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'You are a man because you have children': experiences, reproductive health knowledge and treatment-seeking behaviour among men suffering from couple infertility in South Africa

S.J.Dyer[1,3], N.Abrahams[2], N.E.Mokoena[1] and Z.M.van der Spuy[1]

[1]Reproductive Medicine Unit, Department of Obstetrics and Gynaecology, Groote Schuur Hospital and Faculty of Health Sciences, University of Cape Town, Observatory 7925 and [2]Gender and Health Research Group, Medical Research Council, PO Box 19070, Tygerberg 7505, South Africa

[3]To whom correspondence should be addressed. E-mail: sdyer@uctgsh1.uct.ac.za

BACKGROUND: In Africa, infertility traditionally has been viewed as a female problem. This study explores reproductive health knowledge, health-seeking behaviour and experiences related to involuntary childlessness in men suffering from couple infertility. METHODS: Twenty-seven men from a diverse cultural urban community in South Africa participated in in-depth interviews at the time of their first visit to an infertility clinic in a tertiary referral centre. RESULTS: Men had little knowledge about the physiology of human fertility, causes of infertility and modern treatment options. Awareness of male factor infertility was, however, high. Most men appeared involved in the health-seeking process. Men described their emotional reactions to childlessness and the impact of infertility on marital stability, and many reported that infertile men suffered from stigmatization, verbal abuse and loss of social status. CONCLUSIONS: These findings improve our understanding of the reproductive health needs of men suffering from couple infertility in Africa. This understanding is essential for the effective integration of male partners into modern infertility management. The need for appropriate counselling of men and, most particularly, for education of the community is recognized.

Key words: Africa/infertility/infertility management/men/psychosocial factors

Introduction

The negative impact of infertility on reproductive health in Africa is increasingly being recognized. Epidemiological studies have identified high prevalence rates (reaching 20–40% in certain regions) and reference is made to an 'infertility belt' stretching across sub-Saharan Africa (Cates *et al*., 1985; Leke *et al*., 1993; Larsen, 2000). Anthropological and sociological studies bear testimony to the considerable suffering associated with involuntary childlessness due to negative psychosocial consequences such as marital instability, abuse and stigmatization (Gerrits, 1997; Sundby, 1997; Dyer *et al*., 2002b). Evaluation of infertility related treatment-seeking behaviour in Africa has demonstrated relentless and protracted care seeking by women. This places considerable demand on already inadequate health services which frequently are ineffective, uninviting and inaccessible (Fiander, 1990; Gerrits, 1997; Sundby *et al*., 1998; Rowe, 1999; van Zandvoort *et al*., 2001; Walraven *et al*., 2001).

To date, most studies have focused on women, probably with the understanding that in African countries women carry the main burden of infertility as they appear to be 'blamed', often solely, for a couple's childlessness (Savage, 1992). Only few studies have included male participants, and most of these were aimed at assessing the prevalence and aetiology of male infertility (Mbizvo *et al*., 1984; Yeboah *et al*., 1992). As a result, very little is known about men's experiences of involuntary childlessness in Africa (van Zandvoort *et al*., 2001).

This study was undertaken to evaluate men's reproductive health knowledge with regard to fertility and infertility, to review health-seeking behaviour and to gain insight into their experiences of involuntary childlessness. In order to capture complex human behaviour and experiences, qualitative research methods were utilized. The advantages of qualitative research methods which avoid the more rigid format of quantitative data collection are recognized in this setting and have been discussed previously (Berg, 1994; Dyer *et al*., 2002b).

It was anticipated that the results of this study would offer important information about the male perspective of infertility in Africa. This information is essential in order to understand and respond to the reproductive health needs of couples suffering from involuntary childlessness.

Patients and methods

The study was conducted at the infertility clinic of Groote Schuur Hospital in Cape Town, South Africa. This clinic is one of the few public health institutions in South Africa in which patients from indigent and socially disadvantaged communities can access tertiary level infertility management (Dyer *et al*., 2002b). Three main ethnic groups (black, white and coloured/mixed ancestry) are encountered in the local community of Cape Town. The dominant languages are Xhosa, Afrikaans and English, and Christianity followed by Islam are the most common religious faiths.

