The Perception and Acceptance of In vitro Fertilization amongst Infertile Couples Attending Fertility Clinic in University of Port Harcourt Teaching Hospital Choba in Rivers State

Udo Orukwowu*, Mercy Mgbere and Jane Baridah Kue

Department of Nursing Sciences, Faculty of Basic Medical Sciences, College of Medical Sciences, Rivers State University, Nigeria.

*Corresponding author email: udocd27@gmail.com; Phone: +2349060039098

Abstract

In vitro fertilization is a treatment for infertility in which a woman’s egg (ovum or ova) are fertilized by spermatozoa in a laboratory dish, one or more of the fertilized egg (embryo) are then transferred into the woman’s uterus where it is planted to produce a pregnancy. This research study investigated the perception and acceptance of In vitro fertilization amongst infertile couples attending fertility clinics in the University of Port Harcourt Teaching Hospital Choba in Rivers State. The objectives were: to ascertain the opinion of couples on In vitro fertilization procedure, to determine the level of acceptance of In vitro fertilization among couples and to identify challenges facing the acceptance of in-vitro fertilization amongst couples. Related literature was reviewed. Theory of Reason Action (TRA) was adopted in this study. A cross-sectional descriptive design was used in the study. The target population consisted of 130 couples, 99 was determined as the sample size using Taro Yemen formula. The instrument for data collection was a self-structure questionnaire consisting of section A and section B consisting of 12 items that elicited information for the research questions. Data were analysed using frequency, percentage and mean. The findings reveal that 94 respondents are of the opinion that In vitro fertilization is very expensive, 89 respondents said it involves rigorous activities, 13 respondents believed that pregnancy can be achieved through IVF while 74 respondents said it does not affect their religion. In the acceptance of in vitro fertilization, 91 respondents easily accept other means of conception, 86 have attempted IVF previously, 67 male partners do not accept IVF and 19 female partners do not accept IVF. The challenges reveal that 67 respondents lack support from the male partner. Eleven (11) respondents believe that religion hinders the acceptance of IVF, 64 respondents see it to be time-consuming and 87 respondents do not lack respect in society. The researcher recommended that awareness should be created for the public through the media, to enable infertile respondents to have an understanding of the procedure. We however recommend that the study be carried out in other states on the perception and acceptance of In vitro fertilization among couples.

Keywords: In vitro fertilization, Infertility, Fertilization of egg, Spermatozoa, Pregnancy

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1. Introduction

In vitro fertilization is a treatment for infertility in which a woman’s egg (ovum or ova) are fertilized by spermatozoa in a laboratory dish, one or more of the fertilized egg (embryo) are then transferred into the woman’s uterus where it is planted to produce a pregnancy. Studies have shown that the inability to bear children due to infertility is a leading cause of suicide, divorce, abandonment, domestic violence, psychosis, depression and even death amongst couples who are infertile. This has become a public health issue that needs to be addressed urgently. Joseph (2017) noted that there is a high rate of infertility among couples and these challenges are perceived differently in each socio-cultural context in which they are experienced. The solution to the problem is adversely affected by the people perception of the phenomenon. Chen (2015) observed that couples usually resort to In vitro fertilization after they have exhausted their option of pursuing other less intrusive forms of treatment and that alternatives such as adoption or living a childfree life are not widely accepted. He further noted four challenges that were identified which include; the process of hardship, the endurance of hardship with a loving relationship, partnership couples and ambivalence toward social support. These offer insight into the life of couples undertaking in vitro fertilization couple and point to the need for a supportive program for infertile couples as dyads to them get through the hardships of treatment.

Also, Brick (2014) noted that since the first lens in vitro fertilization birth in 1982, on average 1:100 babies are now born in vitro fertilization and also France’s Social Security Policy on assisted fertility treatment is recognised as...
In vitro fertilization as the treatment of infertility among couples, however, is still very low due to their perception and some perceived challenges that affect its acceptance. The high cost of the treatment, religious dogmas and traditional norms and values about procreation are important determinant factors in the use of in vitro fertilization (Okafor, 2017).

The researchers during the clinical experience in the University Teaching Hospital Port Harcourt noticed that about 130 women are attending the fertility clinic but only five (5) out of them have attempted a cycle of in vitro fertilization. Others still pass through difficulties and trauma of childlessness in their marriage. This spurred the researcher to investigate into Perception and Acceptance of In vitro fertilization amongst couples attending fertility clinics at the University of Port Harcourt Teaching Hospital Rivers State.

1.2 Research Questions
- What are the opinion of couples on in vitro fertilization as a conception option?
- To what extent is in vitro fertilization accepted among infertile couples attending a clinic in Port Harcourt Teaching Hospital.
- What are the challenges facing the acceptance of In vitro fertilization procedures in Port Harcourt Teaching Hospital?

