

In-Vitro Fertilization Practice: Awareness and Perceptions Among Women Attending Fertility Clinics in Okija, Anambra State, Nigeria

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ABSTRACT

Background: *In-vitro fertilization (IVF) is a procedure that is one of the options in managing infertility. It involves fertilizing the egg from the female with the spermatozoa from the male outside the human body. It is a common practice in the developed world. However it is still a new phenomenon in the developing countries. This is due to the level of awareness and acceptability, worsened by cost which is still beyond the reach of the poor masses in the developing countries.*

Aim: *To assess the level of awareness and perceptions of in-vitro fertilization among women attending fertility clinics in Okija, Ihiala local Government area of Anambra State, Nigeria.*

Method: *The study is a cross-sectional descriptive study. A total of 500 women attending fertility clinics in Okija were recruited using systematic sampling technique. Data were collected using pre-tested, structured, interviewer-administered questionnaire and analyzed manually.*

Result: *The mean age of the respondents was 30 years. The mean duration of infertility was 11 years. Secondary infertility was more common (66%) than primary infertility (34%). Only 37.6% of the respondents were aware of in-vitro fertilization. Only 37.2% of those that aware accepted to undergo IVF procedure. 79.7% of those who rejected IVF claimed that the babies are abnormal, while 12.7% of believed that the cost is high.*

Conclusion: *There is need to put in efforts in spreading the knowledge of in-vitro fertilization in developing countries like Nigeria. Efforts should be made to make the procedure more affordable and accessible to the masses.*

Keywords: *Awareness, Perceptions, In-vitro fertilization (IVF), Okija.*

INTRODUCTION

Infertility is defined as the failure to achieve a clinical pregnancy after 12 months or more of regular

unprotected sexual intercourse.¹ Africa has the highest rate of infertility, mostly due to tubal occlusion. Paradoxically, however, it records the lowest rate of assisted reproductive technology (ART) treatment.² In vitro fertilization (IVF) is a procedure in which eggs from the woman's ovary are removed, and are mixed with sperm in an In-vitro Fertilization laboratory culture dish. Louise Joy Brown, born 25th July, 1978, is the world first baby conceived by In-vitro Fertilization (IVF), a procedure developed by Patrick Steptoe and Robert Edward. In Nigeria, Oladapo Ashiru pioneered the IVF program in 1984 and his team successfully delivered the first IVF baby in 1986. In Anambra State, Joseph Ikechebelu and his team at Life Specialist Hospital Nnewi, delivered the first IVF baby on 6th August, 2011.³ Of the various treatment options available for the treatment of infertility, none of treatment procedures have had an impact on the society as much as in vitro fertilization. There is no difference from a pregnancy established without fertility therapy and is not considered high risk. In-vitro Fertilization is for couples who had no hope of having a "biologically related" child; bilateral tubal occlusion being the most common underlying cause.⁴ IVF based reproduction still has an edge over adoption because in adoption, there is no genetic contribution by the couple but in IVF, couples contribute genetically or carry the baby. In Nigeria, there has been a lot of research work on infertility; for example, in Northern States^{5,6} South-western States,⁷⁻⁹ Southern State^{10,11} and South Eastern Nigeria.¹²⁻¹⁵ For the effective realization of various disease control measures instituted in any community, the knowledge/awareness of the populace of the cause, mode of spread/transmission and the possibility of treatment of the disease is of immense importance.¹⁶ Therefore, the aim of this study was to assess the level of awareness and perceptions of IVF practice among women in Okija.

MATERIALS AND METHODS

The study area, Okija (Latitude 5° 54' N; Longitude 6° 52' E), with tropical rainforest vegetation, is in Ihiala Local Government Area of Anambra State, South-eastern Nigeria. Okija lies on both sides of the Onitsha-Owerri Federal Highway, bounded to the north and northeast by Ukpok (Lat. 5° 64' N; Long. 6° 54' E), Southeast by Ihiala (Lat. 5° 51' N; Long. 6° 51' E), northwest and southwest by Ossamari (Lat. 5° 49' N; Long. 6° 43' E) and Ogbakuma (Lat. 5° 58' N; Long. 6° 44' E).¹⁷ The women were mainly traders although there are public servants and farmers. A written informed consent was obtained from the community heads, hospitals and husbands of the women recruited for the study.

