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'Gift with a price tag': Nigerian egg donors' knowledge, experiences and motivations

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Abstract

Research around the world has indicated that the demand for egg donation has grown considerably among young females. This study qualitatively examines the knowledge, experiences, and motivations of young egg donors at a Nigerian health facility. In-depth interviews were conducted in Igbo and English with consenting thirty-one egg donors attending a fertility clinic in Anambra State, south-eastern Nigeria. Data were collected and analysed to generate themes with the aid of NVivo 10 software. Three themes were identified from the participants' motivations and include (a) monetary (93.6%), (b) altruistic (3.2%), and (c) both monetary and altruistic reasons (3.2%). Findings highlighted that the differences were based on a variety of reasons in Nigeria. All the participants were literate and single, and the majority received payment. The majority (77.4%) of those who received payment mentioned that the payment was not worth the donation program. The participants preferred to be anonymous because they had not discussed their donation with their family members, and the non-acceptance of egg donation program by the Nigerian society. Given that the market for egg donation has become a common method of infertility management in Nigeria, our findings have important implications for practices, policy actions, and future research. (*Afr J Reprod Health* 2022; 26[6]:64-79).

Keywords: Egg donation, donation motivations, demographics, young females, Nigeria

Résumé

Des recherches menées dans le monde entier ont indiqué que la demande de don d'ovules a considérablement augmenté chez les jeunes femmes. Cette étude examine qualitativement les connaissances, les expériences et les motivations des jeunes donneuses d'ovules dans un établissement de santé nigérian. Des entretiens approfondis ont été menés en igbo et en anglais avec trente et un donneurs d'ovules consentants fréquentant une clinique de fertilité dans l'État d'Anambra, au sud-est du Nigéria. Les données ont été collectées et analysées pour générer des thèmes à l'aide du logiciel NVivo 10. Trois thèmes ont été identifiés à partir des motivations des participants et comprennent : (a) des raisons monétaires (93,6 %), (b) des raisons altruistes (3,2 %), et (c) des raisons à la fois monétaires et altruistes (3,2 %). Les résultats ont souligné que les différences étaient fondées sur diverses raisons au Nigeria. Tous les participants étaient alphabétisés et célibataires, et la majorité a reçu un paiement. La majorité (77,4 %) de ceux qui ont reçu un paiement ont mentionné que le paiement ne valait pas le programme de dons. Les participants ont préféré rester anonymes, car ils n'avaient pas discuté de leur don avec les membres de leur famille et de la non-acceptation du programme de don d'ovules par la société nigériane. Étant donné que le marché du don d'ovules est devenu une méthode courante de gestion de l'infertilité au Nigéria, nos résultats ont des implications importantes pour les pratiques, les actions politiques et les recherches futures. (*Afr J Reprod Health* 2022; 26[6]:64-79).

Mots-clés: Don d'ovules, motivations au don, démographie, jeunes femmes, Nigeria

Introduction

Infertility is recognized as a public health problem globally^{1,2}, the rate is considered worrisome³, and

the burden remains high⁴. It is estimated that about 8-12% of couples worldwide are infertile and that many of these couples are seeking fertility treatment⁵. For some couples, especially women,

the only option is to use the egg(s) donated by a third party known as the donor^{6,7} to conceive a partial genetically linked child or a gestational link by using a surrogate⁸⁻¹¹.

Despite criticisms and controversies surrounding egg donation, research indicates that the demand for egg donation has grown considerably among young females¹²⁻¹⁵, and it indicates that egg donation has become an accepted part of infertility management, especially for couples who cannot produce the requisite eggs^{14,16-18}. Its popularity is due to the phenomenon of delayed motherhood because trends reveal that women start planning motherhood later¹⁹. As a woman grows older, especially from age 35 onwards, her ovarian reserve keeps on diminishing, and the egg quality becomes poorer and less healthy than when she was younger. In fact, from age 40 onwards, the oocytes are more likely to develop a genetic abnormality²⁰⁻²², and conception becomes difficult and even when it succeeds, the risk of miscarriage, birth defects, or genetic disease is higher. Akolisa noted that where drugs for ovary-stimulation are untenable, the next option is egg donation²³. Like the sperm donation, it is a treatment sensitive to local culture and regulation²². For instance, in Germany, egg donation is not allowed, while in other parts of Europe, it is allowed with either donor anonymity (e.g., France, Greece, Hungary, Italy, Poland, Portugal, Slovenia, and Spain), or non-anonymity (e.g., Austria, Finland, Netherlands, Sweden, and UK). Both anonymous and non-anonymous egg donations are allowed in Belgium²².

On the contrary, in the developing world, particularly in some African cultures, assisted reproduction technique (ART) relieves more than 50 percent of infertility cases⁸, however, gamete donation remains secret, unexplored, and underutilized^{24,2,19}. It is perceived as a sensitive matter and taboo subject shrouded in secrecy due to the extreme social and cultural importance attached to genetically related children^{24,25}. Therefore, due to the social stigma associated with donor-assisted reproduction some infertile couples may be hesitant to accept reproductive treatment involving donor gametes²⁶. Even those who undertake it, often do so in secrecy²⁷, maintaining a “cult of silence” that operates outside the walls of the clinic²⁸. For instance, the practice in Nigeria is largely controversial²⁹. It is still a grey area struggling for

acceptance because of strong socio-cultural and religious dictates guiding the fertility process and possible stigmatization that has trailed the use of donor gametes²⁶. Additionally, policy guidelines and legislation to formalize and regulate any type of reproductive donation procedure barely exist. This raises several potential legal, medical, moral, and socioeconomic issues^{9,30}. Thus, in Nigeria, due to a lack of policy direction, legislature, and regulations for the performance of any kind of reproductive donation procedure³¹, clinics are free to conduct services as they like. There are an unknown number of unregistered practitioners of ART. This proliferation has spawned the problem of quackery in the practice of ART, especially with the occurrence of “baby factories” (a form of human trafficking) in many parts of the country, which provide fertility services to unsuspecting and often desperate members of the public²⁹.

