

The social meaning of infertility in Southwest Nigeria*

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Abstract

There has been very little documentation of the social meaning given to infertility in many developing countries, including Nigeria, where the prevalence of infertility is known to be high. We have conducted a number of qualitative studies aimed at exploring socio-cultural issues associated with infertility in Ile-Ife, Southwestern Nigeria. Twenty-five focus-group discussions were held with knowledgeable persons in the rural and urban parts of the community to ascertain their attitudes towards infertility. The results show that community members accord great significance to child-bearing, but, they have incorrect knowledge of the causes and appropriate treatment of infertility. Focus-group participants mentioned several traditional beliefs regarding the causes of infertility from which they derived a variety of traditional and religious methods for its treatment; many affected couples use these methods of treatment, sometimes singly but most often in combination. Orthodox treatments are less often used because of perceptions of the causes of infertility and lack of confidentiality at the treatment centres. Women are more likely to suffer the social consequences of infertility; they suffer physical and mental abuse, neglect, abandonment, economic deprivation and social ostracism as a result of their infertile status. These findings have profound implications for reproductive health and reproductive rights of women in the area. Measures recommended to ameliorate the adverse consequences of infertility in the community include provision of broad reproductive health education and appropriate services; integration of infertility treatment and prevention into primary health care and the traditional system of health care delivery; and programs aimed at the empowerment of women in the area.

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The field of human reproduction has recently become a dynamic area of research for social scientists and medical anthropologists throughout the world. However, social science research in developing countries has tended to give prominence to issues relating to fertility, family planning and childbirth. By contrast, very little attention has been directed to the problems of reproductive failure as epitomized by such conditions as infertility, ectopic pregnancy, miscarriage and stillbirths. This lacuna is worrying given the high tendency for these reproductive tract morbidities to be particularly frequent in many sub-Saharan African developing countries. The absence of data on the social determinants, correlates and implications of reproductive failures is a hindrance to government and non-governmental organizations in Africa in their efforts to improve the reproductive health of women.

Of the reproductive tract morbidities, infertility, the inability of couples to achieve a pregnancy after two years of unprotected intercourse, illustrates this programmatic dilemma most vividly. Although several studies indicate that Africa has extremely high rates of infertility (Adadevoh 1974; Belsey 1976; Caldwell and Caldwell 1983; Cates, Farley and Rowe 1985), and that infertility produces profound social consequences for African women (Inhorn 1994a,b), no systematic study has yet been undertaken in many African communities to discern the basis of the social effects or the cultural practices that surround infertility. This is in contrast to the substantial information available on the socio-cultural determinants of fertility in many African communities. The absence of comparable data on infertility has limited the 'comprehensiveness' of reproductive health and hampered efforts to provide balanced interventions for the promotion of reproductive well-being in sub-Saharan Africa.

Available evidence suggests that the social consequences of infertility are particularly profound for African women as compared to men (Inhorn 1994a,b). Regardless of the medical cause of infertility, women receive the major blame for the reproductive setback and they suffer personal grief and frustration, social stigma, ostracism and serious economic deprivations. In Cameroon, Feldman-Savelsberg (1994) reports that infertility is a ground for divorce among the Bangangte tribe causing a woman to lose her access to land distributed by her husband. Where she is able to avoid divorce, an infertile woman receives fewer gifts from her husband and is abandoned in old age with no child to till the land for her. In Egypt, women go through a complicated ritual known as *kabsa* (a form of fertility-producing, polluting boundary violation) in efforts to overcome infertility (Inhorn 1994c). Among the Ekiti of southwestern Nigeria, Ademola (1982) reports that infertile women are treated as outcasts and their bodies are buried on the outskirts of the town with those of demented persons.

Within the few studies of infertility, documentation has been least on the social interpretation of infertility, treatment-seeking behaviour of affected couples, socio-cultural factors that modulate treatment seeking and the coping mechanisms for infertility that operate in many communities. Such data are needed to complete the social science literature on this reproductive problem and to provide an explanatory paradigm for the observed attitudes towards infertility at the local level.

Many African communities that have high levels of infertility are also known to have high rates of fertility. In these communities, there is mounting evidence that high fertility rates are driven in part by the persistently high rates of infertility. Cates et al. (1985) believe that high rates of infertility in many African communities perpetuate a general reluctance among all women to initiate contraception for fear of jeopardizing subsequent fertility. As an example in Nigeria, where infertility rates may be as high as 30 per cent (Nylander and Ladipo 1979; Adetoro and Ebomoyi 1991; Snow et al. 1995), the contraceptive prevalence rate is only six per cent and women generally link contraceptive use to subsequent infertility (Mitchell 1994; Olukoya and Elias 1994; Messersmith 1994). Thus, it is conceivable that the elucidation of societal beliefs regarding infertility can lead to the discovery of many fertility-

related beliefs and ideas on how fertility is promoted intentionally and unintentionally in many communities. Such ideas could be used to develop culturally appropriate programs to reduce the levels of both infertility and fertility in the communities.

