	6	7	62	67
Improper handling of a child at birth	22	24	10	11	61	66
Too much cycling	2	2	18	19	73	79
Too much work	4	4	14	15	85	91

Multiple response=total % >100

(Source: Field Results, 2012)

Having considered factors that predispose both male and female to infertility, it was reasonable to look at females views on factors that predispose men to inability to contribute to conception and Table 5 summarizes the findings.

Table 5: Females' Views on Socio-Cultural Beliefs and Practices Associated with Infertility in Men
N=107

	Disagree		Not Sure		Agree	
Socio-cultural related factors in men	Freq.	%	Freq.	%	Freq.	%
Male having too many sexual partners	30	28	15	14	62	58
Having sex before marriage	28	26	5	5	74	69
Witchcraft	7	7	31	29	69	65
A bad omen from an evil person	9	8	17	16	81	76
Being circumcised	28	26	11	10	64	60
Rituals performed with a cloth	22	21	13	12	72	67
God's plan or decision	1	1	9	8	97	91
Vowing never to have a child	4	4	19	18	84	79
Parental curse	6	6	16	15	85	79
Blood not rhyming	13	12	22	21	72	67
Sex with older women	19	18	21	20	67	63
Using sperms for rituals	24	22	19	18	64	60
Improper handling of a child at birth	16	15	8	8	83	78
Too much cycling	8	8	10	9	89	83
Too much work	9	8	8	8	89	83

Multiple response=total % >10

Table 5shows that women like their male counterparts were of the opinion that infertility experience was in line with God's plan and decision as was indicated by about 91% of all females interviewed. Unlike the males, 67% of female respondents associated infertility in men to rituals performed with a cloth. An equally significant finding was that 60% of women interviewed linked infertility with circumcision of males. Interestingly, about 63% of all females who participated in the study indicated that the male infertility was also due to male's sexual affairs with old women.

Subsequently, a correlation test was conducted to test association between infertility and socio-cultural beliefs and practices in both males and females.

Findings from FGDs and KIIs confirmed witchcraft as a determinant of infertility. A number of participants viewed witches as responsible for preventing pregnancy and inducing miscarriages. Jealous female relatives are more often than not responsible. A young woman gave an example of this during the FGD when she stated that:

> *Some people are jealous of others, they go about consulting traditional doctors and they destroy the mother's womb (*Female FGD participant, 27 years).

Echoing these sentiments, one female respondents narrated her odeal by remarking as follows:

> *Personally, I have waited for quite some time now. At some point, I felt something was wrong with me, perhaps I was cursed or something, it got to the point that I almost considered going to a native medicine man*" (Female respondent, 22 years).

During key informant interview, some TBAs explained infertility resulted from "*tuech*" litterally meaning to be "bound or tied". Among the Luo community, it was believed that the grandmother controlled fertility/infertility. The following statement from one of the KIIs clearly illustrates the above mentioned scenario:

> *"Grandmother used to take especially the underwear or the soil which has your period and hide somewhere in the kitchen in the thatch by the fire hearth where some passes as a sign to prevent the girl from getting pregnant –so in case she dies before she had told you, you might not get children*."(TBA, 40 years)

Here, to be "tied" served a dual and often a binary opposing purpose. For a young unmarried girl, to be kept offered protection against unwanted pregnancy and the shame, dishornour of losing out on a marriage partner. This meant that one had to cultivate a cordial relationship with the grandmother to ensure that she can "unbind" one at the oppurtune time. It is for this reason that the grandmother was feared and respected. One of herbalist leaders during KIIs opinioned that in some cases, witches and spiritual forces was also responsible for infertility:

> *I know instances where witchcraft has resulted in childlessness. There are also occasions where witches have openly confessed of their doings. This was very common in the olden days but now you don't hear very much of this (*Herbalist, aged 45 years).

The belief in contraceptives as a cause of infertility was unanimous for both male and female participants. The study revealed that few women experienced secondary infertility after using certain types of contraceptives. Most male participants in the FGDs disliked contraceptives especially among young girls as it is associated with promiscuity. They also believed that girls on contraceptives were more likely to trouble their future husbands. One of the participants during FGD captured the situation as follows:

> *''My partner made a serious blunder by taking the family planning drugs. As a result of this, she took quite sometimes before giving me another child. In fact, I almost divorced her. I told her never to use the drugs again."*(A male FGD aged 45 years)

An interesting finding was that improper handling of a child predisposed individuals especially men to infertility. On the other hand, respect and adherence to societal norms among the married was important in guiding against any possibility of becoming infertile. In the words of one FGD participant:

> *''The only way to prevent infertility is respecting the prescribed norms of the community. This discourages the gods and ancestors who often bring childlessness among married partners."(*A male FGD aged 30 years)

It also emerged during the FGD that God's power or plan exposed some respondents to inability to contribute to conception. One participant acknowledged that God has a significant power in her childlessness. The voices of females FGDs are described below:

> *"I just believe that if it's meant to be, I will have a child…""I mean people fall pregnant taking drugs, people fall pregnant doing all, everything, and, you know, if it's basically not meant to be. This is actually just there to improve your chances, but if it's not meant to be,..... If its God's will that I should have a child, I will have one…"* (FGD Participant, Female 30 years).

