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Enhancing Effective Treatment of Infertility through Appropriate Disease Taxonomy

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Abstract:

Infertility is a major obstacle to good health and peaceful co-existence in many homes especially in developing countries. In spite of this, the treatment of infertility has not received adequate and comprehensive attention. Most of the discussions have centred on fertility reduction. Serious attempt has not been made to address treatment of infertility according taxonomy of causes of infertility. This why infertility treatments, even simple ones such as treatment of STIs (that cause infertility), are therefore not made available to individuals in developing countries. However, it has been established that the treatment of infertility depends on the cause. Therefore, this paper is aimed at identifying and classifying the causes of infertility in order to make treatment better directed and more effective. The study, therefore, adopted a combination of qualitative and quantitative methods. Sampling techniques adopted were purposive and multi-stage sampling methods. Data were collected using in-depth interviews, key informant interviews, focus group discussions and structured interviews. It was found that there is a relationship between causes of infertility and treatment of infertility. The study was able to classify causes of infertility into four groups: BCI, DCI, NCI and ECI. Similarly, data show that the type of treatment for infertility should depend on the type of cause and this determines the type of healer to consult. Then, it can be said that infertility could be successfully treated if the actual cause(s) is established on time and appropriate healer consulted. As a result, the study recommends that fertility education programme, which has been identified as a catalyst for reducing the influence of socio-cultural factors affecting the utilization of infertility health care services, should be encouraged. Again, effort should be made to separate traditional medicine from traditional religion to allow for effective utilization of traditional medical system. There is also need to integrate traditional medicine with Western medicine for proper clinical, theoretical, methodological and epistemological development of a true African medical system which overcomes superstitions.

Keywords: *Infertility, treatment, disease taxonomy, mbano people*

1. Introduction

In recent time, the field of human reproductive health has become an interesting area to population experts, social scientists and medical anthropologists all over the world. Infertility is often not seen by the Western World as being an issue outside industrialised nations. This is because of the assumptions about overpopulation problems and hyper-fertility in the developing countries and a perceived need for them to decrease their populations and birth rates. However, one of the major obstacles to good health and peaceful family living in many Nigerian rural communities is infertility. Yet, the problem of infertility in Africa and particularly Nigeria has not received adequate attention (Inhorn, 2003; Nwosu,2011). Every attention has been on population growth and high fertility to the extent that infertility is not being considered as a serious problem in society (Frank, 1983; van Balen et al, 2001 and Obono,2004). This is why infertility treatments, even simple ones such as treatment of STIs that cause infertility are therefore not usually made available to individuals in these countries.

Despite this, infertility has profound effects on individuals in Nigeria and other developing countries, as the production of children is often highly socially valued and is vital for social security and health networks as well as family income generation. Again, researchers (Larsen,1995a and b; Okonofua et al,1997; Obono,2001 and 2004) have reported that there is high rate of infertility in some communities in Nigeria. According Obono (2004:65), “the percentage of women in their 40s who have never given birth provides an indicator of the level of primary infertility, which the 2003 Nigeria Demographic and Health Survey (NDHS) estimated at less than 3 percent among married women, aged 45-49”. In his own case, Larsen (2000) puts the figure to be as high as 20-30% of women in Sub-Saharan Africa. To make this problem more complex, in Africa, it is generally believed that women are solely responsible for any case of infertility. As a result, childless women suffer a lot and motherhood is often the only way for women to enhance their status within the family and community (van Balen and Gerrits, 2001). Thus, the management of the problem is also difficult because Nigerian men have never accepted their contribution to this stigma (Alemnji,1999). Most men pretend to be innocent partners in infertile marriages.

On the other hand, knowledge of the male and female reproductive systems processes is essential in assessing the causes of infertility. The human reproductive process is quite complex and to achieve a pregnancy, the intricate process of ovulation and fertilization need to work just right. Whenever a couple could not achieve pregnancy, something must have gone amiss in the process. And it is now an accepted fact that the cause(s) of infertility can involve one or both partners in the marriage (Smith,2005; Campana et al,2005; Akinsola,2009 and Ayo-Aderele,2010). Generally, causes of infertility in Africa have both biological and cultural undertones. In other words, anything that disorganises the existing biological, psychological and socio-cultural conditions of the couple may contribute to the factors hindering pregnancy or child birth.

According to Smith (2005) and Lock and Vinh-Nguyen (2011), the treatment of infertility depends on the cause, the duration of the problem, the age of the partners and their specific wishes. That is why Akinsola (1993) opined that medicine whether Western or traditional cannot cure all cases of infertility. He also added that every case of infertility must be well investigated and treated according to the cause. To achieve this, it becomes imperative to provide appropriate classification for the causes of infertility. This is to ensure that treatment is cause-directed. This is necessary because the ultimate effectiveness of treatment for infertility as well as patients’ satisfaction is easy to measure for proper analysis. Generally, this paper focuses on the basic assumption that identification of various categories of causes of infertility makes treatment of infertility better directed and more effective.

2. Conceptual and Theoretical Model

The negative consequences of infertility are much stronger in developing countries than in the Western societies and this is characterised by personal suffering and social stigmatization. Infertility affects the personal wellbeing of women that are involved (van Balen and Gerrits, 2001; Hollos, 203 and Nwosu, 2011). In developing countries particularly African countries, children are of great value economically, socially and culturally. Lack of them constitutes a serious problem. In these areas, infertility has been an unbearable social problem for the couple, the extended family and the entire community. It is seen as an agent of genealogical termination and as such it is hated by all but feared most by women. In particular, childless women suffer a lot because women are always blamed for childless situation (Ajayi, 2009). However, it is now an accepted fact that the cause(s) of infertility can involve one or both partners in the marriage (Smith, 2005; Campana et al, 2005 and Akinsola, 2009). Since achieving fertility involves a complex process, it becomes imperative to assess the causes of infertility and how it is linked to treatment of infertility.