1.3 Objectives of the Study
The aim of this study is to examine the perception and acceptance of IVF among couples attending fertility clinics at the University of Port Harcourt Teaching Hospital Rivers State. The objectives are:

- To ascertain the opinions of couples on In vitro fertilization procedure.
- To determine the level of acceptance of In vitro fertilization among couples.
- To identify challenges facing the acceptance of In vitro fertilization amongst couples.

1.4 Significance of the Study
The findings from this study will be of importance to the ministry of health as they will get to know the challenges facing couples in accepting In vitro fertilization as a means of conception. To this extent, the ministry will use the information to come up with ways of motivating infertile couples.

1.5 Scope of the Study
This study was delimited to the perception and acceptance of In vitro fertilization option amongst couples attending fertility clinic in University of Port Harcourt Teaching Hospital. It will also identify challenges facing them in accepting this conception option.

1.6 Operational Definition of Terms
Perception: Opinion about in vitro fertilization.
Acceptance: Agreement to carry out In vitro fertilization as an option of conception.

In vitro fertilization: Is a process of fertilization by manual combing an egg and sperm in a laboratory dish and then transferring the embryo to the uterus.

Infertility: Is the inability of a couple to achieve pregnancy after one year of regular unprotected sexual intercourse.

Challenges: Constraints encountered by infertile couple which affects their acceptance of in vitro fertilization.
Couple: Two people who are married or otherwise closely associated romantically or sexually.

2. Literature Review
2.1 Conceptual Review
2.1.1 Concept of In vitro Fertilization
In vitro fertilization is a treatment for infertility in which a woman’s egg (ovum) are fertilized by spermatozoa in a laboratory dish, one or more of the fertilized egg (embryo) are then transferred into the woman’s uterus where it is implanted to provide a pregnancy. Fraser and cooper (2009) also defined In vitro fertilization as a laboratory technique where fertilization occurs outside the body and is one of the Assisted Conception Technique (ACT) used.

Furthermore, Richard (2015) added that In vitro fertilization steps occurs about two (2) weeks interval called In vitro fertilization cycle, the ova ries are stimulated by a combination of fertility medication and aspirated from the ovarian follicle and over five (5) million pregnancies have been achieved world write with Nigeria inclusive.

Jacob (2012) in her study of In vitro fertilization stated some indication which includes; Endometriosis, Cervical Hostility, unexplained infertility, ovarian failure, absent or blocked fallopian tube, malefactors (due to low sperm count or low sperm mortality), advanced reproductive age and all other cause of infertility after failing treatment with other therapies e.g. Contraceptive drugs etc. According to Jacob (2012), criteria for selection of patients for In vitro fertilization procedure include; Age of the woman (egg donor) less than 35 years, presence of at least one functioning ovary, normal semenogram i.e. normal sperm quality in male and couples negative for Human Immuno Virus (HIV) and Hepatitis.

Rombart (2014) noted that there are two types of in vitro fertilization, natural and mild in vitro fertilization. Natural in vitro fertilization: it involves using no drugs for ovarian hyperstimulation, while drugs for ovulation suppression may still be used. In vitro fertilization using no drugs for ovarian hyperstimulation was the method of the conception of Louise Brown. This method of conception can be successfully used when women want to avoid taking ovarian stimulating drugs with their associated side effects (Rombart, 2014). Mild in vitro fertilization is a method in which a small dose of ovarian stimulating drugs are used for a short duration during in woman’s menstrual cycle aimed at producing 2-7 eggs and creating a healthy embryo. This method appears to be advanced in the field to reduce complications and side effects for women and it also aimed at quality and not the quantity of egg arid embryo (Rombart, 2014).

Marca and Rombart (2014) stated the steps of In vitro fertilization in their research which are; Ovarian hyperstimulation, final maturation, egg retrieval, egg and sperm preparation, coinubation, embryo selection, embryo transfer and adjunction medication. Ovarian hyperstimulation: This is the stimulation to induce the development of multiple follicles of the oocytes. Ovarian stimulation includes suppression of spontaneous ovulation for which two main methods are available;

Gonadotropin-Releasing Hormone (GnRH) antagonist protocol is shorter and has reduced the risk of hyperstimulation syndrome. Injectable Gonadotropin (Usually Follicle Stimulating Hormone (FSF) analogues) which are generally used under close monitoring and such monitoring frequently checks oestradiol level by means of gynaecologic ultrasonography and follicular growth. Typically approximately 10 days of injection will be necessary. The goal of stimulation of the ovaries to get at least two follicles that are approximately 15-18mm in size to develop for the In vitro fertilization procedure.