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The study sample included 500 women aged 26 – 50 years old attending fertility clinics in Okija between June and September, 2012. The women were recruited by systematic sampling. data was collected using structured interviewer-administered questionnaire. Data obtained was analyzed manually. The interview was conducted in the native language of Igbo or English. All questionnaires were anonymous in order to maintain their privacy. Statistical analysis included frequency distribution of the responses.

RESULTS

A total of 515 women attending fertility clinics in Okija were approached out of which five hundred (500) agreed to participate in this study. Therefore, the response rate was 97%. The socio-demographic characteristics of the women were summarized in Table I. The peak incidence of the infertility was in the age group of 46 to 50 years. 264 (52.8%) of the women had attained secondary school followed by tertiary

education, 202 (40.4%). Their occupation includes trading 305 (61.0%) followed by public services, 100 (20.0%). Majority of the women were in monogamous setting 475 (95%). All were christians and Igbos in terms of religious affiliation and ethnicity.

The women knowledge about infertility was summarized in Table II. The mean age and duration of the infertility among women interviewed were 38.3 years and 11 years respectively. Majority of the women interviewed had the secondary type of infertility 330 (66%) compared to those with primary infertility 170 (34%). The women attributed their infertility to be as a result of blocked fallopian tubes, 190 (38%); others sperm abnormality, 88 (33%); Sexually Transmitted Diseases, 65 (17.6%).

TABLE I: SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE WOMEN

VARIABLE	FREQUENCY	PERCENT
Age		
26-30	70	14.0
31-35	81	16.2
36-40	95	19.0
41-45	124	24.8
46-50	130	26.0
Religion		
Catholics	263	52.6
Anglicans	150	30.0
Pentecostals	87	17.4
Occupation		
Trader	305	61.0
Public servant	100	20.0
Students	65	13.0
Farmers	30	6.0
Level of Education		
Tertiary	202	40.4
Secondary	264	52.8
Primary	34	6.8
Family setting		
Monogamous	475	95.0
Polygamous	25	5.0
Ethnic group		
Ibos	500	100
TOTAL	500	100

TABLE II: ATTITUDE AND PERCEPTIONS ABOUT THEIR INFERTILITY

VARIABLE	FREQUENCY	PERCENT
Duration of infertility		
1-5	45	9.0
6-10	145	29.0
11-15	310	62.0
Type of infertility		
Primary	170	34.0
Secondary	330	66.0
Reason for the infertility		
Blocked fallopian tube	190	38.0
Sperm abnormality	165	33.0
STD	88	17.6
Spiritual attack	37	7.4
Previous use contraceptive devices	20	4.0

Awareness about IVF practice was summarized in Table III. One hundred and eighty eight (37.6%) of the women were aware that in-vitro fertilization practice exists, 37.2% of those who were aware accepted to undergo IVF procedure. The commonest sources of information of the women who were aware of IVF are

family relatives, 97 (51.6%), then church, 51 (27.3%) and newspapers, 20 (10.6%). Knowledge on IVF practice showed that 5.9% of the women who are aware of IVF were aware that the treatment could fail while 16.0% of them knew that male infertility could be treated with the practice.

TABLE III: AWARENESS ABOUT IVF PRACTICE AMONG THE WOMEN

VARIABLE	FREQUENCY	PERCENT
Awareness		
Heard it	188	37.6
Not heard	312	62.4
Source of information		
TV/Radio jingle	08	4.3
Family relatives	97	51.6
Internets	12	6.4
Church	51	27.1
Newspapers	20	10.6
Aware that treatment could fail		
Yes	11	5.9
No	177	94.1
Aware that could be used in male infertility		
Yes	30	16.0
No	158	84.0

Attitude and perceptions of the women about IVF practice were summarized in Table IV. Among the women who are aware of IVF, those who rejected IVF practice claimed that the babies are abnormal 94 (79.7%); others said that it involves high cost of treatment 15 (12.7%), No comment 9 (7.6%). 57 (81.4%) of the women who accepted IVF strongly

prefer to use their own gamete rather than donor oocyte and sperm for their fertility treatment. Also, 91.4% preferred multiple pregnancies to singleton pregnancies. However, none of them accepted the use of surrogate mother after thorough explanation of the meaning.