Extensive research on egg donation among young females has been examined, but, empirical research on donation motivations tends to be limited, and even the few available studies focused on the motives of white donors, especially from Western countries^{12-14,17}. These studies have revealed diverse or multiple dimensions of donation motivations among young females^{15,18,32} with financial compensation being the dominant incentive for egg donation in countries such as the USA, where payment is permitted. Altruistic motives have been cited as the reason for egg donations^{12,13,15,33}, but these studies show that demographic characteristics is one of the causative factors that motivate young females to egg donation¹⁵. As noted in Boutelle¹⁴, demographic data from several studies indicated that donors' age^{12,34,35}, self-identity³⁶, educational achievement, employment status at the time of the first egg donation¹², marital status, and the number of children³⁶⁻³⁸, and religious affiliation¹⁸ are some of the contributory demographic characteristics identified. In the Nigerian context, there is a lack of scholarly research that has explicitly examined young egg donors. The minimal available studies on egg donation are quantitative studies and have failed to unravel the donation motivations of young females. Drawing on key in-depth interviews of the study reports, these preliminary findings of an ongoing doctoral study investigated the knowledge, attitude, and practice (KAP) of egg donation among young females in Nigeria. KAP of young females to

donate their eggs in Nigeria is essential, as young females, particularly students in different parts of the world, have been found to be the primary targets for egg donation^{12,14,18}. This study will not only provide information for professionals and policy makers but will also contribute, and develop extant literature on donation motivations and demographic characteristics of egg donors in Nigeria, as well as inform future directions for studies.

Literature review

Egg donation, also known as *ovum* or *oocyte donation (OD)*, is a fertility treatment where a woman who acts as an egg donor provides the ova (eggs) to another woman who is the recipient in order for the eggs to be fertilized with either the male partner's sperm or donated sperm during IVF and resulting embryos placed into the recipient's uterus to assist a couple to achieve a pregnancy and become parents^{21,39,40}. During this process, any child created will be genetically related to the male partner if the male partner's sperm is used but not to the female recipient. At an egg bank, donor eggs are collected and frozen for purchase, similar to the way a sperm bank operates⁴¹.

However, one significant factor impeding access to many is the cost associated with fertility treatment⁴². Depending on the country and even the clinic where it is performed^{21,23}, on the average, the price of using donor eggs can be as high as €7,500 in countries such as Spain, or as low as €4,500 in other destinations such as Cyprus, the Czech Republic, or Ukraine²³. In the USA, a country that basks in the glory of capitalism, the sale of human eggs is not an offence²¹; treatments are expensive²¹ and now exceed \$20,000 USD⁴³, while the cost for harvested human eggs varies, and ranges from \$20,000 to \$40,000 approximately for a fresh donor egg IVF cycle in the United States of America^{21,41}. This includes the cost of compensation for the donor, usually between \$3,500 and \$10,000^{21,41}. The cost of a frozen donor egg cycle is anywhere from \$16,000 to \$24,000, and the cost of a frozen donor embryo cycle is even less at \$5,000 to \$9,000. Frozen donor embryos are cheaper because there is no need to have them fertilized in a lab²¹. However, in Canada, New Zealand, and France, there is a ban on monetary compensation for egg trading. The UK prohibits payment for donors, but they may receive a fixed amount of money to cover any financial loss

incurred in connection with the donation²¹. It is also illegal in Australia to receive or make any type of payment for human tissue, including donated eggs. The recipient should meet all expenses directly incurred in making the donation (e.g., travel, parking fees), but cannot compensate donors for lost time at work^{22,39}.

In Nigeria, though some advocacy groups want that egg donation to be free, others believe egg donors should be compensated for the time, effort, stress, and inconvenience required of the donation process²³. Ovum trading is now a multi-millionaire business in Nigeria²³, and depending on the facility, an egg donor gets between one hundred and twenty thousand naira (₦120,000 or \$335USD) and one hundred and fifty thousand naira (₦150,000 or \$420USD)(at exchange rate of ₦360 to \$1) to have her eggs harvested^{23,44}. The Nigerian National Health Act of 2014 does not criminalize egg donation, and it is silent on the trade, and this can mean that egg donation is legal and the prospective donor has the right to decide to sell her eggs as far as she meets the selection requirements since the prospective donors are helping couples build a family²³. Before a donor can donate an egg to a recipient to use, an egg donor must meet certain requirements. In Nigeria, the requirements to become an egg donor may vary from one fertility clinic to the other, but the universal standard includes that: (a) donor must be between the ages of 21 to 28 years (some facilities take between 19 to 25 years); (b) donor must maintain a healthy lifestyle (no smoking, no alcohol intake, no tattoos); (c) donor should have a clean medical record (must not be diabetic, no reproductive disorders or abnormalities, not hypertensive, and clean of all sexually transmitted infections especially HIV, syphilis, hepatitis B); (d) donor must be willing to remain committed to the process and ready to undergo a psychological evaluation as well as take injectable drugs; (e) donors must have regular monthly periods; (f) donor must be physically and emotionally healthy; (g) donor must not be obese with Body Mass Index (BMI) between 21 to 28kg/m²; and (h) Donor must not be on any contraceptives, for instance, depo provera²³.

