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Sociocultural Implications of Infertility and Challenges in Accessing Assisted Reproductive Technology: Experiences of Couples from Two Health Facilities in Southern Ghana

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ABSTRACT

Introduction: In most traditional societies in Ghana, infertility is unacceptable and every couple is expected to conceive children by any means. This study explores the sociocultural implications of infertility in Ghana and the challenges couples encounter in accessing assisted reproductive technology.

Methods: The study used a qualitative descriptive design in two health facilities in an urban community in Southern Ghana. The study recruited 20 participants: 16 individuals who had accessed assisted reproductive technology, two nurses and two gynecologists. Participants were purposely selected and data were analyzed thematically.

Results: Culturally, couples who are unable to give birth are considered witches, discriminated against in decision making and are believed to be rejected by the ancestral world when they die. It was found that these sociocultural implications of infertility compelled couples to access assisted reproductive technologies and were faced with social challenges, psychological implications, economic constraints, and medical complications.

Conclusions: Children born through assisted reproductive technologies are not accepted by some sections of the society despite the challenges couples encounter in accessing these technologies. Public sensitization should be intensified in Ghana to accept the use of assisted reproductive technologies to limit stigmatization of couples with fertility problems and children born through assisted reproductive technology.

Abbreviations: ART: assisted reproduction technology

KEYWORDS

assisted reproductive technology; infertility; couples; childbirth

1. Introduction

In Ghana, the prevalence rate of infertility is relatively high (Tabong & Adongo, 2013). It is estimated that 15% of persons of child-bearing age in Ghana are faced with infertility (Donkor & Sandall, 2007). Further, it has

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been estimated that infertility affects one in four couples in low and middle-income countries (Rutstein & Shah, 2004). These statistics suggest that many people in low and middle-income countries in their reproductive age face difficulties having children. It is therefore essential for persons with fertility problems to have access to treatment and/or to be able to resort to alternative means to have children. The challenges to conceive and the desire to get treatment tend to negatively affect individuals with fertility problems. Most often, these individuals are traumatized both psychologically and emotionally (Peloquin & Lafontaine, 2010; Ying et al., 2015), and may experience anger, regret, loss of self-esteem, and maybe ostracized by the community, particularly in low and middle-income countries (Behboodi-Moghadam et al., 2013). In most low and middle-income countries, individuals feel a personal responsibility to conceive and married couples are also expected by society to have children of their own (Ombelet, 2014). This expectation burdens couples especially, to conceive immediately after marriage, making infertility a socially constructed process whereby individuals define their inability to give birth as a problem (Greil et al., 2010).

Infertility is a serious social problem because childbearing is expected of married couples especially in low and middle-income countries (Gyekye, 1996). Given that in most cases, as suggested by Caldwell's intergenerational wealth flows theory, a child is supposed to care for his or her parents in their old age especially in low and middle-income countries (Kaplan & Bock, 2001), and being unable to conceive has an impact on the individual as well as the community (Gyekye, 1996). In low and middle-income countries, traditional stories or folklores modeled around the significance of children tend to disempower couples facing challenges in having a child (Inhorn & Birenbaum-Carmeli, 2008).

Most often, the decision by individuals to conceive or not, is likely to be affected by stigma and prejudices, depending on the nature of the community in which these persons reside (Inhorn & Birenbaum-Carmeli, 2008). In developed countries, an individuals' decision not to have children is more acceptable when compared to some low and middle-income countries where individuals are expected to have children at all costs. For example, in low and middle-income countries such as Ghana, childbearing is considered important in determining the power and economic wellbeing of both women and men (Riessman, 2000). In Madagascar, not having a child is attributed to a woman's marriage to a spirit, the inability of husband's and wife's blood to "mix" or being the captive of a witch (Gerrits, 1997). In Egypt, the inability to conceive children is attributed to the husband's "worms" being weak (Inhorn, 2003). The meanings associated with infertility as explained above can affect individuals negatively.