This article is a report of a qualitative study into infertility carried out at Ife Central Local Government Area of Osun State, Southwestern Nigeria; it includes the results of 25 focus-group discussions held with key informants and community leaders in the Area. The focus-group discussions had three purposes: to explore local attitudes and beliefs regarding infertility; to assess the accuracy and depth of people's knowledge about the causes and appropriate treatment of infertility; and to understand the consequences of infertility and identify any gender differences in the social implications of infertility in the community. We have presented the results of the study to enable analysts and policy makers to understand the complex relationships between culture and reproductive health, and how cultural beliefs can intensify the impact of reproductive morbidity in some parts of sub-Saharan Africa. Additionally, we believe the analysis has profound implications for policy formulation to improve the reproductive health and reproductive rights of women in Nigeria.

The infertility situation in Nigeria

Nigeria, with a population of close to 100 million people, has a high population growth rate and also a high rate of fertility, six births per woman in 1990. Available evidence also suggests that the country has high rates of primary and secondary infertility. Community based data suggest that up to 30 per cent of couples in some parts of Nigeria may have proven difficulties in achieving a desired conception after two years of marriage without the use of contraceptives (Adetoro and Ebomoyi 1991). The results of the Demographic and Health Survey of Nigeria (1990) indicate that approximately four per cent of women aged 30 years and above have never borne a child. Nigerian gynaecologists frequently report that infertility cases constitute between 60 and 70 per cent of their consultations in tertiary health institutions (Megafu 1988; Otubu and Olarewaju 1989). In addition, our recent population-based survey of women of reproductive age in Ile-Ife, Nigeria, revealed that up to 20 per cent of women have secondary infertility, mainly associated with previous exposure to reproductive tract infections (Snow et al. 1995). Additional studies have shown that postpartum infections (Adekunle and Ladipo 1992), septic abortions (Okonofua, Abejide and Makanjuola 1992; Okonofua 1994) and sexually transmitted diseases (Okonofua, Ako-Nai and Dighitoghi 1995) account for a significant proportion of cases of secondary infertility in Nigeria. Regarding gender differences in the aetiology of infertility, several studies in the literature indicate that disorders in males and females account for an equal proportion of infertility, with the male factor being associated with a greater percentage of cases of primary infertility (Kuku and Osegbe 1979). In a follow-up community-based study of 17 males whose female partners had been reported as being infertile, eight males (47%) had severe semen abnormalities that could have been responsible for the infertility reported in the women (Okonofua and Snow 1995).

By contrast to the high prevalence of male and female causes of infertility in Southwest Nigeria, there are currently limited treatment options available for infertile couples. The conventional treatment of infertility in tertiary institutions in Nigeria often does not have a success rate better than ten per cent (Okonofua 1996) and there are currently no facilities for the specialized treatment of the more difficult cases of infertility in this region. In addition, many infertile couples are wary of choosing adoption as a way of resolving infertility because of cultural factors and the non-specific provisions for adoption in the Nigerian legal system. Although the incidence of child fosterage in southwest Nigeria is generally thought to be higher than the 8.6 per cent reported by the Nigerian DHS, it is not a satisfactory method of resolving infertility. Many couples foster children to provide social security for such children rather than to resolve the social and psychological problems associated with infertility.

More specifically, whereas there are now programs that seek to reduce the high rate of fertility in Nigeria, there are at present none that address the high rate of infertility. Although the Nigerian population policy had the prevention and treatment of infertility as one of its stated objectives, many family planning clinics do not provide counselling for couples who are involuntarily infertile. In addition, there are no known intervention programs specifically addressing infertility, neither are there health educational messages that include infertility as a major issue.

There is demographic evidence that targeting programs to specifically address infertility in communities with high rates of infertility do not necessarily increase fertility levels. According to Frank (1983), such communities eventually reach lower levels of fertility as a result of better acceptance of programs designed to reduce fertility levels. In the specific case of Nigeria, several ethnographic studies have suggested that the fear of infertility is the major deterrent to the widespread acceptance of contraception by men and women (Olukoya and Elias 1994). In addition, most women's health advocates in Nigeria regard infertility as the most important reproductive health and social issue confronting Nigerian women (Onah 1992); and Nigerian women frequently mention infertility as their major health concern in focus-group discussions (Olukoya and Elias 1994). Clearly, there is a need to further understand the social dimensions of infertility in order to formulate a comprehensive reproductive health agenda for Nigeria.