The use of a donor egg has its pros and cons. On one hand, research has shown that a woman is born with an estimated of 2 million immature eggs and a vast majority of these eggs will die through a process known as apoptosis. Of

this number, only about 400 eggs will mature naturally. The egg donation had no effect on this number. It is safe and does not affect the chance of getting pregnant in the future²³. Donor eggs come from young and fertile women, thus, success rates for using donor eggs can be as much as two or three times higher than those with regular assisted reproduction in women 40 years and older⁴⁰. Using frozen donor eggs or frozen donor embryos is more cost effective than a standard assisted reproduction procedure because there is no need to pay for expensive ovulation-inducing medications or an egg retrieval procedure⁴⁰. However, the cons are that assisted reproduction using fresh donor eggs is more expensive than a standard assisted reproduction procedure. Part of the reason egg donation has still not fully gained acceptance by Nigerians is the fear of the dangers and/or risk factors. In the short run, short time side effects accompany the whole process. Withdrawing blood for tests and administering injectable medications could be painful and uncomfortable for a donor who is scared of needles²³. The egg retrieval process is painful and could cause mild bleeding but then, donors will be given anaesthesia during the process and painkillers thereafter²³. After the egg retrieval, the donor may get pregnant if she indulges in sexual intercourse. This is because the medications taken increase fertility²³. Another condition is the lengthened time of the process²³. There is this erroneous belief that it causes infertility later in life. However, on health grounds, egg donation has been proven by research to be a medically safe process with no long-term side effects²³. Although a woman has a biological link to the resulting child, she must accept that she is not the child's genetic mother. Some families are open to their children's genetic origins, but others may not feel comfortable with that approach⁴⁰. Again, if using donor eggs and more than one embryo is placed in the uterus, a woman has a higher chance of having multiple pregnancy. Forty percent of the treatment cycles using donor eggs result in a multiple pregnancy. Ailoje⁴⁰ noted that some couples consider this a blessing, but carrying multiples increases the risk of miscarriage and other complications, such as preterm labour, and most clinics do not offer this treatment to women aged 55 years and older because there is not enough evidence to show that it is safe for women in this age group or for the babies.

There may be ethical and medical reasons for declining this treatment to older women^{41,45-47}. There are risks even for the egg donor. Ten to 20 percent of women who took medications during the process (e.g., gonadotropin and HCG), could develop mild ovarian hyper-stimulation syndrome (OHSS), which occurs when the body responds too well to fertility drugs and produces too many eggs²³. The ovaries become swollen and fluid accumulates in the abdomen. They also experience some weight gain, mood swings, and a full, bloated feeling, though this may resolve on its own with careful monitoring by a doctor, some women with more severe OHSS may need to be hospitalized for nausea, vomiting, dehydration, rapid weight gain, blood clots, kidney problems, a twisted ovary, or fluid in the chest. In very rare cases, the condition can be life threatening^{41,45-47}.

Some scholars have observed that the attitude toward egg donation and knowledge of egg donation among potential egg donors influence their willingness to donate⁴⁸. Stevens and Hayes in a survey of 330 female college students reported that only 23% of the students surveyed were willing to donate an oocyte⁴⁹. In the same study, the majority of those who were willing to donate quoted altruism as the main motivating factor influencing their decision, while only 13% quoted financial compensation as their motivating factor. Studies have consistently shown that altruism and financial compensation remain the commonest motivation for people who declare their intention to donate an egg^{25,49,50}. Besides these two factors, however, other motivating factors cited include previous experience with infertility through relatives or friends^{25,51}, establishing a relationship with an infertile couple, and passing on genetic material to the next generation⁵¹. Among students, however, the main motivating factors studied include altruism and financial compensation⁴⁹. Among those who declared unwillingness to donate, some of the common deterring factors cited include, fear of risks associated with the procedure, lack of knowledge, ethical and religious reasons^{49,51}.

While there has been much research on egg donors' motivations, experiences, and opinions in other areas of the world—especially in the United States, and the United Kingdom^{25,52}, a few in South Africa^{25,53} – egg donation research in Nigeria is nascent, and thorough search of the literature did

not show any published study in this area. This study, therefore, seeks to fill this lacuna by presenting the results of a qualitative survey of young Nigerian female egg donors' experiences and donation motivations. Thus, knowing whether potential egg donors are willing to donate and the factors that motivate them is essential as it informs donor recruitment agencies and ART service providers, and participants using assisted reproductive technology services where to channel resources to improve supply. Additionally, the results of this study should stimulate further research on the subject of egg donation as an assisted reproductive technology by the scientific community in Nigeria.

Methods

The study was conducted at Life International Hospital Awka; a private hospital located in the capital metropolitan city of Anambra State, south-eastern Nigeria. It is a leading fertility clinic in the region and performs approximately 200 – 300 egg donation cycles per year, of which 5 – 10% are part of surrogacy arrangements. Prior to data collection, ethical approval was obtained from the ethics committee of the Chukwuemeka Odumegwu Ojukwu University Teaching Hospital (COOUTH/CMAC/ETH.C/VOL.1/FN:04/0033). The study adopted a qualitative approach to gain deeper insights into donation motivations of young females in Nigeria, and the data collected was for the purpose of this study alone. A qualitative approach to this study was determined to be most appropriate given the goals of the study, and the lack of empirical research in this area. The participants were recruited through convenience sampling approach⁵⁴, because of the sensitive nature of the study. The convenience recruitment process was adopted to enable the research to reach only donors that are available and consent to participate in the study. Egg donation is a sensitive topic in Nigeria, as such; young females involved in donation program largely keep this a secret. This is because of their fear of identification, perceived stigmatization and being labelled an aberration to the generally accepted culture on procreation in the study area. To protect donors' privacy and confidentiality, the participants' names were not used, but rather some demographic profiles were used.

Participants and interviews

The participants were consenting young females aged 20–29 years who had approached the fertility clinic of the private hospital to donate their eggs. All donors who had presented themselves for egg donation at the hospital between June and December 2019 (after screening, testing, and treatment given for at least two weeks) were eligible for this study. In total, 36 egg donors presented themselves, of which 5 declined to participate while, 31 agreed to take part, representing 86% of all eligible egg donors. Understandably, the decline to participate largely reflects the level of perceived stigma and consequent secrecy surrounding egg donation in the area. Due to society's perspectives of egg donation, young females are not easily accessible for such sensitive study, which may expose their identity. In order to ensure voluntary participation, no incentive was given to the participants.