In Ghana, persons with fertility problems experience stigmatization and discrimination, coupled with psychological distress from the sociocultural beliefs of the community (Hasanpoor-Azghdy et al., 2015; Karaca & Unsal, 2015; Osei, 2014). This stigmatization most often leads to couples with fertility problems in countries like Ghana to be excluded from leadership roles in their respective communities and in some instances denied membership in the ancestral world (Tabong & Adongo, 2013). The pressure associated with infertility and its treatment could lead to negative sociocultural experiences, which could result in psychological problems, mental disorders and marital problems (Alhassan et al., 2014). Accordingly, women with fertility problems become desperate to have their own children so as to complete their womanhood and fulfill societal expectations (Ulrich & Weatherall, 2000). In most African countries, persons seek infertility treatment from traditional healers and sometimes pastors due to the belief that their condition is a result of witchcraft (Dyer et al., 2002). Others perceive infertility as a phenomenon that requires medical intervention with specific attention to psychosocial consequences (Greil et al., 2010).

Generally, due to the frustrations and stigma associated with infertility in Ghana, persons with fertility problems often resort to alternative means of having children such as assisted reproductive technology (ART). Over the past three decades, many ART, including *in vitro* fertilization, intracytoplasmic sperm injection, intrauterine insemination or artificial insemination, and surrogacy have been introduced to assist reproduction among persons with fertility problems (Inhorn & Birenbaum-Carmeli, 2008). ART was introduced primarily to help persons with fertility problems to have their own children and to ease sociocultural pressure and psychological distress that are often associated with infertility.

According to the theory of planned behavior, an individual's intention to do something is influenced by personal attitudes, subjective norms, and perceived behavioral control (Ajzen, 2011). Individuals are motivated to perform a particular behavior when they have strong intentions for such behavior (Ajzen, 1991). Accordingly, attitudes are determined by an individual's personal evaluation of issues (Ajzen, 2011). In this regard, individuals are likely to access ART if they are certain it would help them conceive and avoid the negative consequences associated with not conceiving. In addition, the subjective norms are the perceptions that would be developed by individuals about the importance community members place on the intended decision (Cameron et al., 2012). Also, the subjective norm defines the perceived approval or disapproval of other members in the community if the behavior is manifested. In this regard, persons who have fertility problems are likely to evaluate if the decision to seek other means of having children is accepted or frowned upon by community members.

People that seek alternative means of conceiving are stigmatized and encounter sociocultural, psychological and health barriers (Amato & Jacob, 2004). In view of that, conceiving through ART has come under serious scrutiny since its inception, especially in low and middle-income countries. As reported by some scholars, ART is perceived as against the norms and the traditions of giving birth (Inhorn & Birenbaum-Carmeli, 2008; Bradbury & Sutcliffe, 2014; Gourounti, 2016). This is because some societies hold the belief that ART creates problems as to who are the biological parents of a child as the dichotomy between the biological and social basis of kingship has become unclear (Taylor, 2005). In addition, studies have revealed that some communities do not perceive ART as an acceptable solution for treating infertility due to the stigma (Savage, 1992). Furthermore, parents of children conceive by ART face a dilemma with regard to disclosing information about conception to their children and other members of the community (Bradbury & Sutcliffe, 2014; Gross et al., 2004). Scholars have therefore argued that ART challenges the traditional and sociocultural norms of giving birth and parenthood especially in low and middle-income countries (Bradbury & Sutcliffe, 2014; Inhorn, 2003).

Psychologically, women who conceive by ART are perceived to experience greater emotional stress as compared to women who conceive naturally (Gourounti, 2016; Morreale et al., 2011), especially during the first three months of pregnancy (Lin et al., 2013). ART is also perceived to result in multiple births, which may affect the health of the resulting children with complications such as stillbirths, cerebral palsy, growth malfunctions, neurodevelopmental issues, neurological consequences, cancer-related risk, psychological development malfunctions, physical risks, and low birth weight as well as long term effects like poor physical health, developmental malfunctioning and cardiovascular diseases in adulthood (Belva et al., 2006; Bradbury & Sutcliffe, 2014; Lu et al., 2013; Reynolds et al., 2003). Moreover, ART is stigmatized as a source of poor maternal health, preterm delivery, and unhealthy infants coupled with low birth weight and infant mortality (Kiely, 1998). Additionally, ART may put pregnant women at a higher risk of pregnancy-related complications, such as pregnancy-induced hypertension, gestational diabetes mellitus, placenta abruption, antepartum hemorrhage, postpartum hemorrhage and perinatal mortality (Qin et al., 2016). The use of ART has been perceived as a source of prenatal complications during and after conception as well as complications that come with the health of the baby when it is born (Kiely, 1998).

