

A Survey of knowledge and perception of surrogacy among health care providers in selected institutions in Ilorin

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Abstract

Background: Surrogacy is a type of Assisted Reproductive Technology (ART) whereby a third party carry a pregnancy on behalf of another couple, delivers a baby and hands the child to the commissioning parents at birth. Surrogacy is becoming increasingly popular in developed countries with a well-structured legislation and laws. However, surrogacy is a relatively new practice in Nigeria and no legislation are guiding any form of ART in Nigeria. This study aimed to assess the awareness, knowledge, perceptions and attitudes of health workers toward surrogacy.

Materials and Methods: This was a cross-sectional survey of Health workers in University of Ilorin Teaching Hospital (UIH) and University of Ilorin Health Centre. A self administered questionnaire was used to obtain information on the knowledge of surrogacy, perception and attitudes toward surrogacy. Data was analysed using SPSS version 20. A total of 402 health workers of various categories participated in this study.

Results: Majority (85.5%) of respondents had previous knowledge of surrogacy with the commonest source of information being the health facility (33.3%). Less than 20% of the respondents had previously seen a baby born through surrogacy. About two-thirds of respondents (66.7%) opined that the intended mother should be the legal mother of the child in full surrogacy, while 54.2% supported the intended mother being the legal mother in partial surrogacy. Majority of respondents (79.4%) opined that the intended father should be the legal father of the child. Knowledge and awareness of surrogacy among the respondents was high.

Conclusion/Recommendations: There is high level of awareness and knowledge of surrogacy among the respondents. The high level of knowledge and awareness did not reflect in the attitudes and perception toward surrogacy. There is also low acceptability of surrogacy as a means of assisted reproductive therapy among our respondents.

Keywords: Surrogacy, Knowledge, Perception, commissioning parents

Introduction

In recent times there has been improvement in medical knowledge via technological advancements to improve the healthcare delivery system. This advancement has also led to a revolution in human reproduction which allows a woman to carry and give birth to a baby that is the product of another couple that wants to have a child. Surrogacy, a type of assisted reproductive technique (ART) can be described as a form of arrangement that usually involves a third party called the surrogate

mother. The surrogate mother is the woman who becomes pregnant, carries the pregnancy and gives birth to the child on behalf of another couple, the commissioning parents.¹³

There are various types of surrogacy arrangements: Full or gestational surrogacy which involves transfer of embryos created from gametes of either the commissioning parents or gamete(s) from a parent and another donor to the surrogate via In vitro fertilization (IVF) and the surrogate mother has no genetic link to the child. Partial, genetic or traditional surrogacy involves artificial insemination of the surrogate by the commissioning father, thus making her the genetic mother.^{4,7} Therefore, a surrogate mother is a woman who carries a pregnancy for the intended parents. Surrogacy arrangements are increasing and becoming popular worldwide because they allow couples who,

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for whatever reason, cannot procreate naturally to build a family.² It also enables couples to have a child that is genetically related to them by using their gametes (gestational surrogacy); which is usually carried out through IVF technology.^{8,9} Prior to the advent of IVF, only traditional surrogacy was practiced where the child was usually genetically related to the surrogate because her egg was used.⁸⁻¹⁰ The practice of commercial surrogacy has also contributed to the increasing popularity of surrogacy.¹¹ This involves compensating the surrogate for her services and not merely her medical expenses alone as is obtained in altruistic surrogacy arrangements where the surrogate mother does not receive financial compensation. In commercial surrogacy, the commissioning parents may opt for cross border surrogacy in which they make surrogacy arrangements with a surrogate from another country, and thereafter travel to the surrogate's country, or may opt to use a surrogate within the same country.¹² Surrogacy arrangements are sometimes made through some organizations.¹³ Surrogacy arrangements are usually bound by contract but this can only be legally enforceable in countries where surrogacy is legally practiced. Furthermore, surrogacy has gained popularity in situation whereby it is medically impossible for a woman to give birth or the woman would be risking her life by becoming pregnant due to some medical reasons.^{2,8,14,15} Surrogacy gives opportunities to heterosexual couples, homosexual couples, single mothers, or fathers to become parents. It can be achieved by using donor sperm, using donor oocytes, oocytes from the commissioning mother or using the oocytes of the surrogate mother.^{2,12}

Despite surrogate arrangement becoming popular, there are still challenges of this type of arrangement being widely accepted because surrogate arrangements are illegal or unethical in some communities, while some accept it to a certain extent. Its acceptability in some areas is also frowned at due to cultural and religious reasons.⁴ Hence, there are controversies surrounding this arrangement, and the complicated legislation around the world is not helping matters.^{10,16,17} Apart from the publicity, the laws surrounding surrogacy are complicated and strict and vary from one jurisdiction to another. In the UK, although single parents can commission a surrogate child, parental responsibility cannot be granted, since the law states that it can only be granted to couples or two people living in an enduring relationship.¹⁴ The United Kingdom (UK) has the most articulated legislation on surrogacy.¹⁸ Unfortunately, there is no law guiding ART in our country (Nigeria).¹⁹ Consequently, most people in Nigeria will see it as a taboo for using a Surrogate. Therefore, this study aims to assess the health worker's knowledge and awareness of surrogacy as well as their perception and attitudes toward surrogacy.