Consistent with the recommendation of Riessman⁵⁵ and Kvale⁵⁶, interviews were used to elicit description-rich accounts of the participants' donation motivations. The interviews were largely open-ended questions that were designed to cover the relevant themes discussed in the literature in an effort to elicit information or to gain a deeper understanding of the participants' donation motivations. Thirty-one interviews ranged from 65 to 80 minutes in length were conducted by the researcher privately in a room at the IVF clinic of the hospital with no member of the clinic present. This ensured privacy, confidentiality, and anonymity of each donor, and it was made clear that their responses would not be discussed with clinic staff. This enabled the donors to speak openly to the interviewer about issues that were not accessible to the clinic. For example, disclosure of the number of previous donations, suggests that donors were speaking openly and honestly. Despite this, the possibility of participants responding in a socially desirable way cannot be ruled out. The interviews were recorded with a digital device with the permission of participants. After testing the interview protocol in a pilot study in the same facility, an interview schedule was developed that consisted of 8 main questions that were expanded through probes during the interviews. Each interview began with an effort to establish rapport and obtaining demographic information. The

questions that followed sought to elicit from donors how they first heard about egg donation; initial views and understanding of egg donation; knowledge of associated risks; who they discussed their donation with; donation motivations; the frequency and number of previous donations; and issues around compensation. Additional questions explored anonymity and disclosure of the donation process. The interviews were considered complete when the participants felt they had fully shared and articulated their experiences. The interviews were conducted in Igbo and English by NIO who later translated the Igbo into English and transcribed the interviews for analysis.

Data analysis

Analysis began with transcription of the audio taped in-depth interviews. The interview transcripts were transcribed verbatim accounts with pauses, silences, and changes in voice tone. Transcripts were systematically analysed by reading it several times with particular attention to content. A thematic analysis⁵⁷ was undertaken to develop the themes. A list of codes to classify participants' responses to the different variables under study was created, in the hope of identifying common themes pertaining to donation motivations⁵⁸. All transcripts were rated according to these codes. The themes were determined based on the frequency devoted to it, the repetitive nature of the theme, and the number of details the participant provided about it. Data of the thirty-one open-ended interviews are presented as number of cases and percentages. In addition, excerpts from the participants' words appear in quotation marks to give further illustrations.

Results

Demographic characteristics of participants

Thirty-one egg donors participated in this study. Egg donors ranged in age from 20 to 29 years with a mean age of 22.4 years. The majority 26(83.9%) but five of the participants were Igbos, an ethnic group that predominates in the area where the study was conducted. All the participants but one spoke English language or 'pidgin' English. Other language spoken was Igbo. All egg donors were single but, 22(71%) of the donors were not in a committed relationship while 9(29%) were in a

committed relationship. Whereas the majority of the participants 29(93.5%) did not have any child, two (6.5%) had at least one child of their own. The children were aged 2 years each. The average level of education for the sample was high. All 31 participants were literate and had attended school. Approximately 68% (21) of the participants indicated that they were currently full-time undergraduate students. Eight (25.8%) had completed secondary school only, while two others (6.5%) had completed a bachelor's degree. Twenty-two egg donors (71%) indicated that they were currently unemployed. The occupations of 9 (29%) of the participants employed varied greatly and included manual and non-manual jobs such as hair stylist, 'Okirika'- second hand clothe seller, ICT trainee, and national youth service corps (NYSC) member. Finally, analysis of respondents by religious affiliation shows that all of the participants were Christians: 16 (51.6%) were Catholics while 15 (48.4%) were Protestant. This finding is indicative of the predominance of Christianity in southeast Nigeria. All the participants said that their religious affiliation is not significant in their decision to donate. They 'don't care' about cultural or religious viewpoints about egg donation.

First source of information of egg donation

The majority (30; 96.8%) of the donors' first source of information on egg donation was by word of mouth through very close friends. These friends were egg donors themselves who received payment for finding new egg donors for anonymous donor agencies. Out of these 96.8%, those who were currently tertiary students (67.7%) also made inquiries about the donation procedure on the internet, which provided more information without compromising anonymity, as this egg donor described that:

'I got initial information of egg donation from my schoolmate and friend who is a donor. Although, she tried to explain this 'stuff' to me well. I didn't understand this... 'thing' that she was saying at all...really. Her explanations sounded bizarre to me. So, I was not convinced and didn't believe her. Unfortunately, as I continued to lack money, I decided to read about it online to be better informed before I get into it. At first, I was scared but in the cause of my research I found that it seemed ok so, I

decided to join' (Student, ICT trainee, aged 21 years, Spoken in English).

However, a donor first heard of the process through a sister who had been donating too. The donor explained that:

I first heard of this process through my younger sister who had been donating since she turned 20 years. At first, I didn't really take her view or advice because it was a horrible shock hearing of egg donation from 'obele nwanem nwanyi' (meaning my own younger sister). You know...our society is very traditional and conservative on issues like that' (Hair stylist, aged 23 years, translated from Ibo).

Donors' initial feeling and understanding of egg donation

To further assess donors' initial feeling of egg donation, the views of participants were also sought. Initially, participants reported that they were scared, had a feeling of disbelief about the possibility of egg donation, not very convinced at first that something like this could happen and wondered how it would happen. A vast majority 23(74.2%) of the participant initially thought that egg donation is like giving one's child to another woman as a donor stated that:

Initially, I used to feel that ED is selling my baby to another woman until I got proper information from my friend who explained that it is only an egg given to another to have a baby' (Unemployed, aged 24 years, spoken in English).

Another donor mentioned that:

Before now, I feel that donating my eggs is selling my child. I felt bad initially but, I don't feel bad about it or regret doing it for now... (laughs) Unless in the future, if I eventually get married and then I can't have my own children, I may then think it is due to eggs that I have donated in the past (NYSC, aged 25 years, spoken in English).