Twenty-seven men suffering from couple infertility were recruited at their first presentation to the infertility clinic at Groote Schuur Hospital. In order to ensure that the study population was broadly representative of the local communities accessing our clinic, the following informants were selected: 12 coloured or white men, nine Xhosa-speaking black men and six men from the Muslim community (coloured). It was anticipated that this number and selection of informants would lead to saturation of data on the topics explored. Analysing differences between these groups of informants was not an aim of the study.

All interviews were conducted between November 2001 and May 2002. Informants were approached consecutively from the clinic but depending on the presence of the research assistants at the clinic. As the appointment system for this clinic operates in chronological order of patient referral, it is most unlikely that the presence or absence of the interviewers at the clinic would have introduced selection bias. Eligibility for this study was based on the informant's willingness to participate and his ability to converse in one of the three dominant languages. Recruitment continued until the required number of subjects in each of the three subgroups had been reached.

Qualitative methods utilizing semi-structured, in-depth interviews were employed. Men were interviewed without their partners at the infertility clinic prior to interacting with the medical team. Two multilingual health care workers were trained to conduct the interviews. An open-ended interview guide was developed, and knowledge of human reproduction, causes of infertility and infertility management, infertility-related health-seeking behaviour as well as emotional and social experiences of childlessness were explored. Interviews were held in the preferred language of the informant, taped, transcribed and translated into English. Data analysis was based on grounded theory as previously described (Dyer *et al*., 2002b).

Briefly, grounded theory has originated from the discipline of sociology and is a commonly applied framework for the analysis of qualitative data (Bryman and Burgess, 1996; Creswell, 1998). Data processing utilizes a systematic approach to data coding involving open coding (breaking up of data into categories containing concepts or themes), axial coding (exploring relationships between categories as well as contexts, causes and consequences of behaviour or experiences) and finally selective coding (drawing up a narrative report). The narrative report typically develops conclusions or 'theories' which are 'grounded' in the original data.

For the presentation of findings, numerical and operationally defined verbal counting as described by Sandelowski (2001) was utilized. Operationally defined verbal counting implies that words connoting indeterminate quantities such as 'few', 'some' and 'many' are defined. In this manuscript, 'few' refers to more than one but less than five informants. The words 'some' and 'several' were used for groups of 5–13 participants, with 'some' referring to the lower numbers and 'several' to the upper numbers in this range. If a finding affected between 14 and 19 men, the term 'many' was applied, whilst 'most' and the 'majority' were utilized synonymously to indicate that 20 or more of the informants were involved in a particular theme or finding.

The study was approved by the Ethics Committee of the Faculty of Health Sciences of the University of Cape Town. Informed consent was obtained from all participants.

Results

A total of 32 men were asked to participate in the study. One man refused on the grounds of not having time for the interview. Thirty-one men were interviewed. One interview with a Xhosa-speaking participant had to be terminated. Although this man had been informed about the study and consented to participate, he subsequently was unwilling to discuss any of the issues raised in the interview. A further three interviews (two coloured men and one man from the Muslim community) could not be analysed as the audiotape was inaudible. According to the field notes, these interviews did not raise themes which were new or significantly different from the other interviews. Interviews continued until the desired number (27) was available for data analysis.

Demographic information

All but three of the 27 men were married, and 14 participants had no living child. Of the remaining 13 informants, four had one living child in their present union, five men had one living child from a previous relationship and three men had more than one living child from previous relationships.

Knowledge of human fertility

The majority of informants had limited knowledge of the biological process of human reproduction. Six of the informants could offer no information other than that a woman fell pregnant through intercourse. Several participants explained that male and female 'sperm' or eggs and sperm had to 'meet' or 'connect' within the woman's body for conception. Two men said that intercourse caused 'cells' or 'seeds' to be released inside the woman's body which subsequently grew into a baby. 'I have the sperm and she has what makes my sperm fertile' one of the informants explained. Only one man was able to sum up the basic biological facts referring to ovulation, fertilization and implantation.

