THE PREDISPOSING FACTORS, CONSEQUENCES AND COPING STRATEGIES OF INFERTILITY IN MALES AND FEMALES IN KISUMU DISTRICT, KENYA

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Abstract

Infertility is a major problem that affects families in Kenya. In Kisumu district, high prevalence rate of infertility and the desire to depart from over-emphasis on fertility studies are the primary reasons for the study. The study aimed at establishing the level of knowledge on the meaning of infertility and assessing the socio-cultural beliefs and practices that predispose people to infertility. In addition, the research focused on the consequences of infertility besides examining the coping strategies used by persons suffering from infertility. A descriptive research was used to describe characteristics of events and experiences of couples faced with the consequences of infertility. Thereafter, the data was organized, tabulated, interpreted and described. Similarly, the study relied on a mixed method design which involves intergrating both qualitative and quantitative techniques. In particular, the study employed the use of semi-structured questionnaires to gather information from 200 respondents. Six Focus Group Discussions (FGDs) comprising of 10-12 individuals were conducted. Admittedly, the study revealed that although people in Kisumu district accord great significance to childbearing, they have low level of knowledge on the meaning of infertility, predisposing factors and appropriate treatment options. Infertile couples and individuals suffered socially, psychologically and economically. For instance, high cost of treatment was reported as a major economic challenge, and failure to raise huge amounts of money for diagnosis and treatment fueled adoption of medically unproven coping strategies. Socially, infertility poses serious threat to marital stability among childless couples. Issues of social isolation and stigmatization were also reported by the respondents as common phenomena. Few individuals especially who recognized infertility as a biological disorder sought medical treatment in health centres while majority relied on traditonal interventions. Establishment of infertility policy and improvement in diagnosis, treatment, education, counselling and foster care services are recommended in addressing consequences of childbearing problems in Kisumu district. The study concludes that several factors predispose couples to infertility and that infertility is nolonger an urban phenomenon, nor is it confined to women only.

Keywords: Infertility, Predisposing, Consequences and Coping, Kisumu

Background

sWith the increase in cases of infertility in Kenya, Kisumu is one of the worst affected by the condition. This has prompted researchers of Anthropological to categorize factors associated with infertility into traditional and natural classes. The former may be classified into personalistic (human) or mystic factors (Janzen, 1981; Gerrits, 1997). Personalistic factors include the inability to procreate as a result of witchcraft and other spiritual problems. Naturalistic infertility involves a close association between modern or biomedical factors, and traditional factors (Gerrits, 1997).

Lukse and Vacc (1999) posit that the term barren conveys the potent emotional toll that failure to produce children exerts on couples. Worldwide, statistics show that between 8 and 12 percent of couples suffer from infertility or the inability to conceive a child, at some point during their reproductive lives (Reproductive Health Outlook, 1999). According to a more recent yet shocking statistics is that one out of six couples face infertility related complications worldwide (Pittman, 2013) while one in every four couples in developing countries is estimated to be affected by involuntary infertility (WHO, 2013). A vast number of studies on reproduction reveal that women worldwide bear the major burden of infertility (Inhorn and Van Balen 2001; Van Balen and Trimbos-Kemper 1993). Inhorn (1994) and Van Balen (1995) add that infertility has social consequences for both the female and the male. Such consequences are more grave in non-Western settings, than in the Western World. As one woman struggling with infertility explains:

> *Infertility challenges everything … your beliefs about yourself, about what's important about marriage, about what is fair and just. Being infertile makes you question the purpose of marriage and life…..nothing is left unaffected by this experience…Being infertile changes everything (as cited in Daniluk, 1997, p 103)*

The total number of new cases of infertility reported in New Nyanza General Hospital since May 2007 to December 2008 were 839 (GoK, 2008). Kisumu District gynaecological records reveal that between 2006 and 2008 there were 484 reported fertility problems (KDH, 2008). Among these women, 290 were from Kisumu District 60%, 77 from Siaya 16%, 48 from Bondo 10%, 34 from Nyando 7 %, and 15 from outside Nyanza 3% (KDH, 2008). About three years later, the Kenyan Demographic Health Survey (KDHS) report released for 2008-2010 stood at a total of 862 new cases of infertility (KNBS and ICF Macro, 2012).

