MALE INVOLVEMENT IN THE MANAGEMENT OF INFERTILE COUPLES AT KENYATTA NATIONAL HOSPITAL

A CROSS-SECTIONAL DESCRIPTIVE STUDY

THESIS SUBMITTED AS PARTIAL FULFILMENT FOR THE DEGREE OF MASTER OF MEDICINE IN OBSTETRICS AND GYNAECOLOGY AT THE UNIVERSITY OF NAIROBI

2012

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I declare that this is my original work and it has not been presented for a degree in any other university.

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ACKNOWLEDGEMENTS

I wish to express my sincere gratitude to my supervisors: Dr. James Machoki M'Imunya and Dr. Gathari Ndirangu for their support, guidance and mentorship in the undertaking of this research.

Thanks to Drs. Ong'ech, Kinuthia and Kosgei, the reviewers of this study.

Thanks to all members of staff of the department of Obstetrics and Gynecology University of Nairobi including the Chairman Prof. Koigi Kamau, all the consultants for their guidance during my training.

Thanks to my colleagues, the registrars, the nurses and staff of University of Nairobi and Kenyatta National Hospital for their support during my training.

I wish to appreciate the administration of Kenyatta national hospital for allowing me to learn and practice my skills in their institution.

I would also give thanks to Thika District Hospital, Nazareth Hospital and the Mater hospital for enabling me do my elective term in their institutions. The experience contributed immensely to my knowledge.

I also thank my research assistant, Sr. Mutonga for her good job. Special thanks to Mr. Robinson Njoroge for the data analysis.

To the Almighty God I give thanks and praise.

ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome.
ART	Assisted Reproductive Technology
Etc	et cetera (among others)
H.I.V	Human Immunodeficiency virus
K.N.H.	Kenyatta National Hospital
MTRH	Moi Teaching and Referral Hospital
PID	Pelvic Inflammatory Disease
PMTCT	Prevention of Mother To Child Transmission
RH	Reproductive Health
STI	Sexually Transmitted Infection
W.H.O.	World Health Organization

DEFINITIONS

1. **Fecundity** is the probability of achieving a live birth in a single menstrual cycle.[1]
2. **Infertility** - the inability of a couple to conceive within 1 year of unprotected intercourse of reasonable frequency. Reasonable frequency in this context refers to sexual frequency of 2-3 times a week.[1]
3. **Male infertility** – is inability of a man to achieve a conception with his partner after 12 months of regular unprotected sexual intercourse. It is divided into two categories: primary and secondary; primary when he has never achieved conception, and secondary when he has so done irrespective of whether she is the current partner and irrespective of outcome of the pregnancy. But note this definition is relative because it is based on third person reporting.[1]
4. **Primary infertility** applies to those who have never conceived, whereas **secondary infertility** designates those who have conceived at some time in the past.[1]
5. **Sterility** - an intrinsic inability to achieve pregnancy.[1]
6. **Sub-fertility** occurs when the couple has difficulty in conceiving because both partners have reduced fecundity.(WHO)

ABSTRACT

Background

Infertility remains a global health challenge with devastating psychosocial consequences in many African communities. It is estimated that 50-80 million people worldwide are afflicted by infertility. The global prevalence is 8-12%, but this is higher in African countries (20-30%). [2] In Kenya, upto 31% of the consultations made at KNH and MTRH (the two national referral hospitals) are related to infertility.[3] The distribution of causes of infertility among infertile couples has male factor accounting for 23% and unexplained causes 28%.[4] In a WHO multicentre study, male factor was found to contribute 20% and both male and female to contribute 27%.[5] From the above statistics it is clear that male factor contributes significantly to the burden of disease, yet clinical and research work is concentrated on the female.[6] Failure to target men has weakened the impact of reproductive health programmes.[7] From literature review, there is minimal information on male involvement in the management of infertile couples.

Study Design

A hospital based cross-sectional descriptive study that involved couples presenting to the KNH Infertilility and Gynaecology clinics.

Broad objective

To determine the extent, predictors and impact of male involvement in the management of infertile couples at the Kenyatta National Hospital.

Main outcome measures

The proportion of males involved in the management of infertile couples at the Kenyatta National Hospital.

Results

A total of 163 women and 34 men were recruited into the study. At least 69.9%(114) of the women who participated were ever accompanied to the clinic by their spouses. Knowledge on infertility among male participants was generally low especially when it came to matters that concerned their spouses. Couple awareness on male participation in infertility was 61.8% by the men and 67.5% by the women but they all agreed that it would improve the care given. The male partners who came to the clinic were more involved in the care of their partners, in terms of paying hospital bills, having investigations performed on them, participating in the decision making process and accepting treatment ($p<0.05$). On multiple logistic regression, it was found that male partners of accompanied women were paying the medical bills (p-value = 0.017, OR=3.0[1.2-7.4]), being investigated (p-value=0.011, OR=3.1[1.3-7.5]), helping decide the treatment the partner receives (p-value = 0.04, OR=2.5[1.0-5.9]) and accepting treatment if found to have a problem (p-value=0.005, OR=4.0[1.5-10.5]). Men with male factor infertility were more likely to accompany the spouse to the clinic if there was an associated female factor infertility, p=0.002. There was no statistical significance between accompanied and unaccompanied women in terms of education and employment. Majority of the male participants (55.9%) had received pressure from the community to get children.

Conclusion

Male partner participation improved the quality of care. There is need to address the negative pressure from family and community about a couple's childlessness.

Recommendations

Health care providers should offer appropriate counseling for the male partners and educate the community on infertility. In light of our findings, further research should be done on ways to improve male partner attendance and participation in the infertility clinic.

BACKGROUND

It is estimated that worldwide 50-80 million people are infertile, with over 2 million new couples entering this pool each year. In Africa, the prevalence rate is estimated to be 20-30%.[2]

In a national infertility survey carried out in Kenya in 2008, infertility related consultations were found to be as follows: at teaching and referral (tertiary) hospitals 31%, in provincial hospitals 27%, in district hospitals 15%, in health centers 4% and in dispensaries to be 2% .[3]

Both partners in a relationship contribute to potential fertility and both may be subfertile. It is believed that when males and females are aware of each others health needs, they are more likely to receive needed services. Men are encouraged to be more involved and supportive of women's needs, choices and rights in sexual and reproductive health. There is also need to address the men's health needs appertaining to infertility.[8]

The World Bank Global Burden of disease study found that in Kenya approximately 12.8% of all chronic disabilities among women aged 15-44 years are due to infertility, while for men in the same age group is 21.7%, hence building a strong case for need for male involvement in the management of infertile couples .[9]

LITERATURE REVIEW

The term male involvement includes two aspects, namely, male responsibility and male participation. Male responsibility stresses the need for men to assume responsibility to: using contraceptive methods, practising safe sexual behaviour to protect self and partners from STI/ HIV and active participation in each other's health and nutrition needs. Male participation suggests a more active role for men in both decision making and adopting behaviours like reproductive health decision making. [10]

Most societies, at present and in the recent past, have been patriarchal, and men have enjoyed a relatively higher status compared to women. Hierarchies and segregation in role and status have conditioned men, and perhaps also women, to regard issues relating to reproduction as an exclusive female domain. Men are generally seen as providers of economic support. Very little has been done in terms of research on male as compared to female issues. They are also rarely involved in national health programmes, for example family planning, immunization, etc. It is very important to involve men because of their own health issues and the potential effects of their sexual behavior on the reproductive health of their female partners. Following the International Conference on Population and Development (ICPD) held in Cairo in 1994 and the Fourth World Health Conference on Women held in Beijing in 1995, an increased recognition has been accorded to the need for men to share more responsibility in reproductive health matters. Countries were given outlines, not specific policies and guidelines, for each of them to customise according to its needs. This can be done by taking a more active role in planning pregnancy (will reduce abortion rate and hence the sepsis and other associated complications), seeking health care in the case of adverse pregnancy outcomes (syphillis that results in abortions, stillbirths and congenital syphillis), reproductive tract infections (causing PID and tubal blockage or urethritis in males with epididymal blockage), in preventing STIs and HIV/ AIDS. There is need to find out where men go for diagnosis and treatment of perceived sexual dysfunction or urologic problems. [11]

This was also discussed in the first conference of French-speaking African countries on men's participation in reproductive health in Ouagadougou, Burkina Faso in 1998. [12]

Men also experience psychological trauma accompanying the inability to bring forth children. A study among the Yoruba in Nigeria revealed that infertile men would be extremely

sensitive to any discussion about children or pregnancy. There is a belief among this group that a childless person has failed in a fundamental way since he does not have an heir to carry on his lineage. [13]

Infertility may also lead to risky sexual behaviour on the part of the man. Such a man will likely be encouraged by family members to either seek another wife or to impregnate another woman outside marriage so as to have a child and prove his fertility. [13, 14]

In society, men are not recognised as infertile, but women are blamed for it and referred to as barren. Men tend to take a second wife, but for women, it is not socially acceptable to take a second husband.

In Africa, polygamy is still practised, therefore if a man has sired children with the other wives, he won't see the need of accompanying the spouse with a fertility problem to the clinic.

The experience in East Africa is that marriage and having children are essential for men to be considered "real men" and unmarried men are not considered adults; men are never considered infertile, for it is the woman who is assumed to be barren when a couple does not have children; in old age, masculinity and virility are reaffirmed by having children, frequently with much younger women; and valued characteristics of men include: being a risk taker, fierce competitor including for women, competent sexual partner, husband, father, decision maker and effective provider. [15]

Infertile couples suffer psychological trauma, anxiety, and fear and are also at risk of contracting HIV/ AIDS because of their risky sexual behaviours in the hope of impregnating a woman in the case of men (or getting pregnant in women). In addition, infertile women suffer discrimination, ridicule, verbal abuse, mistreatment, and sometimes, physical abuse by the

partner. Infertility is a major cause of marital disharmony and instability, and can lead to divorce. Infertility was cited as a reason for marital instability by a rural population in Southwest Uganda. An infertile woman can be expelled from the husband's home either as a decision of the husband himself, or pressure from husband's family members. In Cameroon, infertility is a ground for divorce and if a woman was not divorced, she may be abandoned in old age. In-laws may subject the infertile woman to physical and verbal abuse especially when the husband passes away and he had been known to be protective of her when he was still alive.[16]

Infertility also means economic disempowerment since it affects inheritance and economic production, especially in agrarian societies. Cultural and social values in many African societies are heavily weighted towards increasing fertility. Emphasis is given to the importance of continuing lineage and, wealth and security are often measured by the size of the lineage or clan. Infertility, therefore, has far-reaching socio-psychological and socio-economic implications by those affected by it.[16]

In most societies in Sub-Saharan Africa, infertility is often given a superstitious label, often making couples to seek help from traditional healers first and later turn to medical doctors either for additional help or to treat problems caused by herbal and unorthodox treatments. This may also follow failure of traditional treatment. The delay in seeking medical help often leads to worsening of the root cause of infertility and may lead to irreversible damage. Traditional therapy for infertility tends to be ritualistic, risky and ethically complex. Such treatments may include engaging in sex with traditional healers, taking herbs and other concotions, as well as performing certain rituals. Seeking help from hospitals or using modern medicine is not an immediate consideration. The other reason people do not seek help from hospitals is because of the social stigma attached to infertility and the hospital environment may be too open to accomodate such secrecy.[17,18]

Both partners are socially, economically and physiologically dependent on each other, and in all this, the man is fairly dominant in society whether educated or not.

Management of infertility is by thorough history taking and physical examination of both partners. This is because the infertility could be due to male factor, female factor or both, or it could be unexplained.