Final Maturation: When the ovarian follicle have reached a certain degree of development, induction of final oocytes is performed by injection of Human Chorionic Gonadotropin (HCG) commonly known as trigger shot HCG arts in analogue of luteinising hormone (LH) and ovulation would occur between 38 and 40hours after single HCG injection but the egg retrieval is performed at a time usually between 34 and 36 hours of HCG injection that is just prior to when the follicle would rupture. This avails for scheduling the egg retrieval procedure at a time when the eggs are fully mature. HCG injection confers a risk of ovarian hyperstimulation syndrome therefore using GnRH antagonist of HCG eliminate the ovarian stimulation syndrome. Marca and Rombart (2014).

Egg Retrieval: Marca and Rombart (2014) noted that the eggs are retrieved from the patient using a transvaginal technique called transvaginal oocyte retrieval, involving ultrasound of the ovaries. Through this needle, follicles can be aspirated and the follicular fluid is passed to an embryologist to identify ova. It is common to remove between ten (10) and thirty (30) eggs. The retrieval procedure usually takes between 20–40 minutes depending on the number of mature follicles and is usually done under conscious selection or general anaesthesia.

Egg and Sperm Preparation: In the laboratory, the identified egg are stripped of surrounding cells and prepared for fertilization. An oocyte selection may be performed prior to fertilization to select an egg with optimal chances of a successful pregnancy. In the meantime, semen is prepared for...
fertilization by removing inactive cells and seminal fluid in a process called sperm washing. If semen has been provided by a sperm donor, it will usually have been prepared for treatment before being frozen and quarantined and it will be thawed ready for use (Marca and Rombart, 2014).

Co-incubation: According to Marca and Rombart (2014) the sperm and egg are incubated together at a ratio of about 75,000:1 in a culture media in order for the actual fertilization to take place. A review came to the result that the duration of this co-incubation of about 1-hours result in a significantly higher pregnancy rate than 16-24 hours. In most cases, the egg will be fertilized during co-incubation and will show two pronuclei. In certain situations, such as low sperm count or motility, a single sperm may be injected directly into the egg using intracytoplasmic sperm injection (ICSI). The fertilized egg is then passed to a special growth medium and left for about 48 hours until the egg consists of six to eight cells.

Embryo Culture: the main duration of embryo culture are until the cleavage stage (day two to four after co-incubation) or the blastocyst stage (day five or six after co-incubation) embryo culture until the blastocyst stage confers a significant increase in live birth rate per embryo transfer, but also confers a decreased number of embryos available for transfer and embryo cryopreservation. So the cumulative clinical pregnancy rates increase with cleavage stage transfer. Transfer of day two instead of day three has no difference in the live birth rate (Marca and Rombart 2014).

Embryo Selection: Marca and Rombart (2014), asserted that laboratories have developed grading methods to judge oocyte and embryo quality. In order to optimise pregnancy rates, there is significant evidence that a morphological scoring system is the best strategy for the selection of embryos. Since 2009 when the first time-lapse macroscopy system for In vitro fertilization was approved for clinical use, morphokinetic scoring system has been shown to improve to pregnancy rate further.

Embryo Transfer: Embryo are graded by the embryologist based on the number of cells, evenness of growth and degree of fragmentation. The number to be transferred depends on the number available, the age of the woman and other health and diagnostic factors. In countries such as Canada, the United Kingdom, Australia and New Zealand, a maximum of two embryos are transferred except in unusual circumstances. In the United Kingdom and according to Human Fertilization and Embryo Authority (HFEA) regulations, a woman over 40 years may have up to three embryos transferred, whereas in the United State of America younger women may have many embryos transferred based on individual fertility diagnosis. Most clinics and country regulatory bodies seek to minimise the risk of pregnancies carrying multiple, as it is not uncommon for more implantations to take than desired. The embryos judged to be the “best” are plastic catheter, which goes through her vagina and cervix. Several embryos may be passed into the uterus to improve the chances of implantation and pregnancy (Marca and Rombart, 2014).

Adjuvant Medication: Marca and Rombart (2014) stated that letal support is the administration of medication generally progesterone, progesterin or Gonadotropin-releasing Hormone (GnRH) antagonists to increase the success rate of implantation and early embryos genesis, thereby complementing supporting the function to the corpus leuteum. A Cochrane review found that human chorionic Gonadotropin (HCG) or progesterone is given during the luteal phase may be associated with higher rates of live birth or ongoing pregnancy.

According to the Center for Human Reproduction (CHR) (2013), in vitro fertilization rates result in a favourable outcome depending on the type of calculation used. This outcome may represent the number of confirmed pregnancies called pregnancy rate or the number of live birth called live birth rate. The success rate depends on variables factors such as maternal age, cause of infertility, embryo status, reproductive history and lifestyle factors. Due to advances in reproductive technology in vitro fertilization success rates are substantially higher today than they were few years ago.

