Challenges experienced by clients undergoing assisted reproductive technology in Ghana: An exploratory descriptive study

Josephine M. Kyei1,* | Abubakar Manu2 | Agnes M. Kotoh2 | Salima Meherali3 | Augustine Ankomah2,4

1School of Nursing and Midwifery, University of Ghana, Accra, Ghana
2Department of Population, Family and Reproductive Health School of Public Health, College of Health Sciences, University of Ghana, Legon Accra, Ghana
3Faculty of Nursing, University of Alberta, Edmonton, AB, Canada
4Population Council Ghana, Accra, Ghana

*Correspondence
Josephine M. Kyei, University of Ghana, School of Nursing and Midwifery, Accra, Ghana.
Email: jmkyei@ug.edu.gh

Abstract

Objective: To explore the experiences of clients accessing assisted reproductive technology (ART) services in selected health facilities in Greater Accra, Ghana.

Methods: An exploratory, descriptive, qualitative design using a purposive sampling technique was employed. Overall, 12 women and six men participated in the study. In-depth interviews were conducted using a semi-structured interview guide. The Braun and Clarke (2006) procedure for data analysis was followed. Data collection spanned 9 months (January to October 2017).

Results: Five major challenges were identified that were commonly experienced by our participants at every phase of the ART treatment, including the high cost of ART treatment, the long distance to treatment centers, drug treatment challenges, disturbances in daily routine and work, and anxiety about pregnancy outcome.

Conclusion: Given the emotional and psychological challenges reported by the participants in the present study, an integration of counseling units in the ART centers is recommended, manned by qualified personnel such as clinical psychologists and counselors to support clients at every stage of the treatment. Also, given the high cost of ART services, as reflected in the participants’ views, it is recommended that private health insurance companies fund some aspect of ART services, such as laboratory investigations and medications.

KEYWORDS
Access; Assisted reproductive technology; Experience; Ghana; Infertility; Qualitative study

1 | INTRODUCTION

Infertility remains a challenge for many couples around the globe.1,2 In fact, the global estimate shows that about 10% of people have problems with fertility,2–5 and one in every six couples will experience a fertility problem during their reproductive age.1 Generally, infertility affects the mental and social well-being of individuals, particularly those in low- and middle-income countries.6,7 Some of the probable effects of infertility documented include psychological distress, discrimination, social isolation, lack of economic security, and stigmatization.8 In addition, infertility has a financial implication on affected individuals.9,10 For example, the cost of infertility treatment is often above the resources of affected persons, especially those within the low-income bracket and residing in low-income countries.

Historically, assisted reproductive technology (ART) has existed for the past four decades. During this time, ART has brought hope to many individuals who hitherto had problems with childbirth. Nevertheless, its associated challenges cannot be underestimated.11 Specifically,
accessibility to and affordability of ART remain a challenge in many settings. For example, the high cost of ART and patients’ low financial strength were identified as barriers to utilization of ART in Kenya by Murage et al. In addition, physical, social, psychological, and ethical challenges are well documented to characterize the use of ART.

Furthermore, the different phases of ART treatment present various forms of challenges to people who opt for ART. The severity and the extent of the challenges, in some instances, lead to discontinuation of the treatment. This is exemplified by a systematic review that outlined challenges such as depression, stress, side effects of the treatment, and other health-related factors as reasons for discontinuing the fertility treatment. In Ghana, most of the fertility clinics are geographically inaccessible to many as their availability is restricted mainly to the capital city of Accra and its environs. There are about 12 recognized ART centers in the Greater Accra region and these facilities are privately managed. ART is limited by economic access as it is not affordable to the average Ghanaian. The estimated cost is in the range of Ghs 30,000–50,000 (US$6000–US$10,000) depending on the facility and the number of ART cycles. Previous studies in northern and southern Ghana have documented the psychosocial experiences of women with infertility. What appears missing in the literature is the challenges faced by people accessing ART in Ghana. The aim of the present study therefore was to explore the experiences of clients already accessing ART services in selected facilities in the Greater Accra region of Ghana.