Materials and Methods

The study was a cross-sectional survey of 402 Health workers at the University of Ilorin Teaching Hospital (UITH) and the University of Ilorin Health Centre, Nigeria. This study was conducted in 2018 using self-administered questionnaires as the data collection method. This comprises doctors, nurses, pharmacists and laboratory scientists. A stratified sampling method was used, the health workers were grouped into four strata namely, doctors, nurses, pharmacists and laboratory scientists. A table of random numbers was then used to randomly select the participants to obtain the total sample size of 402.

Quantitative methods of data collection were used to obtain information from the study participants. An adapted and validated questionnaire on knowledge, attitude and perception was used to obtain all related information for this study.²⁰ Prior to the data collection period, ethical approval was obtained from university of Ilorin ethical review committee. Participation was voluntary and data obtained were treated with absolute confidentiality. Data entry and management were done using Statistical Package for Social Science (SPSS) version²⁰ software (IBM Corporation, Armonk, USA). Descriptive statistics was used to summarize the results which were presented with the aid of pie charts, bar charts, and frequency tables.

Written informed consent was obtained from each study participants before they completed the questionnaire. Ethical approval for the study was granted by the Ethical Review Committee of the University of Ilorin (Approval Number: UERC/ASN/2017/1087; Protocol Identification Code: UERC/BMS/088). Participation was entirely voluntary, and respondents retained the right to withdraw their consent at any time without any consequences.

Results

A total of 402 health workers were interviewed. Two hundred and fifty-one (62.4%) of respondents were between the ages of 21-40 years age group. Close to two-thirds (64.7%) were male, and more than half (56.0%) of the respondents were married. Doctors constituted over a third (35.3%) of respondents, and majority (84.3%) practiced monogamy. (Table 1).

Table 2 shows the respondents' awareness of surrogacy. Majority of respondents (85.5%) were aware of surrogacy, and with 33.3% hearing about it at health facilities. However, less than 20% of the respondents had seen a baby born through a surrogacy arrangement. Figures 1 and 2 show respondents' knowledge on surrogacy. Three hundred and forty-four (85.6 %) of

Table 1. Socio-demographic characteristics of participants

Socio-demographic characteristics	n (%)
Age group (years):	n = 402
<20	44 (11.00)
21 – 30	126 (31.30)
31 – 40	125 (31.10)
41 – 50	74 (18.40)
51 – 60	26 (6.50)
60 – above	7 (1.70)
Sex:	n = 402
Female	141 (35.10)
Male	260 (64.70)
No response	1 (0.20)
Profession:	n = 402
Doctors	142 (35.30)
Nurses	116 (28.90)
Pharmacists	39 (9.70)
Lab scientists	17 (4.20)
Others	74 (18.40)
No- response	14 (3.5)
Marital status:	n = 402
Single	171 (42.50)
Married	225 (56.00)
Divorced	2 (0.50)
Separated	2 (0.50)
Others	2 (0.50)
Religion:	n = 402
Christianity	218 (54.23)
Islam	179 (44.53)
Traditional	0 (0.00)
No Response	5 (1.24)
Family type:	n = 402
Monogamy	339 (84.33)
Polygamy	46 (11.44)
No Response	17 (4.23)
Have children?	n = 402
Yes	224 (55.72)
No	166 (41.29)
No Response	12 (2.99)

the respondents knew that surrogacy is a type of ART (figure 1). Figure 2 shows the participant's response to the question “Who is a surrogate mother?”. Tables 3 shows respondents' perception on surrogacy, majority of the respondents 42.8% in full surrogacy and 43.0 in partial surrogacy feels decision for antenatal care of the surrogate should be made by both intended parents

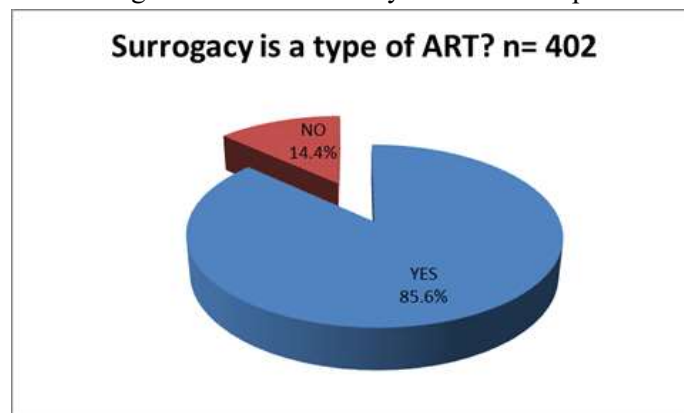


Figure 1. Respondent's knowledge on surrogacy: Is surrogacy a type of ART?