In biomedical field, the causes of infertility can be divided into three, which is, causes of male infertility, causes of female infertility and joint causes of both male and female infertility. One major cause of male infertility includes abnormal sperm production or function (impaired shape and movement of sperm, absence of sperm production in testicles and low sperm concentration). Other causes include varicocele (this is a varicose vein in the scrotum that may prevent normal cooling of the testicle and raise testicular temperature and prevent survival of sperm), undescended testicle, testosterone deficiency, Klinefelter’s syndrome and infections – STDs, mumps and inflammation of the prostate, urethra or epididymis (Smith, 2005). Yet, another cause of male infertility is impaired delivery of sperm (sexual-erectile dysfunction, premature ejaculation, painful intercourse or use of toxic lubricants during intercourse, retrograde ejaculation, blockage of epididymis or ejaculatory ducts, no semen to transport the sperm, misplaced urinary opening, anti-sperm antibodies and cystic fibrosis). Again, diethylstilbestrol exposure in utero may be a cause of male infertility (Campana et al, 2005; Speroff et al, 1989 and Delano,1988). Tranquilizers, depressant drugs and some antihypertensive drugs can cause impotence (Labby, 1982).

On the other hand, the major causes of female infertility in the eyes of biomedical sciences include fallopian tube defect or blockage following inflammation; uterine defect such as congenital malformation or acquired fibroid and intrauterine adhesions. Other causes include cervical hostility, stenosis or incompetence; ovarian defects leading to failure of ovulation; female circumcision; endometriosis; non-clinically induced abortion and STDs (Smith,2005; Campana et al, 2005; Speroff et al, 1989; Delano, 1988 and Okonkwo, 2009).

According to Katz and Katz (1987:404), emotional factors are responsible for less than 5% of infertility in both male and female. They emphasized that “stress related excess catecholomine secretion has a sound neurological basis by which it could affect ovulation, ovum transport and implantation”. In addition to these are malnutrition, obesity, cancer and its treatment, alcohol and drugs, sickle cell disease, diabetes, kidney disease, thyroid, HIV/AIDS and exposure to pesticides and other chemicals such as hydro-carbon (benzene, xylem and aromatic solvents (Smith, 2005). However, Akinsola (2009) went further to add idiopathic (unknown) cause. This shows clearly that there are causes of infertility that are not known to the biomedical field. This is where cultural explanation for infertility becomes relevant.

For instance, Katz and Katz (1987) revealed from their study that culturally speaking, the causes of infertility are promiscuity, sexually transmitted diseases, “dirt” or “germ” in the womb, curse, witchcraft and a breach of cultural taboo. In the same vein, van Balen and Gerrits (2001) notes that supernatural forces are often believed to cause infertility. This is evident among some groups, the Macua of Mozambique (Gerrits, 1997), the towns-people of Alexandria, Egypt (Inhorn,1991), the Islanders of Pemba, Tanzania (Kielman,1998), the Dhaka slum dwellers, Sudan (Nahar et al, 2000) and the Hmong mountain people from Laos (Liamputtong-Rice, 2000). Osunwole (1996) also agreed that in many African societies, infertility is believed to result from either the problems with co-wives, quarrel between parents and children over the choice of spouse and mystical powers of witches and sorcerers.

It should be noted however that the treatment of infertility is dependent on the cause of the problem. It is as a result of this that treatment for infertility is sought from various sources, varying from home treatment, the formal medical system (public and private, general practitioners and specialists), herbal and spiritual healers, traditional health specialists, diviners and even priests (Inhorn, 1994; van Balen et al, 2000; Gerrits et al, 1999; Inhorn and van Balen, 2000 and Campana et al, 2005).

There are various ways in the treatment of infertility in the modern medical system and these include the non-surgical infertility treatment and surgical infertility treatment. In the traditional healing, treatment of infertility involves three components: ritual, advice and herbs administered internally, externally or both. The ritual components of treatment for barrenness were designed to appease angry spirits (such as grandparents), to pacify or please God, to protect against evil actions or to counteract the effect of a curse or broken taboo (Katz and Katz, 1987). Lending strength to this discussion, Okpako (1999) noted that when a plant remedy is used as part of the treatment regimen; its physical characteristics such as aroma, texture, shape, taste, colour and nutrient value and the rituals attending its preparation and administration (e.g. incantation or song) are more important than its pharmacological constituents.

It should be understood from this stand point that the unique feature of medical anthropology is its relationship with medical profession, thereby providing enough cultural and social perspective for understanding, interpreting and solving health related problems. This is possible because human beings are simultaneously biological and cultural beings. As a result, social action theory and health belief model become relevant in explaining the relationship between causes and treatment of infertility.

In its own case, social action theory (SAT) is interested in the analysis of the motivating force behind actor(s) in a particular social environment. According to Odiagbe (2004), Weber, a major apostle of SAT believes that an understanding of the social action is an understanding of the underlying meaning or the motivation attached to such acts. However, Rex (1951) explained that motivation alone is not enough to explain reasons for actions. He noted that the action of an individual may be integrated with that of another through the cultural patterning of elements. For him, whether an action is rational or non-rational, the ends which the individual seeks may be set for him by his cultural conditioning.

From this view point, it can be seen that the cause of a disease (infertility) can lead the victim to seek for particular type of treatment. In other words, it is necessary to group diseases into functional categories in order to assist sufferers to determine the type of treatment pattern to assess. This theory (SAT) is relevant in that the cause of any disease goes a long way in determining the type of action that the victim will take towards the treatment of such disease. This pattern of analysis was adopted to determine whether the cause of infertility provides the level of motivation for seeking an end to infertility or the reasons for such rational actions.

In the same vein, explanation for health condition differs from one society to the other. All human societies have different ways of classifying disease or ill-health. Usually, this is in line with their health belief system. That is why health belief model (HBM) suggests that beliefs and attitudes of people are crucial determinants of what they call disease and “their health-related actions” (Jegade, 1998:38). Therefore, a person’s perception of his health condition and the actions he is likely to take depends on vulnerability to the illness and the severity of the illness which is also dependent on the cause. And the cause of illness in any society is classified according to people’s belief. This is why Foster and Anderson (1978) noted that all societies have “disease-theory system” which helps them to identify, classify and explain illness. Treatment of diseases is also dependent on the people’s belief system. Therefore, it becomes imperative to understand the underlying belief of a people concerning a disease such as infertility before seeking for action plan that will enable one to tackle the problem.