The etiological prevalence of infertility in the US is as follows: male factor 25 to 40%, female factor 40 – 55%, both male and female 10%, unexplained infertility 10%.[19] In Kenya, according to Mati, Sinei and Oyieke, male factor contributes 30% while female contributes 61.9%. [20] In a WHO multicentre study, male factor was found to contribute 20% and both male and female to contribute 27%. [5]

The causes of male infertility may be pretesticular, testicular or post testicular. The pretesticular causes include endocrine disorders affecting the hypothalamo pituitary axis, psychosexual causes leading to erectile dysfunction, drugs such as antihypertensives, antipsychotics and genetic disorders such as Klinfelter syndrome. Testicular causes include primary testicular failure, Sertoli cell only syndrome, abnormal sperm motility and abnormal spermatogenesis caused by drugs, radiation, mumps orchitis, cryptorchidism and varicocele. Examples of post testicular causes include obstruction of the efferent duct which may be congenital or acquired causes including infections such as tuberculosis and gonorrhoea, surgical procedures such as herniorrhaphy and vasectomy. Other post testicular causes include ejaculatory failure, retrograde ejaculation, hypospadias and bladder neck surgery. [21]

Wasike found that occupation may contribute to male infertility. He found that 35.7% of *bodaboda* (bicycle taxi) drivers whose bicycles were mechanical and had a nasal seat, suffered from erectile dysfunction. [22]

Osifo et al carried out a study on 45 patients with varicocele to examine the effect of varicocelectomy on the fertility profile of infertile patients and found that 69.7% of spouses of those who underwent varicocelectomy achieved pregnancy in the followup period hence showing success in the procedure. [23]

Main investigations in male infertility include semenalysis and mucus studies. Post coital test is done to see the initial interaction between the sperm and female genital tract. Greatest role of PCT is screening for antisperm antibodies or for poor cervical mucus due to hormonal, anatomic or infection factors. [24]

In the developed countries, contribution to female infertility is ovulation dysfunction 30-40%, tubal peritoneal factors 30-40%, unexplained infertility 10% and miscellaneous causes 10-15%. [19]

At KNH, 75% of the infertility cases seen are due to tubal blockage secondary to one or more episodes of occlusive salpingitis.[25, 26] Both infertility and HIV/AIDS are associated with sexually transmitted infections. Mulandi found the STIs affecting women in her study were syphillis, *Neisseria gonorrhoea* and *Chlamydia Trachomatis*. [27] Besley found 73% of the female infertility cases were due to tubal blockade which occured as a result of pelvic inflammatory disease following puerperal sepsis, septic abortion or sexually transmitted illness. [2] Douching has also been shown to increase the chances of PID hence making the user at risk of getting tubal blockage. [28, 29]

Connat et al did a study on male infertility and found that 68.4% were azoospermic and each had at least one episode of urethritis with pain and discharge. [30] Thagana et al found that 49% of azoospermic males at KNH had palpable epididymal abnormality, while 11% had varicocele. The conclusion of the study was that obstructive lesions most likely as a consequence of urogenital infection were the commonest cause of azoospermia. [31]

Menarche is occuring 3 months earlier with each decade since 1900 in the developed world. [32] The falling age of menarche is attributed to improved standards of living and therefore better nutrition. [33] While menarcheal age is falling, there is protraction of formal education and financial dependence, leading to a prolonged period of premarital exposure. [31, 34] Prolonged premarital sexual exposure means more sexual encounters, higher number of sexual partners and hence higher chance of getting STIs.

Depending on the cause found, the infertile couple may be treated. If all therapeutic options are exhausted except for child adoption, both of them have to make the decision to adopt together. They may want a child biologically related to them and hence decline adoption. Sub-Saharan African cultures generally do not support adoption, hence adoption has remained the last resort in infertility dicussions. Oladukun carried out a study in Nigeria and discovered that adoption was not widely practised. The barriers were cultural practices, stigmatization, financial implications and procedural bottlenecks. Measures suggested to curb these negative attitudes were advocacy, community mobilization and enactment of supportive law that would protect all parties involved.[35] Adoption should be presented as an alternative to costly infertility treatments and information, education and communication campaigns should be designed to promote its acceptability within various cultures in the region.

Men are instrumental in providing the necessary physical, financial, and emotional support to give women access to reproductive healthcare, or conversely represent obstacles for these women. Communication between spouses is very important and improves reception to RH services.

In my literature search, i did not find information on male involvement in the management of infertility.

RATIONALE

In the international conference on population and development in Cairo, a need was seen to have men share more responsibility in reproductive health matters.[36]

Many programmes have been started, but most are limited to male involvement in family planning, which is only one element of reproductive health. Also a focus on men only, is as inadequate as a focus on women only, as it fails to take into context the way in which decisions are made and the context that influences them, hence the importance of couple management. [37]

Many studies have been done locally on the subject of infertility, but none has looked into male involvement in the management of the infertile couple. Men can be involved in the following ways: help in decision making, provide financial and moral support, be educated and be treated in case of male factor.

Infertility has been feminized and has impacted as follows: at individual level it has resulted in women acceptance, men relagation and skewed biopsychosocial outcomes; at community level it has resulted in biased stigmatization; and at research and management level it has resulted in lack of full deck approach, misallocation of resources and poor overall outcomes.

Both partners will benefit from care, both are looking for a child. There are both male and female factors which cannot be analysed in isolation. Non participation of the male may delay treatment and outcomes like conception.

This study will provide information on the extent of male involvement and hence facilitate establishment and strengthening of standard operating procedures that will better involve the male. The study will also advise on more scientifically powered research which will guide policy formulation on issues related with male reproductive health issues beyond infertility.

A cross-sectional descriptive study under the context was the most appropriate to respond to the set objectives of the research.

RESEARCH QUESTION

- What is the extent, predictors and impact of male partner involvement in the management of infertile couples at KNH?

CONCEPTUAL FRAMEWORK

Narrative

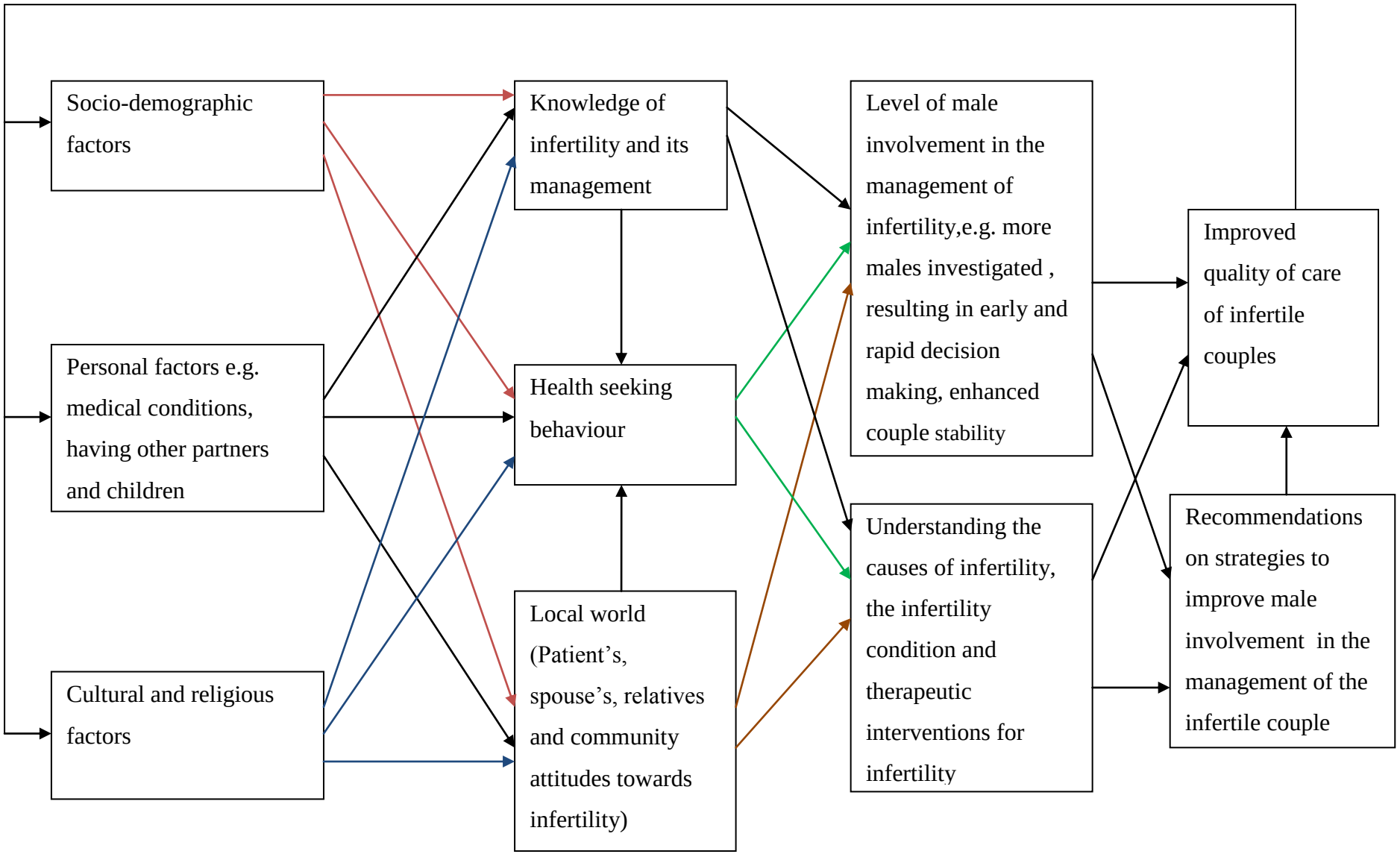
Male involvement is of clinical relevance in the management of the infertile couple. The purpose of the study is to look into factors that may influence male involvement like socio-demographic characteristics, cultural, religious and personal factors.

These may in turn influence the couple's knowledge of infertility and its management, the couple's attitudes in addition to those of relatives and the community and their health seeking behaviour.

These may determine the level of male involvement in the management of infertility and improve the understanding of the possible contributory factors to infertility, the infertility condition and its therapeutic interventions, a result of which will be early and rapid decision making and will result in enhanced couple stability.

This will go a long way in helping come up with recommendations on strategies to improve male involvement in the management of the infertile couple, both at health care provider level and institutional level. As a result there will be improved quality in the management of the infertile couple which will impact positively in the knowledge, health seeking behavior and also improve the attitudes of the people in their local environment.

Diagrammatic conceptual framework



OBJECTIVES

Broad objective

To determine the extent, predictors and impact of male involvement in the management of infertile couples at the Kenyatta National Hospital.

Specific objectives

1. To determine the proportion of males accompanying their spouses to the KNH Infertility Clinic
2. To determine the knowledge, attitudes and practices of the infertile couples attending the KNH Infertility Clinic in relation to male involvement in their care.
3. To determine the relationship between clinical diagnosis and male involvement among infertile couples attending the KNH Infertility Clinic.
4. To determine the socioeconomic and cultural factors that may influence male participation in the management of the infertile couples attending the KNH Infertility Clinic.

METHODOLOGY

Study site and setting

This study was carried out in the Infertility Clinic and the Gynaecological Outpatient Clinics at KNH which is a national teaching and referral hospital in Nairobi, Kenya. It is situated about three kilometers from the city centre. KNH is also the main teaching hospital for the College of Health Sciences, University of Nairobi and the Kenya Medical Training College. It has a bed capacity of 1800 beds. It has all the modern facilities and patients are referred from all over the country hence likely to get diversity. Of the gynaecological patients seen in the two national referral hospitals (KNH and MTRH), 31% have infertility. The site is also structured; there are the out-patient gynaecology clinics and the in-patient facilities. All these are distributed amongst three clinical firms.

Study design

This was a cross-sectional descriptive study. Infertile couples attending the Infertility Clinic and the Gynaecological Outpatient Clinics were interviewed by the chief investigator and her trained reasearch assistant. A questionnaire was completed for all study participants who met the inclusion criteria.

Study population

The study population was made up of both male and female infertile patients (clinical diagnosis of infertility made in KNH) attending the Infertility Clinic and the Gynaecological Outpatient Clinics at KNH. The Infertility Clinic is on Monday while the gynaecological clinics are on Tuesday, Wednesday and Thursday. Patients seen in the infertility clinic are referred from the other gynaecology clinics. Most patients seen in the Monday clinic are those eligible for laparoscopy, majority have tubal blockage. The others are distributed in the Gynaecology Clinic over the other three days of the week.

Inclusion Criteria

- All infertile couples consenting to be interviewed.
- Infertile couples in a heterosexual relationship and are biologically male and female.
- Duration of infertility at least 1 year
- Couples attending for at least the third visit (By the third visit a patient is investigated and has a working diagnosis)
- Unaccompanied female patients

Exclusion Criteria

- Couple(s) unwilling to be interviewed.

Sample Size Determination

A minimum sample size of 150 infertile female patients was sufficient to estimate the proportion of male involvement in fertility management of their female spouses with a confidence level of 95% and an error margin of ±7.5%. From an unpublished pilot study that was carried out at the KNH Infertility Clinic to hypothesize an estimated proportion of male involvement, it was observed that an estimated 32.5% of female patients were accompanied by their male spouses. On the first visit, 6 men accompanied their spouses out of the 24 women who were seen on that day, giving a percentage of 25%. On the second visit, 8 men accompanied their spouses out of the 20 women who were seen that day, giving a percentage of 40%. Therefore, an average of 32.5% of the patients seen at the clinic were accompanied by their male spouses, giving an error margin of 7.5%. Fisher's formula for estimating means and proportions was applied to estimate the sample size for this study;

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

where: n = minimum sample size

p = hypothesized percentage of males accompanying their spouses to the clinic (32.5%)

z = z statistic derivative for 95% confidence level

e = Estimated error margin (0.075)

therefore $n=\frac{1.96^2 * 0.325(1-0.325)}{0.075^2}$

n=150

Sampling frame and sampling procedure

This study was carried out in its natural environment without any interventions to improve male involvement. The study participants were identified as follows: from the list of the patients booked for clinic that day (Monday, Tuesday, Wednesday or Thursday), initial screening using the files was carried out to identify the potential participants according to the inclusion and exclusion criteria. Then these were subjected to the consenting process (the purpose, aims and benefits of the study were explained to the study participants and informed consent taken). Those consenting were then recruited before being seen by the gynaecologists and questionnaire completed after they had been seen. There were separate male and female questionnaires for each couple but linked by the same study number. This was done so as to ensure that the participants were free to express themselves and were truthful. Each person was interviewed and the questionnaire filled privately.

