

Acceptance of Third-Party Reproduction in Assisted Reproduction Technology: Perception of Nurses in Osun State

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Abstract

Background: Assisted reproductive techniques are becoming increasingly available in Nigeria for infertile couples. Majority of the couples presenting in many fertility clinics are women with advanced age, some of the men also have severe male factor not amenable to in vitro fertilization, necessitating use of donor gametes in the treatment.

Objective: Nurses play significant roles in management of medical conditions worldwide inclusive of Infertility. The study set out to determine knowledge, perception and acceptability of third-party reproduction among Nurses working in Osun State.

Methodology: A Cross sectional study. 130 Self-administered questionnaires were distributed among nurses from different cities and levels of hospitals who gathered for the annual mandatory update course organised by Nursing and Midwifery council. Questionnaire consisted of eighteen stem questions divided into four sections testing knowledge, perception and acceptability of third-party reproduction.

Results: Respondents have overall good knowledge about third party reproduction (63.99%), did poorly in only four out of the eighteen stem questions. The respondents consider the products of conception from egg donation to belong to the couples rather than the donors who assisted in one form or the other.

Discussion: The generalist nurse possesses basic knowledge about third party reproduction. Few misconceptions concerning its scope and indications can be corrected by Fertility Nurse Counsellors in fertility clinics.

Conclusion: Nurses in Osun State have good knowledge about third party reproduction.

Keywords: *infertility, donor gametes, In Vitro Fertilization, Third party reproduction.*

Abbreviations

ART	: Assisted Reproductive Technology
TPR	: Third party reproduction
ICSI	: Intracytoplasmic sperm injection
IUI	: Intra-uterine insemination
IVF	: Invitro Fertilization
LGBT	: Lesbian, Gay, Bisexual, Transgender

Introduction

The phrase “third-party reproduction” or donor assisted reproduction refers to involving someone other than the individual or couple that plans to raise the child (intended parent[s]) in the process of reproduction¹.

This includes using donated eggs, sperms, or embryos, gestational-carrier arrangements (in which the pregnancy is carried by someone other than the intended parents).

Many women requesting fertility consultations in ART clinics in Nigeria are menopausal while significant amount of men have severe male factor not amenable to IVF/ICSI.

Indications for TPR include but not limited to severe male factor infertility, Premature ovarian failure, Menopause and Advanced maternal age, Undesirable sex-linked genetic disorders, Repetitive fertilization or pregnancy failure, Incapacitating medical conditions, Single women/ LGBT.

In 1984, researchers in Australia reported that the first recipient of a successful OD through IVF was a 25-year-old woman with premature ovarian failure.²

Studies have shown that children conceived through third party reproduction are doing well psychologically and developmentally and do not appear to be adversely affected by the lack of a genetic or gestational link to the intended parent^{3,4}

The first recorded use of donor sperm in a medical setting occurred in the USA in 1884.⁵

The use of donor sperm in assisted conception procedures is an important treatment option in cases of severe male factor infertility or where the male partner has a serious inheritable genetic condition that is not amenable to preimplantation genetic diagnosis or where this is ethically unacceptable.

Open documentation of use donor semen in male factor infertility treatment started in 1945.⁶

Egg donation- The Monash IVF team achieved the first pregnancy in a woman without ovaries by using donor eggs in 1983.⁷

Acceptance and perception of recipients and society at large on TPR varies based on culture, religion, educational background.

Many would-be TPR users would seek information on safety issues from health workers

Objective of study

The study set out to determine Knowledge, Perception and Acceptability of Third-Party Reproduction (TPR) among Nurses working in Osun State.

Methodology

A cross sectional study with the use of self-administered questionnaire given to nurses during 2017 mandatory update course (MCPDP) Osun state Nurses (NANNM) week.

One hundred and thirty questionnaires were administered to all consenting participants. (Questionnaire validated with pre-testing among ten nurses of female medical ward of Lautech Teaching Hospital, Osogbo.

Questionnaire consisted of thirty-one stem questions divided into four sections testing Knowledge, Perception and Acceptability of TPR.

Grading of Knowledge used: 80-100% Excellent; 60-79 Good; 40-59 Fair; <40 Poor.

Four-stem questions on acceptability of TPR were weighted and score of or more than 50% of total score was considered positive attitude.

Analysis of data was done with SPSS version 23.

Research population

One hundred and thirty Self-administered questionnaires were distributed among nurses from different cities and levels of hospitals who gathered for the annual mandatory update course organised by Nursing & Midwifery council at National Association of Nigerian Nurses and Midwives house, Osogbo.

Research setting

A private fertility specialist hospital 'AyomideWomens' health IVF center and fertility hospital. The hospital is located in Osogbo the state capital of Osun state. This hospital major mainly in various aspects of fertility care and investigations.