2.1.2 Perception of In vitro fertilization amongst couples

Perception of In vitro fertilization varies by sex, attitude, belief, cultural practices toward accepting new technology, religion, socio-economic factors and income. Ochutuji (2016) showed that 10% result in a significantly higher burden of infertility is rising with the increasing population and also data collation. The aspiration of our womenfolk to acquire western education up to primary level and the burden of infertile ones and the infertile population is regulated by the HFEA regulations. The aspiration of our womenfolk to acquire western education up to primary level and the burden of infertile ones and the infertile population is regulated by the HFEA regulations.

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group such as homosexual couples single parents, fertile women and other countries prohibit egg donors from producing eggs for infertile couples as it’s considered as adultery in Jewish and Islam thereby decreasing the level of acceptance (Okafor & Ezeah, 2015).

2.2 Theoretical Frame Work

Theory of Reason Action (TRA)

The Theory of Reason Action (TRA) was developed by Fishbein and Ajzen in 1980 and its origin is in social psychology. The theory defines the link between beliefs, attitudes, norms, intentions and behaviours of individuals. According to this model, a person behaviour is determined by its behavioural intention to perform it. This intention itself is determined by the person’s attitude and subjective norms.

The theory can be summarised by the following equation; Behavioural Intention = attitude * subjective norms.

The model, therefore, suggests that external stimuli influence attitude by modifying the structure of the person’s belief. Moreover, behavioural intention is also determined by the subjective norms that are themselves determined by the normative beliefs of an individual and by his motivation to comply with the norms.

Application to the study: The theory asserts that people act towards things based on the meaning those things have for them, and these meanings are derived from social interaction and modified through interpretation: The theory argues that the meaning of a thing resides in the action that it elicits as well as depend on the degree of consensual responses between two or more people.

The subjective norms are the pressure mounted on infertile couples concerning the childlessness in order to be accepted by society and their joy as a parent which is been triggered by the consequence childlessness. Depression, lack of respect and deprivation of family inheritance, so putting all these to consideration makes the infertile couples to have a reason to consider In vitro fertilization as a conception option and to have a positive attitude towards it and believing that with In vitro fertilization pregnancy can be achieved. The Theory of Reason Action, look at how people in everyday situations perceived IVF which defers between cultures and settings. Somebody being unable to perform his/her reproductive role can be seen as having a disease or ill health, having no children, or having no sons. In their words, reality does not only give meaning to things, but rather people must make things meaningful in order to make them socially real. Thus, the meaning of IVF Modalities Arises.

2.3 Empirical Review

A research carried out by Sule (2011) on “acceptance of in vitro fertilization” using a quantitative component, a sample size of 589 couples in Zamfara State through records, questionnaires and one on one interviews, has his findings that non agreed In vitro fertilization as an option for conception due to religious belief and partner factor.

Adedeji (2012) who conducted his research on the perception of In vitro fertilization among couples in Edo State Teaching Hospital using a descriptive study sample size of 150 couples through convenience sampling technique for two years through records in hospital, 150 questionnaires and observation reveals that half of the couples agreed to In vitro fertilization while others did not agree due to their partner and the cost.

Okoronyewo (2014) in his research on “acceptance of in vitro fertilization” in Abia State University Teaching Hospital with a sample size of 100 using purposeful sampling of non-probability of sampling technique, read journals checks record and constructed 100 questionnaires which he distributed. His findings reveal that acceptance of In vitro fertilization among the couples was poor i.e. only a few accepted the In vitro fertilization procedure while the majority rejected the procedures.

In a recent study conducted by Richard (2015) on “perception of infertile couples in In vitro fertilization in Enugu Fertility Clinic Teaching Hospital, a descriptive design was carried out and a sample size of 200 was utilized using convenient sampling through records, observation, interview and distribution of 200 questionnaires. Out of which, only a few had a good perception on In vitro fertilization while the remaining majority claimed not to partake on the procedure i.e. have a no good perception of IVF.

Also in a study conducted by Adewale (2014) in Lagos State University Teaching Hospital on the perception of In vitro fertilization using quantitative component and a sample size of 150 through records, interview and 150 questionnaires reveals tha the majority agreed on In vitro fertilization while few did not agree to it.

Finally, Obita et al. (2014) in their studies on “perception and acceptance of In vitro fertilization using descriptive research and sample size of 500 couples in Nnamdi Azikiwe University Teaching Hospital through the checklist, observation, interview and distribution of questionnaires stated that the majority believes that conception can be achieved through the procedure and few accepted to undergo the IVF procedure.

3. Methodology

3.1 Research Design

The design for the study is a cross-sectional descriptive survey because it deals with collecting data and describing the data in a systematic manner.