The problem of infertility is compounded by the fact that the health sector in developing countries is underdeveloped, and mainly targets basic primary health care. As a result, a lot of attention is given to the reduction of maternal and infant mortality, and the promotion of family planning usage. The great disparity between rural and urban health provision, is yet another factor that hinders infertility treatment (Bergstrom, 1992). While urban areas enjoy relatively better reproductive health services, rural areas lack basic health facilities and services. The situation is further made worse by the fact that many health practitioners prefer not to work in such remote areas. Bergstrom (1992) adds that in many rural areas of developing countries, women are exposed to the problem of excessive infertility and this confirms that infertility is indeed a major social and healthcare problem. In an attempt to clarify the difference between health provison in rural and urban areas, and in seeking to understand the points of divergence or convergence between the two unique areas, Mariolis et al.(2008) concluded that urban residents have varying health needs. This point justifies the reasons for selecting particular Public Health Centre (PHC) units in rural areas for the study. In addition, Mariolis et al.(2008) argue that proximity to health services and the public character of the urban health centre seem to be the main advantage of urban areas in so far as infertility treatment is concerned.

Statement of problem

In general, studies on reproductive health in developing countries over-emphasise fertility issues and family planning methods at the expense of infertility issues which are left untouched. This has inherently led to a gap in the reproductive health literature since few or no studies target socio-cultural issues associated with infertility within the communities. That notwithstanding, a couple of Kenyan government health reports disclose a widespread concern about a possible decline in male and female fertility in many parts of Kenya. The sources of the statement of problem in this study included personal interaction with people as well as nuances and anecdotes from the people in Kisumu District. The District has one of the highest prevalence of infertility and this is confirmed by the latest figure on infertility for 2011-2012 in Kisumu District which reveals that there were 261 new cases of infertility, 145 in Winam, 100 in Kadibo, 11 in Maseno and 5 cases in non Kisumu regions including Bondo, Kabondo and Mombasa (KDHS, 2012). An extensive literature review revealed loopholes both in methodological approach and in the coping strategies with infertility. Finally, previous infertility studies have mainly focused on females hence raising a lot of questions with regard to males.

Research objectives

The study sought to establish the level of knowledge on the meaning of infertility, to assess the socio-cultural beliefs and practices that predispose people to infertility, to find out the consequences of infertility and to examine the coping strategies used by persons suffering from infertility. By addressing the objectives, the study adds to the knowledge on infertility besides informing policy decisions.

Literature review

The World Health Organization (WHO, 1994) (as cited in Rowe, Comhaire, Hargreave, and Mellows, 1993) recommends modifying the clinical infertility definition for use in epidemiological research as follows: "The absence of conception in 24 months of regular unprotected intercourse." WHO proposed to extend the period of trying to get pregnant from 12 to 24 months, because it had been found that many couples who did not get pregnant in a period of 12 months, did eventually get pregnant without treatment. Although there is little information in developing countries on infertility, the World Health Organization (WHO) reports that infertility is a public health issue worldwide. It poses a major challenge to those involved in its treatment and assisted reproduction (Vayena, Rowe, and Griffin, 2001). It is estimated that over one billion women aged between 15 and 49 years were in marriage or in consensual unions as per by the year 2006. This included 122 million women in less developed countries (Boivin et al, 2007). Within the same category were 72 million women aged between 20 and 44 years living in marriages or in consensual relationships, and suffering from infertility. Of these women, 40 million were likely to seek health services for the management of infertility, while 32 million will not, due to the stigma attached to it. Out of the estimated 40 million women suffering from infertility, only 12 million accessed treatment (Boivin *et al*, 2007).

It is estimated that 15% of Kenyan men and almost a fifth of Kenyan women have infertility related problems, according to the recent statistics from the University of Nairobi, while most people do not know their fertility status (Muhoro, 2012). In Nyanza Province, the Kenyan Demographic Health Survey (KDHS) report released for 2008-2010 stood at a total of 862 new cases of infertility (KNBS and ICF Macro, 2010). According to the latest figure on infertility for 2011-2012 in Kisumu District, there were 145 cases in Winam, 100 in Kadibo, 11 in Maseno and 5 cases in non Kisumu regions including Bondo, Kabondo and Mombasa(KNBS and ICF Macro, 2012).