2 | MATERIALS AND METHODS

A qualitative design using an exploratory descriptive approach was employed to conduct this study. This approach was used because little was known about the challenges faced by infertile couples during ART treatment. Hence, this approach was best suited for this study in the context of Ghana. Ethics approval for this study was obtained from the Ghana Health Service Ethics Review Committee (protocol number GHS/REC: 02/01/201) and consent for participation was sought from the participants. According to the Fertility Society of Ghana (FERSOG), which was launched in September 2016, at the time of the study, there were 12 fertility centers in the Greater Accra region. Of the 11 facilities, five were used as data collection sites, because at the time of data collection, three out of the 11 were not receiving clients: one of the facilities had ceased operation, while two facilities declined to be part of the study.

Participants for the study were recruited from five private fertility centers that offer ART services in Accra, the capital city of Ghana. These facilities offered similar services and types of ART including in-vitro fertilization (IVF) and intracytoplasmic sperm injection (ICSI).

The study participants comprised women and men who had been diagnosed with either primary infertility (never achieved pregnancy or had a live birth) or secondary infertility (ever achieved pregnancy and subsequently having difficulty to achieve pregnancy or having a live birth) and were undergoing ART. They either attended the clinic alone for a particular procedure or were accompanied by their spouses. Participants were therefore recruited as individuals and not as couples.

A purposive sampling approach was used to recruit participants. The participants were selected based on the inclusion criteria. The inclusion criteria for study participation were individuals with either primary or secondary infertility undergoing ART treatment in a facility offering ART services in the Greater Accra region. Consecutive clients who met the inclusion criteria and agreed to be part of the study were selected for in-depth interviews. A total of 18 individuals (12 women, 6 men) consented. Male and female participants with infertility opting for surrogacy as a means of ART were excluded because they have different processes and were more likely to have different challenges. More women participated in the interviews because they were mostly present at the fertility centers compared to the men, as the women participated in all phases of ART.

The participants recruited were classified into three phases of treatment. Phase One had five participants, Phase Two had eight participants, and Phase Three had five participants.

Phase One is the assessment stage, where the client begins the treatment process and has to undergo an assessment before the actual treatment begins. This phase of treatment lasts approximately 2 weeks.

Phase Two of ART is when the clients start hormonal treatment, followed by the transfer of the egg and a pregnancy test. Phase Two lasts about 14 days.

Phase Two had the highest number of participants because it is the hormonal treatment phase and most clients found themselves in this phase.

Phase Three of the treatment process is the final stage in which the outcome of the hormonal treatment is determined. Clients at this phase have tested positive for pregnancy and started antenatal clinic. Those who had successfully given birth are also included in this phase.

Trained research assistants and health workers at the treatment centers located eligible participants and recruited them into the study. Obstetricians/gynecologists or the embryologist also helped with the recruitment of participants from their clinics. All interviews were conducted by the first author (JMK). Iterative data collection and analysis occurred over a 9-month period until data saturation was achieved.

After consenting to participate, participants completed demographic information forms. To ensure privacy, the interviews were conducted in an enclosed private room at the fertility centers. The interviews were audio recorded after the participants granted the researcher permission to do so. Data saturation was reached by the 13th respondent; however, an additional five interviews were conducted to ascertain whether new relevant issues would emerge. There were no new findings after the five additional interviews and this confirmed that saturation was reached. Each interview lasted for approximately 45 minutes to 1 hour. The rooms for the interviews were well enclosed and therefore it was impossible for an outsider to hear the issues being discussed. Overall, two participants experienced emotional breakdowns when they were recounting their experiences. As a response, the interviews were halted and the principal investigator, who doubled as a trained counsellor, provided emotional support for the affected interviewees.  

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until they were stable and consented to continue the interview. All the interviews were conducted in the English language. The period for data collection spanned over 9 months, between January and October 2017. A semi-structured interview guide was developed based on the literature and through consultation with experts in the field of qualitative research and infertility. The guide was pre-tested, and the comments were used to improve the clarity of the guide.