To date, studies on fertility and ART in Ghana have focused on depression among women who are facing fertility problems (Alhassan et al., 2014), coping strategies of women seeking infertility treatment (Donkor & Sandall, 2007), and the implication of infertility in Ghana (Fledderjohann,

2012). The focus of research on infertility in Ghana has left other issues related to fertility treatment only partially addressed. This study explored the experiences associated with the use of ART as a means of conceiving, focusing on the sociocultural implications of infertility and the challenges faced by those accessing ART. It is hoped that the findings of the study will contribute to existing knowledge.

2. Methods

2.1. Study setting and design

The study was conducted in two health facilities in an urban community in Southern Ghana. The selected health facilities specialized in the provision of ART. The study area was considered appropriate because most hospital facilities that provide ART services are situated in Southern Ghana. The study employed a qualitative descriptive research design. Qualitative research design helped the researchers to understand socially constructed realities and interpreted cultural meanings (Erikson & Kovalainen, 2008), allowed the researchers to engage directly with participants to tell their stories as they experienced it (Creswell, 2013). The study employed a purposive sampling technique to select participants who had the needed information to help address the study objectives (Creswell, 2013).

2.2. Participants and method of data collection

The target population for the study consisted of persons who had accessed ART, nurses and gynecologists who had specialized in ART. The study sampled 20 participants, 16 of whom were persons who had accessed ART as an alternative means to conceive at the time of data collection. The study also included two gynecologists and two nurses. Initially, the researcher intended to interview 30 participants but reached data saturation with 20 participants due to the intensive and detailed nature of the interviews (Ritchie & Lewis 2003). The criteria for inclusion in this study were: (a) persons must have accessed ART at the time of data collection, and (b) gynecologists and nurses were included only if they had specialized in the area of ART and engaged with persons who had accessed ART to conceive. Individual in-depth interviews were conducted in English and Twi (local Ghanaian language). A total of 20 interviews were conducted and each interview lasted between 40 and 60 min. Interviews were recorded using an audio recorder with permission.

2.3. Data analysis

The interviews were transcribed verbatim on Microsoft word. Six phases of thematic data analysis were used to analyze data (Braun & Clarke, 2006). The first phase ensured that researchers familiarized themselves with the transcribed data. By this we mean, we separately read through the initial data, generated codes and made categorizations from the codes. Following this, the research team came together to compare the generated codes and these were collated into potential themes in the third phase. Further, in the fourth phase, we generated a thematic map and ensured that themes were related to the entire data set. In the fifth phase, names were assigned to the generated themes based on the objectives of the study. Finally, we presented the report in the sixth phase. The authors made sure their prior knowledge on participants had no effects on the data collected through the use of bracketing. To eliminate biases and to ensure the trustworthiness of the data, we did coding separately and came together afterward to agree on the themes that were presented.

2.4. Ethical consideration

Codes of ethics such as informed consent, privacy and confidentiality were ensured. The study participants were informed about the nature and potential consequences of the study in which they were involved. Participants were informed that they could withdraw from the study at any point in time. Privacy and confidentiality of the participants' information were ensured in the study. Participants' identities were not disclosed to any third party and the privacy of their information was assured.