TABLE IV: WOMEN'S ATTITUDE AND PERCEPTIONS ABOUT IVF PRACTICE

VARIABLE	FREQUENCY	PERCENT
Would want to undergo IVF procedure		
Yes	70	37.2
No	118	62.8
Reason for rejecting IVF practice		
High cost of treatment fee	15	12.7
Abnormal	94	79.7
No comment	9	7.6
Preference for the type of pregnancy		
Singleton	6	8.6
Multiple	64	91.4
Preference for the source of gamete		
Self	57	81.4
Donor	13	18.6
Preference for use of surrogate mother		
Yes	0	0.0
No	100	100

DISCUSSION

Results of this study have shown that majority of the women attending fertility clinics in Okija are ignorant or unaware of IVF practice and therefore need to be educated about this practice. Fertility and parenthood are highly valued in Africa to the extent that procreation is usually considered the most important purpose of marriage.¹⁰ Majority of the women had secondary infertility (66%). This study agrees with the findings of several works^{7,12,18} which reported primary and secondary infertility as 28.3%, 42.9%, 22.5% and 71.7%, 57.1%, 77.5% respectively. The participants mentioned that the Ibo vernacular *nwaanyi aga* defines a woman who has never been pregnant before despite having been married for some years, which refers to primary infertility. By contrast, *ume omumu* is used to describe a woman who was pregnant but after some months miscarriage sets in but there is no Ibo term that is used to define a woman who finds it difficult to conceive another after having had one or more babies, a situation of secondary infertility. *Nwaanyi aga* is popularly regarded as being more serious than *ume omumu*, however *ume omumu* could be particularly serious if there is no male child among the surviving children.

Infertility increases with age groups among the women. Mean duration of infertility was 11 years. This was higher than the result reported in Northern Nigeria by Adebisi G.A et al⁶ and in South Eastern Nigeria by Obi SN¹⁴ as 4.1 and 5 years respectively. The higher rate could be as a result of previous untreated sexually transmitted diseases, post abortion complications and

excess traditional concoctions. They attributed the aetiology of their infertility to blocked fallopian tubes 190 (38%). This agrees with the findings of Ikechebelu JI et al¹³ and Umeora et al¹⁵ in South Eastern Nigeria. The findings in this study that the women are abused especially from family relatives agrees with the findings of some previous studies^{19,20} that these class of women are verbally or physically abused in their own homes, deprived of their inheritance and sent back to their parents. There is usually constant pressure from relatives of the husband in a childless union to marry another wife, because more often than not, family members tend to perceive the woman as the infertile partner.

The major source of the women's awareness on IVF practice was through their relatives; not in the clinics. This clearly showed that the use of Assisted Reproductive Technology such as IVF practice is low especially in rural population where challenges of conception may continue as long as education and poverty reduction are not intensified. The low percentage may be attributed to the fact that many of them who rejected IVF said that the procedure is very costly considering the socio-economic situation in Nigeria. This is in agreement with the findings of a study⁴ which reported that a large majority of the population cannot afford infertility treatment since new reproductive technologies are either unavailable or very costly. Also, others claimed that it is immoral to spend time and resources on extraordinary means of promoting births. They noted that it will also promote babies as products rather than as human beings to be

cherished in their own right. They reported that the child may not be accepted in the society.

Majority of the women prefer to use their own gametes if recruited for IVF cycle. This was to avoid relinquishing genetic relatedness, marital conflicts and the society questioning their parental abilities. Also, 91.4% preferred multiple pregnancies to singleton pregnancies if given the opportunity to choose. This correlates with the work of Okohue J.E et al²¹ who also reported 94.4% and 5.6% for choice of multiple and single pregnancies respectively. The likely reasons include desires to maximize the chance for success in a single treatment given the high cost and the fact it will not still lead to conceiving naturally after delivery. Okohue et al²¹ and Schieve L.A²² made the same observation. All the women rejected the use of surrogate mother. The women opposed it on the ground that they would prefer to carry their babies and not any other person. This reflects on the attitude and perceptions of the people in this area.

CONCLUSION

This study has shown that knowledge of IVF is low in our environment. Furthermore the perception among those who have the knowledge is poor. The study also shows that the major reason those aware of IVF do not accept it is that it is perceived as abnormal.

The public should be educated on assisted reproductive technology. The mass media must be fully exploited by the governments, especially that of Nigeria and other developing countries in order to educate its citizens and help to reduce the rate of stigmatization attached to the practice. Also, there is need for reduction of IVF treatment cost.

ACKNOWLEDGEMENTS

We thank the Community Heads in Okija, and women attending fertility clinics for their assistance and cooperation during the study.

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