Also, the study revealed that the extent to which egg donors could express their understanding of egg donation varied greatly. Over forty percent (13) of the participants understood egg donation to mean ovaries that are shed or wasted as menses every month, collected from their bodies and given to

another woman. As a donor stated that: *'my view about egg donation is that instead of wasting it every month, it is good to donate it to people that need it'* (Hair stylist, 24, spoken in English). However, four (12.9%) egg donors (both completed tertiary education) spoke coherently and used scientific language to explain their understanding of egg donation. For example, one of the donors explained that:

'Emmm... from what I have heard, ED involves self-administered injections of fertility drugs to stimulate egg production and surgical egg retrieval from our body after treatment, then given to another woman to facilitate pregnancy... In my own opinion, egg donation is a good way to help childless couple, but I don't feel proud discussing it publicly' (NYSC, aged 25 years, spoken in English).

Another donor viewed egg donation in a positive light, stating that it benefitted others and helped donors by providing money:

'I feel that I am doing something good for someone else. In any case, the eggs are useless and wasted when I shed them every month. If I donate my eggs now, it would benefit infertile people as well as provide money for me' (Hair stylist, aged 23 years, translated from Igbo).

Perspectives of egg donation in the study area

In terms of societal views about egg donation, participants mentioned that society has a different mentality about donation. Most egg donors 17(54.8%) spoke of negative societal attitudes and explained that egg donation is perceived as a sin because, people feel that it is morally and culturally wrong, while 14(45.2%) explained that in the society, egg donation is seen as a taboo, not generally acceptable and not discussed openly. One of the donors stated that:

'Our society is not yet so developed and don't understand ED. In Nigerian context, it is often perceived as ethically, morally and culturally wrong to donate your egg. To some people, especially those that are enlightened, they don't see it as something wrong but, for some others, they would say that you are doing something wrong. Traditionally, our society and culture

Table 1: Demographic characteristics of participants

Variables	Demographic	Frequency (n=31)	Percentage %
Age of Participants	20	5	16.1
	21	2	12.9
	22	10	32.4
	23	5	16.1
	24	4	12.9
	25	1	3.2
	26	1	3.2
Tribe of Participant	27	1	3.2
	Igbo	26	83.9
	Auchi	1	3.2
	Ishekiri	1	3.2
	Efik	1	3.2
	Ijaw	1	3.2
Marital Status	Ibibio	1	3.2
	Single/No Committed relationship	22	71.0
Number of Children	Single/Committed relationship	9	29.0
	0	29	93.5
	1	2	6.5
Level of Educational Attainment	2 (Twin)	2	6.5
	Completed secondary	8	25.8
Currently a Student?	Tertiary (Graduate)	2	6.5
	Tertiary (Undergraduate)	21	67.7
	No	10	32.3
Employment Status	Yes (Full-Time)	21	67.7
	Unemployed	22	71.0
Occupation	Employed	9	29.0
	Student	20	64.5
	Hair Stylist	5	16.1
	Second hand Clothe Seller	1	3.2
	ICT Trainee	1	3.2
	NYSC	1	3.2
	Caterer	1	3.2
	No Occupation Currently	2	6.5
Religious affiliation	Christian – Catholic	16	51.6
	Christian – Protestant	15	48.4
Total		31	100

Source: Field Survey, 2019/2020

think of it as selling our baby. Peradventure when one gets married, you may start looking for a child...' (Unemployed, aged 26 years, spoken in English).

This view was again reiterated by another donor who explained that:

'In Nigerian cultural context, people are not open-minded about this... Yes, donating your egg is seen as sinful and wrong because people believed that eggs were given to you freely by God...but, you, selling the eggs now and collecting money for it, is regarded as doing business with what God has given to you freely' (Caterer, aged 23 years, spoken in English).

However, one donor who came to donate altruistically for the friend noted that:

'Though a lot of people considered it as a bad thing or a sin but, for me egg donation is not a bad thing. In our society there are a lot of bad things that are happening, and no one says it is bad. In my own view, it is collecting money after donation that makes it sin. We should not be compensated since we are donating it to help people that need it, just like in blood donation. Ideally, it is not good to collect money because when you collect money it is as if you're selling... (you understand) your eggs. Really, donating egg to help infertile couple makes me feel confident that I am fertile and gives the couple joy for conceiving eventually... In future, when I get married, and if I'm unable to get pregnant, I'll feel sad though, but it will never

make me think about the eggs that I donated in the past which others have used to have children. But, if there is an occasion or a need to accept a donor egg for me to get my own child, I will definitely accept, but, with my husband's support. If my husband does not support, we will continue to wait on the Lord and then I will try my best to convince him because his consent and money will be needed in the ART procedure' (Second-hand clothe seller, aged 22 years, spoken in English).

Motivations to donate

When participants were asked why they donated, they gave a variety of answers, most of which related to their own monetary gains. A vast majority 29(93.6%) indicated that their motivations were strictly based on monetary needs. Financial explanations included one of the following:

'I learnt the skill of hair braiding/styling and so I don't have money to start up... I don't have anybody to give me money, neither would my parents, so I decided to donate so that I can get money to start up my own hair saloon... Ooooh God! I must continue doing business. (laughs)... After six months, I'll come for another donation and then get another one hundred and twenty thousand naira (₦120,000; \$335 USD), and this will add up to two hundred and forty thousand naira (₦240,000; \$670 USD), which will be manageable to start my hair saloon business' (Hair Stylist, aged 23 years, translated from Ibo).