Knowledge of causes of infertility

Men offered a wide range of factors as possible causes of infertility. The more 'medical concepts' of infertility included concerns regarding a low sperm count or 'weak sperm',

menstrual abnormalities, blocked tubes and previous use of contraception. A few men thought that sexually transmitted diseases could cause male infertility. The following interview extract is an example of this concept. 'There are men who can be a problem [with regards to fertility] because there are those who cannot have one wife or one girlfriend and now they start to have diseases and…they make him weak'.

Other causes of infertility included religious considerations (either God's will or God's punishment), lifestyle ('bad living', use of drugs, diet and stress), a 'dirty womb' as well as witchcraft. The latter would usually be exerted directly or indirectly (with the help of a witchdoctor) by some jealous person. Two men felt that their infertility was invoked by ancestors who did not approve of their relationships or who were offended by the couple's non-conformity with traditional rituals.

All but one of the participants were aware of the possibility of male infertility. Five men felt that male infertility might indeed be more common than female infertility. 'Women are born to have children' one of the informants offered as explanation. Four of the participants felt that female causes were more common and the remainder considered the ratio to be equal or were unsure about it. Despite this awareness of possible male infertility, a few informants felt that men did not like to 'admit' that they had 'the problem' and that the 'majority of men would blame the woman'. One of the informants gave a reason for this 'denial': 'In society today...man cannot be the problem. He has got this stereotype…he is the man and nothing could be wrong with him'.

Some men, although aware of male infertility in general, were confident that they could not be 'the problem' as they had fathered children previously. A further two informants interpreted the ability to ejaculate as proof of 'having sperm' and thus being fertile.

Several participants said that they did not know what would prevent a man and a woman from having children, and that they had come to this clinic in order to find out. Two of these informants felt that they lacked knowledge as other men who were childless would not talk about their situation.

When asked about the presumed cause of infertility in the index relationship, eight men said they did not know, 11 informants thought the problem lay with their female partners, four men were concerned about a possible male factor and the remainder considered the possibility of both male and female factors.

Expectations and concepts of modern infertility management

All participants were asked what expectations they had of their first visit to the infertility clinic. Answers were mostly vague and centred around the hope to receive information, the expectation to be 'checked' or 'tested' and then treated as necessary and to obtain 'help'. The majority of men said they did not know what investigations would be required or what treatment could be offered and emphasized that they had come to the clinic in order to be given this information. The words of the following informant reflect these concepts: 'What I expect is that they are going to tell me exactly what the problem is, if I am the problem or if she is the problem, and whatever they can do at this stage'. Another participant also emphasized the importance of information when he said 'Knowledge of what is wrong is already a great comfort'.

Some of the participants expected to receive medication or to join a 'programme' in order to make the couple more fertile. 'They will first check me and my girlfriend. That will help them discover where the problem is. Then they will know what to mix so as to help us in bearing children' one patient explained. The need to clean the body or bodily parts (i.e. blood or womb) of one or both partners was a concept held by five of the informants, one of whom said: 'I think they are going to clean my wife, so that she can menstruate, because I think the problem is this blood which she must shed but which is not coming out every month'.

A few of the participants referred to biomedical terms and procedures, such as 'insemination'. It was, however, evident that these men remained very unsure as to what these terms and procedures really implied. This uncertainty is reflected in the questions of the following participant: 'I really don't know what this treatment will entail. Will there be any operations or are they going to draw sperm out of my body? How are they going to do that? What are they going to do with my wife? Are they going to implant sperm into her, operate on her?' Only one man appeared to be adequately informed about some principles of infertility management. He and his wife previously had undergone assisted reproductive techniques in the private health sector.

Treatment-seeking behaviour

The majority of participants said they had been actively involved in initiating the process of finding help. In a few instances, this involved the joint decision that the female partner would go and see a doctor. In six couples, the woman had taken the initiative while in five couples it had been the man. Amongst the latter couples, two men felt that their wives were too shy to see a doctor and one felt that his wife was not as keen as he was to have another child. The presumed underlying cause of infertility did not appear to influence who initiated the health-seeking process.

