

JOURNAL OF THE MEDICAL WOMEN'S ASSOCIATION OF NIGERIA

Established in 2004

March 2025

Volume 10: No 1

Original Article

Access this article online

Quick Response Code:



Website: www.jmwan.org.ng

<https://doi.org/10.71526/jmwan.v10i1.71>

Knowledge, Prevalence, and Willingness to Donate Oocytes among Female Undergraduate Students at a Tertiary Institution in Rivers State

Adeniji Foluke Olukemi,^{1,2} Obaseki Imade Uyi,² Obodo Fejiro Vera,² Ogbanga Queen²

Abstract

BACKGROUND: Oocyte donation is a vital part of assisted reproductive technology and is therefore an important treatment modality for infertility. This study aimed to assess the knowledge, prevalence and willingness to donate oocytes among female undergraduate students at a tertiary institution in Rivers State.

METHODS: This study was a descriptive cross-sectional study using a multi-stage sampling technique and a structured self-administered questionnaire for data collection. The questionnaire was completed by 372 female students of the University of Port Harcourt, all of them less than 35 years old. The data was analysed using Statistical Product and Service Solutions (version 25) and represented in tables. P values of ≤ 0.05 were considered statistically significant.

RESULTS: The majority, 253 (68%) of the respondents, were between the ages of 18-22, and 362 (97.3%) were single. A total of 336 (90.3%) had heard about oocyte donation, and about three-quarters, 275 (73.9%) of the respondents had excellent knowledge concerning oocyte donation. The prevalence of oocyte donation was extremely low: 5 (1.3%). Only 92 (24.7%) of the respondents were willing to donate their oocytes, and the major factor influencing oocyte donation was financial gain. There was no relationship between knowledge of oocyte donation and socio-demographic characteristics and willingness to donate oocytes.

CONCLUSION: The majority of respondents were informed about oocyte donation but hesitant to participate. For those willing to donate, their main incentive was financial compensation. This underscores the necessity to promote more altruistic donations among these individuals.

Keywords:

Oocyte donation, knowledge, prevalence, willingness, female undergraduates, Rivers state

¹Department of community medicine, University of Port Harcourt Teaching Hospital

²Department of Preventive and Social Medicine, Faculty of Clinical Sciences, College of Health Sciences, University of Port Harcourt, Nigeria.

Address for correspondence:

Foluke Olukemi Adeniji
Department of Preventive and Social Medicine, Faculty of Clinical Sciences, College of Health Sciences, University of Port Harcourt, Nigeria,
foluke.adeniji@uniport.edu.ng
08033132893

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

Introduction

Infertility is said to occur when a couple fails to conceive after a year of regular unprotected intercourse.^[1] The causes of infertility are varied, they include male factors (obstruction of the reproductive tract, hormonal disorders, testicular failure to produce sperm, abnormal sperm function and quality.) and female factors (tubal disorders e.g. blocked fallopian tubes, uterine disorders e.g. fibroids, disorders of the ovaries, disorders of the endocrine system).^[2]

Infertility can be classified as either primary or secondary. Primary infertility refers to the inability to achieve a pregnancy after a year of unprotected intercourse, while secondary infertility is defined as the inability to conceive after having previously achieved at least one successful pregnancy.^[2] To treat infertility, treatment of identified underlying health conditions, and sometimes assisted reproductive technologies (ART), which includes vitro fertilization (IVF) and intrauterine insemination (IUI) have been used.^[2]

Assisted Reproductive Technology (ART) involves the donation of healthy oocytes, sperm, or embryos to enable an infertile couple to conceive and have their babies.^[1] The donors of these oocytes and sperms may be known to the recipients or anonymous. The recipient who accepts the donation uses the oocytes to conceive a baby or may be a surrogate (carries the baby for another person).^[1]