Data source and methodology

The study was carried out in the rural and urban parts of Ife Local Government Area (Ife LGA), in Osun State, Southwest Nigeria. Ife LGA has Ile-Ife as its main urban centre and approximately 106 surrounding villages and hamlets make up the rural section of the LGA. The entire Area had an estimated population in 1994 of 196,538, with nearly 80 per cent of the people residing in the urban part. Women of reproductive age make up approximately 20 per cent of the population. The crude birth rate is 50 per 1000; total fertility rate is six; and the annual growth rate is three per cent. The majority of residents in the area are Yoruba by ethnicity, a large proportion of them being farmers, petty craftsmen and traders.

The data for this report were obtained from focus-group discussions carried out as a follow-up to a comprehensive community-based study of infertility in Ife LGA. In the larger study, nearly 1200 married women aged 15-45 years in the rural and urban parts of the LGA were randomly selected for interview. The sampled women were interviewed in their households with a pretested questionnaire and allocated into various fertility categories using a standard WHO protocol. The purpose of the study was to determine the prevalence and risk factors for infertility in the group of women. The study showed that nearly 20 per cent of the women were involuntarily infertile and that the significant risk factors for infertility were increasing age of women, previous induced abortions and previous reported pregnancy complications. To understand the social context of infertility in the area and to provide substantive explanation for the results derived from the quantitative study, we decided to undertake more in-depth qualitative studies in the community.

Subsequently, focus-group discussions were undertaken among key informants in the rural and urban sections of the community to provide contextual information on the social meaning of infertility in the LGA. Reported here are the results of the focus-group discussions. Twenty five focus-group discussions were conducted: 12 with women and 13 with men. A total of 105 women aged 29-63 years, and 118 men aged 30-65 years participated in the discussions. The focus groups were organized by occupation and place of residence of the participants, and in this manner persons from a wide range of different socio-economic and educational strata were included. The discussions ranged in size from four to 12 participants, with the average size of a group being nine persons. Table 1 provides a

breakdown of the characteristics of the participants for each of the focus-group discussions. The focus-group participants were mostly drawn from wards in the LGA that were not sampled for the community field survey in order to reduce the chances of eliciting pre-informed and biased responses.

Table 1
Characteristics of focus groups

Description	Number of participants	Age range	Sex	Location
School teachers	8	30 - 39	F	urban
Farmers	10	40 - 59	F	rural
Farmers	9	38 - 58	M	rural
Farmers	12	30 - 55	M	urban
Farmers	10	34 - 50	F	urban
Church TBAs ^a	8	45 - 60	F	urban
Church members	10	34 - 50	F	urban
Church members	9	43 - 60	M	urban
Church members	10	40 - 63	F	rural
Church members	7	33 - 44	M	rural
School teachers	10	31 - 43	M	urban
Nurses	7	32 - 40	F	urban
Professionals	8	33 - 44	M	urban
Professionals	10	34 - 42	F	urban
Doctors	7	33 - 38	M	urban
Traders	10	29 - 45	F	urban
Traders	10	31 - 45	M	urban
Traders	8	29 - 43	F	rural
Traders	11	32 - 44	M	rural
Civil servants	8	33 - 42	M	urban
Faith healers	10	42 - 60	M	urban
Traditional chiefs	4	40 - 60	F	urban
Traditional chiefs	8	55 - 60	M	urban
Traditional chiefs	9	58 - 65	M	rural
COWAD ^b	10	30 - 60	F	urban

^aChurch-based traditional birth attendants; ^b a grassroots women’s organization in Ile-Ife.

The principal aim of the focus groups was to develop a comprehensive understanding of infertility among community members within the LGA. The operational definition of infertility adopted during the discussions was the inability of a married person to achieve a pregnancy despite a desire to do so. We embraced this wide-ranging definition of infertility in order to give the opportunity for discussants to provide unbiased insights into the community's understanding of infertility. In particular, we wanted to elucidate community perceptions regarding the causes, treatment and social consequences of infertility and the ways in which the society interprets and responds to cases of absolute or relative infertility. Focus-group discussions therefore centred on explanations of the mechanisms by which people acquire, prevent, or deal with infertility, with an emphasis on establishing the common ethno-vocabulary for infertility and the differences that exist between men and women regarding the social consequences of infertility. Specific attention was given to understanding the association of these perceptions with traditional beliefs concerning illness and treatment

seeking, as well as their perceptions of the efficacy of the orthodox health care system for infertility management.