The hospital has three main theatres first occupying the ground floor of the hospital is the laparoscopy and hysteroscopy theatre where closed surgeries and diagnostic laparoscopy is carried out.

The second theatre is the IVF theatre where follicular aspiration is done for IVF treatments. Attached to the IVF theatre is the andrology laboratory where the embryologist work on the aspirated eggs and semen preparation is carried. The third theatre is where various obstetrics and gynecological

open surgeries such as caesarian section, myomectomy, subtotal abdominal hysterectomy, Total abdominal hysterectomy, vaginal hysterectomy, adhesiolysis for intrauterine and pelvic adhesion.

Other investigations and procedures include Hormonal assay, follicular tracking, abdominal and transvaginal scans, intra uterine insemination-IUI. Ante natal care is rendered to pregnant women on Mondays while Gynecological clinics holds on Wednesdays and Fridays of every week.

The hospital is covered by a consultant Obstetrician and gynecologist who is also a fertility specialist.

Other doctors are a senior medical officer and two medical officers. The hospital has six Registered Nurses and midwives, three with BNSc.

The hospital has five private rooms, four bedded post-natal ward, four bedded post embryo transfer wards, a labour ward, one neonatal ward with two phototherapy kits. All resuscitative measures such as multi parameter monitor, 100percent oxygen, suctioning machine etc. are always available to meet clients need. The hospital has recorded several successful IVF pregnancies with deliveries of live infants.

The hospital has two certified embryologists and two trainees. There are four ward orderlies and two security men.

Research sampling and sampling technique

All consenting participants at the 2017 mandatory update course (MCPDP) Osun state Nurses (NANNM) week were included by convenience sampling.

Method of data collection

A Cross sectional study. One hundred and thirty Self-administered questionnaires were distributed among nurses from different cities and levels of hospitals who gathered for the annual mandatory update course organised by Nursing & Midwifery council at National Association of Nigerian Nurses and Midwives house, Osogbo. Questionnaire consisted of eighteen stem questions divided into four sections testing knowledge, perception and acceptability of third-party reproduction. 108 questionnaires were duly filled and returned.

Method of data analysis

The retrieved data were entered into SPSS version 23 version. Descriptive analysis using frequency to summarize socio demographic data, knowledge and attitude levels, cross tabulation was used to explore association between sociodemographic data and level of knowledge and attitude of the nurses in Osun state to third party reproduction.

Ethical consideration

The Ethical committee of Ayomide Women's Health Specialist Hospital and the local organizers of 2017 mandatory update course (MCPDP) Osun state Nurses (NANNM) week gave permission for the administration of the questionnaires to the participating nurses.

The participants were approached individually for permission, filling the questionnaire was taken as evidence of consent.

Results

From the socio demographic data 68.6 % of respondent were aged between 30 to 49 while one of every five respondents were age 50 or more. There were 96.3% of female and only 3.7%. We also have 92.5% that were married and 4.7% single.

(Table I) All the participants had tertiary level of education 51.4% of respondents were junior cadres (NOII, NOI, SNO) of nurses while the rest were in the senior cadre. Over 90% of respondents have been practising nursing for five years or more and about 60% of respondents possessed BNSc degree in Nursing.

Knowledge analysis- The respondents answered correctly questions related to knowledge about third party reproduction on the average of 63.99% (good knowledge). Of the 18 stem questions, respondents had poor knowledge in four as follows.

- 1) Oligozoospermia is an indication for third party reproduction (11.1% correct answers),
- 2) Bilateral tubal blockage is an indication for TPR (13% correct answers),
- 3) Intrauterine insemination of washed husband semen is a form of TPR (25% correct answer),
- 4) TPR could be achieved using timed intercourse (25.9% correct answer).

Attitude and Practice of TPR- The respondents agree that donor of human gametes should be screened regularly and should be in the age range of 18 to 30 years. However, the respondents (82.4%) preferred that gametes donors be rewarded adequately rather than being given inconvenience allowance. Over a third of respondent said no to inconvenience allowance. Fifty percent of respondent do not know if TPR is acceptable in Islam while a quarter of them also do not know if TPR was acceptable to Christianity.

The respondents consider the products of conception from TPR to belong to the couples rather the donors who assisted in one form or the other. (Fig 2).

Almost half of the respondents think that the babies from TPR only resemble the genetic parents and also think that egg donors are at higher risk than semen donors. Majority (63%) think that embryo adoption is foreign to our culture.

Cross tabulation analysis- Women aged 50 or more were less likely to miss the four stem questions missed by majority of respondents ($X^2 = 40.676$, $p = 0.000$). Cadre in Nursing profession whether Junior or Senior cadre did not affect tendency to miss the four stem questions.

