

## **Patients' Perception of the Effectiveness of Infertility Treatment Methods and Coping Strategies in Southeast, Nigeria**

**Innocent A. Nwosu**

Department of Sociology,  
Alex Ekwueme Federal University Ndufu Alike Nigeria

### **ABSTRACT**

Infertility has varied consequences for victims and their families, which are more severe in Africa. Despite several advancements in infertility treatment, about 4 percent of couples who want children are childless. There are various treatment methods used by infertile couples. Various studies have been done on causes, consequences and treatment of infertility. However, no comprehensive study has assessed the effectiveness of the treatment methods and coping strategies against infertility in Southeast Nigeria despite the fact that successful action plan requires evaluation. Therefore, this study assessed the effectiveness of various treatment regimes and coping strategies of infertility in Southeast Nigeria. The study used the research design called cross-sectional. It focused on couples who were patients at gynaecological unit of Alex Ekwueme Federal University Teaching Hospital, Abakaliki (AEFUTHA) Nigeria. The study which was conducted between January and July, 2024 used 258 participants selected through census method. Questionnaire used was as research instrument. Analysis of data was done with the aid of descriptive statistics. Result revealed that the most used method for treatment of infertility is the clinical therapy while the least is traditional therapy. It was also found that child adoption is the most accepted/used coping strategy. Ironically, data revealed that traditional therapy is the most effective treatment method for infertility; followed by clinical therapy. The most effective coping strategy is child adoption; followed by child fostering. As a result, it was concluded that if infertile couple could understand the most effective treatment methods for infertility and use them on time; it could lead to early resolution of their problem. The research suggests that infertile couples should use only coping strategies that have no health consequences in manage their infertility cases. Therefore, enlightenment campaigns should be organized to educate married couples on issues concerning infertility and treatment.

**Keywords:** Coping Strategies against Infertility, Effectiveness of treatment methods, Infertility, Infertility treatment, Patients' perception, Relevance of coping strategies, Southeast Nigeria, Treatment Methods of infertility

### **INTRODUCTON**

Infertility is quite different from childlessness. As such, childlessness is a situation of not having a child at a particular point in time. Generally speaking, infertility can be defined as the inability of a woman to get pregnant (conceive) after one year (or longer) of unprotected sex or the inability of a man to get his wife pregnant after the same period of 12 months or

longer of unprotected sexual engagement. This definition is all encompassing. Demographically, infertility is the absence of a live birth by any woman who is within the reproductive age of 15–49 years after having regular sexual intercourse without protection (Abebe et al 2020). Infertility can be categorized as primary or secondary. Primary infertility is when a woman is not able to conceive or a man could not impregnate a woman at all. Secondary infertility on the other hand, occurs when a woman has previously conceived but is no longer able or a man has previously impregnated a woman but is no longer be able to.

A lot of factor contributes to infertility. It can occur as a result of choice by couple or by natural/medical circumstances and is distinguished from belief in anti-natalism, wherein childlessness is promoted (Hansen et al, 2009). Infertility which is the primary cause of childlessness has been explained as inability of woman to be pregnant and bear children after 12 months and above of constant marital sexual intercourse without protective device when any known reproductive pathology is absent (Nwosu et al, 2022). Infertility has different negative effects as a result of its negative impacts on societies, individuals' lifestyles as well as the people's (couples) life chances. In Western nations, childlessness may mean life satisfaction for some couples. However, in nations where parenthood is cherished as a personal achievement particularly in Africa, childlessness is seen as diminishing people's lifestyle and life chances. In most societies, infertility is a major issue with regards to low birth rates as well as reduction in population. All these are also associated with reduction in labour force and increase in the number of elderly persons (Guthrie, 2012).

In spite of recent advances and developments in infertility treatments, about four percent of couples who want children have remained without children (Karmaus and Juul, 1999; Erica 2012). These infertile couples do stay for years with hope of having their own children until such a time that they have to accept that the expected child(ren) will not actually come. Then, they do experience severe distress due to sense of loss. This leads to a period of bereavement trauma (Daniluk, 1991). It is clear that death is not actually involved, but infertile couples still pass through a tough process as if they are mourning the loss of a child which in reality they do not have. This distressful emotions, which mostly combines with the experience of stigmatization do result into several health complains and psychological challenges such as depressions and anxiety (Daniluk, 1991; Verhaak et al, 2010). These feelings of distress, sometimes combined with an experienced lack of social support, may result in several

physiological and psychological symptoms of distress, such as health complaints, depression, anxiety and even complicated bereavement (van den Akker, 2015; Verhaak *et al.*, 2010).