3.2 Research Setting

This study was carried out in the fertility clinic in the University of Port Harcourt Teaching Hospital (UPTH) Choba. The Hospital is situated at Choba (along East-West Road) in Obio-Akpor Local Government Area of Rivers State. It is a major tertiary-care teaching and research facility which was founded in 1980 and the Hospital has a 500-bed capacity and a staff strength of about 2,173. The Fertility Clinic has the following structures; Reception, Counselling room, Scanning room, Sperm Specimen Collection room, theatre, laboratory room, recovery room, nurse office etc, and also has a staff strength of 20 (twenty) which are two nurses, seven doctors (team B) two Lab Technicians, one receptionist, two Radiographers and two Gynaecologists. Their consultation day is only Tuesdays.

3.3 Target Population

The target population consisted of 130 couples who have been diagnosed with infertility and are currently attending fertility clinics at the University of Port Harcourt Teaching Hospital.

3.4 Sample Size Determination

The sample size for the study was determined using Taro Yemen’s formula. Therefore a sample size of 99 was used for the study. (Please see appendix I)

3.5 Sampling Technique

The convenience sampling technique was used for this study during each day of data collection. Couples who have been diagnosed of infertility were used by the researcher.

3.6 Instrument for Data Collection

A self-structured questionnaire was developed by the researcher to obtain all required information. It consists of two sections (A and B). Section A consist of demographic variables while section B consists of 12 items that were used to examine the opinion of couples in vitro fertilization, the acceptance of In vitro fertilization amongst couples and identity challenges facing the acceptance of in vitro fertilization.

3.7 Validity of the instrument

The face and content validity of the instrument was determined by the research supervisor and two lecturers in the research committee. The correction and modification were affected by the researcher accordingly.

3.8 Reliability of the Instrument

The reliability of the instrument was determined using the test-retest method. Ten (10) copies of the questionnaire were given out to couples in Braithwaite Memorial Specialist Hospital at the fertility clinic two weeks later. The same questionnaire was administered to couples in Braithwaite Memorial Specialist Hospital and the result was analyzed using person product-moment correlation at the significant level of 0.05. The test-retest result was 0.9.

3.9 Method of Data Collection

99 copies of the questionnaire were distributed by hand to each respondent after obtaining verbal consent. The questionnaire was retrieved on the spot after much clarification as necessary.
3.10 Method of Data Analysis
The data were analyzed using descriptive statistics such as frequency, percentage and mean.

3.11 Ethical Consideration
A duly signed letter was obtained from the principal of Rivers State School of Nursing Port Harcourt and the same was presented to the Chief Medical Director of University of Port Harcourt Technical Hospital, Head of Department of fertility clinic to conduct the research in the fertility to be grant permission. Thereafter an approval letter was obtained from the ethics committee of the hospital. The questionnaires retained the respondent’s confidentiality.

4. Results

4.1 Section A: Demographic information of respondents
The demographic information of the respondents were presented in Table 1. A total of 19 (19.2%) were between the age of 25-30 years, 21 (21.2%) were between the age of 31-35 years, 44 (44.4%) were between the age of 36-40 years while 15(15.2%) were between the age of 40 years and above.

83 (83.84%) were Christian, 14(14.14%) were of other traditions. 10(10%) were student, 22 (22%) were traders, 54 (55%) were public servant and 13 (13%) were farmers.

Educational background of the respondents indicated that none stopped at primary school, 36(36%) stopped as secondary school, 48 (49%) acquired up to tertiary education while 15 (15%) were not educated.

Out of 99 respondents, 62 (62.6%) were from polygamous setting. Finally the duration of infertility were 21(21.2%) has been infertile for 1-5 years, 42 (42.4%) has been infertile for 6-10 years while 36 (36.4%) has been infertile for 11 years and above.

| S/N | ITEM | Respondents | Percentage (%) |
|-----|------|-------------|----------------|
| 1   | Age of respondent | | |
|     | 25-30 years | 19 | 19.2 |
|     | 31-35 years | 21 | 21.2 |
|     | 36-40 years | 44 | 44.4 |
|     | 40 and above | 15 | 15.2 |
|     | Total | 99 | 100 |
| 2   | Religion | | |
|     | Christianity | 83 | 83.84 |
|     | Muslim | 14 | 14.14 |
|     | Others | 2 | 2.02 |
|     | Total | 99 | 100 |
| 3   | Occupation | | |
|     | Student | 10 | 10 |
|     | Trader | 22 | 22 |
|     | Public servant | 54 | 55 |
|     | Farmer | 13 | 13 |
|     | Others | 0 | 0 |
|     | Total | 99 | 100 |
| 4   | Education background | | |
|     | Primary | 0 | 0 |
|     | Secondary | 36 | 36 |
|     | Tertiary | 48 | 49 |
|     | Not educated | 15 | 15 |
|     | Total | 99 | 100 |
| 5   | Family Setting | | |
|     | Polygamy | 37 | 37.4 |
|     | Monogamy | 62 | 62.6 |
|     | Total | 99 | 100 |
| 6   | How long have you been diagnosed infertility? | | |
|     | 1-5 years | 21 | 21.2 |
|     | 6-10 years | 36 | 36.4 |
|     | 11 years and above | 36 | 36.4 |
|     | Total | 99 | 100 |
Research Question One: Opinion of couples on in vitro fertilization as a conception option.