On a more specific note, infertility services are mainly offered at Kenyatta National Hospital and Nairobi Hospital. These hospitals are located in the city centre, out of reach of the rural poor. The Kenya Vision 2030 that envisages a high quality life by the year 2030 may not be attained if the country does not invest heavily in reproductive health services, which are equitably distributed the country over. For instance, there is need to decentralize infertility services from urban centres to remote parts of the country. In addition to that, there is an urgent need to research on the socio-cultural issues that impede on the reproductive health of members of the community. Such findings can be used to integrate biomedicine and traditional medicine, with the intention of ensuring a quality life for all Kenyans.

In Mombasa, Kenya, an IVF centre was created in 1995, and nearly 50 patients had attended by early 2003, according to an obstetrician/gynaecologist from Mombasa's Coast General Hospital. At a regional obstetrical conference, he reported that 19 of the patients seen at the IVF centre had conceived with the help of simple ovarian stimulation, and two babies have been born using IVF (Kibwana, 2003). Child fostering is another coping strategy which is really effective, it is reported to be wide spread in various parts of West Africa. Child fostering in Gambia especially has been identified to be of high percentages. Adoption and fostering therefore give infertile couples a chance at parenthood. This also solves two problems at once; not only for the infertile couples but also for the children who would have lived their childhood years without parental love. However, others consider adoption as an act that is less valuable and incomparable with biological parenthood, arguing that the adopted children cannot be real children for adopters due to their felt needs of biological generational continuity (Aseffa, 2011).

In terms of Theoritical Framework, Menning (cited in Schlossberg, Waters, and Goodman, 1995) proposed the life crisis theory of infertility similar to the grief model used with dying patients and their families. He believed in his Life-Crisis Theory that life crisis was as a major negative social setback. Proponents of this theory believe that infertility can increase anxiety and stress and negatively affect life coping skills of a woman (Schlossberg, Waters, and Goodman, 1995). While the life crisis theory postulates that successful resolutions depend on an individual's resources, the biopsychosocial theory illuminates the consequences of infertility over a period of time and across family relationships. The conceptual framework that fitted this study was the one associated with the symbolic interaction perspective. This conceptualized framework analysed the individual's action in relations to others besides capturing meanings of different phrases and sentences used by those affected by infertility.

Methodology and data

The study design

To pursue the study objectives, the study adopted a descriptive research design. Research design is simply as a blueprint or a detailed plan of how the study is going to be conducted. According to Messah and Kigige (2011), a research design is a programme to guide the researcher in collecting, analyzing and interpreting observed facts. Drawing on methodological best practice of previous work, the study adopted an integrated study approach/design. It utilized a descriptive research that focuses on issues in the lives of people reporting inability to contribute to conception, and how they relate with community members. Mixed method research was used to avoid the bias inherent in any single method and to describe responses surrounding the four main research questions. The decision to adopt a mixed methods strategy was also based on the fact that it "allows a wider, or more complete, picture to emerge than that presented by single methods work alone" (Williamson 2005:9). Thus, the use of quantitative methods integrated with qualitative approach mainly through semi-structured, in- depth, individual interviews and focused group discussion provided

another avenue to gather rich data whereas the use of quantitative information had a complimentary role of adding precision and clarity to words (Kraska and Neuman 2008). This study adopted the use of two sampling techniques namely purposive and stratified sampling techniques. Purposive sampling, also known as 'judgmental or theoretical', is a non-probability sampling strategy which involves the conscious selection and sampling of certain elements or subjects from a pre-specified group (Trochim, 2000) or "information-rich cases (Webb and Doman, 2008).

The semi- structured questionnaire examined issues ranging from the knowledge of infertility, its associate causes, consequences, and its management options within Kisumu District. This data collection technique targeted all the 200 respondents, who were asked to complete a set of 49 open-ended and close-ended questions. Open-ended interviews provided an opportunity to gain insights into the dynamics of infertility and the experience of the group. In addition, the researcher was able to assess the subtle interaction between an individual woman's behaviour and the larger social context.

In order to match the characteristics of preferred participants in FGDs, selection was also based on the following eligibility criteria: (i) Individuals or couples who had been trying to get pregnant for 1 year, (ii) at least 1 year of regular unprotected intercourse with at least one partner without conception after previous pregnancy (iii) experiencing childbearing problems at the time, and (iv) ages ranged from 20-44 years (v) living in the Kisumu District (Winam, Kombewa, Maseno and Kisumu town) (vi) sexually active, where being sexually active is defined as having had sex at least once in the last 2 weeks (vii) Willing and able to give written informed consent. Thus the technique enabled the researcher to involve households and key informants that included health practitioners, herbalists and TBA.