It is important to note that the manner in which infertile couples cope with their situation is expected to determine the level of distress they go through as well as its possible signs. Generally, two coping strategies can be found in the literature (Lazarus and Folkman, 1984; Jung *et al.* 2021; Sarafino, 2002). The first is active coping strategy, which people use to solve the underlying challenges. Examples of active coping strategy include the infertile couples seeking contacts and relationship with fellow infertile persons. This helps them find a new alternative meaning in life which replaces the unfulfilled desire for children as well as being parents. On the other hand, passive (emotional) coping strategy which tends to reduce the negative emotions caused by the infertility issue. This strategy includes avoidance, withdrawal from the public and fixation on issues concerning children.

In the same vein, Nwapa (1981) posited that some infertile couples believe that their infertility problem is caused by supernatural forces. Such couples do hope that God who is the giver of children would give them theirs at the right time. Others resort to adoption without caring about the cause of their plight. This makes them feel satisfied because they are socially seen as parents even when they know that they are biologically infertile (Gawron *et al.*, 2022). It has been established as difficult the communication between infertile couples and their friends who have children. The infertile couples most times get negative remarks within the couples' social world especially at birthday parties of children and other social engagements.

In Africa, children are important assets to the parents, relatives and their entire community. Children are seen as old age assurance. Their absence connotes emptiness and hopelessness (Nwosu, 2011). It is quite unfortunate in Nigeria, women suffer most even when they are not the main cause of the infertility. She is constantly under stress, frustration, disappointment and faces persistent stigmatization. Infertile women are seriously ridiculed and stigmatized, which makes them tensed and full of sorrow. Men in Nigeria do not accept that the problem could come from them. As a result, infertile women became desperate due to social pressures and therefore resort to assist their husbands by getting children secretly through other men (Nwosu, 2010). Infertility has been the source of regular quarrels, domestic fights, misgivings and suspicion in such marriages. There has been an increase in the numbers of couples that are infertile in recent time. This has made the rate of childless homes to also be

on the rise, especially with the evidence that some infertile couples are still resisting the move to engage them in child adoption (Thomas & Ojo, 2019).

Presently, there have been some medical interventions for the management and treatment of infertile individuals/couples. Some of these interventions are in vitro fertilization (IVF), artificial insemination and intracytoplasmic sperm injection. Fertility drugs have also helped to enhance the opportunity of conception by infertile women (Hammond-Browning, 2019).

Many childless couples also face social stigmatization and cannot easily take any place in social dialogues, especially in a troublesome situation, since any hint of their childlessness makes them feel moody and bad. They often appear desperate and unfulfilled (Nwapa, 1981). All couples experiencing infertility usually seek for cure all their lives hoping to get a remedy. Most of the cures are usually based on trial and error methods which have little to no assurance and the treatment regimen is not time bound. Meanwhile, only but a few have the courage to adopt a child because of the social stigmatization attached. This situation is particularly bad for the majority of who are rural poor women who are prone to unhealthy competitions that easily result in quarrels and fight accompanied by uncontrolled abuses. Hence, there is intense desperation in most infertile couples to address their reproductive challenges.

Treatment of infertility is one way of assisting the infertile couples to solve their reproductive challenge and bear children. There are various methods used by infertile couples. However, it has been noted that the method of treating infertility depends on certain factors such as the cause of infertility, the age of the infertile partner(s), the duration of infertility, and personal preferences of the partner(s) (Nwosu, 2004; Mayo Clinic, 2020).

In situations where spontaneous pregnancy could not occur, couples still achieve pregnancy and childbirth through the use of herbs, prayers, drug administration and/or assisted reproductive technologies. However, infertility treatment involves significant financial, physical, psychological and time commitments. In spite of this, not all cases of infertility can be successfully treated (Mayo Clinic, 2020).

In the case of men, infertility treatment could take the form of a change of lifestyle, medication (orthodox or traditional), surgery and/or sperm retrieval. In women, treatment could be in form of stimulating ovulation with drugs (orthodox or traditional), intrauterine insemination, surgery, assisted reproductive technology such as in vitro fertilization (IVF), and/or change of lifestyle (Mayo Clinic, 2020).

Since not all cases of infertility can be successfully treated and it sometimes takes sufficient time for some treatment to be successful, there is need to have other non-treatment strategies for ameliorating the pains of infertility. In actual fact, coping strategies are those cognitive and behavioural activities that a person engages in to be able to understand, analyze and adjust an undesirable situation which leads to a decrease in the person's discomfort (Folkman, 2004). According to Ghazanfari and Kadampoor (2008), there are two main forms of coping strategies for cases of infertility which are emotional coping strategies and problem-centred coping strategies. In the first, efforts are made to achieve emotional balance by controlling the resultant emotions from stressful conditions. In the second, efforts are made to remove or change the source of the stress.

This is why Pearlinli (2017) pointed out earlier that positive adjustment is the foundation for problem-centred coping strategies. Under this situation, dynamism provides requisite equipment for actively coping with stressful situations. This involves the need that the person's ability and willingness be increased to ensure success.