Table 2. In vitro fertilization, is very expensive. Obtained data indicated that 86 of the respondents strongly agreed, 8 agreed, 2 disagreed and 3 strongly disagreed with a calculated mean of 3.8. Findings shows that 78 of the respondents strongly agreed that in vitro fertilization involves rigorous activities, 11 agreed, 8 disagreed and 2 strongly disagreed with a calculated mean of 3.7. 30 of the respondents strongly agreed that pregnancy can be achieved through in vitro fertilization, 26 agreed, 8 disagreed and 5 strongly disagreed with a calculated mean of 3.1 while 15 of the respondents strongly agreed that religion believes that in vitro fertilization, 10 agreed, 48 disagreed and 26 strongly disagreed with a calculated mean of 2.1. The total mean derived 12.7 while the criteria mean is 10 which means that the results is positive.

Table 2: Research Question One: Opinion of couples on In vitro fertilization as a conception option

| S/N | Research Question One: | A | D | SD | Total | Mean | Criteria mean |
|-----|------------------------|---|---|----|-------|------|--------------|
| 1   | In vitro fertilization is very expensive | 86 | 4 | 3 | 375 | 3.8 | 2.5 |
| 2   | In vitro fertilization involves rigorous activities | 78 | 8 | 2 | 363 | 3.7 | 2.5 |
| 3   | Pregnancy can be achieved through in vitro fertilization | 30 | 5 | 3 | 309 | 3.1 | 2.5 |
| 4   | Religion believes that in vitro fertilization | 15 | 48 | 26 | 212 | 2.1 | 2.5 |
| Total | | | | | | 12.7 | 10 |

Research Question Two: Acceptance of in vitro fertilization.

In Table 3, it was found that many fertilization couples easily accept other means of conception. 84 of the respondents strongly agreed, 7 agreed, 4 disagreed and 4 strongly disagreed with a calculated mean of 3.7. 64 of the respondents strongly agreed that you have attempted In vitro fertilization previously, 22 agreed, 9 disagreed and 4 strongly disagreed with a calculated mean of 3.5. 52 of the respondents strongly agreed that Male partner do not accept in vitro fertilization, 15 agreed, 23 disagreed and 9 strongly disagreed with a calculated mean of 3.1 while 11 of the respondents strongly agreed that female partner do not accept in vitro fertilization, 8 agreed, 58 disagreed and 22 strongly disagreed with a calculated mean of 2.0. The total mean derived 12.3 while the criteria mean is 10 which means that the results is positive.

Table 3: Research Question Two: Acceptance of in vitro fertilization

| S/N | Research Question Two: Acceptance of in vitro fertilization | A | D | SD | Total | Mean | Criteria mean |
|-----|-------------------------------------------------------------|---|---|----|-------|------|--------------|
| 1   | Many fertilization couples easily accept other means of conception | 84 | 4 | 4 | 369 | 3.7 | 2.5 |
| 2   | You have attempted In vitro fertilization previously | 64 | 4 | 4 | 344 | 3.5 | 2.5 |
| 3   | Male partner do not accept in vitro fertilization | 32 | 9 | 9 | 308 | 3.1 | 2.5 |
| 4   | Female partner do not accept in vitro fertilization | 11 | 22 | 22 | 202 | 2.0 | 2.5 |
| Total | | | | | | 12.3 | 10 |

Research Question Three: Challenges facing the acceptance of in vitro fertilization.

In Table 4, it was found that the lack of support from male partner hinder the acceptance of in vitro fertilization. 61 of the respondents strongly agreed, 6 agreed, 25 disagreed and 7 strongly disagreed with a calculated mean of 3.2. 7 of the respondents strongly agreed that my religion belief affected the acceptance of in vitro fertilization, 4 agreed, 63 disagreed and 25 strongly disagreed with a calculated mean of 1.9. 44 of the respondents strongly agreed that in vitro fertilization is time consuming, 20 agreed, 15 disagreed and 20 strongly disagreed with a calculated mean of 2.9 while 8 of the respondents strongly agreed that infertile couples lack respect in the society, 5 agreed, 22 disagreed and 65 strongly disagreed with a calculated mean of 1.6. The total mean derived 9.6 while the criteria mean is 10 which means that the results is negative.