Infertility is recognised as a problem of public health importance globally.^[3] This is because it is associated with a huge social, psychological, and financial burden for the individual and family.^[3] Nonetheless, it holds increased significance in Africa, where the birth of a child is associated with great cultural and social value.^[3] About 8-12% of couples worldwide are infertile.^[4] In Africa, the prevalence has been estimated to be slightly greater than 49%.⁵ The WHO reports that 1 in 6 people experience infertility in their lifetime.^[2] In Nigeria, the facility-based incidence

of infertility was reported as 16% and 12% from Kano (North-West) and Port Harcourt (South-South), respectively.^[6,7] Altruistic oocyte donation involves the donation of oocytes to a woman or couple who requires donor oocytes to have a child.^[1] In altruistic oocyte donation, the donor is not receiving fertility treatment themselves but is donating to help one or more women or couples. During the process of oocyte donation, oocytes from the donor are fertilised with sperm from the intended parent or designated sperm donor and transferred into the uterus of the patient who is trying to conceive.^[1]

Oocyte donation is mostly indicated in patients who experience a cessation in ovarian function, such as menopausal or ovariectomised patients, women with genetic diseases, women who received chemotherapy or radiotherapy at a young age, and women who have experienced recurrent miscarriages due to chromosomal abnormalities.^[8]

Oocyte donation remains a contentious topic within Nigerian society, as discussions surrounding it often evoke ethical, social, and psychological concerns.^[9] Research indicates that awareness of oocyte donation is notably low among female undergraduates. This lack of understanding may stem from the absence of clear guidelines, a general ignorance of relevant legislation (even though the National Health Act has guidelines for organ donation) and prevailing societal norms that shroud oocyte donation in secrecy.^[10,11] This situation underscores the urgent need for comprehensive information regarding oocyte donation in the context of assisted reproduction. This study aimed to assess the knowledge, prevalence, and willingness to participate in oocyte donation among female undergraduate students at a tertiary institution in Rivers State.

Materials and Methods

Study Area: A descriptive cross-sectional study was carried out at the University of Port Harcourt. The University of Port Harcourt is a public tertiary institution; it was established in

1975 as University College, Port Harcourt, and was given university status in 1977. 12 It has an undergraduate student population of about 44,500 and a postgraduate student population of about 10,000. The University of Port Harcourt community is a multicultural and multilingual community, with students from many tribes of Nigeria as well as international students who predominantly speak English and Pidgin. The university has three campuses: Abuja, Delta, and Choba campuses; twelve (12) faculties; and eighty-eight (88) departmental courses.^[12]

Study Population: The study population consisted of undergraduate female students at the university. All female undergraduates were included in the study. Undergraduate students who were over 35 years old and those unwilling to participate were excluded from the study.

Using the sample size formula for descriptive studies, a sample size of 398 was derived with a prevalence from a previous study after correcting for a 10% non-response.^[13]

A multi-staged sampling technique was used. In the first stage, using the list of faculties in the university as a sampling frame, 8 faculties were picked by balloting. In the second stage, the list of departments in each of the faculties was used as the sampling frame. Eight departments were selected by balloting. In stage 3 the sample size was divided equally among the departments and an average of 50 respondents were selected from each. From the department the student list at each level was obtained and used as the sampling frame. Based on a 4- or 5-year course system, 10 to 13 students from each level were selected via random sampling using a table of random sampling. The students that were not available were replaced until the required sample size was reached.

Data was collected over 2 weeks with 3 research assistants who were medical students. They received a one-day training on the administration of the questionnaire. The questionnaire was self-administered via Google Sheets on an Android phone immediately after class. Data was cross-

checked for consistency and completeness, and the data was inputted using a Microsoft Excel spreadsheet.

Data Collection Tool: The study population consisted of undergraduate female students at the university. All female undergraduates were included in the study. Undergraduate students who were over 35 years old and those unwilling to participate were excluded from the study.

Using the sample size formula for descriptive studies, a sample size of 398 was derived with a prevalence from a previous study after correcting for a 10% non-response.^[13]

A multi-staged sampling technique was used. In the first stage, using the list of faculties in the university as a sampling frame, 8 faculties were picked by balloting. In the second stage, the list of departments in each of the faculties was used as the sampling frame. Eight departments were selected by balloting. In stage 3 the sample size was divided equally among the departments and an average of 50 respondents were selected from each. From the department the student list at each level was obtained and used as the sampling frame. Based on a 4- or 5-year course system, 10 to 13 students from each level were selected via random sampling using a table of random sampling. The students that were not available were replaced until the required sample size was reached.