The researcher selected purposively 6 FGD composed of between 8 to 12 members: Out of this, 3 FGDs comprised exclusively women while the other 3 was composed of male participants. In total 6 FGD were 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. Other FGD participants were selected based on information from the community members and due to the fact that they were qualified to provide key information needed for the study.

The Study Site

Kisumu District is the capital of Nyanza Province. The District is faced with high maternal and child mortality rates among many other health challenges. Other health related challenges in the District include high rates of malaria and HIV prevalence, poor staffing of health workers and rundown medical infrastructure. Kisumu District is also one of the leading Districts in Kenya with high prevalence of infertility, which for a long time has been an issue that is mostly blamed on women. Figure 3.1 illustrates the differences in prevalence within the research sites.

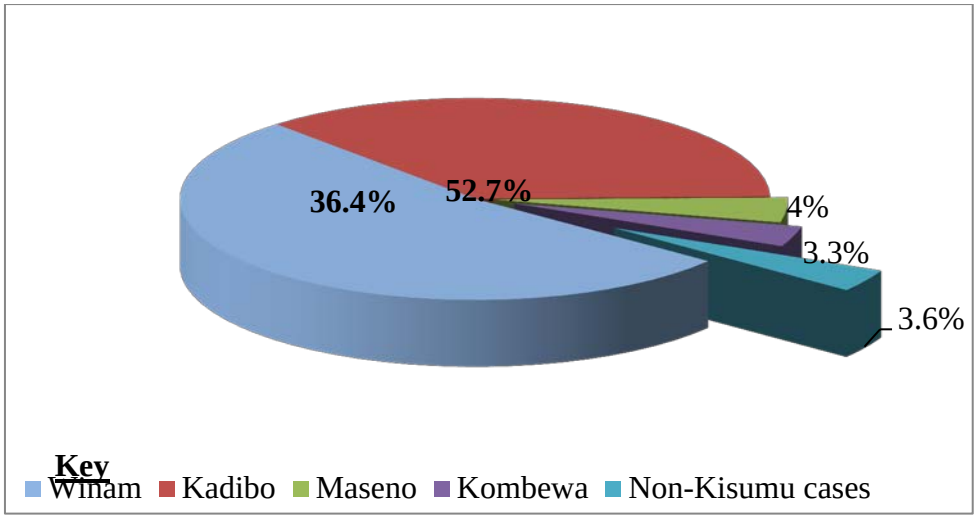

Figure 3.1: Kisumu District Infertility Statistics
Source: Kisumu District 2008-2012 Infertility Records

From the figure, it is clear that Kisumu District has the highest infertility rates as compared to non-Kisumu areas. Kadibo has relatively high rates of infertility and is closely followed by Winam 36%, while Maseno has 4%, Kombewa 3.3% and the rest 3.6% comprise of non-Kisumu cases including Kabondo, Bondo and Uyoma. The higher rates of infertility can be attributed to the frequent infection of reproductive organs and negative socio-cultural practices. Kisumu's main industrial activities include subsistence agriculture, trade and fishing in Lake Victoria.This study adopted the use of two sampling techniques namely purposive and stratified sampling techniques. Purposive sampling, also known as 'judgmental or theoretical', is a non-probability sampling strategy which involves the conscious selection and sampling of certain elements or subjects from a pre-specified group (Trochim, 2000) or "information-rich cases (Webb and Doman, 2008).

Data Analysis

In analysing data obtained from the questionnaire, the correlation and multivariate model was used to examine the association between different variables for instance socio-cultural factors namely premarital sex, slap with a ring, having sex with older women, vow never to have a child and socio-economic status, as well as education. A multivariate logistic regression was then used to determine the collective associations of the various variables as mentioned above.