Focus groups were conducted either in Yoruba or English depending on the educational level and place of residence of the participants. Discussions were led by experienced discussants who were fluent in both Yoruba and English. The focus-group leaders had previously received training in focus-group methodology conducted by social scientists based at the Obafemi Awolowo University in Nigeria. The discussions were audio-taped; extensive notes were taken during the discussions and these were used during subsequent review and transcription of the tapes. The focus-group data were analysed with a focus on the dimensions of infertility in the community and its social consequences. The results of the focus-group discussions were used to provide explanations for some of the survey data as well as to develop a set of strategies for combating the social consequences of infertility in the community. We also used the focus-group data to formulate questions for in-depth interviews with infertile men and women identified during the field survey.

Results

General knowledge about infertility

In general, most people were quite forthcoming with their opinions about societal beliefs and had anecdotes of relatives who experienced infertility. The men gave more lengthy responses and detailed information than the women, and their views about the causes and Western treatments of infertility were more likely to be correct than those of the women, with the exception of the group of female nurses. While there was a correlation between general level of education and the accuracy of responses, in that more educated discussants gave more biologically correct explanations of causes, and subscribed to the 'Western' aetiologies for infertility, most people still held strong beliefs in supernatural causes of infertility.

There was little diversity in the participants' definition of infertility: most defined it simply as a woman's inability to bear children. Focus-group participants generally recognized the concepts of primary and secondary infertility. It was widely mentioned that the Yoruba word *agan* defines a person who has never been pregnant despite having been married for some time, which in the medical literature refers to primary infertility. By contrast, *idaduro* is used to describe a person who has difficulty in achieving another pregnancy after having had one or more babies, a situation of secondary infertility. *Agan* is generally regarded as being more serious than *idaduro*, however *idaduro* could be particularly serious if there is no male child among the surviving children.

When discussants were asked the length of time that passes before a couple is considered to be infertile, the answers ranged from one month to five years, with the most frequent answer being about one year. Many of the discussions revealed the common Yoruba custom that expects a woman to be pregnant before marriage. It is considered a good sign if a woman is showing a pregnancy on her wedding day. The family, especially that of the husband, is intimately involved in such matters, and family members and friends notice whether the woman is pregnant or not, and may consider it a problem if the woman is not pregnant before marriage.

The reasons people gave for wanting children fell into five major categories: to maintain the lineage or family name and to ensure inheritance; for assistance at home and work, and for security in old age; to obey the command of God to 'go forth and multiply'; for joy and companionship; and to gain respect and status in the community. This last reason was true both for men and women, but was particularly true for women. It was clear from the discussions that a woman's status both in the family (with respect to the husband's family

and/or other wives) and in the community is dependent upon the number of children she produces.

Causes of infertility

To questions about the causes of infertility, there were two, perhaps related responses, that came up in almost every discussion. Abortion, and promiscuity or 'waywardness' during youth, were consistently put forward as causes of infertility. It is widely believed that abortions and 'D and Cs' can cause infertility, when performed by 'quack' practitioners. In addition, abortions are often associated with promiscuity, and 'waywardness' itself is believed to be responsible for infertility rather than the abortions *per se*. Although discussants mentioned that infections (notably sexually transmitted infections) can cause infertility, many people feel that the immorality of 'waywardness' is responsible, rather than the infections. When asked further, people often responded that infertile people had simply 'used themselves up' or damaged their organs through early sexual activity and promiscuity.

We discovered a common belief, regardless of the level of socio-economic status and education, that contraceptives themselves cause infertility. Many people believe that the use of exogenous hormones will eventually disrupt the body's natural functions, and lead to infertility. It is unclear where these views developed. However, this may be associated with the belief that one has been 'allotted' a certain number of children, and one can 'use them up' through abortions and contraceptive use, and find oneself infertile when one decides to have children. The belief in supernatural causes of infertility is widespread, bordering on uniformity. The belief that some women are witches, and that curses can be placed on either or both of the couple extends from the illiterate up to the most educated and elite members of society. Even some obstetricians and gynaecologists who treat infertility patients with modern methods believe that witchcraft exists and can cause infertility. Also, it is believed that a woman can be infertile as a result of a vow she took in an earlier life not to bear children. The general belief in reincarnation among this largely Christian population helps to accentuate this as a cause of infertility among community members. There is also the belief in the phenomenon of *Ogbanje* whereby a woman repeatedly gives birth to a child who is not destined to live beyond the first birthday. This belief may have its roots in the high rate of infant mortality in the locality. Yet many of the discussants mentioned many causes of infertility such as blood incompatibility, which can be regarded as biologically plausible. This may represent a misinterpretation of immunological incompatibility or sickle-cell disease, but is believed to mean that for some reason the 'match' between the couple is not right, which could then result in infertility or recurrent death of the infants. In this situation, they are free to find other partners to marry and have children with.