The second theme emerged around altruistic reason as one (3.2%) donor stated, *'helping others to have children...'* (Silent awhile, then explained amidst cries) that:

'I have a very close friend that had suffered a lot of fertility challenges ever since she got married. I saw all that she had to go through seeking for the blessings of the fruit of the womb. So, having seen her pains, and, when I heard that she chose to use an egg donor program to conceive, I felt there is need to donate my eggs so that I can help my friend out. On my own, I visited the hospital and enquired about the ED procedure, and then I indicated interest to donate anonymously for one of their clients who incidentally is my friend. Even, my friend didn't know that I was the person that

donated my eggs for her IVF procedure. Thank God that her pregnancy test came out positive oooooh...! I know a lot of women feel extremely sad that it feels that their life has come to an end because they can't conceive... Of course, the money is tempting, but at the end of the day, when you think about it from another woman's point of view, or even put the whole money thing aside, I think you'll feel nice that you are in a position to assist, you know... So, I basically feel that if it comes to donating freely for my friend, I'll be more than willing to help out' (Second-hand clothe seller, aged 22 years, spoken in English).

Finally, a response from one donor (3.2%) suggested that both monetary gains together with altruistic reasons played a role in her decision to donate. However, financial motivation was mentioned first as a primary motivation whereas, altruism was a secondary factor, as in the following example:

'To be honest, I needed money, and as a student, the additional money was nice. But, I became more eager about it because it was a wonderful thing to do; the thought of helping someone is indeed exciting for me as well as the extra money... If I make enough money now to cater for my academic and other personal needs, and there is still need for me to donate freely, sure, I can donate more if, I still have more eggs (laughs)... I have to help others too' (Undergraduate student, aged 20 years, spoken in English).

Previous donations and understanding of associated risks

In response to the maximum number of previous donations and knowledge of associated risks, most of the donors 22(71%) indicated that they had donated two times only. Six others (19%) had donated three times, whereas 2 (6.5%) donated only once. One donor confidently reported that she had donated more than six times (across different clinics). This confirms a similar finding displayed in Jadvá, *et al*¹⁵, where one egg donor had donated more times across different clinics than the permitted limit of six donations per donor set by the Indian Council of Medical Research (ICMR). The study further revealed that 28 (90.3%) of participants indicated that the length of time

between donations was twice yearly (i.e. every six months). However, 2 (6.5%) of the donors indicated that they would continue to donate their eggs until they get married, while a donor indicated that: *'once she is through with giving birth and still shedding eggs, that she may continue to donate and freely'* (Student, aged 20 years, spoken in English).

Payment (financial compensation) for egg donation

Although the motivation to donate varied widely, all of the donors except for one (altruistic donor) received financial compensation for their donation irrespective of their level of education or other demographics. The donors received one hundred and twenty thousand naira (₦120, 000; \$335 USD in 2019) or less, depending on the quality of eggs retrieved. According to an embryologist at the hospital, the frequency and number of donations, determine the quality of follicles produce and retrieved (Embryologist, Informal interview, 2nd October 2019). This may directly affect their health and indirectly downgrade their payments. Fertility clinics should consider counselling and highlighting to donors the associated risks in donating outside permitted limits, which may encourage them to adhere strictly to healthy donation practices. A donor donating for the first time stated: *'I am truly looking forward to the payment'* (Student, aged 21 years, spoken in English).

In terms of what the payment would be spent on, some egg donors gave more than one response. The majority 22(71%) of the participants were current students and indicated that compensation would be used for example for items such as school tuition, final enrolment fee, to pay rent, and other personal stuff. One donor out of the those that are currently students also had a child and mentioned that: *'the money would help with school tuition as well as taking care of my baby'* (Student with a child, aged 20 years, spoken in English). The remaining 9 (29%), indicated that compensation would be used for other items such as medical bill for a sick parent, to start up a business, or provide for family members. A donor (crying) mentioned that:

'... Honestly, I will benefit financially, I could use the money to reopen my mother's hair styling shop and help my family. I am the first

child, taking care of my three younger siblings. My mum who used to be a hairstylist died and my dad is not doing anything to help out. I am the one putting food on our table. I will continue to donate my eggs until I get married to help myself and my family. Is it not better than to go into 'runs' (prostitution) to make ends meet? I think that it's even risky doing 'runs' because you don't know who may carry you and use you for money rituals. For me, it is a good thing and I don't feel that it has any side effects on someone's fertility. I even have a friend that donated like three times and today she is happily married with children. So, I don't think there is anything drastic about ED. If there is no compensation, I will not even try it' (Apprentice hair stylist, aged 27 years, spoken in English).

Compensation worth and increment

When asked whether the financial compensation was worth the role donors played in the donation process and if there is need for a raise, a huge majority of the donors, 24 out of 29 (88.8%) of the donors who said that financial compensation was significant to their decision reported that the compensation they received was not worth the role they played in the process and there is need for increment in the payment. A donor noted that: *'Procedure for ED is more tasking and takes more time than blood donation, so it should be compensated adequately, and not for free'* (NYSC, aged 26 years, spoken in English). However, 5 out of 29 (17.2%) reported that the level of payment was just about right, but 2 (6.5%) of the participants were unsure about the financial compensation. When asked if any increment is worth their eggs, and if yes, what amount of raise would be adequate, all the participants responded that no amount of money is worth their eggs. A first-time donor said:

'...No oooh!! no amount of money is worth my eggs oooh...! What I am saying is that even the said compensation is not commensurate to the donation. In Nigeria they pay egg donors between ₦120,000 and ₦130,000 (\$335 - \$360 USD) depending on the facility. I feel if they can raise it to between ₦150,000 to ₦200,000 (\$420 - \$560 USD), it will be manageable' (Student, aged 22 years, spoken in English).

Issues around anonymity and disclosure of donation: “I will not tell...”