Nonetheless, various studies had been carried on the causes, consequences and treatment of infertility among married couples (Nwosu et al, 2022; Okonofua et al, 1997; Suellen et al, 2020; Fehintola et al, 2017; Eze & Okonofua, 2015; Jaradat & Zaid, 2019; Ola et al, 2008). Few studies have also addressed the coping strategies used by infertile couples (Nwosu, 2019; Isiugo-Abanihe, 1984; WHO, 2020). However, it is nothing yet known that any comprehensive study has focused on assessing the effectiveness of the various strategies that infertile couples have used to manage their reproductive plight in terms of treatment and coping strategies in Southeast Nigeria. This is very important in order to help chart an effective pathway that infertile couples could adopt to solve their infertility challenge. It is expected to help prevent unnecessary waste of funds and delay engaging in unproductive treatment regimens or dangerous coping strategies.

As a result, this study is aimed at assessing the effectiveness of various treatment regimes and coping strategies used by infertile couples in addressing their reproductive health challenge in Southeast Nigeria. specifically, the study will address the following: (i) Various treatment methods used by infertile couples to treat infertility in the area; (ii) Various non-treatment coping strategies adopted by infertile couples in addressing their challenge in the area; (iii) Effectiveness of the infertility treatment methods; and (iv) Effectiveness of the various non-treatment coping strategies used by an infertile couple to manage their problem.

## **MATERIALS AND METHODS**

### **Research Design**

The study made use of a descriptive cross-sectional research method in order to achieve the stated goals of the study. The reason for adopting this design is due to the efficiency in analyzing and evaluating the opinions of the respondents while yielding a comprehensive result. As Nwodo (2006), rightly justified that the survey method of research focuses on a representative sample derived from the entire population of study. This exactly fits into the intents of this study. The study focused on couples who were attending gynaecological clinic at Alex Ekwueme Federal University Teaching Hospital in Abakaliki, Ebonyi State Southeast, Nigeria. The clinic and the hospital were chosen because they were the easiest place to have access to infertile couples and also to be able to elicit desired responses with little or no hindrances. Infertile couples were also selected for the study because they are the ones that seek and utilize the treatment and coping strategies being investigated. The study was conducted between October, 2023 and February, 2024.

### **Participants**

Records from the hospital has it that an average of 55 infertile patients come to the gynaecology unit of the hospital weekly. Those who attend the clinic for the first time each were 37.3 % of the overall attendants. As a result, each new patient in the clinic was also enrolled to participate in the study. Therefore, 489 patients were enrolled for the present study. Later, the study purpose and process was explained to each of the selected participants. At that point, only 258 participants representing 52.8% of those initially selected agreed to participate in the study. This figure is low but due to the sensitive nature of the study, it was accepted. The research used the census method in the administration of instrument and data collection. This is because the numbers of participants (258) was small. It should be noted that census method is a statistical practice of listing all elements in a population and measure the features of these subjects in relationship with the study that is involved (Lavrakas, 2021). As a result, the 258 patients were selected to participate in the research since they fulfilled the expected inclusion criteria. Putting it differently, the census style was used because of the manageable size of the sample. It is pertinent to note that the participants were assessed based on the following inclusion criteria: the person must be a married man or woman, be within the reproductive age (15 – 60 years), is having difficulty with conception, and is seeking for medical solution for the perceived infertility at the gynaecological unit of the health facility. All spinsters and bachelors who visited the clinic and other women and men who did not give

consent to participate as well as those who fell outside the stipulated age bracket mentioned above were not included in the study. The instrument of the study was submitted to the Research and Ethics Committees both Alex Ekwueme Federal University Teaching Hospital and Alex Ekwueme Federal University Ndufu Alike, Nigeria. After careful scrutiny, the two institutions granted the ethical approval for the study to be conducted.

### **Research Instrument and Method of Data collection**

Questionnaire was used as instrument for data collection. It was a self-designed questionnaire. The research instrument (questionnaire) went through pretesting among 20 couples who visited the gynaecological clinic of the health facility. The pretesting took place one month before the commencement of the main research. The questionnaire was made up of 3 segments – the demographic profile of the respondents, methods they have used for infertility treatment, strategies they believe people use to cope with infertility, their opinion on how effective the treatment method are and their opinions on how effective they think the various coping strategies are. Interview method was used to administer the questionnaire. Most of the questions were presented to the participants in interview format. As the respondents give his/her answers, the interviewer ticks the corresponding answers as contained in the questionnaire. This system of questionnaire administration was necessary to make the responses as accurate as possible and also to reduce the chances of attrition.

### **Method of data analysis**

The administered copies of the questionnaire were 258 in number. However, five of them could not be retrieved leaving only 253 that were collected back. Out of this number, three had errors in the way they were filled. Therefore, the data analysis was based on 250 copies of the retrieved and properly filled questionnaire. Descriptive statistics was used in analyzing the data collected. Variables with P-value < 0.05 were believed to be statistically significant using 95% level of confidence. It should be noted that in the analysis, any variable in which the mean is greater than 2.50 is rejected while any variable in which the mean is less than 2.50 is accepted.