It was of interest that the male partner was not spontaneously mentioned by the focus-group participants as a cause of infertility. However, when prompted by the moderator, participants agreed that male disorders could be responsible for infertility. Many people, especially the male participants, seemed to think that ability to have an erection and sexual intercourse meant that the male would be fertile. The causes of male infertility mentioned by the discussants fell under three subheadings: natural; supernatural; diseases and miscellaneous (see Tables 2 and 3). A common disorder repeatedly mentioned as a cause of male infertility by the different focus groups regardless of sex or social class was 'watery sperm.' Despite the fact that many people felt society deemed men incapable of being infertile, 'watery sperm' was almost invariably given as a cause of infertility. It is possible that this is a misinterpretation of gonorrhoea in the male, though it is more likely to be based on the belief that the sperm (semen) must be 'strong' to be able to produce a child.

Table 2
Causes of infertility mentioned by the focus groups

Promiscuity and abortions in women

Abortion
Promiscuity (premarital sex)
Contraceptives

Supernatural Causes

Jedijedi/witchcraft
Curses by evil persons
Slap with a ring
Rituals performed with an egg

Natural Causes

Destiny
Vow never to have children (*Emere*)
People having children in another world (*Ogbanje*)
Incompatibility

Diseases in women

Eda
Gonorrhoea
Syphilis
Inarun
Ticks
Tuberculosis
Worms
Hotness of womb/hotness of blood
Smoking
Frigidity
Female genital mutilation
Black menses
Obesity
Anxiety

Table 3
Causes of infertility in males mentioned by the focus groups

Natural Causes

Watery sperm
Weak sperm
Impotence
Size of penis
Weak organs

Supernatural Causes

Improper handling of child at birth

Piles (*Jedijedi*)

Using sperm for ritual to get rich

Eating sweet foods

Diseases in Men

Alcohol/drugs

Gonorrhoea

Syphilis

Urethritis

Others

Male promiscuity

Sex with older women

Circumcision

Treatment of infertility

A general consensus reached by the focus-group participants was that the treatment of infertility in the community is usually directed specifically at women and that most people use three treatment outlets: churches (spiritualists), traditional healers and hospitals (orthodox medical treatment). However, there was no agreement between and within the groups on which of the three methods people prefer. Nevertheless, there was a strong sense that people often use the three treatment methods in combination and possibly in sequence; the first method chosen is often determined by the perception of the couple regarding the causes of the infertility. As most people are deeply convinced of the supernatural causes of infertility, it is not surprising that infertile people often patronize traditional healers and religious leaders very early. Orthodox medical practitioners are often consulted later when religious and traditional methods have failed to provide a solution to the infertility.

Another important consideration in the choice of a practitioner is the issue of privacy. As infertility is considered to be a very sensitive issue in the community, people often seek out practitioners who will be able to keep their infertile status a secret. Focus-group participants had varied views about which practitioners, orthodox, traditional or spiritual, would maintain the most confidentiality. Although it was generally agreed that traditional healers are capable of assuring the most confidentiality, nevertheless, the view was expressed that women are often exploited as a consequence, either financially or sexually, by traditional practitioners. This did not diminish the power of the treatment provided by the traditional healers, however, but was considered the 'price you pay' in order to get a child. As a result of this rationalization, people continue to seek the services of traditional healers.

When groups were asked about the traditional treatments available to treat infertility, there was a wide variety of responses. Most common was the use of preparations of either boiled or fresh herbs, sometimes boiled together with roots and animal meat such as rat or goat, and either drunk by the woman, inserted into the vagina, or used to wash the body and/or genitals. Commonly, respondents mentioned the use of black soap used to wash the genitals and breasts. These rituals were usually carried out with incantations, but respondents could rarely describe the incantations, saying that the herbalist keeps this information very secret. A number of different traditional methods of treatment and herbs mentioned in the focus groups are listed in Table 4.

Table 4

Traditional methods of treatment of infertility identified by the focus groups

Concoctions

Use of black soap

Use of spiritual powers/incantations
 Herbs and roots (*Egboigi*)
 Worshipping in Osun river
 Use of red pepper
 Making incision on the forehead
 Use of an egg
 Making sacrifices at crossroads
 Use of banana
 Use of a leaf (*Oloburo*)
 Use of red pepper (*Ataare*)
Kaun and *Eruwo* roots
 Alcohol/Schnapps
 Use of Shea butter
 Intercourse with herbalist
 Eating the faeces of dogs and cats
 Carrying goat on the back
 Drinking longstanding urine
 Receiving children from *iroko* tree (*Oroigi*)
 Drinking the breastmilk of lactating women
Agunje
Ibore

The herbalist may also prescribe certain rituals or actions, such as the woman bathing at night at a place where roads meet, or making sacrifices of food to evil spirits that may be causing her problem, and leaving the items at a crossroads. She and her husband may also be asked to have intercourse at such a place, or she may be asked to perform rituals at the marketplace at night.