The Braun and Clarke (2006) procedure for data analysis was followed. Inter-coder reliability was ensured during the analysis stage. One transcript was first coded by two authors (JMK and AA) separately. A meeting was therefore held to discuss the various codes and categories that differ. At the end of the discussion, consensus was reached on the various categories and themes.

Throughout the analysis process, analytic rigor was enhanced through discussions between all the authors in which the coding framework, analytic procedures, preliminary findings, and interpretations were reviewed. Trustworthiness regarding the soundness of the study in terms of planning, data collection, analysis, and reporting was ensured through credibility, transferability, dependability and confirmability.

Credibility was achieved in the present study by piloting the interview guide (Appendix S1) using two participants. Dependability was ensured by documenting the methodological processes in detail to enable future researchers to repeat the process. Confirmability was ensured by keeping an audit trail, which includes field notes, transcripts, and so on. Transferability was achieved by providing a thick description of the study setting in addition to verbatim reports of the participants’ quotes.

3 | RESULTS

The study enlisted 18 participants who were seeking ART and who were at different phases of treatment. The female participants were aged 31–55 years, while the male participants were aged 32–50 years. Other sociodemographic characteristics are shown in Table 1.

Three participants were seeking ART treatment for secondary infertility and 15 participants for primary infertility. The number of years the participants had experienced infertility was in the range of 2–27 years.

Content analysis of the interviews revealed five major themes: the high cost of ART treatment; the long distance to the facility; disturbance in their daily routine and work; challenges regarding drug treatment; and anxiety about pregnancy outcome. Results are reported according to the phase of treatment.

3.1 | Assessment phase (Phase One)

3.1.1 | Cost of treatment

According to a number of participants, the initial process of the treatment is usually expensive. This is because the ART treatment is mostly based in private facilities. Again, it is a phase where most laboratory investigations and procedures are carried out to help identify the type of infertility treatment the individual will experience.

The entire process was considered very expensive by most of the participants. Some shared their views:

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<th>Participants</th>
<th>Age (years)</th>
<th>Sex</th>
<th>No. of children</th>
<th>Religion</th>
<th>Occupation</th>
<th>Ethnicity</th>
<th>No. of years married</th>
<th>Treatment phases</th>
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<td>Akan</td>
<td>27</td>
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</tbody>
</table>
“In terms of finances, we have to pull from our own coffers. As you know, we cannot go to somebody for money and tell the person we are going to use it for this kind of treatment. You have no option but to see it as your own cross. To be honest with you, it’s very huge for a young couple like us.”

[31-year-old woman, married for 2 years]

Due to the expensive nature of the entire process, some individuals resorted to loans to be able to get through the process. One respondent indicated that she had to take a loan to start the ART process:

“Money has been a challenge. Some of us had to take a loan. Every step of this process involves money and it can be a real challenge. The transportation alone from the house to this place is expensive.”

[47-year-old woman, married]

3.1.2 Distance challenges

Some of the participants indicated distance to the facility as a major challenge. These fertility centers are mostly located in the Greater Accra region, and the participants having to commute from their homes or region to the facilities was a challenge. To avoid traveling long distances, they had to look for accommodation close to the facility, which posed a new challenge. At this phase of the treatment, they had to attend the clinic daily for 2 weeks to receive treatment.

A participant who commuted from her home daily also reported:

“The hospitals are far from where I stay. Sometimes, I travel for more than 6 hours to see my doctor. On some occasions, I am unable to return home and I have to find a place to spend the night away from home.”

[40-year-old woman]

3.2 Hormonal treatment phase (Phase Two)

3.2.1 Distance to the treatment facility

In the second phase of the treatment, clients also mentioned distance as a challenge. In Ghana, there are limited facilities that provide ART. All these facilities are privately owned and nearly all of them are concentrated in the Greater Accra region. Couples, therefore, travel from all over the country to access their services. The distance some of the couples had to cover from their homes or regions to the facilities added additional costs to the treatment.