## **RESULTS**

### **Demographic Profile of the Respondents**

The following presentations such as age, sex, educational status, marital status, occupation and types of infertility were among the questions asked under demographic characteristics of

the participants. Data on table 1 show that majority of the participants (35.6%) were under the age group of 21-30 years. This is followed by those in the age bracket of 31-40 years (32.4%). The least number of participants (12 or 4.8%) were under the age group of > 50 years. A small percentage (14.8%) was also recorded for the age bracket of 15-20 years.

In terms of the gender of the participants, most the participants (78%) were female while a small number (22%) were male. The educational background of the respondents was also assessed. It can also be seen from table 1 that those participants without any form of formal education were 22 (8.8%) while majority of the participants (48.4%) had secondary education. The participants with primary education in the sample were 55 which represents 22% of the entire sample. The remaining 55 (20.8%) participants had tertiary education of NCE, OND, first degrees or postgraduate degrees.

It was also found that majority of the respondents (84.8%) were suffering from primary infertility. The remaining 38 (15.2%) participants had secondary infertility. In terms of occupation, majority of the participants (30.4%) were traders/artisans while those who were farmers were 68 (27.2%). The number of civil/public servants in the sample was 53 representing 21.2% of the entire sample. Those who were housewives and unemployed/students were 38 (15.2%) and 15 (6%) respectively.

**Table 1: Demographic distribution of the respondents**

<b>N=250</b>			
Variables	Categories	Frequency (fq)	Percentages (%)
Age	15 – 20 years	37	14.8
	21- 30 years	89	35.6
	31 – 40 years	81	32.4
	41 – 50 years	31	12.4
	> 50 years	12	4.8
Sex	Male	55	22
	Female	195	78
Educational status	No formal Education	22	8.8
	Primary	55	22
	Secondary	121	48.4
	Tertiary	52	20.8
Type of infertility	Primary	212	84.8
	Secondary	38	15.2
Occupation	Farmers	68	27.2
	Civil/public servants	53	21.2
	Traders/Artisans	76	30.4
	House wives	38	15.2
	Unemployed/students	15	6

**Source:** Fieldwork 2024

### Treatment Methods for Infertility

Results on table 2 reveal that there are four major treatment methods employed by infertile couples in the study area. The most used method for treatment of infertile in the area is clinical therapy (orthodox treatment) (mean=1.44 and standard deviation= 0.587). It can be seen that the mean (1.44) is less than 2.5 and therefore, it is accepted that clinical therapy is the most accepted method for treatment of infertility. Prayer therapy (mean= 2.10) and change of lifestyle (mean=2.43) have mean lower than 2.50 and as such it is accepted that infertile couples mostly use prayers and change of lifestyle in treatment of infertility. Traditional therapy has the mean of 3.82 which is above 2.50 and as such it can be said that traditional therapy is not a major treatment method for infertility in the area.

**Table 2: Treatment methods mostly used for infertility**

**N=250**

Treatment methods	SA	A	UD	DA	SDA	Mean	Std. Dev.
Traditional therapy	25(10%)	25(10%)	0(0%)	121(48.4%)	79(31%)	3.82	1.260
Clinical therapy	150 (60%)	88(35.2%)	12(4.8%)	0(0%)	0(0%)	1.44	0.587
Prayer therapy	25 (10%)	125(50%)	75(30%)	25(10%)	0(0%)	2.10	1.302
Change of lifestyle	10(4%)	190(76%)	3(1.2%)	25(10%)	22(8.8%)	2.43	1.027

**Source:** Fieldwork 2024

### Strategies for Coping with Infertility

Results on table 3 show that there are nine (9) major ways through infertile couples cope with their infertility situation. The most used coping strategy in the study area is child adoption with a mean of 1.91 and standard deviation of 0.563. It can be observed that the mean is less than 2.50 and therefore, it is accepted as a strategy for coping with infertility. Another coping strategy for infertility used in the area is child fostering (mean = 2.14 and standard deviation = 1.082). Again, the mean is less than 2.50 and as such it is accepted that child fostering is a major coping strategy used by infertile couples in the area. One other strategy accepted in the study area is that husbands in infertile marriages marry other wives through whom they hope to get children. This is accepted because it has a mean of 2.27 and standard deviation of 1.275 with the mean being less than 2.50. Other coping strategies used by couples in infertile marriages include self isolation (mean = 3.60 and standard deviation = 1.202), becoming extremely busy (mean = 2.91 and standard deviation = 1.454), alcoholism (mean = 4.10 and standard deviation = 1.385), engaging in extra marital (mean = 4.30 and standard deviation =

1.007, surrogate (woman to woman) marriage (mean = 3.68 and standard deviation = 1.128) and wife divorcing husband to marry another man (mean = 3.316 and stand deviation = 1.391). All these have mean that is greater than 2.50 and as such they are not accepted as major coping strategies used by couples who are into infertile marriages.