The study adopted discourse analyses informed by the respondents written narrations to ensure that themes were identified by reading and re-reading the texts of each interview. Hence the researcher utilised discoursed analysis to illuminate how words, description(s), and metaphors were assembled to form discourse that socially constructs a concept such as infertility and societal realities. For instance, when some respondents were asked to explain the consequences and the coping methods used in handling infertility in their lives and a male FGD had the following to say:

> *Take it easy – take it easy -you're worrying too much. Don't think about it, and then it'll happen on its own.*
> *You're trying too hard.*
> *Give it time at least-Give it time...*
> *Try to adopt a child.*
> *May be your condition is a blessing from God*
> *(FGD participant, female 34 years, 2011)*

From the text, analysis of the text revealed the frequency of occurrence of certain phrases like “take it easy” and “give it time”. Such repetition revealed is critical in emphasizing the meanings and the importance of the texts. Such discourses enabled the researcher to summarize and compare various expressions from the respondents.

Study findings and discussion

Level of Knowledge on the Meaning of Infertility

One of the major interests of this study was to review how the concept infertility as was understood by the locals and how such understanding compares with the standard definition of infertility given by WHO. WHO defines infertility as a reproductive system failure to achieve a clinical pregnancy after 12 months or 24 months of regular unprotected sexual intercourse. In this study, participants associated infertility to a timeless condition of childlessness, being bewitched and being unlucky. In other words, the respondents view infertility as a condition that can only be confirmed after one year of failed conception. While the Luo community in Kisumu District refers to a woman who has never given birth as *lur* after marriage, the Yoruba calls her *agan.* On the other side, Yoruba calls a woman who is unable to continue giving birth as *idaduro* (Okonofua et al.,1997). This study did not capture a term used by the Luo community to describe a woman who is unable to continue to give birth. The timeline for one to be declared *lur* ranged from one year to many years, the Yoruba viewed *agan* as somebody who could not conceive within a period ranging from one month to five years (Okonofua et al., 1997). However, the two ethnic groups viewed *lur* and *agan* as worse than *idaduro*,more or so if the couples had not managed to sire a male child. In relation to the objective two, both studies concur that the educated had a correct definition of infertility according to World Health Organization.

Correlations of the Different Meaning of Infertility and the Different Determinants

Determinant	Labeling	
	Person r	Sig.
Attribute		
level of education	0.587*	.000

Source: Field survey 2010

The above table shows different labels used to refer to the term infertility as dictated by the level of education where P=0.000 a value less than the critical value (P=0.05). This confirms the fact that a correlation between the different meanings of infertility and educational status exist, a point that is rightly observed by John Dewey who once defined the term education as ‘business of education might be defined as an emancipation and enlargement of experience' (1933: 340). The same sentiment is shared by Bulvin (2008) who in his study about infertility knowledge revealed that the more educated respondents often had correct meaning of infertility.

Socio-Cultural Belief and Practices that Predispose Couples to Infertility

On the socio-cultural factor that predispose people to infertility, both the male and the females cited pre-marital sex, witchcraft, vow never have a child and slap by a ring. Other predisposing factors to infertility included being Circumcised, sex with older women, using sperms for rituals and improper handling babies at birth. Certainly all results are less than the critical value (P=0.05) and therefore indicates a positive correlation between the infertility and socio-cultural beliefs and practices. Furthermore, women often showed outward emotions easily than men and this was important in expressing their attachment to ideas or issues like witchcraft. One FDG participant remarked that:

“After waiting for sometimes (years) in marriage, I felt desperate and alone, I couldn’t confide in anyone,” she said. “I even started to believe 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 FGD participants, 27 years, 2012)

The close asociation between women and witchraft is confirmed by Katzs (1994) who asserts that females are generally associated with witchract. This view is supported by Dye (2002) studies which associated witchcraft and failure to adhere to cultural taboos to childbearing problems. Similarly, Foster and Anderson, (1978) postulated that the causes of infertility is associated with factors such as people or supernatural beings and forces, like spirits or witches. Dye et al (2004) acknowledge the fact that witches can be engaged by the jealous neighbours, in laws and co-wives to block ones womb. However, Ola (2012) study on the dilemma of infertility among adults in Osun State of Nigeria revealed that most meanings of infertility revolved around their socio-cultural makeup of the community.

Consequences of Infertility

Social Consequences of Infertility

From the study, a total of 65% and 64% of the respondents reported cases of divorce and seperation respectively. These findings implied that infertility was a serious threat to the institution of marriage and family stability. Furthermore, most female respondents with unexplained infertility problems were worried about their marriages and many felt their husbands were likely to leave them. A similar finding agreed with that of Feldman-Savelsberg (1994) who found that infertility was a ripe ground for divorce among the Bangangte tribe in Cameroon. Okonofua et al., (1995) noted that infertility was a common reason for the expulsion of the woman from the husband's house, with or without divorce. In fact, among the Ewe and Ashanti of Nigeria, a man or woman who has no child is not considered fully adult and after death buried with no full adult funeral rights (Forter, 1978). Such seperation and divorce led to low self-esteem and isolation on the women.