Main outcome measures

- The proportion of males participating in the management of infertile couples at the Kenyatta National Hospital.
- The knowledge, attitudes and practices of the infertile couples attending the KNH Infertility Clinic in relation to male involvement in their care.
- Relation between clinical diagnosis and male involvement among infertile couples attending the KNH Infertility Clinic.
- The socioeconomic and cultural factors that may influence male participation in the management of the infertile couples attending the KNH Infertility Clinic.

Operational definitions

1. **Accompanied women** - women whose spouses had come to the KNH Infertility clinic at least once. This includes those who came with their spouses on the day of being interviewed. Males who accompanied their female partners on the day of interview were also interviewed
2. **Unaccompanied women** – women whose spouses had never come to the KNH Infertility clinic.
3. **Spouse** – a husband or a wife.
4. **Couple** – two people who are married or in a sexual relationship.
5. **KNH Infertility clinic** – KNH Infertility and Gynaecological outpatient clinics.

Study Instrument

This was a questionnaire. It was an interviewer administered questionnaire with both open-ended and closed questions.

Data Collection

Data was collected by the chief investigator and her trained research assistant. Selection of the study participants and identification of their records was as explained above under sampling frame and procedure. A pretested structured questionnaire was used. There was a separate male and female questionnaire but this were linked by the same study number. Each person was interviewed in private, hence confidentiality was assured for each participant. Details of their sociodemography and knowledge, attitudes and practices as relates to male involvement taken. More information was gotten from file records. Information gotten from the file included the investigations carried out and the conclusion as to the type of infertility. The data collected was both qualitative and quantitative.

Quality Control

The questionnaire was piloted by administering it to at least 20 infertile couples at Thika District Hospital infertility clinic. The piloting was done by the principal investigator, and a trained research assistant for standardization. The questionnaires were analysed, any flaws in the design of the questionnaire and clarifications on questions identified and corrected before administering it to the participants. Same questionnaire was used on all participants. In order to avoid double recruitment, the participants' file numbers were entered in a register upon recruitment for serialization. This register was counter-checked on a regular basis for any double entries and if so discovered, one of the questionnaires was withdrawn and discarded and the serialization rectified before recruitment continued.

Data Management

The Principal Investigator entered data from the questionnaires into an SPSS database version 19 (property of SPSS Inc. an IBM Company). Each record was assigned a unique identifier and names were dropped so as to maintain participants' confidentiality. Quality of data was assessed by conducting consistency checks. Data was stored in a password protected computer that was only used for the purposes of the study and was only handled by the Principal Investigator.

Data Analysis Plan

Data was analysed using SPSS (Statistical Package for Social Scientists) data analysis programme version 19, Copyright 1989, 2010 SPSS Inc., an IBM Company. Tables illustrated the socio-demographic characteristics of the males and famales who participated in the study, the proportion of males who accompanied their spouses, paid for services, participated in investigations and treatment, proportion of males and females with knowledge of human fertility, causes of infertility and concepts of modern infertility management. Their treatment seeking behaviour, experiences of infertility, effects on marital relationships and experiences in the community were also provided. A correlation was made between accompanied and unaccompanied women to find out if there was value in male involvement.

All continuous data had their measures of central tendency determined and presented as means together with their standard deviations. Comparison of continuous variables was done using the student t-test for normally distributed variables.

All categorical data was presented in frequency tables and graphs where applicable. Associations between these categorical variables was tested using the Pearson Chi square or the Fishers Exact test. A p-value of less than 0.05 was considered statistically significant.

Plans for Dissemination and Utility

The plans are as follows:-

- Publication as a dissertation in partial fulfillment for the award of the degree of Master of Medicine in Obstetrics and Gynecology of the University of Nairobi.
- Presentation at seminars and conferences.
- Publication in local and international journals

Study Limitations

- Some patients were not be able to avail their spouses
- Patients not yet fully investigated either due to timing of data collection or due to lack of funds to pay for the investigations
- Certain aspects of answers required were based on recall which could result in error. Patients were however given ample time before responding.
- Some subjects may have questionable sexual behaviour and in fear of appearing promiscuous some may not have answered truthfully. They may have given what they thought were the socially correct responses. This was however controlled by creating rapport with the couple, interviewing them separately and reminding them that confidentiality would be maintained.
- Selection bias may have been introduced by interviewing only patients coming for their third or more visits.

Ethical Considerations

The study proposal was reviewed and approved by the Kenyatta National Hospital ethics and research committee. Informed consent was obtained by the principal investigator and the research assistant from all study subjects that participated in the study. This was done by explaining to them the purpose, aims and benefits of the study before taking the informed consent. The patients were assured of utmost confidentiality and were encouraged to be truthful in cases where the questions were of embarrassing or sensitive nature. Standard care was given to all patients regardless of whether they consented or declined to participate in the study. No one was coerced by any means to join the study. The records were coded and patients' names were not used. Information so collected remained confidential and was used for purposes of the study only.

RESULTS

A total of 197 participants (163 females and 34 males) on follow up in the infertility and gynecology clinincs were recruited into the study between the months of August 2010 and February 2011. The 34 men are those who accompanied their women during the study period.

A.Sociodemographic characteristics of men and women seen in the KNH infertility clinic

Table 1: Socio demographic characteristics (n=197)

	Female (n=163) n(%)	**Male (n=34) n(%)**
Age (Mean, SD) years	31.1 yrs (SD 5.3 yrs)	35.3 yrs (SD 6yrs)
Marital status		
Married	145(89)	33(97.1)
Single	7(4.3)	0
Widowed	2(1.2)	0
Divorced/Separated	9(5.5)	1(2.9)
Education level		
None	4(2.5)	0
Primary	69(42.3)	16(47.1)
Secondary	71(43.6)	13(38.2)
Tertiary	19(11.7)	5(14.7)
Employment status		
Unemployed	34(20.9)	4(11.8)
Self employed	91(55.8)	16(47.1)
Salaried employment	30(18.4)	8(23.5)
Casual laborer	8(4.9)	6(17.6)
Religion		
Catholic	52(31.9)	8(23.5)
Protestant	108(66.3)	25(73.5)
Muslim	3(1.8)	1(2.9)

Table 1 presents the sociodemographic characteristics of the men and women recruited into the study. The men were older than the women, mean age of men being 35.3 years (SD 6 years) and of women 31.1 years (SD 5.3 years). Most of the men 33(97.1%) and most of the women 145(89%) were still married. Majority of the participants had some form of education whether primary, secondary or tertiary, 159(97.5%) women and 34(100%) men. Most men 16(47.1%) and women 91(55.8%) were self employed. Majority of the men 25(73.5%) and women 108(66.3%) were Protestants.

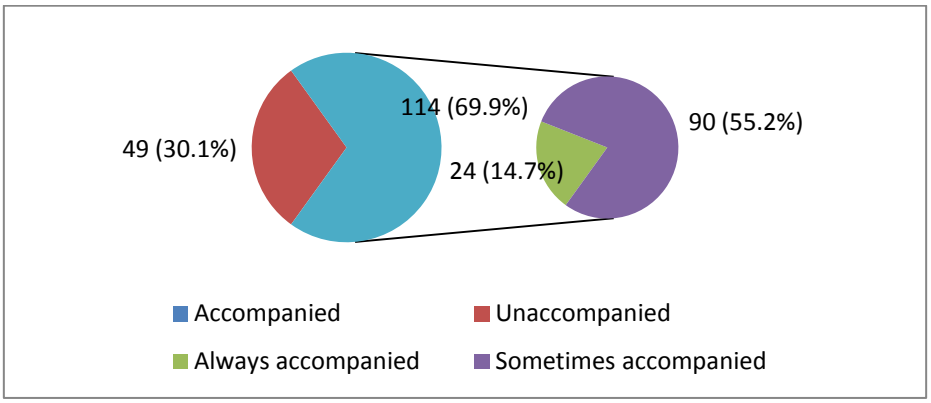
Table 2: Comparison between sociodemographic characteristics of accompanied and unaccompanied infertile females attending Infertility clinic at KNH			
	Accompanied women		**P value†**
	Yes (114) n(%)	**No(49) n(%)**	
Age in years (Mean, SD) years	31.1(5.471)	31.2(4.763)	0.839*
Marital status			
Married	106 (93)	39 (79.6)	1
Single	2 (1.8)	5 (10.2)	0.022
Widowed	1 (0.9)	1 (2)	0.472
Divorced/Separated	5 (4.4)	4(8.2)	0.267
Education level			
None	3 (2.6)	1 (2)	1
Primary	47 (41.2)	22 (44.9)	1.000
Secondary	52 (45.6)	19 (38.8)	1.000
Tertiary	12 (10.5)	7 (14.3)	1.000
Employment status			
Unemployed	23 (20.2)	11 (22.4)	1
Self employed	65 (57)	26 (53.1)	0.848
Salaried employment	21 (18.4)	9(18.4)	0.946
Casual laborer	5(4.4)	3(6.1)	1.000
Religion			
Catholic	38 (33.1)	14 (28.6)	1
Protestant	73(64)	35 (71.4)	<0.001
Muslim	3(2.6)	0	-
†Fishers Exact Test was applied. Significance level <0.05 *Student t-test was used. Significance level <0.05			

As illustrated in table 2 above, only marital status and religion were found to be statistically significant with male accompaniment to the fertility clinic, p-values of 0.022 and less than 0.001 respectively. Married were seven times more likely to be accompanied [OR=6.8:95%CI(1.1-53.0)]. For religion, the Catholics were 1.3 times more likely to be accompanied compared to the Protestants [OR=1.3:95% CI(0.6-2.9)].

To assess the strength of the relationship between the accompanied women and the two significant sociodemographic factors, a logistic regression was undertaken since the dependent variable was a binary outcome (yes/ no). This model was adjusted for age. The model was significant with p-value of <0.001 and a chi-square value of 298.5.

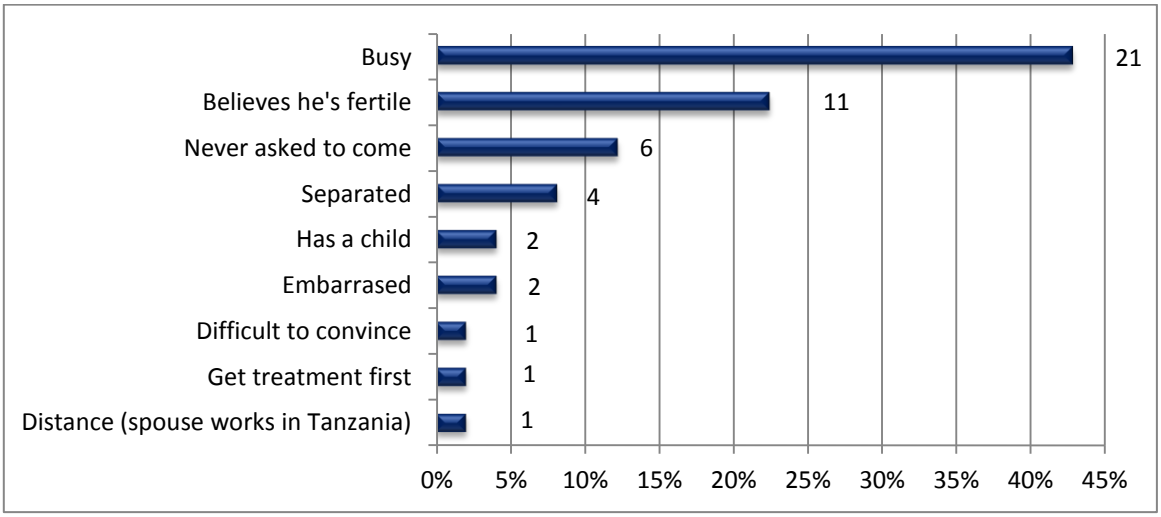
B. The proportion of males accompanying their female partners to the KNH Infertility clinic

Figure 1: Proportion of infertile females accompanied by their male partners to the KNH Infertility clinic (n=163)



Of the 163 women enrolled in the study, 114(69.9%) were ever accompanied while 30.1%(49) were never accompanied by their spouses. Of the ever accompanied women, 24(14.7%) were always accompanied while 90(55.2%) were sometimes accompanied.