Most of the informants had accessed the health care system via their general practitioner or the local primary care facility in the public health sector. Couples were then referred to our tertiary care clinic, often at their specific request. A few informants experienced delays with this referral process, but only one expressed dissatisfaction. Only three patients had seen a private specialist and only one couple had received infertility treatment previously (at a private tertiary care facility).

Four of the black informants had seen a traditional healer and a further two contemplated doing so. Treatment from traditional healers appeared to involve traditional medicine or herbs to 'clean the blood'. It was evident that traditional medicine and modern health care were viewed as complementary rather than opposing options. This can be seen in the following interview extract referring to the support from family members and friends: 'They are supportive because they are even saying that we must consult our ancestors and …do our traditional ceremonies. They give advice about our culture and

they also encourage us to come to the clinic'. One of the couples who felt that their childlessness was invoked by their ancestors had organized family festivities to communicate with the ancestors and had then waited for a year to see if they would conceive.

Most of the informants were highly motivated with regard to investigations and treatment. 'Yes, obviously, yes. That's why we are here…to solve our problem. Yes, definitely, yes' one of the informants answered when asked whether he was willing to undergo investigations. Several men expressed an unconditional willingness to do 'anything' that was required of them. 'I don't care what I have to go through, I will do it' one patient explained. A few others, however, expressed reservations or even resentment. 'A man is always reluctant to come to a place like this' one patient explained. Another man asked: 'Why must we come [to the clinic]…why can't we have children like normal people?'

All participants were asked specifically about their attitude towards semen analysis. This topic was explored without supplying the participants with information about the procedure. Twenty of the informants said they would be willing to comply. A few men appeared even eager to be tested. 'I want to find out if my sperm is fertile or infertile. I want to know' one man emphasized. Four men did not know how a sperm test would be conducted like this man who asked: 'I don't have a problem but I want to know how or where will they get the sperm from? Through injection or from my wife?' Seven participants expressed reservations about producing a sperm sample by masturbation. Three of these considered the procedure embarrassing and four informants said that masturbation was 'not within their culture'. Their concern is reflected in this interview extract: 'I think that [masturbation] will be a little bit difficult. But if it is supposed to be done I'll do it. But why masturbation? Is there no other way?'

Experiences of infertility

Only three patients said that they did not feel particularly affected by their childlessness. Most of the others were outspoken about the emotions that involuntary childlessness induced in them, and feelings of sadness, pain and emptiness were described. Some men spoke about a deep longing inside and about feeling down, guilty, left out and heart broken. 'It is hurting, it makes me sad. I don't like it because it makes me feel inadequate' one informant said.

Eight men also expressed feelings of anger, frustration and helplessness. One man revealed possible consequences saying: 'It feels like I can do anything, maybe hurt somebody or things like that'. Some felt that not having children affected a man's identity. 'You feel like you are half a man' one patient said. And another one explained: 'You see, you are… a man because you have children. But if you don't have children some other guys say you are a woman'.

Effects on marital relationships

Many informants said they had a good and loving relationship. Two men had noticed that as time had gone by they learned to deal better with the issue of childlessness in their relationship, and one of them said: 'You learn to live with [it]. We love each other and even though there is this yearning for a child on my side I won't push her away or be angry with her'. Some men expressed feelings of sadness for their partner's suffering. 'I must be highly supportive of her' one of them emphasized, 'when she sees her sister's children I can see that she really thinks about the issue…then I …make a joke just to help her forget about it'.

Among the informants who had described their relationship as 'good', one man referred to an episode during which he had physically assaulted his wife and another man admitted to an extra-marital affair. Some of the other respondents felt that their childlessness was a source for arguments, but only four men made negative comments about their marriages which, they said, were taking 'strain' or getting 'stale'. None of the informants expressed concerns that infertility might threaten the relationship to the degree of causing separation and/or divorce.