Data was collected over 2 weeks with 3 research assistants who were medical students. They received a one-day training on the administration of the questionnaire. The questionnaire was self-administered via Google Sheets on an Android phone immediately after class. Data was cross-checked for consistency and completeness, and the data was inputted using a Microsoft Excel spreadsheet.

Data Analysis

Data was collected over 2 weeks with 3 research assistants who were medical students. They

received a one-day training on the administration of the questionnaire. The questionnaire was self-administered via Google Sheets on an Android phone immediately after class. Data was cross-checked for consistency and completeness, and the data was inputted using a Microsoft Excel spreadsheet.

Data analysis was done with IBM SPSS (Statistical Product and Service Solution) version 25. The results were presented using tables showing their frequency and percentages. The level of statistical significance was set at $p \leq 0.05$.

Ethical clearance

Ethical approval for this research was obtained from the ethics and research committee of a tertiary institution. (Ethics number UPTH/ADM/90/S.11/VOLX1/1729). Permission was obtained from the school and informed consent was obtained from all the participants.

Results

Table 1: Social Demographic Characteristics

Variables	Freq n=372	(%)
Age (Years)		
<19	117	31.5
20-25	238	64.0
26-31	17	4.6
Sex		
Female	372	100.0
Marital Status		
Single	362	97.3

Married	9	2.4
Divorced	1	0.3
Religion		
Christianity	349	93.8
Islam	18	4.8
Others	5	1.4
Faculty of study		
Management Science	50	13.4
Pharmaceutical Science	49	13.2
Science Lab Technology	49	13.2
Science	49	13.2
Social Science	48	12.9
Agriculture	47	12.6
Engineering	45	12.1
Law	35	9.4
Education financing		
Parent	301	80.9
Combined	35	9.4
Self-sponsored	31	8.3
Spouse	4	1.1
Brother	1	0.3
Monthly allowance (₦)		
Less than 10,000	93	25.0
10,001 - 20,000	105	28.2
20,001 - 30,000	66	17.7
30,001 - 40,000	61	16.4
>40,000	47	12.6

Table 1 shows that the majority of respondents, 253 (68%) were between the ages of 18-22. Most, 362 (97.3%) were single. A large proportion of respondents 301 (89.3%) have their education financed by their parents. More than a quarter, 105 (28.2%) receive between 10,000 naira and 20,000 naira as their monthly allowance.

Table 2: Awareness and knowledge of oocyte donation

Variables	Frequency n=372	Percentage (%)
Heard about In-vitro Fertilization (IVF)		
Yes	316	84.9
No	56	15.1
Have you ever heard of egg donation?		
Yes	336	90.3
No	36	9.7
Source of Information		
Internet	155	41.7
Media	80	21.5
Health talk/seminar/conferences	50	13.4
Someone who has donated before	22	5.9
A friend	14	3.8
Others	6	1.6
Cannot remember	2	0.5
Are you aware that egg donation is done in Nigeria?		
Yes	292	78.5
No	80	21.5
Do you have a friend or relative who has donated eggs before		
Yes	50	13.4
No	322	86.6
Are you aware of facilities where egg donation is done		
Yes	61	16.4
No	311	83.6
Where can egg donation be done?		
Specialists hospitals	296	79.6
Any hospital	68	18.3
Mission homes	6	1.6
Chemists	2	0.5
How many times can egg donation be done in a life time		
Only once	58	15.6
2-3 times	103	27.7
4-5 times	22	5.9
More than 5 times	19	5.1
As much as you want to	170	45.7
Level of Knowledge		
Excellent Knowledge	275	73.9

Very Good Knowledge	44	11.8
Good Knowledge	24	6.5
Poor Knowledge	7	1.9
Very Poor Knowledge	22	5.9

Table 2 shows that the majority of the respondents 336 (90.3%) had heard about oocyte donation, even more than the number that had heard about in-vitro fertilization 316 (84.9%). Most of them 322 (86.6%) did not know anyone who had donated oocytes and only 50 (13.4%) knew a friend or relative who had participated in oocyte donation. About three quarter of the respondents 275 (73.9%) had excellent knowledge of oocyte donation. The source of knowledge for most was the social media 155 (41.7%).