> *"There have been many times when I have reached out to my fellow church members, wanting their help and prayers in dealing with this situation. Once, I requested prayer from a women's prayer group and was promptly told by these women that maybe it was not God's will for me to have a child. Therefore, they were not going to pray for me. Since my religious beliefs and convictions are based on the power of prayer, I was devastated*" (FGD Participant, Female 25 years).

From the above sentiments, it is clear that the FGD participants are convinced that both her miscarriage and infertility is caused by a punishment from God although she does not know her fault, which angered God. Religious explanations of the causes of infertility are common and infertility is perceived as the test of one's patient. Religious treatments of infertility are dominant and religious leaders have the power to say that God only cures infertility. The statement below illustrates the responses in one KII with religious leaders:

> *There is nothing impossible with God. If people patiently demand from God only, it is easy to get everything, including children. We can see in the Bible that Sarah and other infertile women gave birth during their old age [post menopause]. ....Many of the popular figures in the Bible such as Isaac, Jacob, Samson, St. Mary, and John the Baptist were born from couples who faced infertility problems at first and who received God's blessings for their faith in Him. The problem is that most people have no patience and do not stick to God only. They try sorcery, commit adultery, break their marriage, or lose hope in God. As religious persons, we advise people to be strong, to stay with their husband or wife, and pray to God as He has his own time."(*KII with a 46 years old, religious leader)

However, another religious leader emphasized the difference between the New and Old Testament about the cause of infertility. As explained in the Old Testament, infertility was considered as resulting from a person's sinfulness and God's curse. According to him, infertility is considered as God's curse in the New Testament.

> *"In the Old Testament, infertile people were considered as cursed because they didn't share the blessing: "Be fruitful and multiply; fill the earth." Genesis, 1:28. Other people insult them by saying 'dry breast', 'closed womb', 'relative of mule', 'unblessed and cursed'. In the Old Testament, the religious leaders for holy services did not accept the tribute of the infertile people* (A pastor, 43 years).

As can be seen from findings, there are different views on socio-cultural beliefs and practices associated with infertility in both men and women. Spiritual factors are the most associated with infertility. It is clear that the name God means many different things to different people. The mystery and familiarity of God is quite apparent in this study. For instance, Majority of respondents linked the problems of infertility in females to God's plan or decision. The attribute of God's wisdom is one of the significant beliefs about God among the Luo for it proves that God knows everything. This attribute is significant to the Luo way of life and belief because in their daily lives they allude to God's wisdom in managing their affairs. For instance when faced by a difficult situation they would usually say, "*Nyasayeong'eyo*" translated as "God knows." Therefore, we see that God's justice is closely connected to His Wisdom and thus the two complement each other when looking at the life and beliefs of the Luo.

Discussion

It is interesting to note that more female respondents as compared to their male counterparts held the view that God was responsible for their situation. This finding appears to support the suggestion that women are closer to nature and are more spiritual than men (Nga, 2005). An explanation to this point is that childlessness condition is a sign of punishment for sins people committed in the past. Nonetheless, this finding is in sharp contrast to the one realized by Barden-O'Fallon (2005) whose study in Malawi revealed that economic factors predisposed many to infertility as compared to social factors. Witchcraft is also one of factors perceived by most of the respondents as responsible for infertility.

Witches and sorcerers among the Luo communities are known as "*jojuogi*". Witchcraft power is seen as misapplied and abused power, leading to misfortunes, illness, and death to others. Usually, the act takes place between people in close relationship, in the neighbourhood, or with co-workers.

When in harmony, people tend not to interpret problems in terms of withcraft, but when in conflicts, attributions of witchcraft are likely to occur as pointed out by Sami and Ali (2006). Conditions like infertility are then more likely to be linked to witchcraft, concludes Mabasa (2002). Explanations about infertility in this context imply that the infertile person is not responsible for his/her infertility. Apart from the spiritual causes, some respondents were convinced that infertility was brought about by certain cultural factors. These cultural factors are closely linked with couple's reproductive processes. For instance, failed reproductive processes were blamed on blood incompatibility and being circumcised.

Conclusion and Recommendations

The study concludes that there are several misconception about factors associated with infertility. Supernatural and mythical components seem to colour the etiology of childlessness in Kisumu County. In particular, members of the community tend to associate infertility with socio-cultural values, norms and practices such as witchcraft associated with infertility. This is perhaps due to low levels of education thus limited knowledge about the biological reasons of infertility. The manifestation of low levels of understanding is in their summation of the various factors associated with childlessness and practices. Again, because of the prevailing misconception about the causes of infertility, victims are confronted with psychological, social and economic consequences.

Infertility is particularly stigmatizing for affected couples in most parts of the study area. However, women tend to bear greater stigma in comparison to men because women represent birthing. Therefore, infertility is a serious individual and societal problem in Kisumu County.

The study recommends for the need to provide sexual and reproductive health education and awareness. This would serve as important tool for discouraging practices and resolving the misconceptions on infertility regarding its causes.

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