When the impact of infertility was approached in general terms, away from the index relationship, several informants felt that childlessness could have very negative effects on a relationship, including divorce and domestic violence. A few men acknowledged that women were likely to suffer more under these negative experiences when compared with men. 'Maybe they [men] drop her [female partner], they leave her…or maybe some men they drink or they lie and begin hitting her' was the view of one patient. According to another participant, a woman's children from a previous relationship could also become the target of abuse under these circumstances. A third informant described the behaviour of some childless couples. 'They go to alcohol, they abuse drugs, there is sleeping around. A man gets tired of his wife and a wife gets tired of the man and they cannot take it. This happens a lot in [my] area and where I work. It is not nice to see how people throw themselves away if there are no children'.

Some of the informants felt that partners in an infertile relationship might be tempted to test their fertility with other men or women. 'Because you are blaming each other and one might want to go outside to test if it is really him or her' one patient explained. Another man felt that marriage created certain expectations and if these were not fulfilled it would be 'automatic' to look for another woman. These men emphasized that they were speaking in general terms about extra-marital relationships and not about themselves. Only one informant acknowledged to have successfully tested his fertility with another woman just a few weeks prior to coming to the clinic. However, as he was a married man and his girlfriend a young woman without parents and who was also carrying responsibility for a younger sibling, the pregnancy was terminated.

Experiences in the family setting

Men had different experiences with regards to infertility in the setting of their families. Six men said their families were supportive and a source of comfort and advice. One informant explained how his parents and siblings had encouraged them to get help. 'They know …the emptiness in her [partner's] life and if they [siblings] could they would even give one of their children to us…but…we want a child of our own' he explained. Another patient, who had a child from a previous relationship,

said: 'All the family knows she wants a child…and everyone has sympathy for her and the sympathy is bubbling out of her ears now'.

Just under half of all the informants, however, felt pressurized by their families. They were uncomfortable about the 'questions' that were asked and the jokes that were made. Four men acknowledged that others might be unaware of the impact of their comments. Another man described how others would tease him: 'Sometimes…we are together and everyone talks about their child, so they start. They take it as a joke but to me it is not a joke. I do not feel alright that I do not have a child'. In a few instances, the reactions of other family members to infertility seemed to be based on perceived violations of social norms. 'You know us African, as soon as you get married they expect you to have children whether you are ready or not' one informant said. The influence of a religious norm is apparent in the words of this patient: 'My in-laws…pressurize my wife. And then they tell her: it's because you had sex before marriage, that's why'.

Experiences in the community

The majority of men reported negative experiences within their communities because of their childlessness. Several informants explained how infertility would induce 'talk' in the community. 'The community will be talking behind your back and the wife will be scorned. The family turns to be ill-treating such women …because most of the time we grow up believing that women are responsible for this' one man reported. Men, too, according to this informant, had 'tough times' as 'no good words are going to be said about you…they degrade you'. Many participants spoke about the 'jokes' that others would make. Men were called names such as 'tjoekee' (failure) or 'incabi' (castrated cow) and comments would be made such as 'bad swimmers', 'shooting blanks' and 'water penis'.

Some informants laughed and said they would just ignore such talk. Several others experienced these 'jokes' as hurtful and insulting, but felt they had to accept them. 'Sometimes maybe you laugh with the joke', one participant said, 'but it's actually not good…because it breaks you. You are already going through …emotional things and…you exercise patience with your wife and here a guy comes along and just calls you a name'. Another informant described possible follow-on effects. 'When men are sitting together …some say jokingly: ''bring your wife to me, I can do it for you''. Those words are passed as a joke but when you are on your own, thinking about all that is being said, you feel insulted. [And] if your wife one day comes home late…those things can come back to you. You think that maybe she thinks I am worth nothing because I can't give her a child, maybe she has started seeing somebody else'. This suspicion of her infidelity could lead to domestic violence. 'Because the whole thing starts haunting you. You will be wanting somebody to take out your frustration. Unfortunately your wife will have to take that because you don't have another way of taking out your anger'.