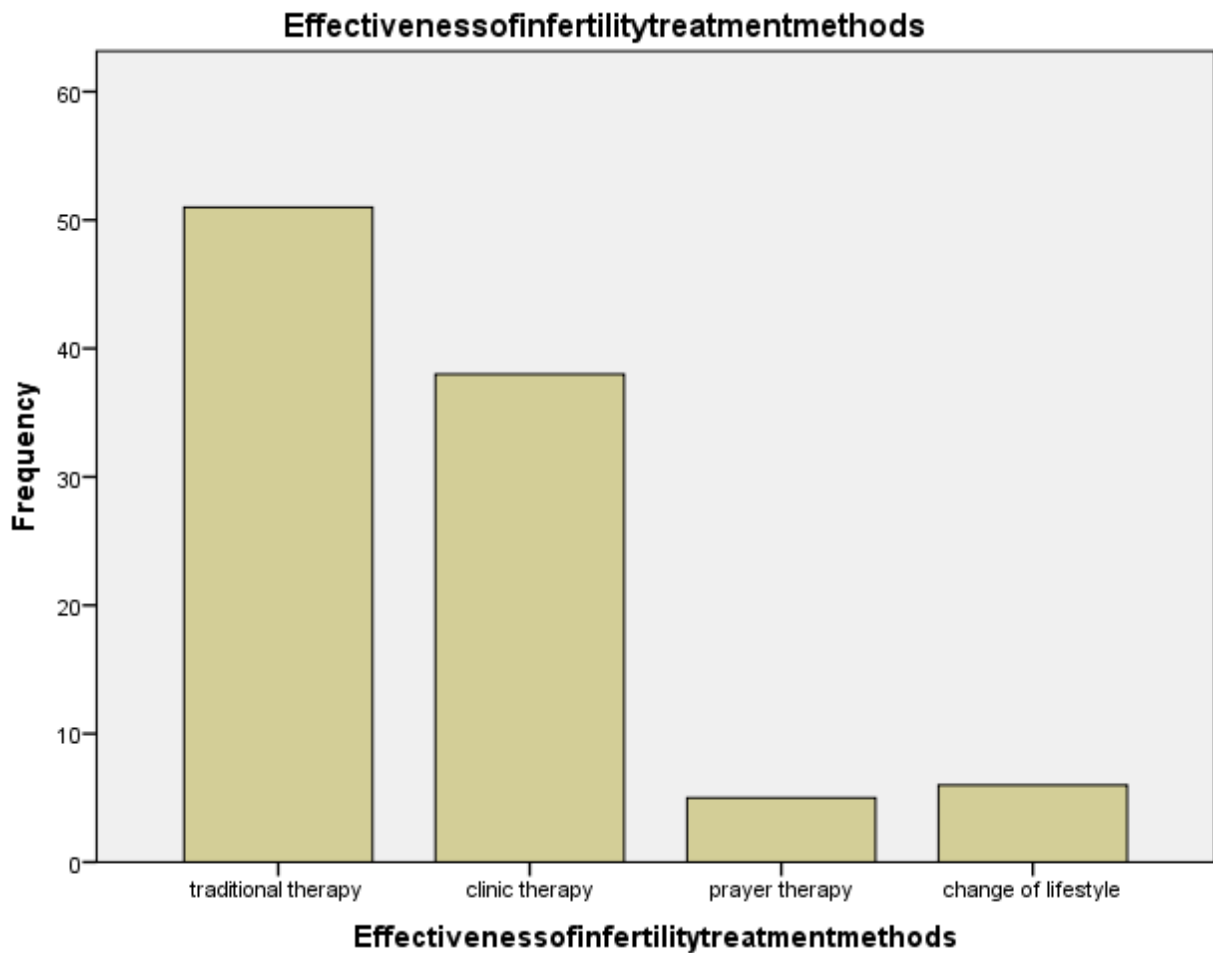
**Table 3: Copies strategies mostly used for infertility**

N=250							
Coping Strategies	SA	A	UD	DA	SDA	Mean	Std. Dev.
Child adoption	50(20%)	175(70%)	23(9.2%)	2(0.8%)	0(0%)	1.91	0.563
Child fostering	81(32.4)	94(31.6)	45(26.0%)	20(18.0%)	10(4.0%)	2.14	1.082
Self isolation	0(0%)	75(30%)	25(10%)	75(30%)	75(30%)	3.60	1.202
Getting extremely busy	50(20%)	75(30%)	22(8.8%)	53(21.2%)	50(20%)	2.91	1.454
Alcoholism	26(10.4%)	24(9.6%)	0(0%)	50(20%)	150(60%)	4.10	1.385
Extra marital affair	0(0%)	25(10%)	25(10%)	50(20%)	150(60%)	4.30	1.007
Surrogate marriage	0(0%)	56(22.4%)	44(17.6)	75(30%)	75(30%)	3.68	1.128
Husband marries additional wife	78(31.2%)	102(40.8%)	20(8%)	25(10%)	25(10%)	2.27	1.275
Wife leaves & marries another man	50(20%)	20(8%)	25(10%)	101(40.4%)	54(21.6%)	3.316	1.391