Generally, the causes of infertility have both biological and cultural undertones in Nigeria. However, the causes of infertility could be biological, psychological and cultural. In a particular study, it was reported that infertility could be caused by fumes and soot from power plants and vehicles exhaust in towns and cities (Oguntola, 2008).

3. Research Method and Design

3.1. Scope and Setting of the Study

The study focused on couples who could not bear children within the first two years of marriage. This is because by this time consequences of infertility have begun to manifest. In essence, couples who could not bear children early in their marriage but later had children were also included in the study.

The study was conducted in Mbano, Imo state, Nigeria. Mbano is a traditional Igbo rural setting. It is made up of two local government areas: Isiala-Mbano and Ehime-Mbano. It should be noted that Mbano occupies a land area of about 352 square kilometres. According to the 2006 National Census in Nigeria, the population was about 329,667 people (National Population Commission, 2006).

The residential pattern is cluster of houses in one compound. Each compound may accommodate between 1-5 families. Extended family unit is the basis of kinship relation which has the obligation of providing and protecting the members, who reciprocate by giving corporate support to the family. Any newly married couple lives within the family compound. This helps to ensure that the new wife receives adequate attention especially when it comes to pregnancy and child birth.

Traditionally, the economic pattern is based on subsistence production of food crops such as yam, cassava, cocoyam, beans, grains and leafy vegetables. Some elderly people practice a kind of modified gathering activities. Due to the problem of insufficient land, some people tend to depend on gathering of plant and animal food for survival. These gatherers usually leave home in the morning with their containers or bags and return in the evening with their containers filled. In Mbano, it is no crime to collect fruits which had fallen to the ground even if the tree is not yours. But any attempt to pluck any fruit belonging to another person without due permission attracts severe penalty.

Due to the same problem of inadequate land, many people engage in trading. Others engage in various crafts such as pottery, mat making, basketry, blacksmithing and so on. The people of Mbano also strive through hunting and fishing. Others also practise traditional medicine. The people of Mbano can best be described as farmers, craftsmen and traders. They have a zest for industry and hard work.

The basis of every social activity is the family. In Mbano, the structure is the extended family system. Monogamy is the basic form of marriage but custom does not frown at polygyny. Family residence in the area is patrilocal and the people also practise unilineal principle of kinship and patrilineality.

Social activities in the area which include story-telling, moonlight shows, wrestling, hide and seek begin from the household level. Marriage is traditionally arranged by the parents of the groom with their son's consent.

Politically speaking, towns and villages in Mbano are divided into quarters, that is, descendants of common ancestor. The various quarters have distinct geographical boundaries. A group of quarters make an *Ama* (village). Each *Ama* is headed by an *Amala*. A group of villages make an autonomous community or town. Each autonomous community is headed by an *Eze*. The *Eze*-in-council which is made up of the *Eze* and all the *Amala*'s make laws and adjudicates in disputes among their subjects. The *Eze*'s court is the final appellate in the traditional setting.

The people of Mbano believe in the Supreme Being addressed as *Chukwu* (Great God). The people believe that *Chukwu* is so awesome that they are not worthy to have direct contact with him. For this reason, they also believe in intermediary gods who serve as a link between man and *chukwu*. These gods serve different purposes – *Ezeala* (god of land), *Ajoku* (god of yam), *Ogwugwu* (god of health) and *Mbaa* (god of rivers). The people believe in ancestral worship on the basis that man is made of a body which is physical, temporal and mortal, and of a soul, which is invisible and immortal. They do believe in mystical powers such as evil persons, charms and supernatural forces. However, they do not believe in the existence of witchcraft. Death and sickness are not explained in line with pathology theory but are often ascribe to extramundane cause especially evil men and women.

3.2. Methodology

The challenges and consequences of infertility among Mbano people are identified by the study of eight communities in Isiala and Ehime Mbano. Data collection was by a combination of qualitative and quantitative methods. The qualitative methods helped to provide data about how people think, about opinions, attitudes and actual practices regarding infertility.

Quantitative methods were involved to measure and analyse the causes of infertility in the study area as well as corroborate and complement data provided by the qualitative methods.

Sampling technique adopted was purposive sampling (for selecting subjects for in-depth interviews and key informants) and multi-stage sampling (for selection of subjects for focus group discussions and structured interviews).

The key informant technique was the first data gathering method used. It made entry into the field easier. It was used in retrieving information regarding cultural lives that have gone into extinction or have been modified overtime. This is to ensure that no vital information is lost. In-depth interviews were conducted with childless couples, former infertility sufferers, sufferers of secondary infertility, hospital medical practitioners, traditional medical practitioners and spiritual healers. Similarly, 24 focus group discussions were held in a relatively informal setting which allows discussants freedom and greater participation. The settings were semi-circular to avoid "high table effect". Structured observation was also used to differentiate professed and observed attitudes. On the other hand, structured interviews were conducted through a questionnaire which was administered on 320 respondents to elicit information about causes and treatment of infertility.

Data were generated through analysis of emic and etic perceptions. The unit of the study was the household. Analyses were done at two levels using descriptive statistics.

4. Result

4.1. Causes of Infertility

In cultural anthropology, causes of diseases are viewed from the point of view of the people's culture. Within the Igbo culture, there are some basic sacred and secular beliefs which provided meaning to causes of disease such as infertility. So, the causes of infertility are better understood within the context of the people concerned (Jegede, 1998). Similar view had earlier been posited by Geertz (1970), when he suggested that the people's view helps to develop knowledge and attitude of the people towards life.