Figure 2: Reasons provided by the 49 unaccompanied females attending the KNH Infertility clinic for male partner not attending the fertility clinic



Of the reasons given by the unaccompanied women for their spouses not attending the fertility clinic, most respondents, 21, reported that their male partners were busy.

C. Knowledge, attitudes and practices of the infertile couples attending the KNH Infertility clinic in relation to male involvement in their care

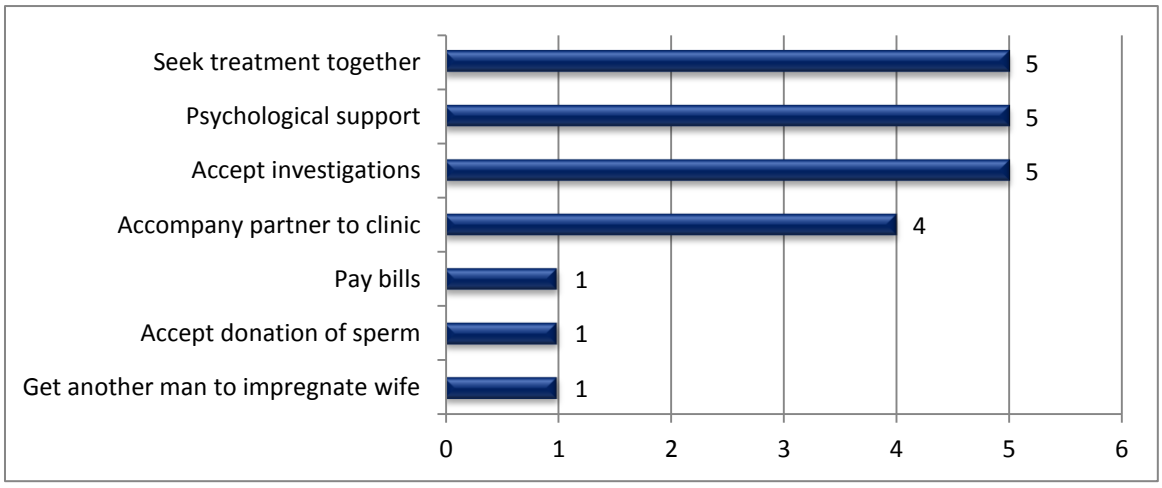
Perspective on role of men in infertility management

Table 3 : Knowledge by participants attending the KNH Infertility clinic of male participation in partner's care

	Men N=34	Women N=163	p-value
Yes	21(61.8)	110(67.5)	0.521
No	13(38.2)	53(32.5)	

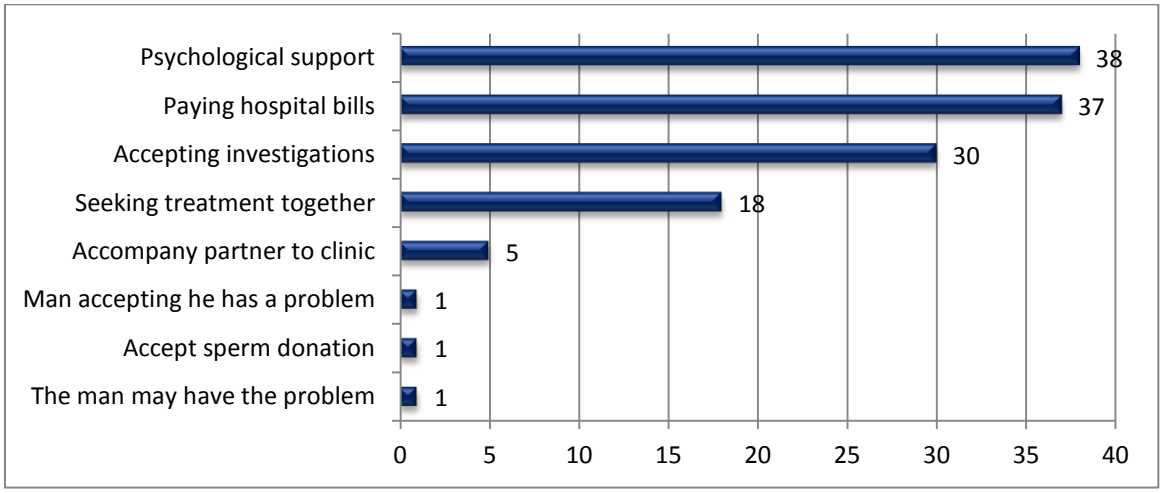
At least 21(61.8%) men and 110(67.5%) women had heard about males participating in their partners' care. The knowledge between the men and the women was not statistically significant after the Pearson Chi square test was applied (p=0.521).

Figure 3:What the men attending the KNH Infertility clinic had heard about male participation in the partner's care



Majority of the men said seeking treatment together, offering psychological support and accepting investigations. One of the respondents was of the feeling that getting another man to impregnate the wife was part of the male participating in the partner's care.

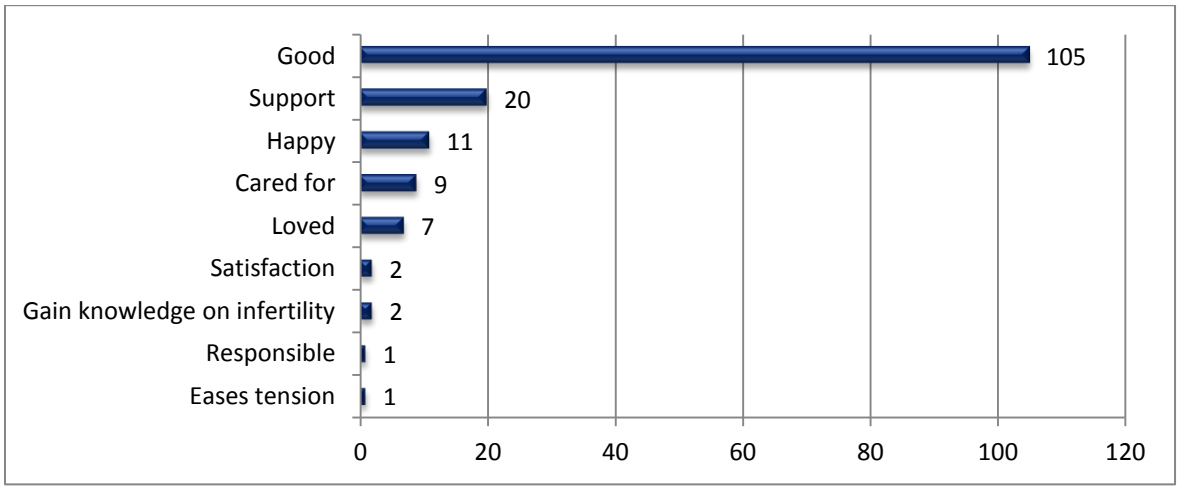
Figure 4: What the women attending the KNH Infertility clinic had heard about male participation in the partner's care



From the female perspective, most women, 38, said the man offering psychological support was part of how he could participate in the spouse's care.

<u>Female preference on being accompanied by their spouses to the KNH infertility clinic</u>

Figure 5: Reasons by women attending the KNH Infertility clinic for wanting their spouses present



Most of the women, 158(96.9%), wanted their spouses to accompany them to the clinic. Some of the reasons they gave on why they wanted their spouses present are illustrated in figure 5 above. Out of these 158 women, 105 said it would make them feel good.

All the men 34(100%) and all the women 163(100%) felt that male participation would add value to the overall couple care.

Knowledge of fertility and factors that lead to infertility by the infertile couples attending the KNH Infertility clinic

Table 12: Knowledge of participants attending the KNH Infertility clinic on fertility and factors that lead to infertility		
	Women n=163, n(%)	Men n=34, n(%)
When to expect ovulation		
Yes	79(48.5)	12(35.3)
No	69(42.3)	19(55.8)
Don't know	15(9.2)	3(8.8)
Psychological stress has an effect on fertility		
Yes	97(59.5)	13(38.2)
No	44(27)	8(23.5)
Don't know	22(13.5)	13(38.2)
Chronic illness can cause infertility in females		
Yes	109(66.9)	18(52.9)
No	18(11)	2(5.9)
Don't know	36(22.1)	14(41.2)
Chronic illness can cause infertility in males		
Yes	108(66.3)	19(55.9)
No	18(11)	2(5.9)
Don't know	37(22.7)	13(38.2)
Past genital infection can cause infertility		
Yes	120(73.6)	23(67.6)
No	13(8)	5(14.7)
Don't know	30(18.4)	6(17.6)
Scrotal swelling can cause infertility		
Yes	58(35.6)	20(58.8)
No	31(19)	3(8.8)
Don't know	74(45.4)	11(32.4)
Ejaculation viewed as proof of fertility	24(14.7)	5(14.7)
There are drugs to make males fertile		
Yes	132(81)	26(76.5)
No	29(17.8)	4(11.8)
Don't know	2(1.2)	4(11.8)
There are drugs to make female partner more fertile		
Yes	134(82.2)	27(79.4)
No	28(17.2)	4(11.8)
Don't know	1(0.6)	3(8.8)
Sperm donation and insemination		
Yes	101(62)	19(55.9)
No	23(14.1)	8(23.5)
Don't know	39(23.9)	7(20.6)
Partners may be normal even if they have no baby		
Yes	69(42.3)	16(47.1)
No	60(36.8)	13(38.2)
Don't know	34(20.9)	5(14.7)

On timing of ovulation, 79(48.5%) women were correct compared to 12(35.3%) men. At least 97(59.5%) women thought psychological stress has an effect on fertility. Only 13(38.2%) men thought so.

As to whether chronic illness can cause infertility, majority of the women 109(66.9%) concurred, while only 18(52.9%) men agreed to the same. Majority of the women 120(73.6%) and 23(67.6%) of the men thought past genital infection can cause infertility.

Most men 20(58.8%) thought scrotal swelling can cause infertility while only 58(35.6%) women thought the same. Most men and women 85.3% didn't think ejaculation was proof of fertility.

Majority of the participants responded that there are drugs to make men and women more fertile. Sperm donation and insemination as a method of treating infertility was given by 101(62%) women and 16(47.1%) men. At least 69(42.3%) women and 16(47.1%) men responded that both partners may be normal even if they have no baby.

Correlation between male partner participation and male accompaniment to the KNH Infertility clinic

Table 5 (a): Comparison of male participation between accompanied and unaccompanied women attending the KNH Infertility clinic

	Accompanied women		P value
	Yes (n=114) n(%)	No(n=49) n(%)	
Partner paying medical bills			
Male partner	74 (64.9)	16 (32.7)	1
Female partner	5 (4.4)	11 (22.4)	<0.001
Both	35 (30.7)	22(44.9)	0.005
Support if need to provide medical or surgical treatment	110 (96.5)	40 (81.6)	0.003
Male partner investigated	83 (72.8)	14 (28.6)	<0.001
Helps decide on the treatment the partner will receive	80 (70.2)	18 (36.7)	<0.001
Male partner would accept to be treated if found to have a problem			
Yes	99(86.8)	20(40.8)	1
No	2(1.8)	5(10.2)	0.003
Don't know	13(11.4)	24(49)	<0.001

Table 5 b): Association between male involvement and accompaniment to the KNH infertility clinic

	Accompanied women		OR(CI 95%)‡	P value
	Yes (n=114) n(%)	No(n=49) n(%)		
Partner paying medical bills				
Male partner	74 (64.9)	16 (32.7)	3.0 (1.2 to 7.4)	0.017
Female partner	5 (4.4)	11 (22.4)	1.0(0.2 to 5.7)	0.973
Both	35 (30.7)	22(44.9)	-	-
Support if need to provide medical or surgical treatment	110 (96.5)	40 (81.6)	1.8 (0.3 to 10.4)	0.495
Male partner investigated	83 (72.8)	14 (28.6)	3.1(1.3 to 7.5)	0.011
Helps decide on the treatment the partner will receive	80 (70.2)	18 (36.7)	2.5 (1.0 to 5.9)	0.040
Male partner would accept to be treated if found to have a problem				
Yes	99(86.8)	20(40.8)	4.0(1.5 to 10.5)	0.005
No	2(1.8)	5(10.2)	0.3(0.0 to 2.2)	0.229
Don't know	13(11.4)	24(49)	-	-

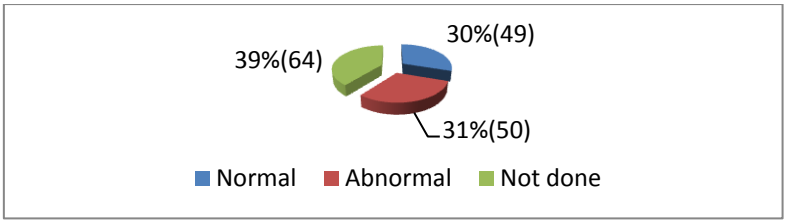
‡Logistic regression was applied. Significance level <0.05

As illustrated in table 5(a), it was observed that male partners who accompanied their female partners to the fertility clinics were more involved in the fertility treatment. That is, compared to those who did not accompany their female partners, more of them paid the medical bills, would provide support for treatment if needed, they were investigated etc. The Fishers exact test was applied to compare these differences and they were statistically significant.