**Source:** Fieldwork 2024

### Effectiveness of the Infertility Treatment Methods

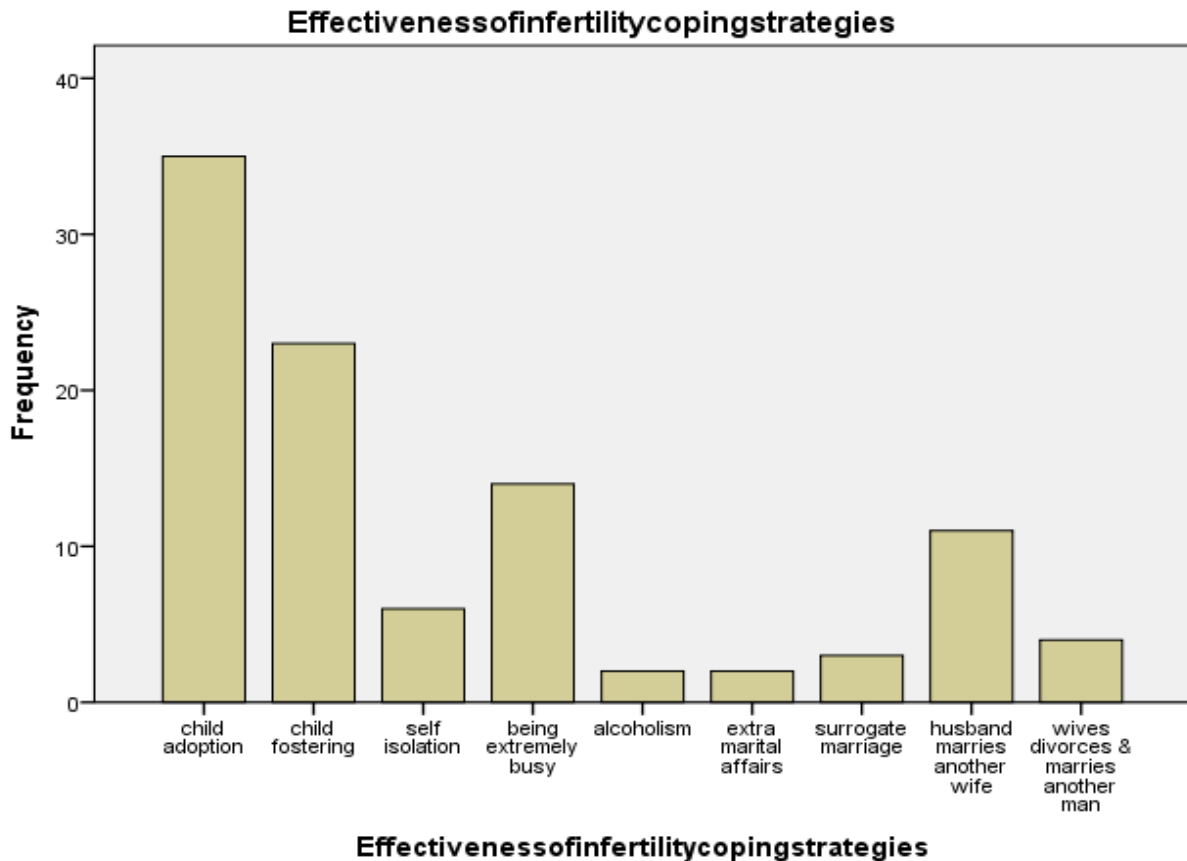
The study sought to know how effective the participants believed that the treatment methods for infertility are. Data on figure 2 revealed that the most effectiveness of all the methods is traditional therapy with the acceptance rate of 128 (51%). Another method accepted to be very effective in the treatment of infertility is clinical therapy with the acceptance rate of 95 (38%). The participants believed that the treatment methods that their effectiveness may not be truly ascertained are prayers (12 or 5%) and change of lifestyle (15 or 6%).

**Fig. 1: Effectiveness of Infertility Treatment Methods**

Source: Fieldwork 2024

### **Effectiveness of Infertility Coping Strategies**

Figure 2 shows the various coping strategies that couples used when they are faced with infertility and how effective the strategies are. It can be seen that child adoption has the highest value (88 or 35%). In other words, it is the most effective strategy for coping with infertility in the study area. The next is child fostering which has a value of 58 (23%). Other coping strategies which are believed to be effective are being extremely busy (value = 14 or 35%) and husband marrying another wife (value = 11 or 28%). The remaining coping strategies are believed to be ineffective. They are self isolation (value 15 or 6%), alcoholism (value = 5 or 2%), engaging in extra marital affairs (value = 5 or 2%), surrogate marriage (value = 7 or 3%) and wife divorcing husband and marrying another man (value = 10 or 4%). All these as ineffective coping strategies used by infertile couples because they all have values less than 10 or less than 20%.