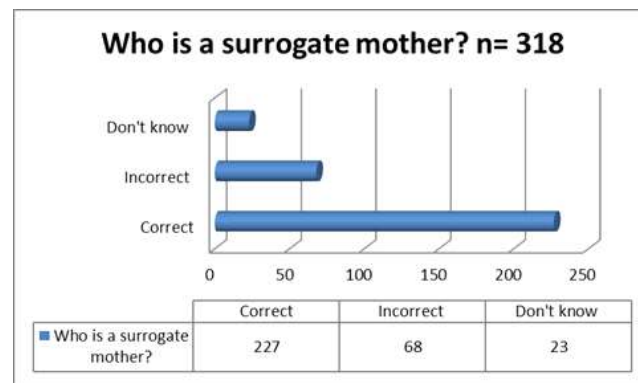


Figure 2. Respondent's knowledge of a surrogate mother

Table 2. Respondents' awareness of surrogacy

Variable	n (%)
Ever heard of surrogacy:	n = 402
Yes	344 (85.57)
No	50 (12.44)
No Response	8 (1.99)
Where did you first hear about surrogacy?	n = 402
Friends/family	32 (7.96)
Colleague	56 (13.93)
Mass media	71 (17.66)
Social media	51 (12.69)
Health facility	134 (33.33)
No Response	58 (14.43)
Ever seen a baby born through surrogacy?	n = 402
Yes	75 (18.66)
No	298(74.13)
No Response	29 (7.21)

Table 3. Respondents' Perception on surrogacy n=402

Variable	Full Surrogacy n (%)	Partial Surrogacy n (%)
Decision on antenatal care		
Intended parent	120 (29.9)	83 (20.5)
surrogate mother	63 (15.7)	68 (17.0)
both	172 (42.8)	173 (43.0)
not sure	31 (7.7)	56 (14.0)
undecided	16 (4.0)	22 (5.5)
Legal mother of the child?		
Intended mother	268 (66.7)	218 (54.2)
surrogate mother	65 (16.2)	75 (18.7)
not sure	48 (12.9)	87 (21.6)
undecided	21 (5.2)	22 (5.5)
Legal father of the child?		
Intended father	319 (79.4)	
Husband of Surrogate	28 (7.0)	
not sure	29 (7.2)	
undecided	26 (6.4)	

Table 4. Respondents' Attitudes toward surrogacy n=402

Variables	Agree n (%)	Neutral n (%)	Disagree n (%)
Surrogacy should be a means of assisted reproduction	278 (69.2)	80 (19.90)	44 (11.0)
If you/your partner found yourself to be infertile, would you consider having a child via surrogate mother?	142 (33.3)	129(32.08)	131 (32.6)
Would you prefer surrogacy to adoption?	158 (39.3)	95 (23.46)	149 (37.1)
After a surrogacy agreement has been reached between two parties and the surrogate mother is pregnant do you think the intended parents should be able to opt out of the agreement if they change their mind about wanting a child?	51 (12.7)	96 (23.88)	255 (63.4)
Should a sister of the intended mother be allowed to be the surrogate mother?	142 (35.3)	118(29.35)	142 (35.3)
Surrogacy should not be allowed because it is against my religion	100 (24.9)	137(34.07)	165 (41.0)

and surrogate mother while 29.9% in full surrogacy and 20.5 % in partial surrogacy feels decision for antenatal care should be done by Intended parents only. Only 15.7% in full surrogacy and 17.0% in partial surrogacy feels decision should be made by the surrogate mother only. Majority of respondents 66.7% in full surrogacy and 54.2% in partial surrogacy feels the intended mother should be the legal mother of the child at birth and 79.4% feels the intended father should be the legal father at birth.

Table 4 shows the respondents' attitude toward

surrogacy, almost two third of respondent 69.2% agree that surrogacy should be a means of assisted reproduction but only 33.3% agreed to consider having a child via surrogacy if they have infertility, 39.3% prefers surrogacy to adoption. However, 63.4% of the respondents disagree that intended parents can opt out of the surrogacy agreement if they change their mind of wanting to have a child after agreement has been reached between the two parties. 35.3% agrees that sister to the intended mother should be allowed to be the surrogate mother while 35.3% disagrees. 41.0% disagrees that surrogacy should not be allowed if it is

against their religion while 24.9% agrees that surrogacy should not be allowed if it is against their religion.