As a result of this, there is an attempt here to synchronize the views of the traditional infertility healers (TIHs) with those of the hospital infertility healers (HIHs). In the eyes of the TIHs, there are some causes of infertility that are peculiar to female or male and there are others that can affect both. Those causes that are peculiar to female include fibroid (*Ehe Afo*), black menstruation, irregular menstruation, abortion, spiritual husband (*di-uwa*), hot womb and sperm mixtures. On the other hand, causes of male infertility according to the traditional view are spiritual wife (*nwunye -uwa*), epilepsy, hot waist, consistent driving of long distant trucks, consistent sexual intercourse with menstruating women, swollen testicle (*Ibi*), lack of circumcision and dysentery (*afo-obara*). There

are other causes of infertility that are common to both male and female. They are destruction of children’s toy, curses, breaching of cultural taboos, mystical attack be enemies, worms, natural defects, accidents and sexually transmitted disease (fig. 1)

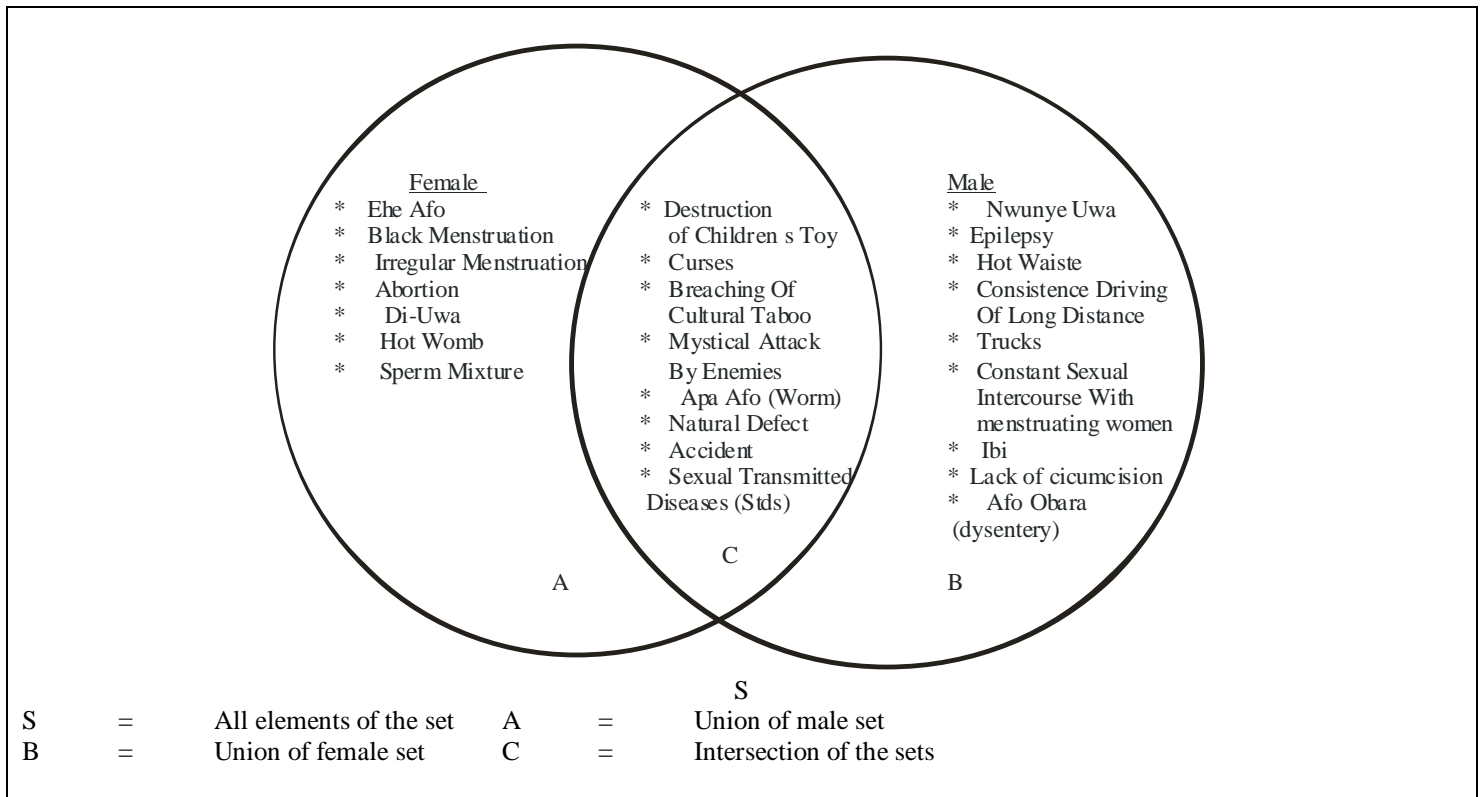


Figure 1: A Set Showing Traditional View of Causes of Infertility
 Source: Fieldwork 2017

Contrary to this view, the biomedical (HIHs) view believes that the causes of infertility in female include inflammation, uterine defect, female circumcision, cervical hostility, non-clinically induced abortion and stenosis. According to this view, the causes in male infertility are abnormal sperm production or function, varicocele, undescended testicle, testosterone deficiency, erectile dysfunction, retrograde ejaculation, anti-sperm antibodies and depressant drugs. However, there are some areas in which the traditional and biomedical views agree. These include sexually transmitted disease (STDs), abortion, natural defects, fibroid, ovarian defects and accidents (fig. 2).