Participants were asked whether they would prefer to disclose the idea to people or remain anonymous. All the participants subscribe to secret egg donation, especially from family members. However, whilst 24 (77.4%) had not told anybody about their role as an egg donor, 6 (19.4%) had told very close friends with one (3.2%) having told a relative. A good number 14(45.2%) of the participants would keep the donation process secret because they believed that people donors told about the donation may start telling everybody that they are selling their children. Another set 10(32.3%) of the participants mentioned fear of perceived stigmatization, others 6(19.4%) reported that egg donation may not be supported or encouraged by parents or family members, even if they are informed while one (3.2%) said that, not telling people would ensure confidentiality. Explanations around reasons for anonymity included the following:

‘Noooh. I can’t tell anybody about this oooh!! not a friend, my siblings nor my parents. The first time that I heard about this and cunningly told some of my friends about it, do you know what? Hmmm! they all objected to it; they never liked the idea at all. So, when I eventually started donating, I kept it top secret. Since my friends objected to it, I just feel that if I tell them about it, they may not understand. They may start telling everybody that I am selling my babies. As a matter of fact, this happened to one of my neighbours in my area. She told a friend and when they had issues, and quarrelled, the girl started cursing her in public, shouting that she has been selling her children. I felt really bad but, I learnt a lesson from this. So, for me oooh... I can never tell anyone about this because the society sees egg donors as girls selling their children’ (Student, aged 20 years, spoken in English).

‘I don’t feel proud saying it publicly just like some people feel okay discussing it outside. So, I’ve not really mentioned it to anyone. Even though a lot of girls do it, they don’t want to talk about it. No, no... I wouldn’t want anybody to know about it because I really don’t think; you know...it would go down very well with

people. If I ever consider telling anybody, yes, I can tell my very close friend but once it’s a family member or my boyfriend..., it is capital NO’ (NYSC, aged 26 years, Spoken in English).

‘... Hmmm!! It’s not necessary... I can never tell my parents especially my mother. Uuuuuuu! You know... (ha ka ji isii ndi mgbe ochie) that is, they still look at things conventionally. If I tell her, she will not understand... I think it would break her heart... She would be like I have already damaged my womb... She would say that those eggs may be the only children in my womb and after selling my children, I may never have children in the future...’ (Hair Stylist, aged 23 years, translated from Ibo).

Discussion

This is the first qualitative study on donation motivations and demographic profiles of young females in Nigeria who donate their eggs. It highlights some similarities and dissimilarities between donation motivations and demographic profiles of egg donors from Nigeria and those from other nations. Previous studies on egg donation have shown that young university students are most commonly targeted for egg donation^{12,14,18,59}. Demographic data from several of these studies have indicated that the age range of the egg donors was from 20 to 37 years at the time of first donation, with 25 years being the median age^{12,15,34-36}. These donors have some measure of educational achievement. For instance, Kenney and McGowan¹² found that 45% of their sample were students when they first donated; Jadva *et al*¹⁵ found that all 25 (100%) of their participants were literate, with five (20%) of them having completed their first degree. Most egg donors were employed at the time of donation, but their occupations varied greatly and included manual and non-manual jobs^{12,15}. Religion was indicated by Purewal and van den Akker³³ and Pew Centre Forum⁶⁰ to be a contributory factor in egg donation motivations.

Like the findings of these previous studies on donors’ demographic background, a vast majority of participants in this study were currently young, single, and tertiary students with an average age of 22 years. The average level of education for the participants was high school, where 9 (31%) were literate with some level of educational

attainment. About 29% of the participants were employed in either formal or the informal sectors (e.g., hair stylist and computer trainees). Similarly, all the participants in this study did not believe that their religion played a part in whether or not they would donate eggs. This result could mean that the participants in the study may not even be aware of their religion's stance on egg donation. One participant said, "I don't even know Protestantism's stance on egg donation... I'm not bothered about them... All I know is that I have come to make money to help myself and siblings" (Unemployed graduate, aged 23 years, spoken in English).

Jadva *et al*¹⁵ in their study found that their studied women had a good understanding of what egg donation was all about and what the process involved because most of the participants had obtained information from their agent or from clinic staff, while Kenney and McGowan¹² found that the majority of women donors learned about egg donation through advertisements, articles, and print reports. Of these women, a quarter noted that their first source of information on egg donation was from a college or university newspaper, and they were aware of the associated risks¹². Our study showed similar findings because the study participants had a good understanding of egg donation and the procedure involved. However, our findings showed that 96.8% of study participants obtained their first information about egg donation from very close friends contrary to the results of Kenney and McGowan¹² and Jadva *et al*¹⁵. A minority of egg donors who had access to the internet made further inquiries using the internet, which was a convenient and discrete way to gain information unlike a donor, who first obtained information about egg donation from her sister who had been donating her eggs. This finding is very significant because, in our study area, egg donation is perceived as a secret and taboo subject. Ordinarily, family member(s) would neither support nor encourage a prospective donor to get involved in the donation program, and most times, the ED was done secretly to avoid been identified and stigmatized. Contrary to Kenney and McGowan¹², some donors in our study appeared to have little or no knowledge about the associated risks of exceeding the permitted number of donations per donor, and only a few of the more educated donors were aware of the associated risks and this can be linked to the donors' level of

educational attainment, which could be an impedance to the adequate understanding of associated risks.

However, monetary gain has been found to serve as a powerful motivator for a significant percentage of students at their first donation in relation to their age, employment, and socio-economic status^{12,14,15,33}. Together, these studies have shown that altruistic values (i.e. helping someone to conceive a child) provided little incentive and had little meaning for the majority of students. For example, 94.4% of students in Kenney & McGowan¹² reported that financial compensation played a significant role in their decision to donate when compared with only 56.8% that were not students, and Jadva *et al*¹⁵ showed that 72% of the egg donors were primarily motivated to donate their eggs because of financial needs. These findings aligned with our study that identified three themes regarding donation and includes; (a) monetary gain, (b) altruistic reasons, and (c) both monetary and altruistic reasons. Our study found that 93.6% of the participants were strictly motivated primarily by payment, which is referred to as compensation. The donors expected to receive the financial rewards and emphasized that they would not donate their eggs if they were not paid, which was not surprising, because the majority of the participants in this study were young university students with no or limited employment income. Financial explanations included the following: 'I needed money' (Student, aged 20 years, spoken in English). 'I was having serious money issues; then, when a friend said that I get paid for doing this stuff ... you know...I followed her to donate' (Full-time student, aged 22 years, spoken in English). 'I am truly looking forward to the payment' (Full-time student, aged 21 years, spoken in English).