We heard from several different groups about a ritual performed using an egg. However, the stories varied, either indicating multiple rituals, or incorrect information. The egg was used variously by people who wanted to curse a woman, who might leave an egg behind her door to prevent her from getting pregnant; or the herbalist would tie an egg above his house which would prevent the woman from having spontaneous abortion; or an egg which has had incantations said over it is eaten by the woman, which could produce a pregnancy.

Many participants acknowledged the importance of going to the hospital for tests and firmly believed that the doctors can often determine the exact cause of the infertility, and prescribe drugs to treat it. However, the medical approach is often not used immediately since biomedical factors are not recognized as prominent causes of infertility. Many people believe that Western medical treatment can only help if there is a Western medical cause of infertility. If people believe that the infertility was caused by a curse or spell, or by God, they will seek an appropriate solution, which may not include the medical practitioner. They may also seek help from traditional doctors first, and come to the medical doctor later, either for additional help or to treat a problem caused by the herbal treatments; and the social stigma attached to infertility problems means that people are wary of revealing their problems, and the hospital environment may be too open to accommodate such secrecy.

Participants in the focus groups explained Western medical treatments as consisting of 'tests and examinations' to determine the cause, and then 'drugs, hormones and surgery' to correct the problems. In general, the more educated participants tended to give more exact names of tests and they were also more likely to identify the exact places where tests could be done. The tests often mentioned were blood tests, X-rays of the womb, ultrasound and sperm

tests, but most people, especially in rural areas, just responded with the general term 'tests' and were unable to define the types of tests.

Where there is an infertility problem, it is quite common for the man and woman to seek to have a child with someone else. This 'treatment' is used by both men and women, but by very different means based on gender. At the first sign of infertility, the man is encouraged by his family either to seek another wife, or to impregnate another woman outside marriage, in order to have a child, and to prove his fertility. A woman, on the other hand, may seek to get pregnant by another man if her husband is infertile, but often will say that the child is that of her husband. It appears that the man is often aware of this fact but will accept the child without a problem. The community also accepts the child as his, thus making it clear that having children *per se* is more important than biological paternity.

Social consequences of infertility

There was complete agreement that infertility is not often discussed, and must be discussed carefully and privately. This was largely to avoid embarrassing those who were infertile. People expressed a strong sense that an infertile person would be extremely sensitive to any discussion about children or pregnancy, and would assume that even comments in casual conversations were meant to make fun of them. This is in the context of the belief that a person without children has failed in a fundamental way. It was also very clear from the discussions that women are most often blamed for the infertility problem. There are many who believe that a man cannot be infertile, as fertility and potency are often thought to be synonymous.

A common consequence of a couple's infertility is the expulsion of the woman from the husband's house, with or without divorce. People most commonly responded by saying the husband would 'send her packing'. Thus, having children is clearly more important than loyalty to one's spouse, which is evidenced by the common practice of divorce because of childlessness, or forceful ejection of the wife from the husband's home, either by the husband himself or by his family. The woman becomes an outcast, and is often excluded from inheriting property, from decision-making in the family, and from any type of financial or social security. It is common for people to avoid those women known to be infertile, and women often tell their children to avoid these women, either because they think the women might harm their children because of their bitterness, or because they might not know how to look after other children properly.

A significant number of the groups reported strong beliefs that some women were witches, had given birth to children in another world, and taken a secret vow never to bear children on Earth. This belief justifies the attempt to ostracize these women, and to expel them from their households. Discussants reported that often, any subsequent misfortune of the woman or family which would ordinarily be taken in isolation may instead be attributed to her infertility and/or witchcraft.

A woman's ability to make decisions within the family, and her ability to inherit her husband's property, are almost exclusively dependent upon fertility. In each case, discussants in the focus groups explained that an infertile woman might be allowed such privileges if she behaved well, and was well liked by the husband's family. Inheritance, however, could only be achieved if the husband had specifically designated some property for her in a written will. In cases where the infertile woman was not well liked, she would be evicted from the husband's compound upon his death. If a woman is divorced because of infertility, it appears that the woman can remarry, but if she stays in the area, she may have difficulty finding a man who wants to marry her, unless he is older and needs a caretaker, or is polygamous and already has children. The husband's family may try to jeopardize her chances by warning other men away from her. In these cases it is believed to be best if she moves far away. In

selected cases, the belief that infertility can be caused by 'blood incompatibility' between the couple makes it possible for some women to remarry; however, there was a consensus that once a woman reaches menopause, or if she is older, her chances of remarrying are slim.