Lastly some men described how childlessness affected their social status. These participants reported that men without children were not respected, not considered an adult and not treated as a 'man'. 'What I have seen is that they do not respect you. You [are] not a man if you cannot bring children into the world' was the experience of one patient. Another man said: 'You know, in our culture, if you cannot bear children you are not considered to be a person. They say you are a weak man. During community meetings when this person has to say his views, other men will say ''What are you talking about, you know nothing, you don't have children. Sit, only those men with children can talk'''. A few men talked about exclusion from the custom of letting children do certain tasks. 'Let us say that an elderly person wants to buy something in a shop, then he requests one child to go shopping for him' a participant explained. However, if a man had no children, other parents would not allow this man to send their child but would tell him to make his own. This was perceived to be both a hurtful and an insulting experience.

Men appeared to handle these negative experiences in different ways. Several expressed feelings of hurt, anger as well as shame and embarrassment. 'They put you on the spot' one participant explained about the 'questions' that would be asked, 'and you feel you just want to vanish'. And another one said: 'If you are a man and the [fertility] problem is on the man's side…you want to hide, you don't want to go out in the community'. Eight of the informants explained that they tried to ignore provocations or avoid social contacts like this man who said 'If I am going to take note …I will have to report myself to a nuthouse [mental institution]'. Pretending not to want to have a child was another strategy employed to avoid negative experiences. Some said it was up to each individual to deal with the experience. 'Some people will criticizse you, but if you are happy with your woman you don't worry when they criticize'. A few of the men who appeared unaffected by the negative input were concerned about their wives who did take the 'talk' seriously and suffered because of it.

Only three men thought that the community would not treat childless men differently and a further two felt that although jokes would be made, the community would not reject a person because of infertility.

Discussion

Africa is a pro-natalist continent where marriage is almost universal and occurs at an early age (Sonko, 1994). Children are highly valued for personal, socio-cultural and economic reasons (Savage, 1992; van Balen and Gerrits, 2001; van Zandvoort *et al*., 2001). Women generally have low status and derive their value from their reproductive abilities (Blenner, 1991; Savage, 1992; Sonko, 1994). In this context, infertility traditionally has been treated as a female problem (Mbizvo *et al*., 1984; Savage, 1992; Yeboah *et al*., 1992). This study offers new insight into the male perspective of involuntary childlessness. The results of our study should not be interpreted as contradictory to the general concept that women carry the main burden of infertility but be viewed as an addition to our existing understanding of the reproductive health needs of both men and women.

Lack of adequate knowledge was a central finding of our study. Men were poorly informed about basic reproductive biology, causes of infertility and modern treatment options.

When comparing the results from the current study with information gathered previously on infertile women from the same community, it was evident that men and women had similar knowledge and concepts (Dyer *et al*., 2002a). Similarly, respondents in both studies were anxious and eager to obtain information.

Studies from the industrialized world have documented the importance infertility patients attach to medical information (Schmidt *et al*., 2003). In Africa, where knowledge about sexuality, infertility and reproductive health is often inadequate (Sundby, 1997; Bambra, 1999; Walraven *et al*., 2001), this need for information is even greater. Information delivery must form a key aspect of infertility management in the developing world. This needs to be based on an understanding of the concepts which people hold regarding health and disease (Atkinson and Farias, 1995). Our study contributes to this understanding. The need for information is of such importance both to the individual patient and to the advancement of reproductive health in the community that information and counselling should be accessible even in the absence of other treatment options (Dyer *et al*., 2002a).

The overall lack of reproductive health knowledge among our participants was paralleled by the existence of traditional beliefs and health-seeking behaviour. Although not commonly quoted, concepts of witchcraft and ancestoral power clearly exist. Our results are in keeping with studies from Mozambique, Gambia and Cameroon which have focused on women and which have documented a prominent influence of traditional beliefs (Feldman-Savelsberg, 1994; Gerrits, 1997; Sundby, 1997). Yebei (2000) in a study on infertile Ghanaian women in The Netherlands demonstrated how these beliefs persist despite migration into a different society and exposure to modern health education.