3. Findings

3.1. Demographic characteristics of participants

Couples who had accessed ART were between the ages of 36 and 51 years and the gynecologists and nurses were aged 35–73 years. The gynecologists and nurses had worked in the field between 13 and 40 years. The two gynecologists were males and the nurses were females. Almost all persons who had accessed ART had completed tertiary education with the exception of two who completed the “Ordinary Level.” With regard to occupations, the persons who had accessed ART were revenue officers, traders, businessmen and women, bankers, auditors, accountants, and secretaries. Ten of them were married and six had married but divorced. In addition, 10 of the participants who had accessed ART had conceived before. The remaining six had never conceived, even though they were in intimate relationships. Also, with regard to the number of years the participants had been trying to

Table 1. Demographic characteristics of participants.

		Number of participants N = 20
Individuals who accessed ART		16
Marital status		
	Married	10
	Divorced	6
Years of accessing ART	6–7 years	16
Status of childbirth		
	Given birth	10
	Not given birth	6
Age range	36–51	16
Level of education	Tertiary	16
Gynecologist		2
Nurses		2

have children, findings of the study indicated that the minimum number of years was 6 and the maximum was 20. This is shown in [Table 1](#).

3.2. Sociocultural implications of infertility

In Ghana, the expectation of every marriage, according to the study participants, was to have children. Therefore, after years of marriage without any sign of pregnancy and children, it attracted concerns from the community. At this point, the decision of whether to conceive or not, was influenced heavily by the community rather than the couples. In many cultures, marriage ceremonies are marked by prayers to God and the ancestors to bless the marriage with children; this explains the value society places on children. This section is explained under the theme societal pressure and cultural meanings of infertility.

3.2.1. Societal pressure

To society, children are the priority in marriage, to them, the primary motive of every marriage is to have children, if you do not have children after two years of marriage then you are inviting pressure upon yourself, it happened to us and we had to go through difficult times to cope with the pressure which was coming from all angles (Male, #4, ART).

Ghanaian society has very negative perceptions about infertility and they associate infertility with promiscuity on the part of couples and individuals, especially women, before marriage.

Participants revealed that society viewed infertility as a condition caused by excessive abortions during one's youthful age:

Some people are of the view that your inability to give birth is because you abused your reproductive system through numerous abortions and excessive sex, it is very disgraceful to some of us when people can have such thoughts because you have not been able to have a child (Female, #8, ART).

This participant narrated how she was insulted without any provocation by her in-laws:

Sometimes your in-laws without any provocation can tell you in your face that, you have removed all your children into the gutter and you are coming to waste their son or brother's time ... can you say this to a person you only knew after she- married your son? This is what I had to endure, all in the name of bad marriage (Female, #14, ART).

In the Ghanaian context, not having a child is frowned upon; therefore, voluntarily deciding not to have a child is unacceptable. The culture demands children from any marriage relationship:

In Ghana, you cannot say that I am married and I do not want to have children, you will be ridiculed by your friends and neighbors. It is a must to have children- ... I think it's better you do not marry than to marry and tell your family and friends you do not want to have children (Male, #1, ART).

This is what another participant had to say, concerning marriage and the need to have children:

Our society has been structured in such a way that once you marry you must bear children, unlike Europe where married couples can decide they would not want to have children, is it very difficult for such a decision to be accepted here ... so, any marriage that lacks a child or children becomes problematic (Nurse, #2).

This participant revealed how married couples are expected to have children at all cost:

In many African countries, which includes Ghana, people think that, once you get married the next thing is for you to have children, they forget about other functions of marriage, they forget about everything, whether you have a problem or you do not have a problem, they think that, oh, once you are married by hook or crook give birth (Female, #7, ART).

Society's strong desire for children in every marriage compels couples to "go the extra mile" to get children of their own. In this regard, resorting to all possible means to get a child was considered the only coping strategy to contain the pressure from society:

I think all these negative factors should encourage every couple to go the extra mile to have children of their own because these are challenges that arise when you are not having kids ... but how to overcome these challenges is paramount, we all need to be encouraged to go the extra mile to at least get a child to glorify the name of God (Female, #11, ART).