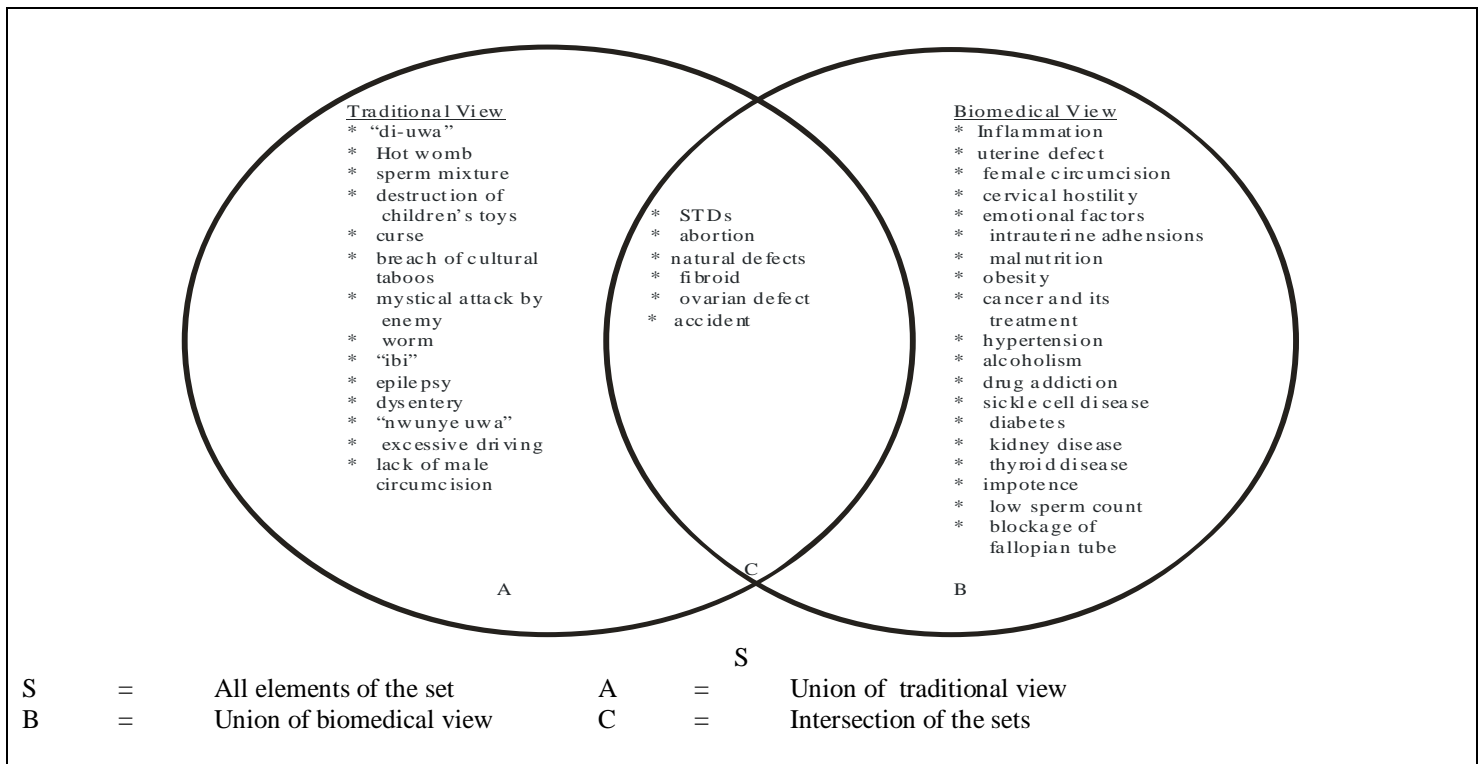


Figure 2: A set showing trado-biomedical views of causes of infertility
Source: Fieldwork 2017

In the same vein, there are some causes common to both male and female. These include STDs, emotional factors, malnutrition, obesity, cancer and its treatment, alcohol, accident, sickle cell disease, diabetes, kidney diseases, hydroid and exposure to chemicals such as hydrocarbon.

5. Taxonomy of the Causes of Infertility

In terms of classification, it is known that diseases are usually grouped under natural, supernatural and mystical causes. Natural causes are diseases that occur as a result of unclean water or unhygienic food taken or through over indulgency in food and sex, when there is a change of weather or lack of rest, blood infection and worm infestation in the body. The general feature of supernatural cause is that the perceived signs and symptoms are obscured in such a way that therapeutic management becomes ineffective. In the case of mystical causes, this is when a disease is believed to result from the gods, angered ancestors, broken taboo or ritual errors (Erinoso, 1978; Ezeabasili, 1981; Oke, 2002 and Jegede, 1998). Similarly, Foster and Anderson (1978) classified the causes of diseases as personalistic, natural and emotionalistic. However, Jegede (1998) warned that the above classifications face overlapping as some illness start as natural problems before extending to the level of supernatural or emotionalistic. This problem is the result of most wrong diagnosis because causes of diseases are determinants of their treatment.

With the above issue in mind and with the aim of providing a clear guide for effective treatment of infertility, the study classifies the causes of infertility as follows:

5.1. Behavioural Caused Infertility (BCI)

Certain forms of infertility do result from certain behaviour of people. This could be when people do what they are not supposed to do, such as indiscriminate sex with several partners, which may result in STDs and sometimes induced abortions. In line with this are alcoholism and drug addiction, which may eventually lead to infertility. It could also be as a result of people's refusal to do what they are expected to do such as inability to feed properly or overfeeding, which may result into obesity.

5.2. Disease (illness) Caused Infertility (DCI)

According to Alland (1970), Kleinman (1980) and young (1982), disease is the abnormalities in the structure and/or function of the organs and organ system while illness is an individual's view and experiences of certain socially disturbing state which affects their daily activities and behaviour. In essence, there are certain diseases that result in illness or create discomfort for the sufferer. Therefore, the present study revealed that some of these types of disease can also cause infertility. Among these are swollen testicles (*Ibi*), worms (*apa afo*), epilepsy, cancer, sickle cell disease, diabetes, hot womb, kidney disease, thyroid disease and dysentery or pile. It was found that *ibi* which is the unusual swelling of the testicles often leads to the blocking or displacement of the *dictus differens* within the scrotum and this in turn weakens the ejaculatory duct. The resultant effect of this, is the transportation of low quantity of sperm in minor cases or the absence of erection in severe cases.

In the issue of dysentery/pile and worms, they tend to sap the strength in men. Under this state no man performs sexual functions effectively. Even when the man attempts, the result may be low quantity of sperm or slow transportation of the sperm. This means that the chance of fertilizing the female ovum is quite narrow.