Table 4: Research Question Three: Challenges facing the acceptance of in vitro fertilization

| S/N | Research Question Three: Challenges facing the acceptance of in vitro fertilization | A | D | SD | Total | Mean | Criteria mean |
|-----|----------------------------------------------------------------------------------|---|---|----|-------|------|--------------|
| 1   | Lack of support from male partner hinder the acceptance of in vitro fertilization | 61 | 7 | 7 | 319 | 3.2 | 2.5 |
| 2   | My religion belief affected the acceptance of in vitro fertilization | 7 | 63 | 25 | 191 | 1.9 | 2.5 |
| 3   | In vitro fertilization is time consuming | 44 | 15 | 20 | 286 | 2.9 | 2.5 |
| 4   | Infertile couples lack respect in the society | 8 | 22 | 65 | 156 | 1.6 | 2.5 |
| Total | | | | | | 9.6 | 10 |
Discussion

5.1 Identified Key Findings

Research question one: Opinion of couples on In vitro fertilization as a conception. The majority of couples see in vitro fertilization to be very expensive, it involves rigorous exercise and has a high failure rate.

Research question two: To what extent is In vitro fertilization accepted among couples attending fertility clinics in Port Harcourt Teaching Hospital? The result in table 4.3 shows that many couples easily accept other means of conception, the majority have also attempted IVF previously and male partners do not accept IVF.

Research question three: What are the challenges facing the acceptance of in vitro fertilization? The table 4.4 result also revealed that the majority of the couples (female) lacks support from their partner (male), it is time-consuming while couples do not lack respect in the society neither does their belief affect the acceptance of IVF.

5.2 Implication of Findings with Literature support

Research Question One: What are the opinion of couples on In vitro fertilization as a conceptions opinion?

Finding from the data gathered from table 4.2 shows that the majority of the couple attending fertility clinic at the University of Port Harcourt perceived In vitro fertilization to be very expensive, involve vigorous exercise, pregnancy can be achieved through In vitro fertilization while few believe in vitro fertilization to be adultery. This research is in support of Okafor and Ezeeah (2012) there study stated that many couples do not accept intro fertilization as conception because it is very expensive and it has been described by the lower the comes earners as a procedure for the rich, it is also in support Ajayi, (2017) who asserted that counselling, many infertile couples perceived benefit to rigorous exercise during In vitro fertilization cycle and complete bed rest following transfer and does not support with Sule (2011) who asserted that if a third party is involved to donate an egg to the couples, adultery has been committed.

Research Question Two: To what extent is In vitro fertilization accepted among couples attending fertility clinics in Port Harcourt Teaching Hospital?

From the findings in table 4.3, the result shows that the majority of couples easily accept other means of conception which is not in support with Obiha, Ikechibule Eleje (2014) in their study found that the acceptance level in Nigeria is increasing since the discovery of the procedure, over 250,000 babies, have been born.

The table also reveals that majority of couples cannot accept In vitro fertilization due to some challenges. This is in support Chen (2015) who noted four challenges that were identified which include; the process of hardship, the endurance of hardship with a loving relationship, partnership, couple and ambivalence toward social support. The table also reveals that the majority of partners do not accept in vitro fertilization. This is in support of Jackson (2014) who asserted that most men dislike their wife going for In vitro fertilization because it reduces masculinity and rubbishes their ego as infertile men and for that reason they choose not to go for in vitro fertilization as they will participate actively in the procedure and may be teased as infertile men

Research question three: What are the challenges facing the acceptance of in vitro fertilization procedures in Port Harcourt?

Finding from table 4.4, the result shows that the majority of the couple are faced with challenges such as support from their partner, religious beliefs, time-consuming while infertile are being respected in society. This is in support of Jackson (2014), Okafor and Ezeeah (2015), and Sule (2011). Who mention challenges that affect the acceptance of In vitro fertilization as, Religion factor, cultural and societal factors, partner factor, financial factor and legal issue.

5.3 Alignment of Finding with Finding of Previous Studies Cited

The result from table 4.2 shows that the majority of couples see in vitro fertilization as expensive, and partners do not support it. This is in line with Adebiye (2012) who conducted his research on a perception of In vitro fertilization and out of 150 couples in Edo state each hospital reveals that half agreed to IVF while others did not agree due to their partners and cost.

The result from table 4.3 shows that the majority of couples, easily accept other means of conception. This is in line with Chen (2015) from china "who observed that couples usually resort to IVF after they have exhausted their opinion pursuing other less intrusion from treatment.

The result from table 4.4 shows that majority of couples sees In vitro fertilization as time consuming, and its acceptance is affected by cultural and societal factor. This is in support with Sule (2011) on acceptance of IVF using quantitative component and couples sample size of 589 couples in Zamfara state has his findings that none agreed to In vitro fertilization as opinion for conception due to religious belief and partner factor.