Discussion

The results of this study show a high level of awareness among health workers. This may not be surprising because most assisted reproductive therapies are probably hospital-based. However, the awareness level in this study is lower than that reported in Greece among medical students which revealed more than 90% were aware of surrogacy,²¹ and higher than that reported (35.2%) by Bello and co-workers among women attending infertility clinics in Ibadan.²² The Greek study reported internet, books, journals/and TV (37%) as the major sources of ART-related information²¹ as opposed to our study in which health facility was the leading source of surrogacy-related information. The awareness of surrogacy may be overwhelming among health workers as indicated by the findings from this study, but it is not common in our society when compared to other types of ART such as In vitro fertilization (IVF), Intracytoplasmic sperm injection (ICSI), Artificial insemination (AI). Even though surrogacy is hospital-based, less than 20% of health workers in our study have ever seen a baby born through a surrogacy arrangement. This low surrogacy practice and acceptance in our communities may be in part influenced by cultural norms, religious beliefs, psychological, ethical, and legal issues.^{9,19,23,24}

Surrogates could be genetic (involving artificial insemination of the surrogate by the commissioning father, thus making her the genetic mother) or gestational (via IVF by the commissioning parents and embryo transfer to the surrogate; or transfer of embryos created from gametes donated by others to the surrogate).^{5,7} Therefore, a surrogate mother is a woman who carries a pregnancy for the intended parents. Surprisingly, more than 20% of the health workers in our study did not know who a surrogate mother was. However, majority of the respondents know that surrogacy is a type of ART. The significance of this high level of awareness is the increase in understanding and acceptance among families. This also helps the intending parents to be well informed and prepare emotionally therefore reducing stress and anxiety.

Medically, as awareness about surrogacy grows, more people may seek out surrogacy services, this can lead to better medical care and support for surrogates and intended parents. It was expected that the high level of knowledge and awareness about surrogacy of respondents documented in our study should reflect in respondents' perception and attitudes toward surrogacy. However, a mixed attitude toward surrogacy was observed in our environment as most of attitude

related questions posed, revealed respondents' differing attitudes. We observed that 70% of our respondents agreed that surrogacy should be a means of ART, and 35.3% would consider having a child via a surrogate mother if their partner is infertile. This was similar to the findings by Bello et al in Ibadan, Southwest Nigeria²² Our findings on respondents' perception of surrogacy revealed that there was a significant opposition to the regulations on surrogacy as is obtainable in advanced countries such as the UK (where an intended parent is the legal parent of the child at birth)²⁵ as majority of our respondents think both the intended parent and surrogate mother should be the legal parents in Full surrogacy and the intended mother should be the legal mother in partial surrogacy. Both surrogate mother and intended parents should decide the antenatal care. This opinion may contribute to legal issues following surrogacy arrangements in our locality as there is currently no known law or parliamentary act guiding and regulating ART in Nigeria.^{9,19,24} However, our respondents' perception of who should determine and decide the antenatal care of the foetus was in agreement with international best practice in which both the intended parent and surrogate jointly decide the antenatal care of the foetus. Overall, participant's knowledge of and awareness of surrogacy was high. This may stem from the fact that the participant's cohorts were health workers where surrogacy-related issues may be commonly discussed before ART is offered. However, the knowledge and awareness of these participants do not translate to their attitude toward surrogacy. This, however, may be linked to religion and or cultural beliefs.

One limitation of this study is the use of a closed-ended questionnaire as the sole instrument for data collection. This may have constrained participants' ability to fully express their personal views and nuanced experiences, which might have been better captured through qualitative approaches such as in-depth interviews (IDIs) or focus group discussions (FGDs). Nonetheless, a key strength of the study lies in the systematic sampling method employed in the selection of participants, which enhances the representativeness and reliability of the findings.

Conclusion

The findings of this study showed a high level of awareness and knowledge of surrogacy among the respondents. However, the high level of knowledge and awareness did not reflect in their attitudes and perception toward surrogacy as we documented somewhat mixed results on attitudes and perceptions. Our results also show a low acceptability of surrogacy as a means of assisted reproductive therapy among our respondents. More awareness on surrogacy is needed in our society. Health workers are well positioned in the

society to provide ART related information as communities would most likely believe and trust surrogacy related information coming from them than anyone else. Therefore, more awareness should be raised through the health workers in partnership with civil societies and non-governmental organizations (NGOs) to increase the acceptability in the society and hence helps in its legislation.

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