Some participants revealed that society does not treat persons who are yet to have children fairly. They believed there are times in everyone's life to have children and that society should support their relatives instead of labeling them and taking them through all sorts of negative treatments:

I was treated unfairly just because I am yet to have a child but society fails to understand that, people have children at a particular time in their lives, it could be earlier or it could be later, I do not think it is the wish of any woman to be in any marriage relationship without children ... all we need from our parents, relatives and friends are words of encouragement instead of the meanings they attach to one's inability to have children (Female, #5, ART).

3.2.2. Cultural meanings of infertility

In most parts of Ghana, children are supposed to be heirs to their parents and carry on the lineage of their parents. Failure to have children means that a person will die without leaving a legacy whatsoever. Participants revealed that, after death, persons without children are not recognized anymore. They do not qualify to be ancestors, making their names fade off just after their demise:

In Ghana, children are inheritance, when you are dead and gone, it is the generation you have left on this earth that will inherit you, whatever achievement you made on the earth is carried on by your children ... so, if you came to this earth and no matter your achievement and you die without children your name will be forgotten (Female, #16, ART).

This participant narrated how the inability to have a child can prevent one from becoming an ancestor:

In my hometown, we grew up to believe that ancestors are very important in our tradition but death does not make one become an ancestor, you need to bear children and die a respectable death, that will make you an ancestor (Male, #4, ART).

Moreover, in Ghana children are considered as a source of social security for the aged. In view of this, adults in their reproductive age are required by tradition to have children, take good care of them in a way that they will be equipped enough to take good care of their parents in their old age. Ghana practices a reciprocity type of social security where parents give to their children in their tender ages and children are expected to give back to their parents when they are old. Also, in Ghana there are no daycare centers for the aged, parents are cared for by their children. Therefore, the consequence of not having a child is felt more during old age. This tends to put pressure on couples and even individuals in their reproductive ages to do everything humanly possible to have children:

Our way of life in Ghana places value on children thus making them very important, I am saying this because I have seen patients who were much concerned when they were growing old. They were much concerned about who would care for them when they become weak and weary ... situations like this puts pressure on every- Ghanaian to have a child ... at least one child who would be there for his or her parents in their old age (Gynecologist, #1).

For this participant, she believes pension benefits are not enough and there is the need to have children who would support you in your old age:

Talking about pension benefits in this country is not enough and older people will always need support, where will this support come from? It will effectively come from your children, even when someone in the family would have to assist, it would not be like your own child ... so, I think all these exert pressure on Ghanaians to have children (Nurse, #2).

In addition, participants indicated that they were sometimes viewed as victims of a curse.

Some community members believed that infertility is a result of a curse due to the disobedience of the elderly or a bad spirit. Also, it is believed the curse could have been placed on a person's forefathers and they are bearing the consequences for their forefathers: Sometimes the inability to have a child is seen as a curse, some people believed that you or your wife had done something to someone and the consequences is your inability to have children, in my case, my mother always inquired if I have wronged somebody... . I remember a pastor told my mother that my husband and I had done something very sinful to someone and we need to make a sacrifice to God, even though we know we have not offended anyone, we made the sacrifice but nothing happened (Female, #3, ART).

For this participant, her inability to have a child was attributed to the sins of her grandparents:

Some people may trace your infertility to sins your great-grandparents committed and will cast a lot of insinuations about your family just because you are not having a child, meanwhile, these same people forget that, it is not everybody that came to this earth to bear children (Male, #1, ART).

Among the Akans and other tribes in Ghana, couples with ten or more children are often rewarded with a sheep. This is done to encourage other family members to have more children which is vital for the survival of the lineage:

The Akans and some tribes in Ghana, reward women who had given birth to ten children or more and they claim this is to encourage others to also have more children, my brother, I can tell you that, in this day and age, having more children would affect your finances and well-being... . even though I know the importance and value society places on children, I think ten children is too much (Female, #15, ART).

Most often adults without children were not recognized in some Ghanaian communities and they experienced countless social hardships. Participants' were sometimes left out of decision making and sometimes seen as useless and burdensome to the family and the communities in which they live:

I believe this is something that happens in every region in Ghana. Adults without children are not recognized, they are not respected, and tend to go through all kinds of

negative treatment wherever they live. I know it would be difficult to change this practice but not having a child should not affect your contributions when it comes to decision making (Male, #1, ART).