Economic Consequences of Infertility

Poverty was cited as an economic consequence of infertility by many respondents as agreed by a joint 77% of the respondents as opposed to 10% who disagreed with the view. Those who were not sure constituted 14%. Inability to have ones own children meant that a widow would not be entitled community resources like land and livestock. This confirms the community's strong belief that children were a source of wealth. Further, Luo traditional community believed that when girls were married off then her famiy was entitled to wealth in terms of animals and so childbearing was viewed as a duty that had to be fulfilled by any normal couple . The study revealed that about 34% of those interviewed were concerned about possibility of less or no inheritance as a result of childlessness while 11% expressed lack of concern with notion on inheritance. This view is consistent with the Luo belief that an individual could only inherit parent's wealth if he had a child or children. About 49% of respondents interviewed indicated that it was difficult to concentrate in ones work due to the fear of losing job. However, close to 24% of the respondents were generally in disagreement with fear factor of losing job. Many respondents expressed their strong desire to have children and other were even willing to sell their properties to solve their infertility situations. In fact, one respondent said that he did not care about what it would cost him to have a child. The respondents interviewed also recounted cases of repayment of bride price, loss of land and sometimes underpayment in the work place due low performance. Other notable economic consequences of infertility included: selling away of belongings, initiating costly adoption procedures and financial exploitation in the hands of herbalists. The same view is held by Feldman-Savelsberg (1994) who reveals that infertility resulted in women of Bangangte tribe in Cameroon to lose lands allocated to them by their husbands.

Psychological Consequences of Infertility

Although many many predisposing factors to infertility were closely associated with socio-cultural beliefs and practices, its psychological consequences were aggravated by physiological factors. For instance some of the respondents reported physical pain as they underwent various intrusive and invasive coping procedures. During focus group discussions, some respondents reported having felt physically defective due to diminished sense of body image that could not contribute to childbearing. An FDG respondent said "I feel let down by my parents who gave birth to me because they did not ensure that I was born complete". Such negative feelings had profound effects on the male and the female self-esteem. However, psychological consequences were weakly correlated with infertility. The result may have been contributed to by the fact that many respondents tended to shy away from disclosing their psychological experiences. In addition, this being a study that relied on qualitative techniques, it did not capture much of the psychological consequences of infertility. Therefore, the study finding contradicts Greil et al., (2012) work titled "The Experience of Infertility: A review of Recent Literature" which reveals that many clinical infertility research leads to psychological distress. The next chapter deals with the coping strategies used by couples suffering from infertility.

However, there is a weak correlation between Psychological consequences and infertility. This is enough reason to reject the hypothesis which states that persons suffering from infertility are more likely to experience gendered, social, economic and psychological consequences of infertility. In this study, most couples experienced gendered,social and economic consequences of infertility. However, psychological consequences were weakly correlated with infertility. The result may have been contributed to by the fact that many respondents tended to shy away from disclosing their psychological experiences. In addition, this being a study that relied on qualitative techniques, it did not capture much of the psychological consequences of infertility. Therefore, the study finding contradicts Greil et al., (2012) work titled "The Experience of Infertility: A review of Recent Literature" which reveals that many clinical infertility research leads to psychological distress. The next chapter deals with the coping strategies used by couples suffering from infertility.

Coping with Infertility

The study revealed different modes of coping. For instance, about 10% either sought treatment from herbalists or resorted to prayers, 6% sought support from Self Help Group members,1 % sought solace from dead ancestors,31% sought support from friends and 23% consulted with their relatives for advice.and others, sought for help from other sources of support (1%) while 17.7% resorted for help from. However, ridicule from friends and relatives posed a great challenge to couples reporting childbearing problems. Couple of respondents appeared to be selective or cautious when confiding with others about their situation. One FDG had this to say:

> *"In this place I have no relative who can help me, am left alone. I only depend on my friends but anyway they are only friends. For neighbours I think it is better not to tell out. In effect this shows that some are concerned about the privacy".*
>
> *(*(Male FGD participant, 35 years, 2012)