**Figure 2: Effectiveness of infertility coping strategies**

Source: Fieldwork 2024

## DISCUSSION OF FINDINGS

The study set out to investigate the various treatment methods available to the people in the study area. The results show that the most common methods for the treatment of infertility are clinic for therapy at infertility treatment centres, traditional therapy, prayer therapy and behavioral therapy (changes in life style to favour fertility). It was also found that treatment at the clinics may involve use of drugs, counseling, surgery and assisted reproductive technologies. The traditional therapy which is also called traditional infertility treatment may involve the use of herbs, ointments, rituals, counseling and dietary. Prayer therapy made also involve prayers, revelations, fasting, counseling, trance and even penance. Behavioural therapy involves behavior modification in such a way that the person avoids actions, foods, drinks or other substances that could predispose one to infertility; and/or the person engages in such activities, food, drinks or substances that can improve one's sexual ability and

reproductive strength. This finding aligns with the views of some scholars (Inhorn & Patrizio, 2015; van Balen et al, 2000; Inhorn & van Balen, 2000; Campana et al, 2005; Nwosu, 2010) when they pointed out that help for treatment of infertility is sought from various sources including formal medical system, herbal and spiritual healers, traditional health specialists, diviners and even priests. This is in agreement with the report by Mayo Clinic (2020) which stated that the major treatment for the disorders of ovulation in women is fertility drugs. The drugs help to control and induce ovulation and also encourage childless couples to talk with your doctor about fertility drug options including the benefits and risks of each type.

It was also revealed that the people use the clinical therapy (orthodox medicine) most in the area. This is contrary to view of Mogobe (2000) in which he noted that people in developing countries use traditional remedies most. The findings also support the earlier positions of Smith (2005) and Akinsola (2009) that treatment of infertility in clinics (orthodox medical system) involves non-surgical and surgical infertility treatment. It was found that apart from clinical therapy, the most used method for treatment of infertility is traditional therapy. The result fits into the earlier submissions of Campana et al (2005) that traditional therapeutic treatment of infertility is highly patronized in rural communities. According to them, traditional infertility therapy is usually favoured because the practitioners are well known to the people, trusted by the people and treatment is cheap. The next therapy in use was behavioural therapy. The result also agrees with Nwosu (2011 b) when he posited some forms of infertility is caused by unhealthy behavioural attributes and such type of infertility could be handled through behavioural therapy. According to him, if the behavior of the individual is positively adjusted, it may lead to the resolution of the infertility problem.

Data further revealed that infertile couples use different strategies to cope with infertility. These strategies include child adoption, child fostering, self isolation, getting extremely busy, taking of much alcohol, engaging in extra marital affairs, surrogate marriage, husband marrying another wife and wife divorcing husband to marry another man. The results agree with the findings of Nwosu (2004) when he noted that a lot of coping strategies are used by infertile couples. According to him such coping strategies include divorce, remarriage, polygyny, infidelity, child adoption, child fostering and surrogate marriage. The result also shows that child adoption is used more in the area than child fostering. This is contrary to the position of Nwosu (2010) when he pointed out that the people use more of child fostering than child adoption. This could have occurred as a result of more enlightenment programmes about child adoption in Nigeria in recent time.

The study investigated the effectiveness of the treatment methods to which infertile couples are exposed to. It was found that in terms of effectiveness, the infertility treatment methods can be ranked as follows: traditional therapy, clinical therapy, behavioural therapy (change of lifestyle) and the least, prayer therapy. This finding aligns with the view of Nwosu (2010) when he posited that traditional infertility healers are the most effective in the treatment of infertility. According to him, this is followed by hospital infertility healers (clinical therapy) and spiritual infertility healers (prayer therapy) in that order. However, Nwosu, (2022) noted that when it comes to any infertility treatment that requires surgery, the clinical therapy supersedes traditional infertility therapy. Similarly, the resultant data also agree with view of Mayo Clinic (2020) that if there is improvement in the lifestyle and behavioural pattern of infertile couples, it could enhance the chances for pregnancy. These include stopping the use of certain drugs, avoidance of dangerous substances, increasing the frequency of sexual intercourse and regular exercise. In other words, when infertility is caused by behavioural issues, the most reliable treatment method could be behavioural therapy (change of lifestyle) as far as such behaviour has not lead to serious biological damages.