5.4 Implications of Nursing

From the study carried out on the perception and acceptance of intro fertilization amongst couples attending fertility clinic in University of Port Harcourt Teaching Hospital. It was observed that the perception and acceptance is low in UPTH. Therefore, couples should be counselled on In vitro fertilization as conception opinion through health talk and sensitization of the public community and public on the In vitro fertilization procedure should be done via mass media.

Conclusions

The study on the perception and acceptance of In vitro fertilization amongst couples attending fertility clinic at the University of Port Harcourt Teaching Hospital show that perceptions and acceptance are low. Therefore, sensitization of the infertile couples in UPTH, should be done by the Nurses, Midwives and Doctors and managing them through health education and teaching. Also, proper counselling should be given to couples to enable them to accept the procedure and finally, there should be referred to centres carrying out the procedure in River state such as Save a Life Clinic etc.

7. Recommendation

The following recommendations were deduced from the study:

- Nurse, medicine and doctors should have an adequate understanding of this procedure in order to impact knowledge to the infertile couples in UPTH and any hospital facility There should be a training of health workers to enable them to meet up standard of care
- Awareness should be created to the public through the media, publication of more Journals, television, Radio to enable infertile couples to have an understanding of the procedure.
- All options of conception including In vitro fertilization should be made known to the client to help them make an informed choice.
- The partner should be sensitized on the advantages of In vitro fertilization and their roles should be explained to them on the procedure to enable the permit their partner to carry out the procedure.
- Government should also participate in the regulation of the cost of In vitro fertilization by collaborating with those carrying out the procedure to make it affordable to couples.

References

Adebiye A.F (2012). Perception and acceptance of infertile couples on Assisted Reproductive Technology in Edo State Nigeria. Nigeria Medical Journal, 26(1). 122- 132.

Ajayi (2017). Importance of in vitro fertilisation among couples. Vol. 2 issued 1-2017.

Azuie, E.C. (2015). In vitro fertilization practice; perception among woman attending fertility clinic in Anambra State. Afrimedic Journal, volume 3, No. 2, July - Dec. 2015.

Brick, H. (2014). Reproductive Biology and Endocrinology: RBE & Biomed Centre, 4(0): 1- 33.

Chen, L. (2015). Experience of Chinese couples undergoing In vitro fertilization Treatment; perception of the treatment process and partner support PLOS ONE.DOI: 10.1371 Journal pone. 01.39691 October 2015. Centre for Human Reproduction (2012). Report on In vitro fertilization success rate. National Summary and Fertility Clinic Report U.S. Vol. 57(1) 62 – 65.

Edward. R.G. (2010). Procedure for In vitro Fertilization. Wikipedia. The free encyclopaedia.

Fraser D.M, & Cooper, M.A. (2009). Myles Test books for midwives. (Fifteenth Edition). Nothingham, United Kingdom: Churchill Livingston Elsevier Publisher. Pp 180 - 185.
Jacob, A. (2012): Reproduction health issue and post abortion care, third edition. Pp 431 - 442.
Jackson, M. (2014). Problems affecting the acceptance of IVF. *Journal and gynaecology*, Volume 9.
Joseph, W.S. (2017). Perception and challenges of IVF procedure among couples. *Nigeria Medical Journal*, 34(2):228-230.
Karen, R. (2017). *Dasis Centre for productive medicine*. All 493 IVF Clinic India.
Marca, L. & Rombart T (2014). Procedure for in vitro fertilization. An International Survey. *Human Reproduction*, 2(15):330—334.
Obioha N., Ikechibule O., & Eleje M. (2014). Perception and acceptance of in vitro fertilization. Nnamdi Azikiwe University Teaching Hospital.
Ogbonna, M.N. (2013). *Acceptance of In vitro fertilization in Nigeria*.
Okafor, N.H, Ikekukwu, H. & Eleuoma, D.M (2017). Challenges Facing the acceptance of In vitro fertilization Nigeria. *Nigeria Medical Journal*, 54(2):114-118.
Okafor, N.H. & Ezeah, K. (2015). *Factors that affects acceptance of in vitro fertilisation*. Volume 10
Okoronkwo, E.D. (2014). Acceptance of infertile woman on In vitro fertilization in Abia State University Teaching Hospital, Abia, Nigeria. *International Journal of Innovative Research and Development*, 3(9): 17.
Onyeyemi, A.W (2010). History of In vitro fertilization Nigeria. *Journal of Medicine*, 5(4):51-56.
Richard, S.O. (2015). In vitro fertilization and cycle. *Journal of Medical Investigation and Practice*, 5(9): 1-5.
Robert, W. (2012). Perception and Acceptance of In vitro Fertilization. *Journal and Gynaecology*, Vol. 12.
Sanyaolu, B.N. (2015). *Acceptance of In vitro Fertilisation*. National Library of Medicine and National Institute of Health Conference.
Sule, A. (2011). Acceptance of In vitro fertilization in Zamsfa State. *Research and Development Vol*.

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