On running the multiple logistic regression, it was found to be significant with p-value less than 0.001 and chi square of 59.5. The significant factors which explained the accompaniment were male partners paying the medical bills (p-value = 0.017, OR=3.0[1.2-7.4]), being investigated (p-value=0.011, OR=3.1[1.3-7.5]), helping decide the treatment the partner receives (p-value = 0.04, OR=2.5[1.0-5.9]) and accepting treatment if found to have a problem (p-value=0.005, OR=4.0[1.5-10.5]) as illustrated in table 5 (b).

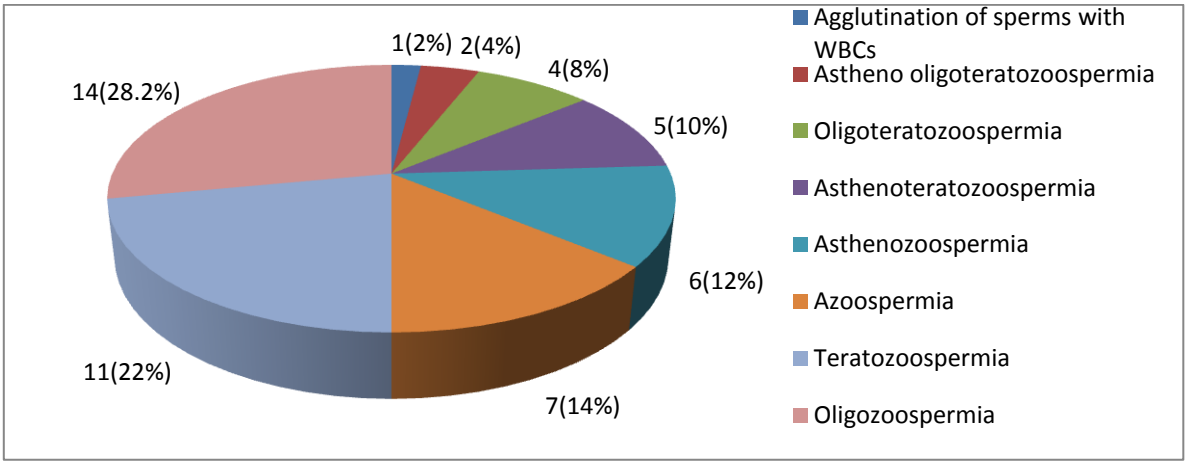
Male partners' participation by investigations in the KNH Infertility clinic

Figure 6: Semenalysis done in male partners attending the KNH Infertility clinic[n=163, n(%)]



In figure 6, 99(61%) male partners were investigated and all of them had had a semenalysis done. Figure 7 below shows the various abnormalities found on semenalysis.

Figure 7:Abnormal semenalysis results of men attending the KNH Infertility Clinic (n=50)



Majority of the abnormal semenalysis results, 14(28.2%), showed oligozoospermia.

Sexual behavior amongst the infertile couples attending the KNH Infertility clinic

Table 6(a): Sexual behavior amongst the infertile couples attending the KNH Infertility clinic	
	n=163 n(%)
Frequency of intercourse with the spouse	
We no longer have sex	6 (3.7)
<3 times a week	74 (45.4)
3 or more times a week	83(50.9)
Time of the month the couple engages in intercourse	
After menses	47 (28.8)
Midmonth	21 (12.9)
Before menses	11(6.7)
Any time	84 (51.5)

Table 6(b): Association between male accompaniment and sexual behavior amongst the infertile couples attending the KNH Infertility clinic

	Accompanied women		**P value†**
	Yes (n=114) n(%)	No(n=49) n(%)	
Frequency of intercourse with the spouse			
We no longer have sex	2(1.8)	4(8.2)	-
<3 times a week	50(43.9)	24(49)	0.176
3 or more times a week	62(54.4)	21(42.9)	0.050

†Fishers Exact Test was applied. Significance level <0.05

Majority of the couples 83(50.9%) engaged in intercourse three or more times a week as illustrated in 6(a) above.

In table 6(b), there was no association between sexual behaviour and male accompaniment to the fertility clinic.

Fertility patterns among the males attending the KNH infertility clinic

Table 7: Fertility patterns among males attending the KNH infertility clinic (n=34)		
		n=34 n(%)
Males with children with current/ additional partners	Yes	8(23.5)
	No	26(76.5)
Males with other female partners	Yes	4(11.8)
	No	30(88.2)

In table 7, majority of the men did not have children with current or additional partners and also did not have other female partners.

D. Relation between clinical diagnosis and infertile women being accompanied to the KNH infertility clinic

Table 8: Relationship between male infertility and male accompaniment			
	Accompanied women		**P value**
	Yes (n=114) n(%)	No(n=49) n(%)	
Partner with male infertility	46(40.4)	4(8.2)	<0.001
Partner without male infertility	39(34.2)	10(20.4)	0.078
Partner not investigated	29(25.4)	35(71.4)	<0.001

Of the 114 women accompanied, 46(40.4%) of their spouses had male infertility as compared to 4(8.2%) of the 49 unaccompanied women. There was significant association between participants who had male infertility and those who did not know there fertility status as shown in table 8 above.

Table 9: Relationship between type of infertility and male accompaniment			
	Accompanied women		**P value†**
	Yes (n=114) n(%)	No(n=49) n(%)	
Male infertility	12(10.5)	1(2)	0.111
Female primary infertility	30(26.3)	19(38.8)	0.160
Female secondary infertility	38(33.3)	26(53.1)	0.029
Both male and female infertility	34(29.8)	3(6.1)	0.002

In table 9, when it was only the male partner with infertility there was no significant association with accompaniment. There were more involved when they were both affected or had ever achieved conception.

Table 10: Relationship between cause of female infertility and male accompaniment			
	Accompanied women		**P value†**
	Yes (n=102) n(%)	No(n=48) n(%)	
Tubal factor	64(62.7)	29(60.4)	0.785
Uterine fibroids	20(19.6)	10(20.8)	0.862
PCOS	13(12.7)	6(12.5)	0.967
Bircornuate uterus	2(2)	0	-
Premature ovarian failure	1(1)	1(2.1)	0.539
Hyperprolactinaemia	1(1)	1(2.1)	0.539
Mullerian agenesis	0	1(2.1)	-
Asherman's syndrome	1(1)	0	-

In women with female factor infertility, there was no association between the cause of infertility and male accompaniment as shown in table 10 above. P values were not statistically significant.

E. Socioeconomic and cultural factors that may influence male participation in the management of infertile couples attending the KNH Infertility clinic

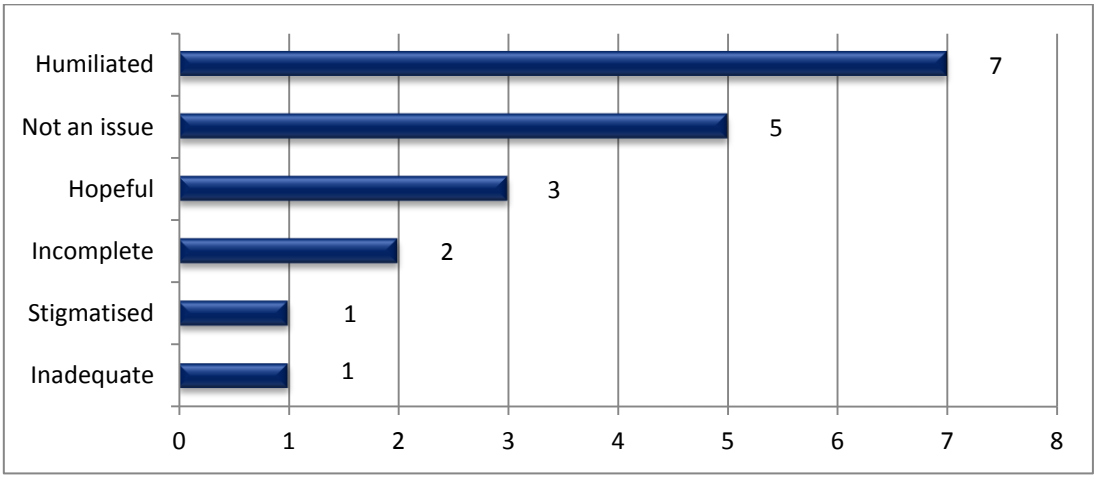
Males perceptions on the effects of childlessness on the partner and family

Table 11: Male perspectives on the effects of childlessness on the relationship with partner and family

Effect of relationship	n=34 n(%)
Lack of children affecting relationship with female partner	18(52.9)
Lack of children affecting relationship with in laws	11(32.4)
Support partner when pressured by relatives	30(88.2)
Receive pressure from the community	19(55.9)
Prefer knowing who is infertile	32(94.1)
Would divorce their wife	4(11.8)
Would you divorce your wife if relatives advocated	2(5.9)
Would you accept sperm donations	10(29.4)
Would you take a second wife	11(32.4)
Would you allow another woman to carry your baby (surrogacy)	10(29.4)
Would you consider adoption	20(58.8)
Would you consider witchcraft as the cause of your infertility	1(2.9)
Would you consider religion to be related to your infertility	0

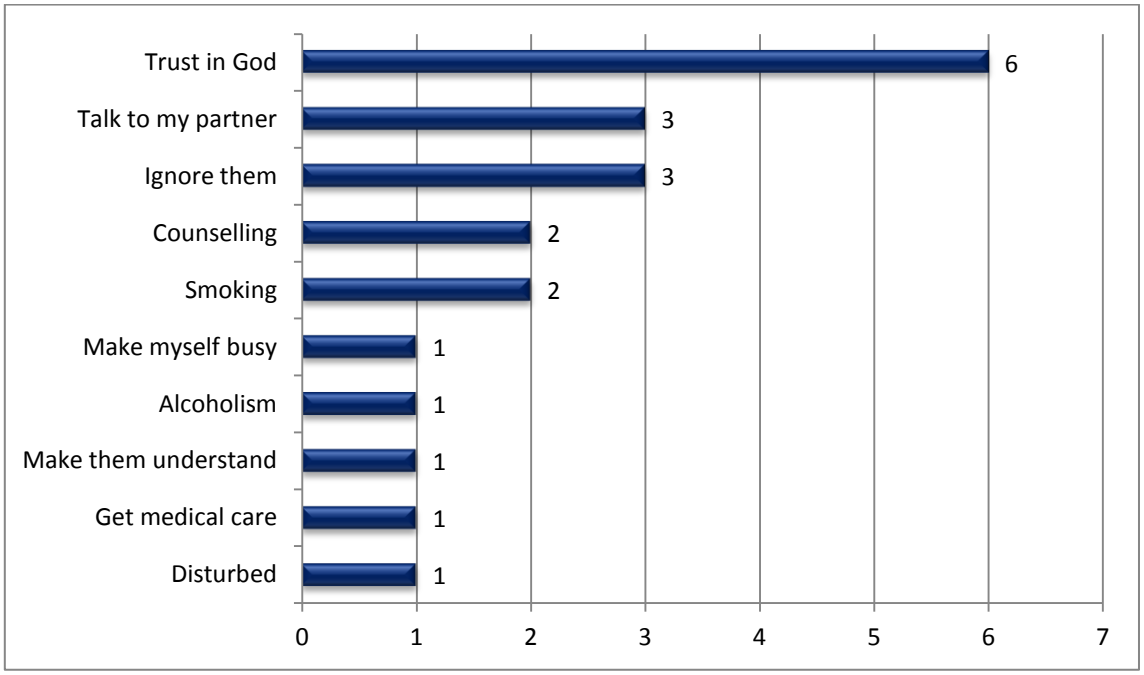
In table 11 above, at least 18(52.9%) men responded that their relationship with the female partner was affected by the lack of children and 11(32.4%) that the relationship with the in laws was affected. Most men, 30(88.2%) supported the partner when pressured by relatives. Receiving pressure from the community were 19(55.9%). Almost all the men, 32(94.1%), would prefer knowing who's infertile. Only 4(11.8%) would divorce their wives and 2(5.9%) would divorce if the relatives advocated. Only 1 man considered witchcraft the cause of infertility. No one considered religion to be related to their infertility. This was also reflected in their practices as most men 31(91.2%) first sought treatment from a medical person. Only 3(8.8%) of the men went to traditional healers and herbalists as a primary resort and another 3(8.8%) as a secondary resort. Only 1 man went for spiritual intervention as a secondary resort.