Discussion

The generalist nurse possesses basic knowledge about third party reproduction to help in provision of basic information for couples who may require it in our society. Few misconceptions concerning its scope and indications can be corrected by Fertility Nurse Counsellors in fertility clinics.

Our findings are similar to that of Obioha et al⁸ who found good knowledge of IVF among nursing staff of NAUTH, Nnewi.

Karin Hammarberg et al⁹, 2016 said as experts in preventive care, nurses working in primary health care are well placed to promote awareness about factors that influence fertility and reproductive life planning to help people achieve their reproductive goals. Few misconceptions concerning scope of and indications for TPR can be corrected by Fertility Nurse counsellors in ART clinics

Conclusion

Nurses in Osun State have good knowledge about third party reproduction, they accept gametes donation as part of treatment but think that embryo adoption is foreign to our culture.

They would want gametes donors properly rewarded for their services rather than inconvenience allowance

Recommendation

There should be training and retraining of Nurses in conferences, seminars and workshops to improve their knowledge on current trend in Assisted Reproduction Technology to be able to stand as educators to those who may need Assisted Reproduction Technology to be able to lead the people aright in their decision.

The health sector should create more awareness on the possibility of third party Assisted Reproduction Technology, so that they can take advantage of it.

There should be rules and legislations on Assisted Reproduction Technology so that the healthcare sectors will be guided in the kind of care given and their practices.

Figures and table

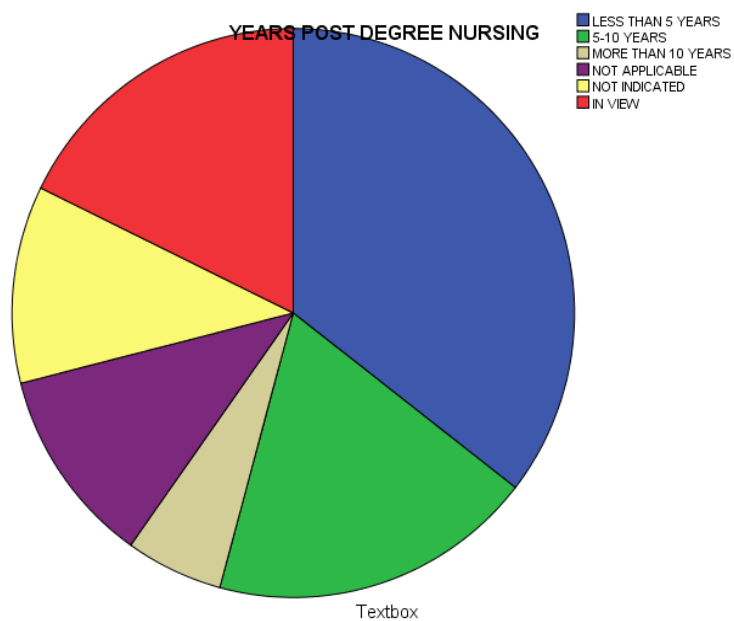


Figure 1. Years of practice post degree in nursing: 59.8% of respondents had BNSc nursing