This participant revealed how persons without children were disrespected:

To live without a child can be very difficult in some Ghanaian communities. One sad thing is, no matter your age you are not recognized, you are not respected and some members of the family see you as useless and not fit for anything (Female, #10, ART).

3.3. Challenges encountered in accessing assisted reproductive technology

Having realized that infertility is a medical condition which affects both men and women and prevents them from having children, it has become imperative for patients to find treatment for infertility. ART has been considered among other medical treatments and interventions as among the most effective ways of treating infertility. However, ART as an alternative means of having children has not been completely accepted socially in most low and middle-income countries, including Ghana. ART is said to contradict the social ethics of having children and as such has attracted lots of challenges from various cultures. In addition, ART as a medical treatment comes with its own side effects, which can lead to serious health complications. Also, it has been revealed by persons who accessed it, and practitioners, as very costly and tend to drain the resources of couples and individuals who access this technology:

I think ART has helped my husband and I a lot, that needs to be acknowledged, but I must admit that it is very costly. You need to have substantial amount of money before you would be able to access this technology, if you are not well prepared in terms of finances, you might get stuck halfway during the procedure (Female, #13, ART).

Based on the responses from study participants, the researchers have grouped the challenges in accessing ART under broad themes which include social challenges, psychological implications, economic constraints, and medical complications.

3.3.1. Social challenges

There are challenges faced by couples and individuals in their various communities as they resort to ART as an alternative means to have children. In addition, it encompasses how people felt about the act and how people treat them due to their involvement in ART. Participants contended that the Ghanaian society frowns upon any untraditional methods of having children. As a result, persons who had conceived or had children through

ART keep their situation confidential and would not like to disclose it to anybody:

The truth must be told that most Ghanaians are ignorant about ART, I mean, not many people know about it and if they get to know that a child was born through this procedure they would see this child differently from other children who were conceived naturally (Female, #9, ART).

Another participant revealed how she and the spouse had been discreet after engaging the services of a surrogate mother to have their children:

My husband and I haven't told anyone we sought the services of surrogate mothers to have our children, during all these two periods I had to behave as if I was pregnant, I had a costume that I wore and it made me look like I was pregnant ... hmm, despite what I had to go through, I thank God for giving us these adorable children (Female, #3, ART).

Prior to accessing ART, participants are often left in a dilemma due to comments from spouses or partners and most importantly the larger family. These comments tend to discourage people from accessing ART:

The first and foremost challenge is the acceptance by your spouse and parents, if only they think it's necessary for you to access it, they come up with lots of excuses like; these children are not healthy, they are not children from God, some may even be physically challenged, they say these things in order to deter you from accessing the technology (Female, #12, ART).

This participant supports the revelation by other participants who had accessed ART:

The problem we have about ART is that, to the layman IVF simply means producing test-tube babies, they feel the babies are reared in test tubes as we know in the normal lab test tube and they are kept in there and when you come, we remove one- for you. I think, it is about time a lot of public education comes up, for people to really understand what ART entails (Nurse, #2).

Participants indicated that if they had disclosed the process they went through before having their children, they and their children would be stigmatized and discriminated against:

Society is not ready to know this, that is how I see it, if you are not careful and you let anybody know your children were born through ART they will discriminate against you and the child for reasons best known to them (Female, #7, ART).

This participant revealed what a patient who had a child through ART told her:

One day this patient who was also a friend came to me and she looked so depressed and sad, I asked her what the problem was and she told me she had some misunderstanding with a neighbor and this neighbor said to her in the presence of the child that "you are bringing yourself, that toy you went to the hospital to bring, you think you have brought a human being" (Nurse, #1).

Also, some participants identified religious and ethical challenges that tend to prevent people from accessing ART. Professionals consider these beliefs to be misconception, which put unnecessary pressure on persons with fertility problems:

Even though many of my church members are aware I am a medical doctor, they consider my assistance to would-be parents who had accessed ART to have children as ungodly just because they think ART is not something God approves of (Gynecologist, #1).