Figure 8: Feeling by the men attending the infertility clinic about pressure from the family and community



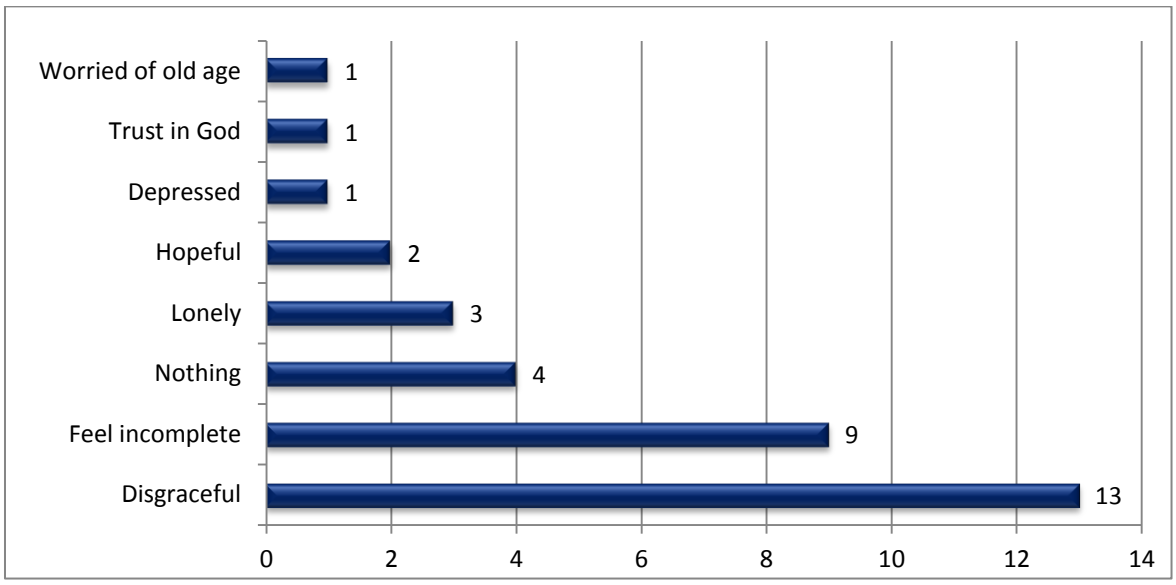
Of the 34 men, 15 did not experience pressure from the family or community. Of those who did, 7 felt humiliated as depicted in figure 8 above.

Figure 9: How the men attending the KNH Infertility clinic cope with the pressure from family and community



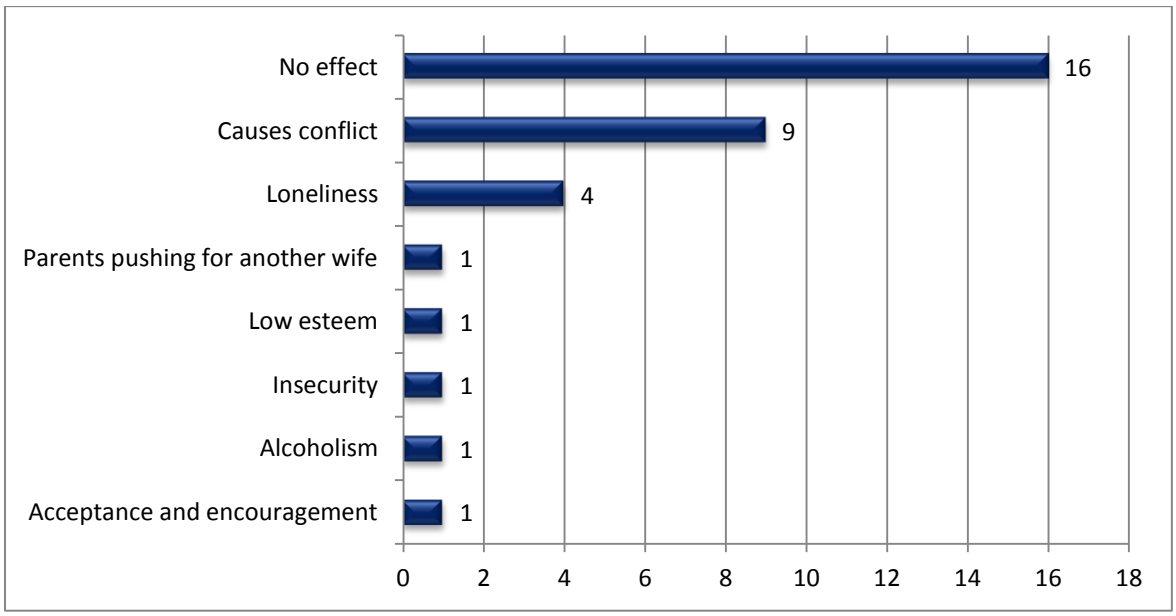
Most of the respondents, 6, said they trusted in God to get them through their situation. However, one respondent said he was disturbed and not able to cope.

Figure 10: Feeling by the men attending the KNH Infertility clinic about not being able to get a child



Majority of the men (13) felt it was disgraceful not being able to get children.

Figure 11: Effect of childlessness on marriage as viewed by the men attending the KNH Infertility clinic



Majority of the men (16) reported no effect of childlessness on their marriage.

Table 12: The effects of childlessness on the relationship with partner and family as perceived by women attending the KNH Infertility clinic	
Effect of relationship	**n=163 n(%)**
Lack of children affecting relationship with male partner	
Yes	72(44.2)
No	91(55.8)
Lack of children affecting relationship with in laws	
Yes	71(43.6)
No	92(56.4)
Supported by partner when pressured by relatives	
Yes	135(82.8)
No	28(17.2)
Prefer both partners knowing who is infertile	
Yes	155(95.1)
No	8(4.9)
Would consider adoption	
Yes	32(19.6)
No	131(80.4)

Out of 163 women, 72(44.2%) reported that their relationship with their male partner was affected by the childlessness.

How their relationship with their partner is affected is depicted in table 13.

Table 13: Effect of childlessness on the relationship of the couples attending the KNH Infertility clinic	
	Frequency n=72
Marital conflicts (Abused, Wife beating, Indifference from spouse)	26
Blames me for infertility	11
Lonely and despised	9
Separated	7
Alcoholism	6
Extramarital affairs	5
Cultural issues (Not living up to cultural standards, delaying to pay dowry, husband to marry another wife)	4
Divorced	2
Interference from in laws	2

For most of the female respondents, they were experiencing marital conflicts; in that they were being abused, beaten or that their spouses were indifferent to their needs. Other effects on the marriage unit are as listed above.

Table 14: Reasons given by couples attending the KNH Infertility clinic for not considering adoption a viable option	
	Frequency n=131
Hope of getting own child	38
Has child with spouse or other partner	24
Want biological child	21
Never discussed	10
Not prepared psychologically	8
Refusal by husband	7
Not proved infertile	5
Hope in God	4
Refusal by parents, relatives	4
Ashamed of adopting (stigma)	2
Costly and takes long	2
Separated/ not married	2
Never thought about it	2
Too late to decide	2

Majority of the infertile couples, 131(80.4%), would not consider adoption. Reasons cited are as shown in table 14 above.

Table 15: Role played by health care providers in the KNH infertility clinic in relation to male involvement in the management of the infertile couple (n=163)	
	n=163 n%
Health care providers asked patient to come with male partner	
Yes	113(69.3)
No	50(30.7)
Health care providers contacted or tried to contact male partner	
Yes	28(17.2)
No	135(82.8)

Majority of the women 113(69.3%) had been asked by the health care providers to come with their spouses to clinic, whereas only 28(17.2%) reported that the health care providers had contacted or had tried to contact the spouse.

Table 16: Suggestions by women attending the KNH Infertility clinic as to what can be done to improve partner participation	
	Frequency n=125
Encouragement	47
Counseling of spouse	21
Advise the man to accompany spouse to clinic	15
Educate him	12
Encourage to be tested	12
Invite him to the clinic	12
Clinic attendance emphasis	3
Contact spouse	3

Most women felt encouraging the male partners would improve their participation. Other suggestions made are listed in table 16 above.

DISCUSSION

Despite the 1994 ICPD conference in Cairo and the 1995 Fourth conference of women in Beijing, male involvement in Kenya remains relatively a new concept. This was a cross-sectional descriptive study evaluating the extent of male partner involvement in the management of the infertile couple at the Kenyatta National hospital. Interviewed were 163 women and 34 males.

It was found that majority of the women were accompanied by their spouses. The common reasons cited for the spouses not attending the clinic were: that he was busy, that he had never been asked to attend and that the spouse believed he was fertile and hence not responsible for the infertility. The high attendance rates could be due to the male spouse wanting to find out if they are infertile and just being more supportive because they want a baby.

Majority of women in this study preferred to be accompanied by their spouses to the infertility clinic. Likewise the men acknowledged that their involvement would add value to the care provided. Despite this opinion that male participation would add value, only 70% of the women had ever been accompanied to the infertility clinic by their spouses. In Mbeya, Tanzania, they also found a contradiction between men's positive attitudes towards their involvement and low participation rates which suggested that external barriers may play a large role in this decision-making process.[38]

Male participants knowledge of fertility, causes of infertility and treatment options was generally lower than for the women. In his study, Dyer and colleagues found that the men had poor knowledge on the same. However when they compared the results from their study with information gathered previously on infertile women in the same community, the men and women were found to have similar knowledge and concepts.[39]

The male partners who came to the clinic were more involved in their partners care, for example more of them paid bills or were investigated. Dyer and colleagues found that most of the male participants interviewed at the clinic were highly motivated with regard to investigations and treatment. Some said it was the reason for their attendance and others expressed a willingness to do all that was required of them.[39]

The commonest abnormality was oligozoospermia as was the case in a study carried out in southeastern Nigeria that found oligozoospermia to be the most common aetiological factor responsible for male infertility.[40] In our study, men with male infertility and those who did not know their fertility status were more likely to accompany their spouses to the Infertility clinic. However, when it was only the male partner with infertility there was no significant association with accompaniment. There were more involved when they were both affected or had ever achieved conception.

Sexuality and sexual activity are also important means of expressing feelings of closeness and intimacy in partnership. During infertility treatments, the pleasurable experience of sexual intimacy may be negatively affected and this may contribute to marital distress. A recent study by Ramezanzadeh et al revealed a reduction in sexual desire and satisfaction in men after a diagnosis of infertility, regardless of the cause of infertility.[41] However, in our study, sexual patterns amongst the infertile couples were not affected despite their infertility problem. Few women no longer engaged in intercourse with their spouses with majority engaging three or more times a week. Of note, there was no statistical significance between sexual behavior and male accompaniment. Meaning that despite not coming to clinic, the men were still sexually involved with their spouses.

Most men did not report having other female partners and only a few of them had children with current or additional partners. In African society one would generally be encouraged by

family members to get another wife or impregnate another woman outside marriage so as to have a child and prove his fertility.[13, 14]

Infertility is regarded as a major life crisis that has the potential to threaten the stability of individuals and relationships.[42] About half the men reported that their marriage was affected. Some reported conflict, others loneliness, low self esteem, insecurity, alcoholism and pressure to get another wife. One reported a positive effect of acceptance and encouragement.

Some men reported that the relationship with the in laws was affected. At least half of the men reported pressure from the community. Majority said they felt humiliated and disgraced. Others felt stigmatized, depressed, incomplete and inadequate. Majority are able to cope with this pressure from the family and community by trusting in God. Others cope by engaging in vices like smoking and alcoholism. Men have been reported to have lower overall life satisfaction, heightened distress and higher treatment-related stress after being diagnosed as responsible for the couple's infertility.[43, 44] The effect of infertility on marital relationships can also be modified by personal coping strategies, sharing and communication between spouses and partners' involvement in infertility treatment. [45, 46]

Majority of the men supported their partners when pressured by family. Very few men would divorce their wives even if the relatives advocated for the divorce. Few men would take up a second wife. In a South African study, many men felt pressurized by social expectations, but none of the informants expressed concerns regarding the stability of their relationships.[39] A study by Nene U.A et al found that as the number of childless years increased, the interspouse-relationship gets stronger and more supportive.[47]

Very few would accept sperm donations or allow a surrogate to carry their baby. Sperm donation carries a threat of the man being dispensable. Also partly contributing to this decision would be poor or lack of knowledge of ART and its benefits.