Table 3: Prevalence and factors influencing oocyte donation

Variables	Frequency (n=372)	Percentage (%)
Have you donated eggs in the past?		
Yes	5	1.3
No	367	98.7
How many times have you donated eggs in the past? (n=5)		
1	1	20
3	1	20
5	3	60
Do you support egg donation		
Yes	279	75
No	93	25
Reasons for not supporting egg donation (n=93)		
Ethical concerns	41	44.1
No reason	21	22.6
Religious beliefs	10	10.8
Fear	9	9.7
Immorality	8	8.6
Traditional belief	4	4.3
Are you willing to donate your eggs?		
Yes	92	24.7
No	280	75.3
If yes, what are your reasons (n=92)		
Financial gain	37	40.2
Assist a family member	31	33.7
Altruism	19	20.7
No reason	5	5.4
If no, what are your reasons (n=280)		

Health risks	139	49.6
Inadequate information	43	15.4
Moral concerns	35	12.5
Others	29	7.8
Fear of exhaustion of eggs	20	7.1
Religious beliefs	14	5
If you were unable to have a child and your only option to conceive was through an egg donation		
No	116	31.2
Yes	256	68.8

Table 3 shows that of the 372 respondents only 5(1.3%) respondents have donated oocytes in the past while 256(68.8%) respondents would consider oocyte donation as an option to conceive.

Three quarter, 279(75%) are in support of oocyte donation and 93(25.0%) were not in support of oocyte donation. Most of the respondents who were not in support of oocyte donation gave ethical concerns 41(44.1%) as their reason, while 21(22.6%) gave no reason, other reasons were religious belief 10(10.8%) and fear 9(9.7%).

In addition, 280(75.3%) respondents were not willing to donate oocytes and most of them gave health risks 139(49.6%) as their reason, other reasons were inadequate information 43(15.4%) and moral concerns 35(12.5%). Only 92(24.7%) respondents were willing to donate their oocytes, reasons given were financial gain 37(40.2%), to assist a family member 31(33.7%) and altruism 19(20.7%).

Table 4: Relationship between level of knowledge of oocyte donation and socio-demographic characteristics

Variables	Excellent (%)	Very Good(%)	Good(%)	Poor(%)	Very Poor(%)	X ² (P-Value)
Age (Years)						
19	107(91.5)	7(15.8)	0(0.0)	1(2.6)	2(5.3)	4.24(0.830)
20-25	225(73.5)	3 (11.9)	1(7.1)	5(2.0)	4(5.5)	
26-31	14(74.1)	1(9.9)	1(7.4)	1(1.2)	0(7.4)	
Marital Status						
Single	267(73.8)	43(11.9)	23(6.4)	7(1.9)	22(6.1)	9.83(0.280)
Married	8(88.9)	0(0.0)	1(11.1)	0(0.0)	0(0.0)	
Divorced	0(0.0)	1(100.0)	0(0.0)	0(0.0)	0(0.0)	
Religion						
Christianity	253(72.5)	43(12.3)	24(6.9)	7(2.0)	22(6.3)	7.75(0.460)
Islam	18(100.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	
Others	4(80.0)	1(20.0)	0(0.0)	0(0.0)	0(0.0)	
Education financing						
Brother	0(0.0)	1(100.0)	0(0.0)	0(0.0)	0(0.0)	19.5(0.250)
Combined	28(80.0)	6(17.1)	0(0.0)	0(0.0)	1(2.9)	
Parents	224(74.4)	33(11.0)	20(6.6)	7(2.3)	17(5.6)	
Self-sponsored	20(64.5)	4(12.9)	3(9.7)	0(0.0)	4(12.9)	
Spouse	3(75.0)	0(0.0)	1(25.0)	0(0.0)	0(0.0)	
Monthly allowance (₦)						
<10,000	71(76.3)	12(12.9)	5(5.4)	1(1.1)	4(4.3)	25.1(0.07)
10,001 - 20,000	85(81.0)	3(2.9)	6(5.7)	4(3.8)	7(6.7)	
20,001 - 30,000	40(60.6)	11(16.7)	8(12.1)	0(0.0)	7(10.6)	
30,001 - 40,000	44(72.1)	10(16.4)	3(4.9)	1(1.6)	3(4.9)	
>40,000	35(74.5)	8(17.0)	2(4.3)	1(2.1)	1(2.1)	

Table 4 shows that there is no statistically significant relationship between the level of knowledge of oocyte donation and socio-demographic characteristics. P> 0.05.