On the other hand, treatment of certain diseases may hinder fertility. For instance, drugs used for the management and treatment of epilepsy, cancer, diabetes and kidney disease do affect the fertility of both men and women.

5.3. Non-illness Caused Infertility (NCI)

It is important to note that etiologies under this group on their own do not reflect serious ill-health. Their effect is usually noticed in relation with reproductive process. One feature that this category shares with the proceeding one is that it can result naturally or can be induced by other occurrences. The most serious cause of infertility in this group is natural defects. It is a situation where some elements in the reproductive chain are either absent or malformed. The malformations could be in shape, size and function. Such case does result at birth but may not be physically noticed. Other non-illness causes of infertility are inflammatory, cervical hostility, intrauterine adhesion, impotence, low sperm count and blockage of fallopian tube.

The study points out that, non-illness causes of infertility do not make the sufferer to be physically sick or malfunction in their daily activities except in reproduction process.

5.4. Extra-Mundane Caused Infertility (ECI)

This category is closely related to what Akinsola (1993) referred to as idiopathic cause or what Jegede (1998) called supernatural cause. Similar to what Jegede (1998) noted, the study found that HIHs do not recognise the effect of supernatural powers in health problems. On the other hand, TIHs and SIHs believe strongly in the supernatural causes of infertility and other diseases. However, the HIHs (modern medicine) believe that there are causes of infertility that cannot be easily explained in medical terms. In other words, they agree that there are causes beyond the ordinary. A close examination at what TIHs call supernatural cause points to the issue beyond the natural or ordinary. As a result of this, the study decides to use the term extra-mundane cause which means causes beyond the ordinary, physical or natural outlook. It removes the issue of superstition which is attached to supernatural that the modern medicine is scared to accept.

The extra-mundane cause is built on the premises that man is both biological and a spiritual being. The causes of infertility under this category include spiritual husband (*di-uwa*), spiritual wife (*Nwunye-uwa*), breach of cultural taboos, destruction of children's play toys, curses (whether private or communal) and mystical attack by enemies.

The issue of spiritual-wife and spiritual-husband function the same way. The spiritual wife affects men while spiritual husband affects women. This was reflected in the response of one discussant at the FGD:

- A lot of these women have married and have children in the spirit world. Ask them. Some of them will tell that they normally have sexual intercourse with strange men in their dreams. The power (sperm) of these spiritual husbands destroys the power (sperm) of the physical husband in forming foetus. So, such a woman becomes fruitful in the spirit world and barren in the physical world. The same thing also happens to men.

The study also revealed that children have direct invisible contact with unborn children and the former do report to the latter the situation on earth. It is from this understanding that the act of hostility against children such as destroying the play materials of little kids can prevent any man or women from having "kiddy toys" (children) in his/her home. It is believed by the people to be an act of spiritual revenge by children who inform their oncoming colleagues to avoid hostile homes. Looking at the issue from the social point of view, it can be seen as a consequence of child abuse.

6. Relationship between Causes and Treatment of Infertility

According to Smith (2005), treatment of infertility depends on the cause and as such, the study sought to know the relationship between cause of infertility and treatment of infertility. It was found that in the case of behavioural-caused infertility, treatment is moderate because there is success rate of between 50% and 60%. Diagnosis and treatment are effective because of the trust and confidence the patients have in their healers (table 1)

On the other hand, treatment of disease (illness) caused infertility is quite high. This is because the healer's role is to provide medicine which attacks the disease and gives way for pregnancy to occur. Therefore, once the disease is successfully treated, the person involved regains his/her fertility. In other words, out of every hundred cases of infertility resulting from disease-illness cause, over seventy can be successfully treated. It was also found that hospital infertility healers do better in this area.

Causes Of Possibility Infertility	High Possibility		Treatment of Infertility				Impossible	
	Fq	%	Moderate Possibility Fq	%	Low Fq	%	Fq	%
BCI	214	22.8	708	75.3	16	1.7	2	0.2
DCI	802	85.3	92	9.8	13	1.4	333.5	
NCI	101	10.7	54	5.7	203	21.6	582	61.9
ECI	42	4.5	38	4.0	617	65.6	243	25.9

Table 1: Distribution of Respondents by cause and treatment of infertility
Source: Fieldwork 2017

For the non-illness caused infertility, the possibility of treatment is as low as ten successes in every hundred cases. This is because most of such cases are the result of natural defects. In other words, there may be one or more reproductive structures in the sufferer's body that were wrongly shaped or that function abnormally. So, treatment in this case sometimes is as difficult as making a very short man to become tall. In the case of extra-mundane caused infertility, treatment possibility is also low. Treatment is only possible in 30 out of every 100 cases of infertility resulting from extra-mundane caused infertility (table 1).

Similarly, it was revealed that both traditional infertility healers (TIHs) and hospital infertility healers (HIHs) could effectively handle infertility resulting from behavioural cause. In terms of rating, the TIHs scored 46.1%, HIHs scored 43.2% while the spiritual infertility healers' scored 10.7%. The reason for this is because sometimes, some negative behaviour can spark off some structural changes in the human body system which can only be adjusted through medication administered by either the TIHs or HIHs.

Again, the HIHs do better than other healers in the case of disease-illness caused infertility. They were rated 81.6% in the treatment of non-illness caused infertility. In this case, HIHs do its best through major surgery which is not practicable under traditional infertility healers (TIHs). However, TIHs have no rival in the treatment of extra – mundane caused infertility. They are rated 73.6% in terms of efficiency in this area (table 2).

Cause of Infertility	Degree of Efficiency of Infertility Healers		
	TIH (%)	HIH (%)	SIH (%)
BCI	46.1	43.2	10.7
DCI	42.6	56.3	1.1
NCI	15.7	81.6	2.7
ECI	73.6	0.7	25.7

Table 2: Respondents' View about Cause and Infertility Healers' Area of Efficiency
Source: Fieldwork 2017

Generally, in terms of treatment of infertility, the trend in the study area (Mbanjo) is similar to that posited by scholars (Katz and Katz, 1987; Mogobe, 2000 and Campama et al, 2005) when they noted that infertility sufferers at times consult both traditional healers and hospitals simultaneously.