Meanwhile, others got solace from people they worshipped with. Religion offered a very good source of support and coping strategy. It is through such support that one of respondent had this to say:

> *"In the past I used just to be a church goer but today I am quite a different person. I have witnessed the power of fellowship and sharing with my fellow 'brothers' in Christ. I mainly pray for a healthy baby son and believe God is faithful".* (Male FGD participant, 35 years, 2012)

In one research carried out in South Africa, the entire group of women admitted that their faith based beliefs provided them with vital sources of support. However, in a study carried out in Taiwan some respondents adopted avoidance as a coping strategy that ensured emotional stability (Neff, 1994). Similarly, other studies have reported cases where those suffering from infertility admitted having recieved support from from colleagues at work, friends and neighbours (Gerrits, 1997; Mariano, 2004). The same observation was also reported in a South African study where women revealed that their male partners or husbands were generally supportive, understanding, trusting and viewed them as friends.

In conclusion, although there is no confirmed medical evidence on the effectiveness of of some of the traditional coping strategies, the strategies were positively associated with infertility as all the levels of significance are less than the critical P value, 0.05. This confirms the hypothesis that persons suffering from infertility were more likely to cope with infertility by seeking social support and were unlikely to visit bio-medicine practitioners. Further, some participants opted for support from church members, relatives, friends and 'others'. The study finding is supported by Wischmann (2008) who found out that couples suffering from infertility often resort informal coping mechanisms like talking to friends, spouse and relatives. In conclusion, all the tests for the three hypothesis were less than critical value P=0.05, and therefore indicated positive correlations, and that the respondents often used the four types of coping strategies namely reactive, anticipatory, preventive and proactive coping interchangeably.

Conclusion and recommendations

This study is deeply rooted in key theories, model and methodological considerations. The mixed –method approach to health research was thus progressively expedient and helped achieve respectability in this study. In terms of methodological implications, the use of discourse analysis is reflected in its challenge on the positivists' assumption of one reality out there. In this case, the one reality of failed conception, its consequences and coping strategies according to medical practitioners is challenged by the inclusion of socio-cultural beliefs and practices based findings. The study has elucidated many non-medical factors that predispose individuals and couples to infertility besides exposing numerous consequences of childbearing problems. Both life crisis and bio-psychosocial theories were accepted and used to understand the struggles and ordeals of childbearing problems in rural and urban parts of the District. The life crisis theory illuminated the negative effects of infertility in individuals and couples. For instance, infertility led to mental crisis which expressed themselves in the social, physical and economic spheres of the people. On the other hand, the bio-psychosocial theories were used to fill the gap in the study as far as the dynamic relationship in biological, psychological, and social aspects of predisposing, consequences and coping with infertility is concerned. However, the bio-psychosocial theories excluded financial resources that also play vital role in the access and treatment of infertility. The successful integration both bio-psychosocial and life crisis theories in this study confirms the need to adopt a holistic coping strategies in failed conception. In understanding the coping strategies, the study adopted symbolic interactionism model as proposed by Herbert Mead, Blummer and Cooley, which emphasized the unique characteristic of the human mind in the interpretation of symbols that pertains to the meaning of infertility, consequences and its coping strategies. Finally, the study concludes that several factors predispose couples to infertility and that infertility is nolonger an urban phenomenon, nor is it confined to women only. Drawing from the conclusions the study proposes series of recommendations were suggested and therefore point out as follows:

1. In order to fill the gap in knowledge on infertility and shun the existing myths surrounding the subject, there is an urgent need for comprehensive education to the population in Kisumu District.
2. A new discussion fora need to be established in which the entire community can renegotiate the meaning of parenthood with a view to lessening the burden on those reporting cases of inability to conceive
3. There is need for further research on socio-cultural beliefs and practices that can promote and those that hinder health within the community
4. In further pursuit of the issue of socio-cultural beliefs, it is important that reproductive health policies appreciate socio-cultural beliefs that enhance human health
5. Further sensitization, counselling, foster care and awareness are needed so that the childless couples or individuals are not discriminated against.
6. A small portion of respondents reported having conceived upon the use of herbal drugs, meaning that some of the herbal medication may work. More scientific research is needed to ascertain the contents of the herbal drugs.

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