Table 5: Relationship between level of knowledge of oocyte donation and Willingness to donate oocyte

Variable	Willingness to donate oocyte n=372		X ²	p-value
	Yes	No		
Level of Knowledge of oocyte donation				
Excellent Knowledge	91(24.5)	184(49.5)	5.117	**0.257
Very Good Knowledge	1(0.3)	44(11.8)		
Good Knowledge	0(0.0)	24(6.5)		
Poor Knowledge	0(0.0)	7(1.9)		
Very Poor Knowledge	0(0.0)	22(5.9)		

**Fisher's Exact Test

Table 5 shows that there is no statistically significant relationship between the level of knowledge of oocyte donation and willingness to donate an oocyte. $P > 0.05$.

Discussion

The level of awareness exhibited by respondents in this study was high, with social media as the major source of information concerning oocyte donation. This reflects the relatively young age of our respondents and their easy access to the internet. A similar result was obtained from a study in Ibadan, which revealed that 90.3% of the students were aware of oocyte donation.^[13] This may be due to the similarities in the study population, with both being undergraduate students under the age of 25 years with unlimited access to the internet. This study also showed that most of the participants had good knowledge of oocyte donation, including its processes and the possible complications. This contradicts the findings of the study done in north-central Nigeria, where 60.3% of the students had poor knowledge of oocyte donation.^[15] This may be due to the different demographic characteristics, particularly religion, with 93.8% of our study population being Christians and 60.5% of theirs being Muslims. Another study done in Southeast Nigeria showed that only 35.8% of the respondents had a high knowledge of oocyte donation; however, this was a hospital-based study done among oocyte donors, thus the sociodemographic characteristics were fairly different.^[16] This difference in knowledge could be attributed to the different age groups of the population sampled, the study area, as well as the source of information.

Oocyte donation in Nigeria is still shrouded in a lot of secrecy, as evidenced by the fact that the majority of respondents knew that it should be done in specialist hospitals, but they had no idea where oocyte donation was done. A similar study done among female undergraduates in Legon, Ghana, reported that 76.9% of its respondents were not aware of oocyte donation being practised, and almost half of them had never

heard about in-vitro fertilisation.^[11] The observed difference may be attributed to the timing of the Ghanaian study, which occurred during the COVID-19 pandemic, a period that garnered significant attention. Additionally, the variation in timing suggests that subsequent study participants will have more opportunity to familiarise themselves with the topic.

The level of knowledge of oocyte donation in this study was high. Our study showed a contrast in the levels of knowledge among female students compared to the study in Ghana, which reported 61% of students as having a low level of knowledge.^[11] This may imply poor access to the internet. The high level of knowledge in the index study disagrees with a study done in the United Kingdom barely four years ago, which showed that 56.3% of women had little or no knowledge regarding oocyte donation, but this was done amongst the general public; thus, it was a widely varied sample in terms of age, relationship status, and educational status, and only 23% of the respondents were students.^[17] This disparity could be because the internet has become a significant means of gaining information concerning oocyte donation, but only the younger generation are avid users. Any population that includes older women may have differing levels of knowledge, as evidenced by the British study, which had only 8.8% of women with significant knowledge.^[17] Another study in Turkey also reported that about 66% had poor knowledge of oocyte donation.^[8] This difference may also be due to differences in the study population, ours being female undergraduate students, while only 18% of their respondents were university graduates.^[8]

The low prevalence of oocyte donation observed in this study indicates that it is not a common practice among the study population. This finding aligns with other research conducted in

Nigeria; for instance, a study in north-central Nigeria reported a prevalence of 0.8%;¹⁸ likewise, another study conducted in Ibadan that also found a prevalence of 0.8%.^[13] This low prevalence may be attributed to insufficient information or the apprehension associated with undergoing an invasive procedure to assist others.