Ill health interpreted in the context of traditional beliefs requires interventions by traditional healers. The role of traditional healers was highlighted in a survey undertaken in the North West Province, South Africa, where infertility was the most common reason for visits to traditional healers (Shai-Mahoko, 1996). Their ability to cure involuntary childlessness was considered to prevent domestic violence. These findings indicate that traditional beliefs are deeply rooted in African communities and are shared by both men and women. As traditional and biomedical concepts mingle, patients may concomitantly access both modern biomedical and traditional health care (Gerrits, 1997; Sundby, 1997). The need for greater collaboration between modern and traditional health workers based on trust and, where necessary, education has been documented previously (Shai-Mahoko, 1996; Sundby, 1997; Abrahams *et al*., 2002).

The awareness of male factor infertility and the overall high level of male involvement in the health-seeking process were important and perhaps unexpected findings of our study, challenging the view that infertility is a female problem (Fiander, 1990; Savage, 1992; Sonko, 1994; van Zandvoort *et al*., 2001). Apart from the recognized cultural and moral barriers to masturbation among African, Oriental and Mexican men (Blenner, 1991), our results also do not entirely support a few other studies from Africa which indicate that there are several barriers to the involvement of male partners in infertility management. These include, among others, refusal of male partners to acknowledge responsibility for infertility, failure to integrate men into the treatment process and withholding the diagnosis of male factor infertility from the female partner (Fiander, 1990; Savage, 1992; Sundby, 1997; Sundby *et al*., 1998). Our results are also not in keeping with reports from the developed world which indicate that women are the prime initiators of treatment (Greil *et al*., 1988; Wright *et al*., 1989; Becker and Nachtigall, 1994).

There are a number of possible explanations for these observed discrepancies. The differences in health-seeking behaviour between our study and other reports from Africa could possibly be attributed to better, albeit still limited, educational and health resources in our urban region when compared with rural areas or other African countries. These resources may facilitate a better understanding of reproductive health matters including male factor infertility, which in turn may have a positive influence on male involvement in the treatment process. Furthermore, our informants were recruited from a cohort of men who were willing to accompany their spouses to the clinic. It is likely that this selection influenced our findings regarding knowledge of male infertility and health-seeking behaviour. The difference in male health-seeking behaviour between our study and reports from industrialized countries is more difficult to explain as it cannot be attributed to disparities in education or health resources. It is possible that in a poorer, more traditional and patriarchal society such as ours, women have to seek 'permission' from their male partners prior to accessing medical care. Alternatively, our informants may have given 'socially correct' answers. Although the richness of the data and the reports from the fieldworkers would indicate that men spoke sincerely about their involvement and experiences, the tendency of infertile men to present themselves favourably and to have higher 'lie scores' than their female partners has been documented (Berg *et al*., 1991; Greil, 1997). Answers may have to be provided by ethnographic studies which document actual behaviour but which are far more difficult to conduct and usually require prolonged fieldwork.

In view of the importance attached to parenthood in Africa, it is not surprising that infertility is considered a major cause for divorce and marital instability (Leke *et al*., 1993; Sundby, 1997; van Balen and Gerrits, 2001). Consequently infertile women commonly fear abandonment, divorce and polygamy (Sundby, 1997; Dyer *et al*., 2002b). Our study suggests that men and women experience the impact of infertility on their relationships differently. Although many men felt pressurized by social expectations and 'jokes', none of the informants expressed concerns regarding the stability of their relationships. There are a number of possible explanations for this apparent difference. Women may experience unnecessary fears despite their partner's reassurances. Women may also have different perspectives either because of the experience of abuse, divorce and polygamy or because they anticipate that marital instability will carry more negative implications for them than for their male partners. Alternatively, men may not have disclosed their fears or behaviour in our study. It is

noteworthy that although none of the respondents felt that infertility was a threat to their own relationships, many men acknowledged that involuntary childlessness could, generally speaking, cause marital instability as well as domestic violence. This increased risk of domestic violence may be partly related to the threat that infertility poses to masculine identity, as recent studies in South Africa have linked fear of losing male identity ('emasculation') to the increased use of violence in general as well as against intimate partners (Morrell, 2001).