As mentioned earlier, it was often reported that the woman might be exploited by the herbalist either during or as a requisite for treatment. One of the physicians reported the case of a woman whose husband was known to be azoospermic; she went to the herbalist, and said that the herbalist made a mixture of herbs, and used his penis to push the herbs into her vagina; she became pregnant. Respondents said the woman might be so desperate for assistance with her infertility problem, and under such pressure from her family, that she might submit to such abuse.

It is clear that the social consequences for an infertile woman do not follow strict rules, or guidelines; the fate of such a woman is dependent upon the 'objective' circumstances of her infertility and position in the household, family and community, and also upon a subjective assessment of 'how good she is'; it depends upon her past record of actions, and treatment of other family members, especially in-laws and children of other wives and relatives.

Prevention of infertility

When asked about how infertility might be prevented, most people suggested that education of the younger generation was very important. The type of education fell into three general categories: sex education; moral education (to prevent promiscuity); and education about cause and effect, and the consequences of one's activity in youth for one's future. People commonly suggested that drugs used for abortion should be banned, although no medical abortifacients are technically available in the community. In several cases, the participants suggested that the use of dangerous drugs should be stopped, and it was suggested in some cases that the doctors themselves were selling these drugs. Many of the participants expressed the wish that all abortions should be eliminated.

When the issue of prevention turned to the use of contraceptives, respondents seemed split on the value of contraceptives: while often people believed that contraceptives could prevent pregnancy, and thus prevent illegal abortion and the infertility that might follow, others felt that contraceptives themselves caused infertility, and that their use should be stopped. Some of these same people felt that women should be encouraged to bear the children if they became pregnant.

Discussion

From this study, it is evident that the major determinant of the attitude towards infertility in Ile-Ife is the cultural significance that community members attach to procreation and to child rearing. Several published studies have repeatedly highlighted this aspect of Yoruba culture that puts a premium on couples having many children (Orubuloye 1981). Much of Yoruba oral literature and mythology stresses this view and there are reports of invocations offered by traditional communities to the 'goddess of fertility' to assist couples who are unable to have children (Makanjuola 1994). As a result of the cultural belief in procreation, couples who cannot have children are regarded as having failed in a fundamental way. The other positive values in marriage such as companionship, love and friendship are not thought to be important. In such a community therefore, the concept of reproductive choice must be all-embracing and must encompass a commitment by policy makers that couples are free to aspire to have the number of children they wish to have.

The results of this study permit us to draw several salient conclusions regarding the cultural comprehension of infertility as a reproductive health problem among a major ethnic group in Nigeria. First, infertility has been given a superstitious label by community members

and therefore the treatment they seek is often inappropriate. This has wide-ranging public health implications. Although many people believe in traditional and religious methods of treatment, the efficacy of these modes of treatment have not been adequately tested. In particular, the beliefs in supernatural causes of infertility, by delaying the use of orthodox methods of treatment may be associated with a worsening of the infertility and engender greater difficulty in treating the infertility at a future date. Elujoba (1995) has provided a compendium of the local herbs and medications used by traditional birth attendants for the treatment of female infertility in southwestern Nigeria but he failed to report on the efficacy of the various methods. On the other hand, there are reports that some local herbs when inserted vaginally to treat secondary amenorrhoea and infertility can produce severe burning and irritation of the vagina walls resulting in secondary gynaetresia (Adekunle and Ladipo 1992). Although data are presently not available, it is possible that such widespread irritation of the vagina can lead to greater likelihood that women will acquire the Human Immunodeficiency Virus infection.

A second major observation from the results of this study is that apart from the fact that some of the perceived causes of infertility in the community are biologically inexplicable, some of the purported causes undermine efforts at providing comprehensive reproductive health services for Nigerian women. Contraception is currently regarded as a major strategy in efforts to eliminate deaths from unsafe abortion and maternity mortality (Okonofua and Ilumoka 1992; Okonofua et al. 1992) and promote the reproductive well-being of women in this country. Yet, the results of this study indicate that both men and women in the Ile-Ife community fervently believe that contraception can damage the uterus and lead to reproductive failure. Some participants went so far as to suggest that the use of contraceptives should be banned. Such an attitude towards contraception may form the basis for the current difficulty being experienced in achieving further increase in contraceptive prevalence in Nigeria. Although specific informational messages may be able to correct the misconception, there is clear evidence that policy makers need to reformulate their strategies on family planning and contraception to include broader reproductive health issues. Family planning providers must also be concerned about sexually transmitted diseases, induced abortion and infertility and they should be able to find ways to incorporate such concerns into their programs. In particular, the quality-of-care framework must be vigorously pursued as a major policy in family planning provision in developing countries and adequate education and counselling must be continuously provided to both users and non-users.