This gynecologist had this to say with regard to people's view on ART:

Some people believe it is ungodly to manipulate sperms and eggs, then after fertilization, the embryo is transferred into the uterus. For them, it is unethical way of conception and giving birth, as a medical practitioner, I do not see it that way (Gynecologists, #2).

Here, a brief history on ART by a gynecologist and some personal experiences he had encountered over the years:

I would like to give you some history about ART, a lot of issues came up when Louise Brown, the first IVF baby was conceived and born, it raised a lot of moral, religious and ethical concerns. A lot of newspaper articles came up that, monsters would be created. Now it is quite funny when clients walk into my office and ask me, are the kids normal? Are they intelligent? How do they look like? and so on and so forth (Gynecologist, #2).

Yet another pondered on the public perceptions about ART as an alternative means to have a child:

Initially, when ART was discovered, a lot of countries disallowed it, they thought doctors were going to create monsters. There are still some religious groups who are still opposed to ART because they do not think it's natural. However, we are—not creating eggs, we do not create sperm, we only manipulate the sperm that God has given to the man and the eggs that God has given to the woman, so we are not doing anything unnatural (Gynecologist, #1).

Another had to say this about perceptions people have about ART:

In Ghana, some people think IVF is fake, not natural, it is not of God and so lots of people frown against it, and they do everything possible to discourage persons with fertility problems from accessing it, they think people who cannot have children naturally are less fortunate and have to live with this condition, (Female, #14, ART).

3.3.2. Psychological implications

Pregnancy through ART can be psychologically arduous. Assisted reproductive technologies are new in the African context and its experiences of medical processes and procedures usually put people into thinking. Some participants shared their psychological challenges in this regard:

Earlier, I felt very bad that I could not carry my own baby due to certain health issues, it was a bitter pill for me to swallow, come to think of it, psychologically, this weighed me down for almost a year, by his grace I was able to overcome the problem and I am happy to say I have a child (Female, #10, ART).

This is what another participant said in regard to the stress and psychological trauma she had to go through:

I was affected psychologically because I had tried the procedure about three times but wasn't successful, I waited for a year after the last one and tried again, I became pregnant at the fourth attempt ... my brother, I went through stress and psychological trauma till I delivered (Female, #8, ART).

Sometimes, accessing ART for a number of times without getting results can be psychologically challenging as is indicated by this participant:

At a point, I felt it was a waste of time and money, psychologically it wears you down and can make you very bitter because you psyche yourself towards having a baby and it does not work out, having gone through the procedure twice or three times without any positive results is heart-breaking and very frustrating (Female, #5, ART).

A nurse gave her assertion about the psychological issues associated with the use of ART:

What I have observed over the years is that, sometimes, some couples come to you with high hopes and when things do not go as they had anticipated, it affects every aspect of their lives, their mood and ability to work, all these are affected, but you see them very excited when the result is positive, especially when they see their baby or babies after delivery (Nurse, #2).

A gynecologist supported the assertion above by narrating how emotional the use of ART can be:

The whole procedure you are doing is emotional, there is an emotion attached to it, you do not know the end from the beginning, right from start you are a bit down, if you should finish and you are successful, let me say, you are happy, extremely happy to tell yourself that I have also joined the league of women in quotes, as I would say (Gynecologist, #1).

Acceptance of the baby by family members and the larger community becomes a vital psychological concern to individuals who accessed ART:

Another challenge is, after the delivery of the baby, how are they (society) going to accept the baby. Will they accept the baby as one of the normal babies or one who was just pushed into you? You know they have a whole lot of perceptions about these children and their attitude towards them is different from the children they call normal babies (Female, #12, ART).

3.3.3. Economic constraints

Economically, participants stated they were cash strapped after accessing ART, with some indicating they would like to have another child through

ART but considering the financial demands, they feel reluctant accessing it again:

I guess it is a good idea to access ART to have a child or children when there is no light at the end of the tunnel that you can have a child naturally, at a point, I had to take a loan from my bankers to support the process ... we wish we can have another child through the same process but the money involved is scaring us (Male, #1, ART).