A participant who commuted from her home daily also reported:

“The stress is numerous. One of my personal stresses is that I wake up early in the morning to come here for my injections and go to work. The going up and down and getting home late around 9 pm and again you have to wake up in the morning to come here is really difficult.”

[40-year-old woman]
have to ask permission every morning or every afternoon to come and get the injections. It tags you as someone with so many excuses at work.”

[31-year-old woman]

The phase of treatment also affected those who were self-employed. Participants had this to say:

"Being here every morning is really taking a toll on my business. My wife cannot drive and so I have to drive her every morning to the fertility center and pick her up later in the day."

[45-year-old man]

"I run my own business. I have a shop and I’ve not been to work since they did the transfer of the eggs and implanted in my womb. I am losing a lot of money during this period."

[42-year-old woman]

3.3 | Post-hormonal treatment phase (Phase Three)

3.3.1 | Anxiety about pregnancy outcome and treatment failure

During this phase of treatment, some clients who tested positive would prefer to attend antenatal clinic in the fertility centers, because some of the facilities had this service. On the other hand, those who tested negative went for follow-up at the fertility centers. Participants expressed uncertainty during this phase, about the outcome of treatment. Those who tested positive for pregnancy were still not sure of the outcome of the pregnancy. This was either based on previous experience with the treatment or what they had heard previously about the outcome of the treatment.

Some participants reported:

"It is not easy! Even when you have the money and you go through the process that is not all there is. If you’ve not given birth, you don’t have your peace of mind and you are always afraid something will happen. The scary part is when you hear that someone has miscarried. Until you give birth, you don’t have your peace of mind. You just try to take your mind off it, but whatever it is you keep thinking about it.”

[33-year-old married woman]

"Sometimes I’m a bit anxious about the whole process. It’s not easy to think it’s going to be successful. You know how the human mind works. It can play tricks on you even when you think all is well; your mind tells you something else, but I’m trying to be less anxious.”

[55-year-old married woman]

A number of participants mentioned that they faced problems relating to pregnancy. Nevertheless, the majority of them considered these challenges normal for every pregnant woman. They attributed the problems to hormonal changes.

A respondent narrated her experiences as follows:

"The pregnancy gives me problems and I must say that’s normal. The spitting, vomiting, and other things are normal. I manage to do things myself and it’s not all the time that you feel weak, there are times that you feel strong.”

[40-year-old married woman]

Some of the participants, unfortunately, went through the final stage without success and therefore faced difficulties such as being worried or sad about the negative outcome of the pregnancy. One of these participants who had an unsuccessful outcome shared her ordeal:

"After they did it for me, on the 11th day at dawn, I realized that I was bleeding so I called the hospital to inform them. I cried until I called my husband. I decided that I wouldn’t stay, I packed my things and left for the house. I don’t know why it happened this way, but I’m hoping for the best next time.”

[40-year-old married woman]

4 | DISCUSSION

Over the years ART has given hope to millions of couples facing problems of infertility; however, the treatment process is not without challenging experiences. Consistent with studies on infertility in other locales, anxiety was the most common challenge reported by the participants in the present study. This could be attributed to fear of the unknown outcome of the treatment. Perhaps the participant’s awareness about the possible failure of the fertility treatment might have exacerbated the anxiety. Participants who were found in the first phase of the treatment seemingly reported that they were anxious about the treatment outcome as were those who were older (i.e. older than 50 years). It is understandable to observe a comparatively higher anxiety among participants who were a bit older, given that they are more vulnerable to increasing hormonal changes, which tends to have negative implications on treatment outcome.

The findings also revealed the cost of treatment as a challenge to couples undergoing infertility treatment. This finding is not unique to this study, as other studies have documented the high cost of ART. Similarly, a study which determined the economic impact of ART found the treatment to be expensive from the couples’ perspective. It is worth mentioning that some challenges were unique to a specific phase of treatment, although a number of these challenges do overlap. In Phase One, in which an assessment is conducted on the couples before the actual treatment, the high cost of treatment was the most commonly cited challenge. ART services are only provided by private facilities in Ghana and these centers are profit-making facilities. No part of the treatment process is subsidized and therefore the couples...
have to bear the full cost of the service, which consequently placed a substantial economic burden on them. This finding was supported by other studies conducted in low- and middle-income countries, suggesting that the financial implication of ART presented a huge burden on clients undergoing ART. It also supports the assertion that only individuals with a high socioeconomic status could have access to ART.

