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KNOWLEDGE, ATTITUDES AND PRACTICES OF INFERTILE COUPLES ON MALE PARTICIPATION IN INFERTILITY MANAGEMENT AT THE KENYATTA NATIONAL HOSPITAL

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ABSTRACT

Objective: To determine knowledge, attitudes and practices of infertile couples on male involvement in the management of infertility.

Design: Hospital based cross-sectional study.

Setting: Kenyatta National Hospital, Nairobi, Kenya.

Subjects: One hundred sixty three infertile couples attending the gynaecological and infertility clinics at the Kenyatta National Hospital.

Main outcome measures: Knowledge, attitudes and practices of infertile couples on male participation in infertility management.

Results: A total of 163 infertile couples (with only 34 men accompanying their wives in this study period) were recruited into the study. Sixty nine point nine percent (114) of the women who participated in this study were ever accompanied to the clinic by their spouses, but only 20.9% (34) were accompanied during the study period. 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]).

Conclusion: Male participation in infertility management was low 34(20.9%) and structures need to be put in place to improve male partner participation in infertility management.

INTRODUCTION

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% (1, 2, 3).

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 (4).

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.(5) Men are encouraged to be more involved and supportive of women's needs, choices and rights in sexual and reproductive health. Infertility could be due to male factor, female factor or both, or it could be unexplained. Therefore it is critical to address the men's health needs appertaining to infertility (6). There are both male and female factors which cannot be analysed in isolation (7). The term male involvement includes two aspects, namely, male responsibility and male participation.. Male participation suggests a more active role for men in reproductive health decision making, in investigations and treatment (8,9). Non-participation of the male may delay treatment and outcomes such as conception.

Infertility has been feminised and has impacted as follows: at individual level it has resulted in women acceptance, men relaxation and skewed bio-psychosocial outcomes; at community level it has resulted in biased stigmatisation; and at research and management level it has resulted in lack of full deck approach, misallocation of resources and poor overall outcomes.

This study seeks to provide information on the extent of male involvement in infertility management.

MATERIALS AND METHODS

This was a cross-sectional study which was carried out in the infertility and gynaecology clinics in 2011 at Kenyatta National Hospital (KNH), Kenya. The sample size was one hundred sixty three infertile couples. A minimum sample size of 160 infertile couples was sufficient to determine the knowledge, attitude and practice of male involvement in fertility management, the with a confidence level of 95% and an error margin of $\pm 7.5\%$. 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, 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. The study population was made up of infertile couples attending the infertility and gynaecological outpatient clinics at KNH. All infertile patients consenting to the study were interviewed. The study

participants were identified as follows: from the list of the patients booked for gynaecological and infertility clinics, initial screening using the files was carried out to identify the potential participants. Consenting patients were then recruited, and the questionnaire administered by the researcher. There were separate male and female questionnaires for each couple but linked by the same study number. This was done in order to ensure that the participants were free to express themselves and were truthful. Each person was interviewed and the questionnaire filled privately. Data was analysed using SPSS (Statistical Package for Social Scientists) data analysis programme version 19, Copyright 1989, 2010 SPSS Inc., an IBM Company. 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 were presented in frequency tables and graphs where applicable. Associations between these categorical variables were tested using the Pearson Chi square or the Fishers Exact test. A p-value of less than 0.05 was considered statistically significant.

RESULTS

A total of 163 infertile couples on follow up in the infertility and gynecology clinics (with only 34 men accompanying their partners during the study period) were recruited into the study between the months of August 2010 and February 2011.

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)
Religio		
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 socio-demographic 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 socio-demographic 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 women were seven times more likely to be accompanied [OR=6.8;95%CI(1.1-53.0)].

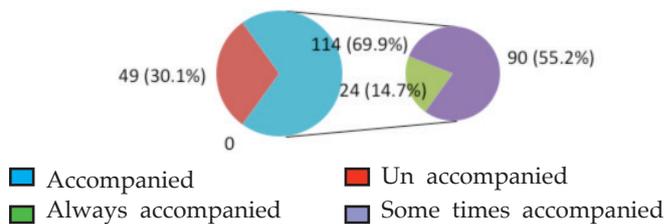
To assess the strength of the relationship between the accompanied women and the two

significant socio-demographic 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.

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

Figure 1

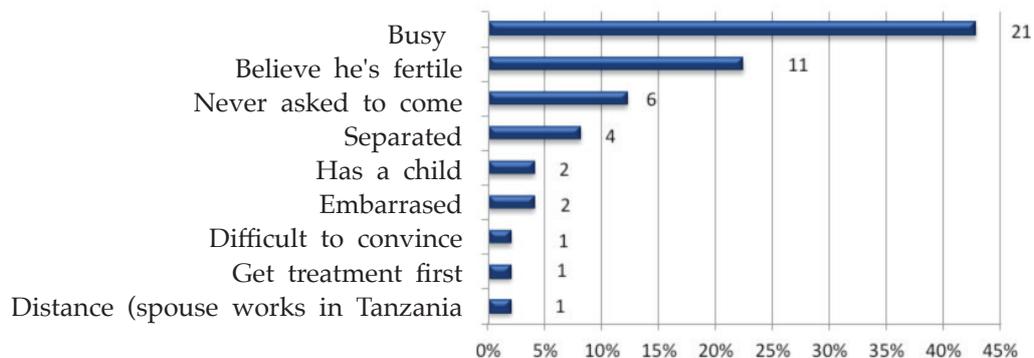
Proportion of infertile females accompanied by their male partners to the KNH Infertility clinic (n=163)



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.