Financial gain serves as an important incentive, while in countries where compensation is prohibited, altruism was also cited as the primary motivating factor for some donors³⁷. This study equally found that one cannot always assume that all donations are motivated by money. In fact, one participant in the study refused payment because of being altruistically motivated to help a close friend. Another of the participants felt empathy for the recipients and indicated an altruistic desire to help alongside the financial gain. For those participants in this study, who also had reported that they wanted to help someone, this could be related

to their understanding of the social stigma associated with infertility in Nigeria, because the altruistic egg donor felt she was helping to remove the blame and burden of infertility for her infertile friend.

More than one response was indicated in terms of what the payment would be spent on. Seventy-one percent of the participants who were currently students indicated that compensation would be used for items that related to school activities and outside school activities (e.g., medical bill for a sick parent and for start-up of business). In addition, one of our young participants, who is a single mother said that 'the money would help with her tuition, and to cater for her baby' (Full-time student, aged 20 years, spoken in English). It is noteworthy that the vast majority of young students believed that egg donation was a good way to help a childless couple, though the same percentage admitted that financial compensation was significant to their decision to donate; and that the compensation paid was not worth the role they played in the process. This is the **“gift with a price tag”** that informed the title of this study.

Presently, there are no laws to moderate and to guide the egg donors despite the existence of such fertility treatments in Nigeria⁶¹. Ola⁴² and Osazuwa⁶¹ agreed that there was a lack of regulation on permitted number of donations per egg donor in Nigeria. In 2012, a bill for the establishment of the “Nigerian Assisted Reproduction Authority” for regulation of ART practice had been presented by the Association for Fertility and Reproductive Health (AFRH) to the Nigerian parliament for consideration. However, it has not been passed⁶². As such, development and formulation of sound evidence-based policy to protect all current and future potential donors and to inform donors about the associated risks is important. Most guidelines in Nigeria are based on regulatory bodies from Europe and America⁶¹, and according to ICMR, donors are not allowed to exceed the permitted limit of six donations per donor¹⁵. In Nigeria, it is not possible to track donations elsewhere, therefore, fertility clinics have to rely on donors, to be honest about the number of times they have donated, but due to monetary gain, egg donors in Nigeria may donate as many times as possible without considering associated risks in such risky donation behaviour. It is also possible for donors to intentionally withhold information on

previous donations at different clinics, because of the financial gains. In our study, one of the egg donors admitted that she has donated more than six times and does not care about the associated risks. The donor indicated "I am still single, and I feel it's good to donate... Anyway, there is nothing wrong in donating eggs that you would waste afterall... I will continue to donate my eggs until I get married" (Hair Stylist, aged 20 years, spoke in English).

All egg donors were aware of the stigma associated with egg donation and favour anonymity to a greater extent, especially from family members who may say that they are selling their babies. Only 19.4% of the participants spoke about it to very close friends, 3.2% had told a relative, while 77.4% had not informed anybody about their role as egg donors. Society's lack of understanding about egg donation was often reported as the main reason for keeping egg donation secret. This is a similar finding to those from other countries, where anonymous egg donation is practiced^{12,15,22}.

Conclusion

Through in-person counselling, health and educational interventions, ART clinics can help young females truly understand and articulate their motivations and attitudes toward egg donation in Nigeria. Since 93.6% of the participants reported that they were strictly motivated to donate primarily by financial compensation, some young females may be at risk of exploitation based on monetary needs. The findings also demonstrated a widespread ignorance, misunderstanding, and misinformation about the risks associated with egg donation, and revealed that this did not affect the participants' donation motives. Such lack of knowledge and confusion could be related to the absence of policies to guide the practice of egg donation in Nigeria. ART clinics should ensure a comprehensive understanding of the risks and benefits of exposing healthy students and out-of-school young females to hormonal ovarian stimulation and egg harvesting procedures. This can help women make informed decisions regarding the procedure not only based on monetary gain but also on health problems that may result from harmful donation practices. It is hoped that these findings will aid discussions around the development of measures that will enhance safer egg donations and dispel wrong beliefs about egg donation.

Limitations

The study has a number of notable limitations. Due to the secrecy involved in egg donation as highlighted earlier, the study relied on the data elicited from very few donors to explore egg donation motivations. The convenient use of samples of young females from a private fertility clinic located in one region of Nigeria may also limit the applicability of such findings to the general population of other young females from other regions or from Nigeria more broadly. However, in keeping with qualitative methodology, a representational sample was not sought, and the findings are not meant to be generalizable, and conducting studies about the motivations toward egg donations varies across a range of different clinics in other regions in Nigeria. Secondly, some of the interviews were conducted in Igbo and translated for analysis, which meant that some of the meaning could be lost. However, to minimize this risk two researchers were involved in the data analysis.

Despite these limitations, this is the first research to qualitatively explore donation motivations of egg donors in Anambra state, south-eastern Nigeria. By using qualitative research methods, the study findings add depth to our understanding of donation motivations of an understudied group, which is under-utilized among assisted reproduction scholars in Nigeria. The study also makes important contributions to egg donation by providing direction for further research. For example, because studies outside Nigeria have revealed that an individual donor's perceptions of the benefits of donating may be fluid over time¹², qualitative studies that involve older adults should be conducted in Nigeria to further explore this theme. Also, research is needed to study the awareness and attitudes during the egg donation process as well as post donation to assess changes in these constructs over time. In future, longitudinal research design to measure the impact of egg donation on all participants in the process, including children conceived through such procedures, as well as future health implications, is very important.

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