A third major conclusion from the study is that infertility is stigmatizing for affected couples in most of southwestern Nigeria. Again, owing to misconceptions about the causes of infertility, women appear to bear the greater stigma in comparison to men. In addition, by depriving them of their decision making powers and their rights to inheritance, infertility is a source of disempowerment for affected women. Thus, it is clear that infertility in a woman increases the possibility that her human rights will be violated even when the aetiology of the problem is not directly attributable to her. Clearly, women's health advocates and development planners should begin to accord great priority to infertility and its antecedents in the development and reproductive health agenda of women in developing countries; such an approach will provide additional impetus and legitimacy to current efforts to promote their reproductive health.

An important question is: what can be done at the country level to reduce the intensity of the social problems attributable to infertility in Nigeria? First, we believe that a comprehensive community educational program needs to be mounted to inform and sensitize people on infertility: its true biological causes, prevention and treatment. Incorporated into such a program should be the information that the causes of infertility are equally distributed between men and women. In particular, the myth that blames women solely for infertility

should be unambiguously denied while correct information is provided on ways of treating infertility in men and women. Since there is no scientific evidence to prove or disprove the belief that supernatural factors can be responsible for infertility, the campaign should be silent on this so as not to be in perpetual controversy with the people over this strongly held cultural belief. However, gentle disapproval should be expressed for those cultural methods of treatment that are decidedly dangerous to the health of women, such as the insertion of caustic substances into the vagina with the intention of bringing on menstrual flow.

A related issue that featured prominently during the focus-group discussions was sex education. Judging by the number of focus groups that suggested it, it appears that sex education would be accepted by people in the community, especially if presented as a strategy to prevent future infertility. Contrary to previous beliefs, and despite the religious nature of the people in southwestern Nigeria, people from all socio-economic groups and religious backgrounds seem overwhelmingly in favour of sex education. Included in this should be information on sexually transmitted disease, symptoms, treatment, prevention and the consequences of lack of adequate treatment.

The Nigerian government should continue to provide quality services for the treatment and counselling of infertile couples. This should primarily consist of the upgrading of the available conventional treatment centres or the setting up of new treatment centres. Although it is recognized that services for infertility treatment are cumbersome and expensive, we believe that a system can be devised in resource-poor developing countries to integrate such services into primary health care in order to make them appropriate and affordable. A referral system can then be introduced so that infertility counselling can take place at first levels with the possibility to refer the more difficult cases to higher levels of care.

The development of centres for assisted conception and specialized infertility treatment is at present not recommended for Nigeria (Okonofua 1996). However, there is an urgent need for the government to clarify legal issues surrounding adoption, to make it a feasible choice for some couples who have irreversible forms of infertility. The potential to integrate modern and traditional medicine for the management of infertility should be explored because of the opportunity such integration offers for effective communication between the two different types of providers, and to reduce the confusion and complications resulting from visiting multiple practitioners. In particular, integration of services may provide more holistic care that can address both natural and supernatural causes of infertility and, for the Western practitioner sceptical of traditional practices, may provide access and early treatment of patients who would otherwise see only traditional practitioners.

It was of interest that in most of the focus groups, participants correctly identified abortion as a cause of infertility. Indeed, in many of the focus groups abortion was the most frequently cited cause of infertility. As abortion is currently not legal in Nigeria, messages should be aimed at increasing the use of family planning to reduce the incidence of unwanted pregnancies and botched abortions. However, we believe that the abortion law in Nigeria should be changed so that when contraception fails, women have access to safe abortion services. The liberalization of the abortion law would not only decrease maternal mortality and morbidity, but prevent the infertility that commonly results from secondary infection or multiple unsafe abortions.

Finally, there are interventions that can be applied at the country level to ameliorate the social consequences of infertility for women. On a short-term basis, men and women should be provided with adequate and accurate information on infertility and the need for both partners to seek treatment. Publicized cases of couples who have successfully sought treatment for infertility would help to reduce the stigma and domestic pressures often put on infertile couples. On a long-term basis programs directed at providing economic and educational empowerment to Nigerian women will have a sustainable effect in relieving

women of the social burden associated with infertility. Women will then be able to face the social challenges posed by infertility with the same boldness and confidence as men.

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