7. Conclusion

It is obvious from the foregoing that infertility does exhibit its complexity through its varied causes. It is not surprising that there is difference in the views of traditional healers and that of hospital healers. However, they have common areas of intersection. This proves that both parties understand the intricacy of infertility. In effect, the views of both the traditional healers and the hospital healers are essential for the proper understanding and successful treatment of infertility.

Even though the causes of infertility are varied supporting the basic assumption earlier stated, it negates the views of Osunwole (1996) that infertility in most African societies are result of problems with co-wives, quarrel between parents as to the choice of spouse and the power of witches. This is because, it was reported that witches do not exist in Mbanjo. Therefore, most of the causes of infertility are brought about by attitude and life style of the couple involved or by nature.

The study also supported the view of Akinsola (1993) that Western and traditional medicine cannot cure all cases of infertility. However, most cases of infertility could be successfully treated if the actual cause(s) is established early enough and the appropriate healer consulted. The implication of this is that the integration of the TIHs and HIHs will go a long way in tackling effectively the plight of infertile couples.

These factors identified above are necessary indices that must be considered by health workers and policy makers, who may use such information for high point decision making to ensure appropriate treatment of infertility.

Fertility health education and mobilization programme which has been identified as a catalyst to reducing the influence of socio-cultural factors affecting utilization of infertility health care services should be encouraged. Such programme should incorporate the grouping of causes of infertility as a guide for victims to know which healer to consult for a particular type of infertility.

Effort should be made to separate traditional medicine from traditional religion. This is because medicine could not advance in Europe until it was separated from their traditional religious belief. Therefore, people should not see indigenous medical system as fetish and its therapeutic materials as concoction. This is because the research has revealed that greater percentage of infertility cases are regularly and successfully treated in the study area through indigenous medical system.

Similarly, the distance between traditional medicine and modern Western medicine should be bridged. There is a need for proper integration of the two medical systems as the collaboration between both groups holds a great promise for the clinical, theoretical, methodological and epistemological development of a true picture of African Medical System which we believe will overcome biases, superstitions and down-grading of obvious medical approaches.

There should also be a specialized fertility education programme for youths especially in secondary and tertiary institutions. This will help to enlighten the youths about some of their social habits that could lead to infertility as well as the grave consequences of infertility. This will help to nip the problem at the bud because when people know that they are susceptible to a health problem, they tend to be more cautious.

8. References

- i. Ajayi, A. (2009). Why Many Men Cannot Impregnate Their Wives? *The Punch*. October 7, P.55.
- ii. Akinsola, Henry A. (1993). *A To Z Of Community Health and Social Medicine in Medical and Nursing Practice*. Ibadan : 3 AM Communications.
- iii. Akinsola, Henry A. (2009). Factors That Could Render Couple Infertile. *Nigerian Tribune*. Thursday 14, February.
- iv. Alemnji, G.A. (1999) The Role of The Male in Infertility in Nigeria. *The African Population in the 21st Century*. 2:135 – 141. Third African Population Conference, Durban South African, 6-10 December.
- v. Alland, Alexander Jr. (1970). *Adoptation in Cultural Evolution: An Approach to Medical Anthropology*. New York: Columbia University Press.
- vi. Ayo-Aderele, S. (2010). Hospital Sensitizes Youths to Causes of Infertility. *The Punch*. Wednesday 25, August P.52.
- vii. Campana, A., de Agostini, A., Bischof, P., Tawfike and Mastrolli. (2005). Evaluation of Infertility. Retrieved 16th September, 2005 from <http://www.Gfmer.Ch/Books/Reproductive-healthFertility-Evaluation.html>.
- viii. Delano, Egun (1988). *Guide to Family Planning*. Ibadan: Spectrum Books Limited
- ix. Eisenberg, L. (1977). Disease and illness: Distinctions between professional and popular psychiatry 1:9-23
- x. Erinoso, A. (1978). Notes on Concepts of Diseases and Illness: The Case of Yoruba in Nigeria. *Nigerian Journal of Economic and Social Studies*.
- xi. Ezeabasili, M. (1981). Traditional Ibo Ideas about Disease and Its Treatment. *Nigerian Perspectives on Medical Sociology*.
- xii. Frank, O. (1983). Infertility in Sub-Sahara Africa : Estimates and implications. *Population and Development Review* 9:137-144
- xiii. Geertz C. (1970). *The Interpretation of Culture*. New York: Basic Books
- xiv. Gerrits, T. (1997). Social and Cultural Aspects of Infertility in Mozambique. *Patient Educational Counsel*. 31:39-48.
- xv. Gerrits, T., Boomongkon, P., Feresu, S. And Halperin D. (1999). Involuntary Infertility and Childlessness in resource-poor countries. *Current Reproductive Health Concerns*. Het Spinnhuis, Amsterdam.
- xvi. Hollos, M. (2003). Profiles of infertility in Southern Nigeria, Women's voice from Amakiri *African Journal of Reproductive Health* Vol. 7 No.2.
- xvii. Inhorn, M.C, (1991). Umm 11-Ghayyib, mother of the missing one. a socio medical study of infertility in Alexandria, Egypt. University of California, Berkeley, CA, USA.
- xviii. Inhorn, M.C (1994). *Quest for Conception: Gender infertility and Egyptian Medical Tradition* Philadelphia: University of Pennsylvania Press
- xix. Inhorn, M.C. (2003). The Local Confronts The Global Infertile Bodies And New Reproductive Technologies in Egypt. In Inhorn, M.C. and van Balen, F (Eds), *Interpreting Infertility: Childlessness, Gender and Reproductive Technologies In Global Perspective*. Berkeley: UCLA Press.
- xx. Inhorn, M.C. and van Balen, F. (2000). *Interpreting Infertility: Childlessness, Gender and Reproductive Technologies in Global Perspective*. Berkeley UCLA Press.
- xxi. Jegede, A.S. (1995). *The history of sociology*. Unpublished
- xxii. Jegede, A.S.(1991). Perception of disease as an aspect of immunization problems in the rural areas. Paper presented at the 3rd regional workshop on rural development of the programme of development studies in Africa of the international center for development studies, Denver Colorado, 8022, U.S.A. Held in Jos, Nigeria. Sept.
- xxiii. Jegede, A.S. (1998). *African Culture and Health*. Ibadan: Stirling-Horden Publisher (Nig.) Ltd.
- xxiv. Katz S.S. And Katz S.H. (1987). An Evaluation of Traditional Therapy for Barrenness *Medical Anthropology Quarterly* 1 (4): 394 – 405
- xxv. Kielman, K. (1998). Baren ground contesting identities of infertile women in Pemba, Tanzania. In Lock, M And Kaufert, P.A. (Eds), *Pragmatic Women And Body Politics*. Cambridge: Cambridge University Press PP 127 – 163.
- xxvi. Kleinman, A. (1980). *Patients and Healers in the Context of Culture: An Exploration of The Borderline Between Anthropology, Medicine and Psychiatry*. Berkeley: University of California Press.
- xxvii. Labby, D.H.(1982). *Current Obstetric and Gynaecologic Diagnosis and Treatment*. California: Benson R.C.
- xxviii. Larsen, U.(1995a). Differentials in Infertility in Cameroon and Nigeria. *Population Studies* 49:329 – 346
- xxix. Larsen, U. (1995b). Trends in Infertility in Cameroon and Nigeria. *International Family Planning Perspectives* 21:138 – 142
- xxx. Larsen, U. (2000). Primary and Secondary Infertility in Sub-Saharan Africa . *InternationalJournal of Epidermology* 29: 285-291.
- xxxi. Liamputtong–Rice, P. (2000). Treating the afflicted body: infertility and ethnomedicine Among Hmong Women. In Inhorn, M.C. and van Balen, F. (Eds). *Interpreting Infertility: Childlessness, Gender and Reproductive Technologies In Global Perspective*. Barkerley: UCLA Press.
- xxxii. Lock, M. and Vinh-Nguyen (2011). *An Anthropology of Biomedicine*. Wiley-Blackwell.
- xxxiii. Nahar, P. Sharma, A., Dabin, K. (2000). Living With Infertility Experiences From Urban Slum Populations In Bangladesh. *Reproductive Health Matters* 8: 33-44.
- xxxiv. Nwosu I.A. (2011). Socio-Cultural Factors Determining Treatment Seeking Behaviour of Infertile Women In Rural Communities in Southeast Nigeria. *South South Journal of Culture and Development*, Vol.13, No.1, April: 42-66.
- xxxv. Obono Oka (2001). Matrician priests and pronatalism among the Yakurr of South Eastern Nigeria. *African population Studies*. 16 (1): 15-42.