Figure 2

Reasons provided by the 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.

Table 3

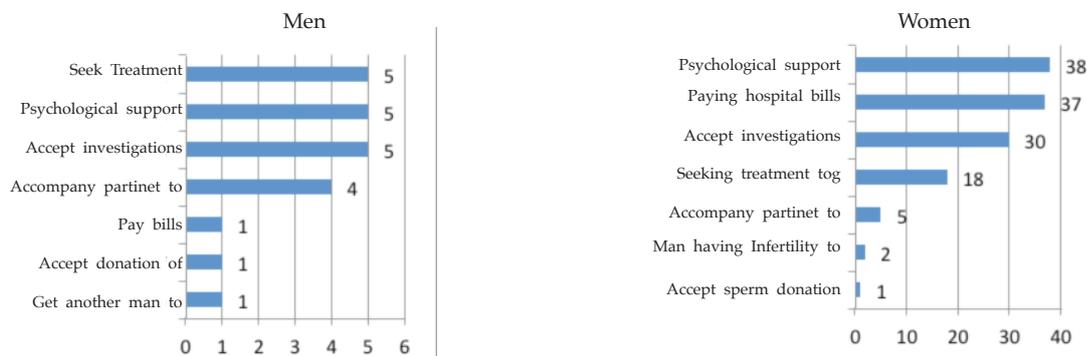
Knowledge by participants attending the KNH Infertility clinic of male participation in partner's care

	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 and women attending the KNH Infertility clinic had heard about male participation in the partner's care

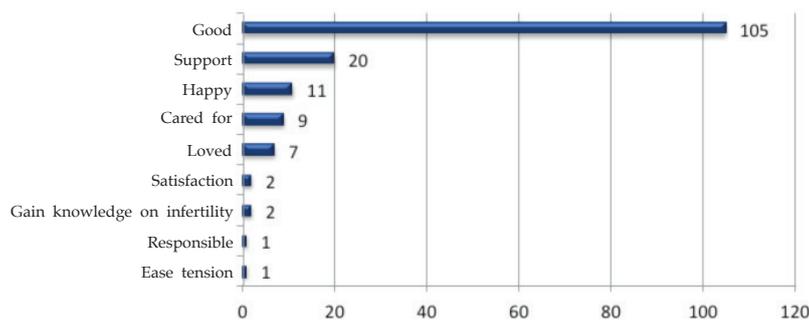


Majority of the men said seeking treatment together, offered psychological support and offered opportunity for his investigations. One of the respondents was of the feeling that getting another man to impregnate the wife was part of the male participating in the partner's care.

From the female perspective, most women, 38 (23.3%), said the man offering psychological support was part of how he could participate in the spouse's care.

Figure 4(a)

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 4 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.

Table 4

Comparison of male participation between accompanied and unaccompanied women attending the KNH Infertility clinic

	Accompanied women Yes (n=114) n(%)	No (n=49) n(%)	P value
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 4(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 4(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 regressions, 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 4 (b).

DISCUSSION

A total of 163 infertile couples on follow up in the infertility and gynaecology clinics (with only 34 men accompanying their partners during the study period) were recruited.

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. However, during the study period, the attendance of men was low - 34(20.9%). This health seeking behaviour among men could be due to socimisconception about infertility being purely a female problem (10, 11).

Despite the 1994 ICPD conference in Cairo and the 1995 Fourth conference of women in Beijing (12), male involvement in Kenya remains relatively a new concept. It was found that very few women were accompanied by their spouses during the study period. 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 number of women ever accompanied could be due to the men wanting to find out if they are infertile and just being more supportive because they want a baby.

Most of the women, 158(96.9%), wanted their spouses to accompany them to the clinic. All the men 34(100%) and all the women 163(100%) felt that male participation would add value to the overall couple care. 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 might play a large role in this decision-making process(13).

Infertility is a known cause of marital discord leading to divorce and separation. This was depicted in a 2004 World Health Organization (WHO) report (14). In Nicaragua, the Dominican Republic, and Eritrea, more than 40 percent of women who have never had a child were separated or divorced (15). In this study however, most of the women 145(89%) and most of the men 33(97.1%) were still married. Married women were seven times more likely to be accompanied.

It was observed in this study that male partners who accompanied their female partners to the fertility clinics were more involved in the fertility treatment. Majority of the men said seeking treatment together, offered psychological support and offered opportunity for his investigations. That is, compared to those who did not accompany their female partners, more of them paid the medical bills, provided support for treatment if needed and were more 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(16).

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.

In conclusion, health institutions need to establish and strengthen standard operating procedures that will better involve the male. There's need to encourage women to come with their spouses to the clinic and appropriate counseling be provided to male partners who attend with an aim of fostering continuity in their participation. Policy formulation on matters related to male reproductive health issues can and should be employed beyond infertility.

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