With regards to the effectiveness of the different coping strategies of infertility, it was found that the most effective coping strategy in the area is child adoption. This is followed by child fostering, getting extremely busy and husband marrying another wife. It is believed that child fostering is very effective because it means that the infertile couple could have their own child permanently with less risk. It is also believed that child fostering in effective because it enables the couple to temporarily have a child in their home pending when such child returns to his/her biological parents. Getting extremely busy is good because it makes the couples think less about their plight but it has some health implications. The issue of husband marrying another wife may be effective in a situation where the infertility issues are not resulting from the man. Even with that it also involves some social problems such as family conflicts and rivalry. The findings support the view of Texas Adoption Center (2020) that child adoption is effective because it leads to healthy living, positive social and emotional feelings and feelings of belonging and love for both the adopted child and the adopting parents. The result also aligns with the position of Minella (2021) that child adoption is very effective in coping with infertility because it has a lot of benefits for both adopted child and adopting childless parents. In the same vein, resultant data agree with the view of Children's Home Society of Virginia (2020) when they stated that child adoption help infertile couples fulfill lifelong dreams of raising a child and build meaningful relationship.

On the other hand, the result confirms the position of Isiugo-Abanihe (1985) when he noted that child fosterage is an effective means of coping with infertility/childlessness in West Africa. The finding also supports the view of Asuman et al, (2018) in which they stated that child fostering whether it is crisis fostering or non-crisis fostering helps to cushion the effect of childlessness. It was also revealed that infertile couples found the act of being very busy a good way for coping with infertility. This helps them to avoid so much contact with activities that may remind them of their problem. However, it should be noted that being extremely busy with little or no period for relaxation could also be dangerous to human health. This finding supports the views of Pelc (2022) and Cleveland (2021) when they posited that one of the greatest concerns regarding overworking is stress which is also implicated in the issues of depression, diabetes, high blood pressure and digestive issues. They noted that overworking increases the production of the hormone called cortisol which increases the risk of heart attack or stroke. Similarly, the result also aligns with the opinion of Cox (2020) that overworking prevents sleep, gets in the way of good habits and is dangerous to the heart.

Another coping strategy for infertility which the people believed to be moderately effective is that husbands in infertile marriage marry other women who they believe could give them children. As stated earlier, this strategy may result in the husband getting if the infertility problem is not from the man. Otherwise it may be a fruitless effort. However, as much as this strategy could result in child bearing for the husband, it has health implications. This is because the husband in this case will be having sexual intercourse with two different women without protection. This could result in the transmission of STDs including HIV/AIDS. This assertion agrees with the disease interrelation model (DIM) in which Nwosu (2011) explained that infertility could cause a husband to marry more than one wife which can be a conduit for transmission of diseases including STDs.

On the other hand, the result shows that alcoholism, extra marital affairs, surrogate marriage and wife divorcing husband to marry another man were some of the coping strategies for infertility. However, the people believe that these strategies are not really effective in managing the issue of infertility. This is because the danger which each of them portrays outweighs their benefits.

## **CONCLUSION**

It is clear that there are various ways of treating infertility which include clinical therapy, traditional therapy, behavioural therapy (change of lifestyle) and prayer (spiritual therapy). Of these methods, the most frequently used are the clinical. However, prayer therapy may be

going on simultaneously with these other methods of treatment. The data show that even though the people use clinical therapy more often, they still believe that the most effective method for infertility treatment is traditional therapy. Again, it is obvious that when infertility is caused by certain negative lifestyle(s), the most effective method could be behavioural adjustment. As a result, it can be said that if couples in infertile marriages could understand, the most appropriate method for their treatment and apply it on time, it could result in effective solution to their infertility condition.

Sometimes, couples facing infertility may have to cope with the situation of infertility either before fore fertility is restored or when treatment fails. As a result, there are different strategies for coping with infertility. These could be child adoption, child fostering, self isolation, getting extremely busy, alcoholism, engaging in extra marital affairs surrogate marriage, husband marrying another wife and wife divorcing husband to marry another man. Of all these strategies, we can conclude that the most effective are child adoption and child fostering. These two strategies are healthy and beneficial to the adopting/fostering couple as well as the adopted/fostered children. It has no health implications. The other strategies that are usually used by infertile couples are self isolation, getting extremely busy and marrying a second wife. Of all these, the only one that may bring forth a child might be marrying additional wife. However, all of them have severe health implications that make them unhealthy strategies for solving infertility.

As a result of all these, we suggest that adequate enlightenment campaign programmes should be organized for married couples about the best ways of treating infertility or coping with it without causing more harm to one's health. It is also important to educate the public about the misconceptions and myths concerning infertility in order to reduce the pressure that infertile couples face which usually lead them to sought for treatments in the wrong places or applying unsafe coping strategies. There is also the need for governments, healthcare practitioners, public health experts, non-governmental organizations and social welfare officers to educate couples who are involved in infertile marries on the effectiveness and use of assisted reproductive technologies (ARTs) to enable infertile couples to get their own children with less difficulties. Similarly, the cost of procuring these ARTs should be subsidized so that they could be affordable to the privileged infertile couples.

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