It is worth noting that the majority of the respondents were in support of oocyte donation and would consider oocyte donation as an option to conceive if they were unable to have a child. Despite this, most were unwilling to donate their oocytes, and the most common reason for this was health risks. Other reasons were inadequate information, moral concerns, and a fear of exhaustion of oocytes. This aligned with findings from Obajimi et al.,^[13] where health risks and inadequate information were the commonest reasons for not donating. This could be due to misconceptions and inadequate information about the process. There is very little public awareness about the need for oocyte donors; consequently, accurate information concerning the subject is limited and not very accessible to the public, and this is a known deterrent. Donors have expressed concerns regarding the challenges of obtaining reliable information about the process. They have indicated that having more information about oocyte donation would be beneficial.^[19]

Religion has also been noted as a factor influencing oocyte donation, with Christians being more likely to donate than Muslims.^[1,11,13] A study in north-central Nigeria revealed that 33.3% disagreed with religious beliefs being a deterring factor, while 37.7% agreed with it.¹⁸ This is particularly important because the majority of the participants in our study were Christians, and less than one-fifth were Muslims, implying that Christians also felt some inhibitions towards donating.

In this study, only a minority were willing to donate their oocytes, and the most significant reason for this was for financial gain. This is

similar to the study done by Amen et al., which revealed that financial benefit was also the reason for which participants were willing to donate.^[9] This also corroborates the findings from studies where most participants were motivated by financial compensation.^[16,20] This finding contrasts sharply with the study done in Ibadan, which showed that 39.5% of the participants were willing to donate purely for altruistic reasons and 17.9% were willing to do it for financial gain.^[13] Similar studies done in Ghana and Canada showed that the majority of the respondents were in support of altruistic oocyte donation rather than for financial gain.^[11,21] Findings from the current study may be due to the current economic situation in the country, where students are seeking means to support themselves through school and, in so doing, resort to donating their oocytes for financial compensation.

From this study, there is no relationship between sociodemographic characteristics and knowledge of oocyte donation. This finding is similar to that reported among undergraduate students in Ghana.^[11] Another study in Lagos, Nigeria, reported only the year of study as being associated with knowledge; this difference may be due to the study population, which was made up of undergraduate males and females.^[22] No relationship was found between knowledge of oocyte donation and willingness to donate. This was also reported in a study among undergraduates.^[11] This finding may be due to similarity in the study population.

The level of education may play a role, as evidenced by studies that show that those with a primary level of education have less knowledge about oocyte donation compared to those with secondary and tertiary levels of education. Similarly, donors from previous reports were educated women.^[18,23]

Conclusion

This study concluded that despite the high level of awareness, knowledge, and support for oocyte

donation among female undergraduate students, the majority of the respondents were not willing to donate their oocytes, and the proportion of those who had donated was negligible. The major factor influencing oocyte donation in this study was financial gain.

The findings of this study have significant implications for the future of oocyte donation in the state. There is also a need to encourage more altruistic oocyte donation.

Strengths and Limitations: This study provides new information about knowledge prevalence and willingness to donate oocytes among undergraduates. Limitations of the study may include socially desirable answers, especially with respect to oocyte donation and the fact that causality cannot be established with a descriptive study.

Conflict of interest statement: Nil

Funding: NIL

Acknowledgement: The researchers would like to thank the research assistants who took part in the study.