Furthermore, the findings of the present study showed that the long distance to the facility centers was a major challenge. Given that the majority of ART centers in Ghana are situated in the Greater Accra region, this makes it difficult for residents outside Accra who need the ART service to access it. Those who overcome this barrier of access are further confronted with difficulties securing accommodation during the period of treatment. Some studies have also confirmed inaccessibility of ART services, especially in low-income countries.

Emotional distress is also identified as a major challenge, especially in the second phase of the treatment. Undoubtedly, this phase has been described as a stressful phase. Evidence suggests that the determination of the treatment outcome, which is shown by a positive pregnancy test result, constitutes the most stressful stage of ART. Again, some of the participants were excused from their duties to justify their absenteeism from work, which affected their routine activities. The effect on their daily routine was also reported by Makuch et al.

Participants in the last phase of treatment found anxiety about pregnancy to be paramount. Participants were afraid of the outcome of the pregnancy, particularly those who tested positive for pregnancy. The emotional challenges at this stage of the process cannot be underestimated. On the other hand, participants who were unsuccessful with the treatment and tested negative for pregnancy at the end of the process were worried and sad. This resulted in couples developing various symptoms of depression.

The study sites were limited to the Greater Accra region of Ghana, and therefore there is the possibility of variations, which may not represent the views of individuals seeking ART treatment in other settings.

Given the emotional and psychological challenges reported by the clients in this study, clients should be offered counseling and emotional support at every stage of the treatment, tailored to the stage of the treatment process. This is important as different challenges are encountered at the different stages of treatment.

Nurses in these facilities should be trained in the various coping strategies, to equip them to educate patients on coping strategies as part of the counseling process. The coping strategy being used by the client should be identified and strengthened and taken through new coping strategies, as this may be useful depending on the phase of treatment.

The government should consider establishing fertility centers in the public domain to help clients who cannot afford private fertility centers but desire having children.

The present study has some limitations. First, given that the study sites were limited to the Greater Accra region of Ghana, there is a possibility that the views of the participants may not be the same for individuals seeking ART services outside the Greater Accra region of Ghana. Second, given the qualitative nature of the study with fewer individuals, some caution must be observed when generalizing the findings of the present study to a larger population. A population-based study that measures the impact of ART-related challenges is worth considering. Finally, the lower number of male participants in the present study also limits the representation of the views of men more comprehensively.

5 | CONCLUSIONS

Individuals who opt for ART encounter a number of challenges. These challenges are associated with the treatment process, which, to some extent, are based on the phase of the treatment. ART-related challenges included anxiety, stress, high cost of treatment, and work-related challenges such as work absenteeism. Given the emotional and psychological challenges reported by the participants in this study, it is recommended that counseling units should be established in these centers, manned by qualified personnel such as clinical psychologists and counselors who will offer counseling and emotional support at every stage of the treatment, tailored to the stage of the treatment process. It is suggested that there should be pre-treatment counseling, counseling during the treatment, and post-treatment counseling.

The health facilities should consider including some aspect of ART services, such as laboratory investigations and medications, into the private health insurance scheme. This will remove the high cost of treatment that acts as a barrier to the uptake of ART in Ghana. It will also reduce the financial burden of ART on clients with infertility who opt for the services.

AUTHOR CONTRIBUTIONS

JMK conceived the study, and contributed to the design, acquisition of data, analysis and interpretation of the data, and writing and revision of the manuscripts. AA, AM, AMK, and SM contributed to the design of the study, analysis and interpretation of data, and revision of the manuscripts for important intellectual content. All authors read and approved the final version of the manuscript.

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CONFLICTS OF INTEREST

The authors have no conflicts of interest.

REFERENCES


SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of the article.

Appendix S1. Interview guide.