- xxxvi. Obono Oka (2004). Life Histories of Infertility Women in Ugep, Southern Nigerian. *African Population Studies* 16(2) : 63 – 88
- xxxvii. Odiagbe, O.S. (2004). Gender Responsibility, Reproductive Decision-Making and Fertility among the Esan of Nigeria. Unpublished Ph.D Thesis University of Ibadan.
- xxxviii. Oguntola, S. (2008). Why Polluted Air Contributes to Infertility in Men. *Saturday Tribune*, 3rd May, No. 733:2.
- xxxix. Ojiaku, Ichie Ezeike (1985). Classification of Igbo Culture. *Nigerian magazine* vol.53, no.2 Pp21-28
- xl. Oke, E.A. (1984). *An Introduction to Social Anthropology*. London: Macmillan Publishers.
- xli. Okonofua, F.E., Harris, D., Odebiyi, A., Kane, T. and Snow, R.C. (1997). The second meaning of Infertility in South West Nigeria. *Health Transition Review* 7:205-220.
- xlii. Okonofua, F.E., Snow, R.C, Alemnji, G.A., Okoruwa, A And Ijaware, C.O. (1997). Serology and Clinical Correlates of Gonorrhoea and Syphilis in Fertile and Infertile Nigeria Women *Contemporary Medicine* 73:197
- xliii. Okonkwo, Oge (2009). How to Cast Out “Demons” That Prevent Pregnancy. *Sunday Sun*. August 9, Vol.5, No.333 Pp34-35
- xliv. Okpako, David (1999). Trends In Pharmacological Sciences. *Tips*. 20: 481-485
- xlv. Osunwole, S.A. (1996). Disease Diagnosis and Etiology as a System of Thought. In Oke, E.A., and Owumi B.E (Eds) *Reading in Medical Sociology Ibadan: R.D.M Publisher* (PP.209-222).
- xlvi. Rex, J. (1951). *Key Problem of Sociological Theory*. London: Routledge and Kegan Paul
- xlvii. Smith J.F. 2005. Infertility. Retrieved 9th August, 2005 from [Http://Www.Mayoclinic/Infertility-Reproductive Health. Html](http://Www.Mayoclinic/Infertility-Reproductive Health. Html)
- xlviii. Speroff, L. Glass, R.H, And Kase, N.G (Eds) (1989). *Clinical Gynecologic Endocrinology and Infertility*, 4th Edition. Baltimore: Williams and Wilkins.
- xlix. *Spotlight on Local Government in Imo State* (1989). Owerri: Government Press.
- l. van Balen, F. And Gerrits, T. (2001). Quality of Infertility Care in Poor – Resource Areas and the Introduction of New Reproductive Technologies. Retrieved 16th September, 2005 from [Http://Num Rep. Oxford Journals Orgcgi/Content. Html](http://Num Rep. Oxford Journals Orgcgi/Content. Html).
- li. Young A. (1982). The Anthropologies of illness and sickness. *Annual Review of Anthropology* 2: 257 – 285