References

1. Najmabadi S. Who is an egg donation candidate? [Internet]. Centre for Reproductive Health and Gynaecology. [cited 2025 Jan 15]. Available from: <https://www.reproductive.org/egg-donation>.
2. World Health Organization. Infertility. [Internet]. [cited 2025 March 18]. Available at <https://www.who.int/news-room/factsheets/detail/infertility>.
3. Lemoine ME, Ravitsky V. Toward a Public Health Approach to Infertility: The Ethical Dimensions of Infertility Prevention. *Public Health Ethics*. 2013;6(3):287–301.
4. Vander Borgh M, Wyns C. Fertility and infertility: Definition and epidemiology. *Clin. Biochem*. 2018;62(62):2–10.
5. Abebe MS, Afework M. & Abaynew, Y. Primary and secondary infertility in Africa: systematic review with meta-analysis. *Fertil Res and Pract*. 2020;(6):20- 28
6. Yusuf M, Abdullahi HM. Epidemiology of infertility in Kano, north-west Nigeria. *Ibom Med. J*. 2019 :12: 1.64-72
7. Oranu EO, Oyiana GI. Secondary infertility in Port Harcourt: Pattern and Socio-demographic relationship. *Asian J. of Med. and Health*. 2021;8;66–74.
8. Uslu B, Özekinci M, Sakıncı M, Tunik S, Özdoğan G, Coşkun N, et. al. Knowledge and perception about oocyte donation in a semirural region of Turkey. *Clin. and Exp. Health Sciences*. 2016 :1;6(3):101-6.
9. Amen HA, Ibraheem RM, Oladiji F, Abdulrahim HA, Salaudeen AG, Musa OI, et al: Assessment of willingness and attitude of female undergraduates of Universities in Kwara State, Nigeria towards Egg donation to Infertile Couples. *J Biomed & App Sci*. 2022;1:21-28
10. Food and Agricultural Organization.org. The National health Act: [Internet]. [cited 2025 March 18]. Available from: <https://www.fao.org/faolex/results/details/en/c/LEX-FAOC162642/>
11. Mensah PA, Morrison Asiamah, Nsoh RA, Kantum RA, Udofia EA. Factors associated with willingness to donate Oocytes among female students in a tertiary institution. *Research Square (Research Square)* [Internet]. 2020 Jun 12 [cited 2024 Nov 12]; Available from: <https://www.researchsquare.com/article/rs-34457/v1>.
12. Wikipedia Contributors. University of Port Harcourt [Internet]. Wikipedia. Wikimedia Foundation; 2019. [cited 2024 Nov 12]; Available from: https://en.wikipedia.org/wiki/University_of_Port_Harcourt
13. Ogunbode OO, Obajimi GO. Assisted Reproductive Techniques and gamete donation; knowledge, attitude and willingness to participate among students in a Nigerian Tertiary Institution. *Med. J. of Zambia*. 2020 ;47(1):8-15.

14. Osian EA, Afemikhe JA, Olorunfemi O, Eweka A. Knowledge and perception of assisted reproductive technology among women attending the University of Benin Teaching Hospital, Benin City, Nigeria, 2018. *J. Nurs. & Midwif. Sci.* 2019;6(3):125-30.
15. Ameen H, Olaitan O, Arimiyau S, Musa O, Ibraheem R, Abdulrahim H, Aderibigbe S. Knowledge of Oocyte Donation procedure and Health Consequences: a Cross-Sectional Survey of Female Undergraduates in North-Central Nigeria. *Wes J Med Biomed. Sci.* 2022 ;3(2):21-28.
16. Odo NI. 'I will shed and waste it after all': Knowledge about egg donors in selected health facilities in Southeast Nigeria. *Niger. J Afr Stud.* 2023;5(1):1-15
17. Bracewell-Milnes T, Holland JC, Jones BP, Saso S, Almeida P, Maclaran K, et al. Exploring the knowledge and attitudes of women of reproductive age from the general public towards egg donation and egg sharing: a UK-based study. *Human Reprod.* 2021; 1;36(8):2189-201.
18. Ameh N, Madugu NH, Odeku T, Ogbe M, Oyefabi AM. A survey of community opinion and perceptions toward gamete donation in north central Nigeria. *Niger. J. Med* 2020 ;29(3):471-475.
19. Hogan RG, Hammarberg K, Wang AY, Sullivan EA. 'Battery hens' or 'nuggets of gold': a qualitative study on the barriers and enablers for altruistic egg donation. *Human Fertility.* 2022 ;25(4):688-696.
20. Imrie S, Jadv V, Golombok S. "Making the child mine": Mothers' thoughts and feelings about the mother-infant relationship in egg donation families. *J. of Fam. Psych.* 2020;34(4):469-479.
21. lyth E, Yee S, Tsang AK. "They were my eggs; they were her babies": known oocyte donors' conceptualizations of their reproductive material. *J. of Obst. & Gynaecol. Canada.* 2011 1;33(11):1134-1140.
22. Bakare OQ, Oluwole EO, Ogunkoya D, Aja C, Thomas J. Knowledge, attitude and willingness to participate in gamete donation for artificial insemination among undergraduate students in Lagos. *Annals of Health Research.* 2022;4:277-287.
23. Pennings G, Mouzon J, Shenfield F, Ferraretti AP, Mardesic T, Ruiz A, et al. Socio-demographic and fertility-related characteristics and motivations of oocyte donors in eleven European countries, *Human Reprod.* 2014; 29(5):1076-1089.