Although not commonly quoted, concepts of witchcraft and ancestoral power exist. In our study, some men considered witchcraft to be the cause of their infertility but none considered religion to be related to their infertility. This was also reflected in their practices as majority of the men first sought treatment from a medical professional. A few men went to traditional healers and herbalists either as a primary resort or as a secondary resort. Others went for spiritual intervention. This is in contrast to other studies. In a study done by Shai-Mahoko, infertility was the most common reason for visits to traditional healers.[48] In another study done by Dyer S.J and colleagues, causes of infertility quoted were religious (either God's will or God's punishment), lifestyle (bad living, use of drugs, diet and stress) as well as witchcraft. A person may have been bewitched by a jealous person with the help of a witch doctor. Others felt it was a punishment from the ancestors who disapproved of the couple's relationship or were offended by their non-conformity with traditional rituals. In the study some of the participants had seen a traditional healer and others were contemplating doing so. It was evident that traditional medicine and modern health care were viewed as complementary rather than opposing options.[39]

Half the men and women felt that lack of children was affecting the relationship with the partner. Majority of these women were having marital conflicts, were being abused and beaten, their spouses were engaging in alcoholism, extramarital affairs and proposing divorce. Others were already separated or divorced and one woman said the spouse was delaying to pay the dowry. Another said the husband was getting a second wife. Some women were lonely, discouraged, felt despised and ostracized. Some reported that the childlessness had affected their relationship with the in laws. In our society, there are deeply ingrained expectations about women's reproductive obligations as payment of bridewealth signifies a woman's requirement to bear children. Infertility generates marital discord, wife beating, and

opposition from members of the extended family. Physical abuse and reprisals from the extended family pose substantial threats to women.[49]

Male factor infertility threatens the traditional male/father role and results in a feeling of personal and sexual inadequacy. This may resolve itself in extramarital affairs or by the sufferer throwing himself into his work.[50]

Majority of the men and women would not consider adoption. The common reasons given were wanting or hoping they would get their own biological child or that they already had a child with their spouse or other partner. Others reported refusal by the other partner. Others were ashamed and afraid of the stigma associated with adopting. Others said it was costly and took long. Marrying a second wife was an option to some. In contrast, in a study done by Wole TM. Northern Uganda, he found that most men and women would accept adoption.[51] The difference between the two studies could be that our study was done in an urban set up, while Wole did his in rural Uganda.

Majority of the men and women preferred both partners knowing who was infertile. This is good in that it might mean improved acceptance and participation in investigations and treatment.

Role played by health care providers in relation to improving male participation was generally low. Some of the suggestions made by the women to improve partner participation were that the health care providers should contact the male partner, counsel and educate him and emphasize clinic attendance.

A key element in reproductive health should therefore be the inclusion of the sexually active couple.

CONCLUSION

Male partner participation improved quality of care. Men who accompanied the spouse were more likely to be investigated. A spouse with male infertility was more likely to accompany the female partner to the clinic. Female partner who was married was more likely to be accompanied by the spouse. More than half the men were being pressured by the community to get children. Adoption was not popular with many couples. Most health care providers asked the patient to come with the spouse but few actually contacted or tried to contact the male partner.

RECOMMENDATIONS

KNH to come up with strategies to improve male partner participation in the infertility clinic, for example:-

- All women should be encouraged to come with their spouses.
- Health care providers should make effort for the male partner to come.
- Provide appropriate counseling for the male partners.
- Educate the community on infertility so as to reduce on stigma hence make it easier for the men to accept the problem and access health care.

Carry out further studies on adoption and its effects on marriage.

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Appendix 1: DATA COLLECTION QUESTIONNAIRE

MALE DATA COLLECTION QUESTIONNAIRE

STUDY NUMBER ☐☐☐

A. SOCIO – DEMOGRAPHIC CHARACTERISTICS

1. What is your age in completed years?

   ☐☐

2. What is the highest level of education you've attained?
   a. None
   b. Primary – number of completed years in primary_____
   c. Secondary – number of completed years in secondary_____
   d. Tertiary
3. What is your marital status?
   a. Married
   b. Single
   c. Widowed
   d. Cohabiting
   e. Divorced/ separated
4. What is your occupation?
   a. Unemployed
   b. Self employed
   c. Salaried employment
   d. Casual labourer
5. Which religion are you?
   a. Catholic
   b. Protestant
   c. Muslim
   d. Hindu
   e. Others (please specify)_____
6. For how long have you been trying to get a child (in completed years)?

   ☐☐

7. Do you have another female partner(s)?
   a. Yes
   b. No
8. Do you have any children with this woman/ women?
   a. Yes
   b. No

B. MEDICAL DETAILS

1. Do you,
    a. have history of trauma to the groin
        i. Yes
        ii. No
    b. have you ever had urethral discharge/ penile(s)
        i. Yes
        ii. No
    c. have you ever had swelling of the scrotum
        i. Yes
        ii. No
    d. Ever had mumps
        i. Yes
        ii. No
    e. Ride bicycles/ motor cycles for many hours each day (more than 20 hours a week)
        i. Yes
        ii. No
2. Are you on any medication
    a. Yes
    b. No
3. If yes to the question above, which one_____

C. SOCIAL DETAILS

1. Have/ Do you smoke(d) cigarettes before?
    a. Yes
    b. No
2. If yes to 1 above, for how long?
    a. Less than 1 year
    b. 1 – 5 years
    c. More than 5 years
3. If yes to 1 above, how many sticks in a day?
    a. Less than 3
    b. 3 – 5
    c. 5 – 10
    d. More than 10
4. Have/ Do you take(n) alcohol?
    a. Yes
    b. No
5. If yes in 4 above, for how long have you taken?
    a. Less than 1 year
    b. 1 – 5 years
    c. More than 5 years

6. How often do you take alcohol?
    a. Less than once per week
    b. 1 – 2 times per week
    c. More than thrice per week

D. KNOWLEDGE, ATTITUDES AND PRACTICES

Knowledge

1. How long after marriage/ relationship should you stay before you think of infertility?
    a. One month
    b. Six months
    c. One year or more
    d. Others (specify)
2. What time in the woman's month do you expect ovulation
    a. During her period
    b. Immediately after her period
    c. In the middle of her month
    d. At the end of the month
    e. No idea
3. Who do you blame for the infertility
    a. Male partner
    b. Female partner
    c. No one
    d. Others (specify)
4. Could psychological stress prevent fertility in the female?
    a. Yes
    b. No
    c. Don't know
5. If a woman had gynecological surgery/ abdominal surgery could this lead to a future failure to conceive?
    a. Yes
    b. No Don't know
6. A chronic illness can cause infertility in the
    a. Female
        i. Yes
        ii. No
        iii. Don't know
    b. Male
        i. Yes
        ii. No
        iii. Don't know

7. If you or your spouse had genital infection like gonorrhea in the past, could this lead to an inability to conceive or get a child
    a. Yes
    b. No
    c. Don't know
8. Could swelling of man's scrotum affect fertility?
    a. Yes
    b. No
    c. Don't know
9. Can you mention coital problems which you think can cause infertility?

    _____

    _____

    _____

10. Do you think low sperm count affects fertility?
    a. Yes
    b. No
    c. Don't know

11. Do you think weak sperms affect fertility?
    a. Yes
    b. No
    c. Don't know

12. Are there other things about semen that you think may cause infertility?

    _____

    _____

    _____

13. Do you think ejaculation is proof of having sperm and thus being fertile?
    a. Yes
    b. No
14. Can you mention some abnormalities in the reproductive system of the male and female that you think can cause infertility?

    _____

    _____

    _____

15. The woman owes her female features to the
    a. Ovary
    b. Uterus
    c. Don't know
16. Infections following delivery should be properly treated to reduce the number of cases of infertility
    a. Yes
    b. No
    c. Don't know

17. Illegal abortions should be discouraged to reduce the number of cases of infertility
    a. Yes
    b. No
    c. Don't know
18. Do you think an operation can be done to open a woman's blocked tubes?
    a. Yes
    b. No
    c. Don't know
19. Do you think removal of fibroids will improve fertility?
    a. Yes
    b. No
    c. Don't know
20. Do you think there are drugs to make you more fertile?
    a. Yes
    b. No
    c. Don't know
21. Do you think there are drugs to make your partner more fertile?
    a. Yes
    b. No
    c. Don't know
22. Donation of sperms and introducing them into the female is a method of treating infertility in some cases of male factor problem
    a. Yes
    b. No
    c. Don't know
23. Could it be possible that you and your partner are normal and still not be able to get a baby?
    a. Yes
    b. No
    c. Don't know
24. Have you heard anything about men participating in their partner's care in treating infertility?
    a. Yes
    b. No
25. If yes to the above, what have you heard

    _____
    _____
    _____

Attitudes

26. Does the fact that you do not have children affect your relationship with your partner
    a. Yes
    b. No
27. Do you feel that relations with the in laws and you and your partner have been affected with inability to get a child/ children?
    a. Yes
    b. No
28. Do you support your partner when relatives pressure her to have children?
    a. Yes
    b. No
29. Are you receiving any pressure from the community ?
    a. Yes
    b. No
30. How do you feel about this pressure from your family and the community?

    _____
    _____
    _____
31. How do you cope with this pressure?

    _____
    _____
    _____
32. How do you feel about not being able get a child?

    _____
    _____
    _____
33. How has it affected your marriage?

    _____
    _____
    _____
34. Do you prefer both partners knowing who is infertile?
    a. Yes
    b. No
35. If your partner has the infertility factor and no remedy is feasible, will you divorce her?
    a. Yes
    b. No
36. Will you divorce her if it's the relatives advocating for it
    a. Yes
    b. No

37. If cause of the infertility is male factor, will you consent to someone donating sperms to be used on your partner?
    a. Yes
    b. No
38. If no, give your reasons and alternatives

    _____
    _____
    _____

39. If it is female factor as the cause of the infertility and is uncorrectable, would you accept
    a. A second wife
        i. Yes
        ii. No
    b. Another woman carrying a baby made from your sperm and your partners egg
        i. Yes
        ii. No
40. If you do not accept any of the above, give your reasons in each case

    _____
    _____
    _____

41. Do you think that adoption is a satisfactory solution in case of no other available remedy
    a. Yes
    b. No
42. Do you think witchcraft could be the cause of your infertility problem
    a. Yes
    b. No
43. Do you think your religion is related to the infertility problem
    a. Yes
    b. No
44. If yes, how?

    _____
    _____
    _____

45. How do you feel attending the clinic

    _____
    _____
    _____

46. If you had the problem, would you agree to be investigated and treated?
    a. Yes
    b. No

47. Do you feel male participation (your participation) will add value to the overall couple care?
    a. Yes
    b. No

Practices

48. After realizing that you have a problem with achieving conception/ getting more children, from whom did you first seek help
    a. Traditional healer/ herbalist
    b. Witch doctors
    c. Medical person (specify)
    d. Spiritual intervention
    e. Others (specify)
49. What motivated you to seek this first therapy

    _____

    _____

    Did you seek therapy from the other sources as well
    a. Yes
    b. No
50. If yes to the above question, which one(s) and why

    _____

    _____
51. Who is paying the medical bills
    a. Male partner
    b. Female partner
    c. Both
52. If there is need to provide surgical or medical treatment, will you support her?
    a. Yes
    b. No
53. If there is need for you to be treated by surgery, will you agree to be treated?
    a. Yes
    b. No
54. If there is need for you to be treated by taking drugs, will you agree to be treated?
    a. Yes
    b. No
55. Have you had any tests done on you?
    a. Yes
    b. No
56. If yes, which one(s)_____

57. Will you help decide on the type of management your partner will receive
    a. Yes
    b. No

FEMALE DATA COLLECTION QUESTIONNAIRE

STUDY NUMBER ☐☐☐

A. SOCIO – DEMOGRAPHIC CHARACTERISTICS

1. What is your age in completed years?

   ☐☐

2. What is the highest level of education you've attained?
   a. None
   b. Primary – number of completed years in primary_____
   c. Secondary – number of completed years in secondary_____
   d. Tertiary
3. What is your occupation?
   a. Unemployed
   b. Self employed
   c. Salaried employed
   d. Casual labourer
4. Which religion are you?
   a. Catholic
   b. Protestant
   c. Muslim
   d. Hindu
   e. Others (please specify)_____

B. OBSTETRIC DATA

1. What was your age at first pregnancy (in completed years)?
   a. ☐☐
   b. Not applicable (I've never been pregnant)

   If answer to question 1 is b, skip to section iii.