Further social consequences of infertility commonly suffered by women in Africa (and in other developing countries) include loss of social status, stigmatization and ostracism (Gerrits, 1997; Yebei, 2000; Dyer *et al*., 2002b). There appears to be a widely held belief that their male partners are not affected by negative social consequences (or far less so), but their actual experiences are poorly documented. Few studies have included male respondents, and these suggest that men may be exposed to stigmatization and loss of social status. According to a male respondent in a study on infertility among migrant Ghanaian women, male infertility was such a disgrace that the transfer of sexual rights would be considered in order to 'hide' childlessness (Yebei, 2000). Papreen *et al*. (2000) conducted in-depth interviews with both men and women from urban slum populations in Bangladesh. According to the respondents, infertile men suffered loss of social status as they were prevented from becoming leaders or from stating their opinions in community meetings. Other indications of stigmatization included exclusion from festive ceremonies (such as weddings) and addressing men as 'infertile' rather than by name. Our own results are surprisingly similar to these findings. We therefore agree with van Zandvoort *et al*. (2001) that the negative implications of male infertility in the developing world may currently be underestimated and require further research.

Contrary to the relative lack of data regarding the male perspective of infertility from the developing world, there is a large and growing body of literature on gender similarities and differences from the industrialized world. Many studies which are quantitative in nature have documented that women suffering from couple infertility score higher levels of psychological distress than their male partners (Wright *et al*., 1989; Greil, 1997). More recently, the need not only to interpret infertility as medically diagnosed physical impairment but to understand involuntary childlessness as a socially constructed reality has been recognized (Berg *et al*., 1991; Greil, 1997; Sandelowski, 1999). According to the social model of infertility, gender and the associated role expectations profoundly shape the experience of involuntary childlessness (Greil *et al*., 1988; Berg *et al*., 1991; Whiteford and Gonzalez, 1995; Sandelowski, 1999). Although gender role pressures may be gradually changing in the developed world, procreation resulting in pregnancy and parenthood appears to remain central to female identity (Berg *et al*., 1991; Nachtigall *et al*., 1992; Becker and Nachtigall, 1994). In contrast, male fertility has been viewed as a reflection of virility, with parenthood being secondary to a man's primary role of a worker and provider. Whilst women therefore commonly suffer from their inability to fall pregnant regardless of the underlying cause of infertility, men, particularly in the absence of a male factor, may escape stigmatization, role failure and perceptions of loss (Greil *et al*., 1988; Berg *et al*., 1991). On the other hand, impairment of male fertility has been described as a profoundly threatening, disabling, stigmatizing and emasculating experience by those affected (Becker and Nachtigall, 1991; Nachtigall *et al*., 1992). These studies highlight the need for health care workers to understand how men and women experience distress in order to offer support, promote communication between partners and find effective interventions

The findings of this study have to be interpreted in the context in which the study was conducted. As in many related studies, our informants were drawn from the convenient sample of patients presenting for infertility treatment. More specifically, we recruited men who were prepared to accompany their wives from a single clinic population in South Africa. It is probable that these men differ in their knowledge, attitudes and behaviour from those not willing to attend, and it is possible that differences exist between infertile men seeking care in different parts of South Africa. Therefore, our findings cannot be extrapolated to all men suffering from couple infertility in South Africa.

The comparison of findings between this study and those from our previous studies on infertile women requires caution. Although both patient groups were recruited from the same community, none of the informants were married to each other and the interviews were conducted during different time periods. Further studies are required to evaluate the impact of gender on the experience of infertility in the developing world.

In summary, the results of this study improve our understanding of the reproductive health needs of men suffering from couple infertility in Africa. This understanding is essential for the effective integration of male partners into modern infertility management. Such integration, which appears currently to be lacking, would serve several important purposes: (i) it would offer support and treatment to a group of patients who have largely been prevented from accessing health care; (ii) it is reasonable to expect that male participation would improve treatment outcome in terms of both adaptation to diagnosis and pregnancy rates; and (iii) it would help to lighten the burden carried by their female partners.

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