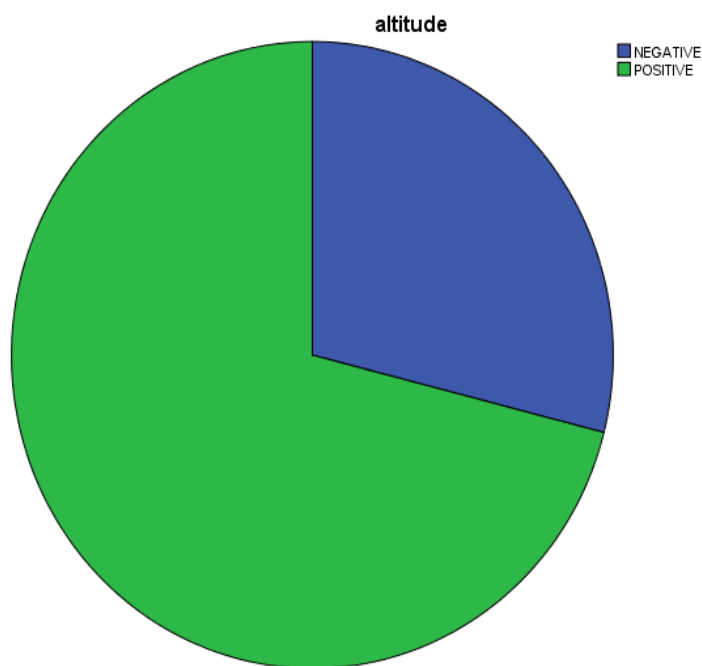


Figure 2. Attitude of respondents to TPR

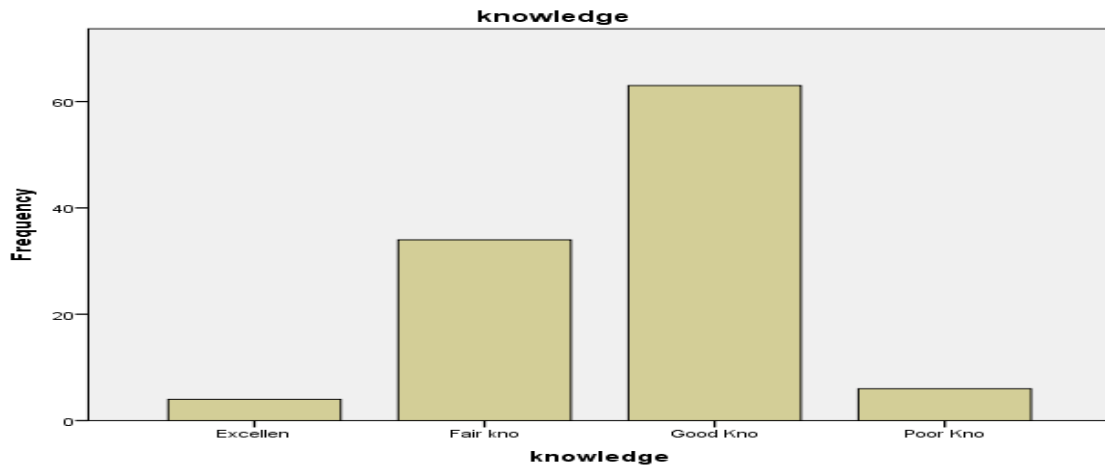


Figure 3. Classification of knowledge of TPR

Table 1. Sociodemographic data

Parameters	Frequency	Percentage
Sex: male	4	3.7
Female	104	96.3
Total	108	100
Age: 21 - 30	15	13.8
31 - 40	36	33.4
41 - 50	35	32.4
51 - 60	16	14.8
Missing	6	5.6
Total	108	100
Marital status:		
Married	100	92.6
Single	5	4.6
Divorced	1	0.9
Widow	1	0.9
Missing	1	0.9
Total	108	100
Categorization of nurses:		
Junior cadre nurses	55	50.9
Senior cadre nurses	51	47.2
Missing	2	1.9
Total	108	100
Practice year:		
Less than 5years	7	6.5
5 – 10	28	25.9
11 – 15	24	22.2
16 – 20	16	14.8
More than 20 years	32	29.6
Missing	1	0.9
Total	108	100

References

- [1]. Wikipedia. Third party reproduction. Available at: https://en.wikipedia.org/wiki/Third-party_reproduction. Accessed May 3, 2015.
- [2]. Lutjen P, Trounson A, Leeton J, Findlay J, Wood C, Renou P. The establishment and maintenance of pregnancy using in vitro fertilization and embryo donation in a patient with primary ovarian failure. *Nature* 1984; 307:174–5.
- [3]. Golombok S, Blake L, Casey P, Roman G, Jadva V. Children born through reproductive donation: a longitudinal study of psychological.
- [4]. adjustment. *J Child Psychol Psychiatry* 2013; 54:653–60.
- [5]. Golombok S, Murray C, Jadva V, Lycett E, MacCallum F, Rust J. Non-genetic and non-gestational parenthood: consequences for parent-child.
- [6]. relationships and the psychological well-being of mothers, fathers and children at age 3. *Hum Reprod* 2006; 21:1918–24.
- [7]. Hard AD. Artificial impregnation. *Med World* 1909; 27:253.
- [8]. Barton M, Walker K, Wiesner B. Artificial insemination. *Br Med J* 1945; 1:40–3. doi:10.1136/bmj.1.4384.40.
- [9]. Trounson A, Leeton J, Besanko M, Wood C, Conti A. Pregnancy established in an infertile patient after transfer of a donated embryo fertilized.
- [10]. in vitro. *Br Med J (Clin Res Ed)*. 1983 Mar 12;286(6368):835-8).
- [11]. Obioha JA, Ikechebelu JI, Eleje GU, Joe-Ikechebelu NN (2014) Knowledge and Attitude of Nurses towards In-vitro Fertilization: A.
- [12]. Prospective Cohort Study *Gynecol Cases Rev* 1:006.
- [13]. Karin Hammarberg, 2016. Knowledge, attitudes and practices relating to fertility among nurses working in primary health care RN, BSc.
- [14]. PhD Senior Research Fellow, Jean Hailes Research Unit, School of Public Health and Preventive Medicine, Monash University, 549 St.
- [15]. Kilda Road, Melbourne, Victoria, Australia karin.hammarberg@monash.edu *Australian journal of advanced nursing* Volume 34 Issue 1.