2. How many children were born after 7th month of pregnancy (dead or alive)? ☐☐
3. How many pregnancies were lost before the 7th month? ☐☐

4. Date of last menstrual period
   a. Date_____ Month _____ Year_____
   b. Not known
5. Which year was your last delivery? ☐☐☐☐

6. Was your last pregnancy by the same spouse
    a. Yes
    b. No
7. Where did you deliver?
    a. Health facility
    b. Home
    c. By the roadside
    d. Others (specify)_____
8. Did you develop offensive vaginal discharge after delivery, miscarriage, surgery, excessive bleeding after delivery, etc?
    a. Yes
    b. No
9. In case of abortion, was it spontaneous or induced
   Spontaneous = 1, Induced = 2

   ☐☐
10. Was uterine evacuation done?
    a. Yes
    b. No

C. GYNAECOLOGIC DATA

1. How old were you when you received your first menstrual period (in completed years) ☐☐
2. How is your menstrual cycle
    a. Regular
    b. Not regular
3. Any sanitary measure used during menses
    a. Yes
    b. No
4. If yes to 3, which one
    a. Pads
    b. Tampons
    c. Cotton wool
    d. Cloth
    e. Tissue paper
    f. Others (specify)_____
5. Have you ever used condoms
    a. Yes
    b. No
6. If yes, when did you use condoms
    a. Every time
    b. Some of the time

7. Have you used any other family planning method?
    a. Yes
    b. No
8. If yes to 7 above, which method (methods)?
    a. Pills
    b. Implant
    c. 3 monthly injection
    d. Coil
    e. Natural method
    f. Others (Specify) _____
9. Any previous history of pelvic surgery
    a. Yes
    b. No
10. If yes to 9, specify_____

D. SEXUAL HISTORY

1. How old were you when you first engaged in sexual intercourse

2. How many sexual partners have you in your life

3. Have you had other sex partners while with your current spouse
    a. Yes
    b. No
4. Do you douche?
    a. Yes
    b. No
5. If yes to the above question, what do you use? _____
6. Have you been treated for abnormal vaginal discharge or lower abdominal pain?
    a. Yes
    b. No
7. How frequently do you have intercourse with your spouse?
    a. We no longer have sex
    b. <3 times a week
    c. 3 or more times a week
8. What times of the month do you engage in intercourse?
    a. After menses
    b. Midmonth
    c. Before menses
    d. Any time

E. KNOWLEDGE, ATTITUDES AND PRACTICES

Knowledge

1. A chronic illness can cause infertility in the
    a. Female
        i. Yes
        ii. No
        iii. Don't know
    b. Male
        i. Yes
        ii. No
        iii. Don't know
2. If you or your spouse had genital infection like gonorrhea in the past, could this lead to an inability to conceive or get a child
    a. Yes
    b. No
    c. Don't know
3. Could swelling of a man's scrotum affect his fertility?
    a. Yes
    b. No
    c. Don't know
4. Can you mention coital problems which you think can cause infertility?

    _____
    _____
    _____

5. Are there things about semen that you think may cause infertility?

    _____
    _____
    _____

6. Do you think ejaculation is proof of having sperm and thus being fertile?
    a. Yes
    b. No
7. Can you mention some abnormalities in the reproductive system of the male and female that you think can cause infertility?

    _____
    _____
    _____

8. What time in the woman's month do you expect ovulation
    a. During her period
    b. Immediately after her period
    c. In the middle of her month
    d. At the end of the month
    e. No idea

9. Could psychological stress prevent fertility in the female?
    a. Yes
    b. No
    c. Don't know
10. Illegal abortions should be discouraged to reduce the number of cases of infertility
    a. Yes
    b. No
    c. Don't know
11. Do you think there are drugs to make you more fertile?
    a. Yes
    b. No
    c. Don't know
12. Do you think there are drugs to make your partner more fertile?
    a. Yes
    b. No
    c. Don't know
13. Donation of sperms and introducing them into the female is a method of treating infertility in some cases of male factor problem
    a. Yes
    b. No
    c. Don't know
14. Could it be possible that you and your partner are normal and still not be able to get a baby?
    a. Yes
    b. No
    c. Don't know
15. Have you heard anything about men participating in their partner's care in treating infertility?
    a. Yes
    b. No
16. If yes to the above, what have you heard

    _____

    _____

    _____

Attitudes

1. Does the fact that you do not have children affect your relationship with your partner
    a. Yes
    b. No

2. If yes, how?

_____

_____

_____

3. Do you feel that relations with the in laws and you and your partner have been affected with inability to get a child/ children?
    a. Yes
    b. No
4. Does your partner support you when relatives pressure you to have children?
    a. Yes
    b. No
5. Do you prefer both partners knowing who has the infertility factor?
    a. Yes
    b. No
6. Have you and your partner considered adoption as a satisfactory solution in case of no other available remedy
    a. Yes
    b. No
7. If no, give reasons

_____

_____

_____

8. Do you want your partner to accompany you to the clinic?
    a. Yes
    b. No
9. How do you feel about the man attending the clinic

_____

_____

_____

10. How do you feel about the man paying the hospital bills

_____

_____

_____

11. How do you feel about the man participating in investigations and treatment

_____

_____

_____

12. If the man had the problem, would he agree to be investigated and treated?
    a. Yes
    b. No
    c. Don't know
13. Do you feel male participation will add value to your overall care?
    a. Yes
    b. No

Practices

14. Does the male partner come to the clinic
    a. Yes
    b. No
15. If yes to the question above,
    a. Always
    b. Sometimes
16. If no, why?

    _____

    _____
17. Who is paying the medical bills/
    a. Male partner
    b. Female partner
    c. Both
18. If there is need to provide surgical or medical treatment, will he support you?
    a. Yes
    b. No
19. Has your partner had any investigation(s) done?
    a. Yes
    b. No
20. If yes, which one(s)_____

21. Does your partner help decide which treatment you will receive?
    a. Yes
    b. No
22. Have you been asked by the health care providers to come with your partner to the clinic?
    a. Yes
    b. No
23. Have the health care providers contacted or tried to contact your partner to ask him to attend the clinic?
    a. Yes
    b. No
24. What would you like done by the health care provider to improve your partner's participation?

    _____

    _____

    _____

F. INVESTIGATIONS DONE AND RESULTS

1. Seminalysis
    a. Normal
    b. Abnormal (specify)
    c. Not done
2. HSG
    a. Normal
    b. Abnormal (specify)
    c. Not done
3. Pelvic ultrasound
    a. Normal
    b. Abnormal (specify)
    c. Not done
4. Hormonal profile
    a. Normal
    b. Abnormal (specify)
    c. Not done
5. Other (specify)

    _____

G. TYPE OF INFERTILITY

1. MALE INFERTILITY ☐

2. FEMALE INFERTILITY ☐
    a. Primary infertility
    b. Secondary infertility

H. TREATMENT PLAN ☐

1. Surgery
    a. Tuboplasty
    b. Myomectomy
    c. Ovarian drilling
2. Medical
    a. Hormonal treatment (specify) ☐
    b. Others

Appendix 2: PATIENT INFORMATION AND CONSENT FORM

i) English version

Study on male involvement in the management of infertile couples at the Kenyatta National Hospital

Study investigator: Dr. Diana Kerubo Ondieki, Master of Medicine student in the Department of Obstetrics/Gynaecology, School of Medicine, College of Health Sciences, University of Nairobi. Mobile no. 0752 969 077.

Supervisors:

1. Dr. James Machoki M'imunya, MB.ChB ; M'Med (Obs&Gynae) UoN, Senior Lecturer, Department of Obstetrics and Gynaecology, University of Nairobi, Andrologist (TAU), Deputy Director UNITID (University of Nairobi Institute of Tropical and Infectious Diseases). Cell no. 0722524174.
2. Dr. Gathari Ndirangu, MB.ChB; M'Med (Obs&Gynae) UoN, Honorary Lecturer, Department of Obstetrics and Gynaecology, University of Nairobi. Cell no. 0722804750.

Ethical review committee chairperson: Professor A.N. Guantai.

Researcher`s statement:

The purpose of this consent form is to give you information about the aforementioned.

This information will help you decide whether to be in the study or not. Please read the form carefully. You may ask questions about the purpose of the research, what we would ask you to do , the possible risks and benefits, your rights as a volunteer and anything else about the research or this form that is not clear. When we have answered all your questions, you can

decide if you want to be in the study or not. This process is called informed consent. If you wish, we will give you a copy of this form for your records.

Study participants rights:

You have a right as a volunteer to decide whether you would like to participate in this study. You have a right to ask any questions concerning this study. Only when all your questions have been answered you may decide to participate or not to. You have a right to ask any question about this study at any time, and contacts have been put in this consent form for any further queries or complains you may have. Once you have been enrolled in this study you can drop out at any time. It is your right. You will not be denied any treatment you require if you decide not to participate.

Study purpose:

The purpose of the study is to determine the extent and value of male involvement in the management of the couple.

Study procedures:

If you agree to be included in this study, the doctor or the nurse will talk to you about the study and give you an opportunity to ask any questions you may have. You can then decide to participate in the study or not. If you decline to participate you will be given treatment in the usual way. You will not be denied any services.

If you agree to participate, you will be asked to give your signature or a thumb print as consent. You will then be taken through the questions in the questionnaire and other details of your diagnosis and treatment plan will be gotten from your file.

Benefits:

There will be no financial or material inducement to participate in this study. Participation will be by informed consent. The results of the study will add more knowledge to the medical community on male involvement in the management of infertile couples.

Confidentiality:

The information given to researchers will be kept in strict confidence. No names, only numbers will be used to identify you.

However no information by which your identity can be revealed will be released or published.

Signature of investigator……. Date…….

Participants statement:

I voluntarily agree to participate in the study looking into the extent of male involvement in the management of infertile couples at the Kenyatta National Hospital.

I have been informed that the information obtained will be treated with the utmost of confidentiality and my treatment will not be compromised if I decline participation or withdraw from the study.

I have had a chance to ask questions, if I have questions later I can ask the researcher. If I have questions about my rights as a research subject, I can call the Ethical Review Committee at Kenyatta National Hospital on telephone number 020 2726300.

Signature of participant…….Date…….

ii) Swahili version

Kiambatisho 2:

HABARI KWA MGONJWA NA CHETI CHA KUKUBALI KUSHIRIKI KATIKA UTAFITI

Huu ni utafiti juu ya ushiriki wa mume katika matibabu ya wanandoa wagumba katika Hospitali ya Taifa Kenyatta.

Mtafiti ni Dr. Diana Kerubo Ondieki, daktari na mwanafunzi wa maswala yanayohusu uzazi, Chuo Kikuu cha Nairobi. Nambari ya simu: 0752969077. Atakuwa akisimamiwa na Dr. James Machoki M'imunya nambari ya simu 0722524174, Dr. Gathari Ndirangu nambari ya simu ambao ni wataalamu wa maswala ya uzazi Chuo kikuu cha Nairobi na hospitali ya Kenyatta.

Mwenyekiti wa kamati ya utafiti Hospitali Kuu ya Kenyatta ni Prof. A.N. Guantai.

Maelezo ya utafiti:

Maana kuu ya hii cheti cha kukubali ni kupasa wewe mshirika habari kuhusu huu utafiti. Haya maelezo yatakuwezesha kuamua kama utakubali kushiriki au la. Tafadhali yasome maelezo haya kwa utaratibu. Unaweza kuuliza maswali kuhusu maana ya huu utafiti, yale mambo tutayokwambia ufanye, faida kwako, haki zako na jambo lingine lolote ungelitaka kujua juu ya huu utafiti. Wakati ambapo tumejibu maswali yako yote, utaamua kushiriki kwenye utafiti ama la. Tunaweza kukupatia nakara ya cheti hii kama ungependa.

Hakuna fedha au aina nyingine ya zawadi atayopewa yeyote ambaye anachagua kushiriki katika utafiti huu. Matokeo ya utafiti huu utasaidia kuboresha ubora wa huduma ya afya katika KNH na nchi kwa ujumla.

Sababu na manufaa ya huu utafiti:

Madhumuni ya utafiti ni kujua kiasi na faida ya mume kushiriki katika matibabu ya wanandoa wagumba. Habari tutazopata kwako tutaziweka siri na hakuna mtu mwingine atajulishwa. Jina lako halitatumika wakati utafiti huu utakapochapishwa.

Sahihi ya mtafiti…….tarehe……..

Cheti cha kukubali kushiriki kwenye utafiti:

Mimi nimekubali kushiriki katika utafiti wa ushiriki wa mume katika matibabu ya wanandoa wagumba katika Hospitali ya Taifa Kenyatta. Nimeelezwa kwamba habari zangu zitawekwa siri, na kwamba matibabu yangu hayataadhiriwa nikikataa kushiriki ama kujiondoa kwenye utafiti. Nimekuwa na nafasi ya kuuuliza maswali, na kama nitakuwa na maswali mengine, ninaweza kuuliza watafiti wakati wowote.

Sahihi ya mshiriki…….....au

Kidole gumba (kulia/kushoto)……...tarehe……