This participant revealed that ART is good but expensive and persons who have intentions to access it who do not have the finances should investigate getting loan:

I must admit that ART is good, as much as you have resources to access it, financially, it is expensive no doubt about that, because there are a lot of people who want to access it but cannot finance it. Thank God we can, but for others who want to access it and think they do not have the money, my advice to them is to go in for a loan, after all, people go for loans to buy cars and houses (Male, #2, ART).

For this participant, recognizing it is very costly to access ART, there is still no guarantee:

I can tell for a fact, ART is not cheap and ART is not absolute, success rate is still low, compared to what happens in nature where the success rate of pregnancy is higher, with natural conception when you give one hundred women one chance to have a baby, a few of them may fail but with ART, when you give them one chance the success rate is about forty or fifty percent and it's very expensive and not everybody can access it because of the cost (Gynecologist, #2).

3.3.4. Medical complications

Despite the assistive nature of ART, it has been proven as an effective alternative means of conceiving even though sometimes it affects the health conditions of persons who access it. Miscarriage was identified as one major health complication of participants accessing ART. Some participants that were interviewed revealed that they encountered miscarriage at some point after conceiving as the result of accessing ART:

I experienced two miscarriages but was very fortunate when I attempted the third time and it worked because at a point I had told myself I would not go in for the fourth IVF if it fails ... luckily enough it worked out, I would like to say that, sometimes it pays to persevere (Female, #8, ART).

This gynecologist revealed some of the side effects associated with ART:

I would say the side effects of ART are minimal and sometimes it can even happen in normal pregnancies. The issue of congenital anomalies and all those things can happen in natural pregnancies. Miscarriage can happen in IVF and the same can happen in natural pregnancies just that the rate of miscarriages in IVF is very high than the normal pregnancies (Gynecologist, #2).

Participants revealed some common side effects associated with the use of ART. Side effects such as ovarian hyperstimulation, headaches, dizziness and drowsiness were stated as the most reported side effects by persons who accessed ART:

Yes, like I said earlier on, I mentioned ovarian hyperstimulation syndrome, that is one possible side effect, the risk in stimulating the oocytes or stimulating the ovaries to produce multiple eggs. A lesser side effect normally could be bruises at the injection site which can be attributed to the numerous injections that these patients had to take (Gynecologist, #1).

The use of fertility medications may affect or may not affect every patient as is indicated below:

Sometimes fertility treatment medications may have some side effects like slight headache, dizziness and drowsiness which may or may not affect every patient, it is patient-specific, every patient reacts to these medications differently (Nurse, #2).

This participant shared her experience on what she had to go through after she became pregnant having accessed ART:

I suffered a lot when I became pregnant, at a point, I thought I would die, just two months into the pregnancy I started having complications which led to my admission to hospital for almost nine months, after which, I had to deliver my twins through caesarian section and since then, I am still recovering (Female, #16, ART).

Despite the numerous challenges associated with accessing ART as an alternative means of conceiving, persons who accessed ART labeled the children they had as lucky children. To them, the end justifies the means and once you have a child after years of endurance, it is worth accessing ART:

Prior to accessing ART, I thought the most important thing was for me to have a baby, a baby I can call my own, so whatever method you go through to have the baby, so far as it is affordable and would be successful, I would not hesitate to access it ... I think these children are lucky because parents go the extra mile to get them in and so when they come, I think they are even luckier and should be treasured more than the normal babies who just popped into your womb and was delivered (Female, #12, ART).

For this participant, her only conviction was to be called a mum one day:

When I started the procedure, I was not too concerned about the challenges that are associated with ART, my only conviction was to be called a mom one day, so that, those who think I am barren to be ashamed ... I am happy now, that I have two kids and trust me, I really do not remember the challenges I went through (Female, #13, ART)

4. Discussions

Within Ghanaian societies, once couples get married, childbearing becomes the means by which the success of the marriage is measured. The Ghanaian society puts so much priority on children because they are perceived as the basic form of security. Culturally, this study has affirmed that society considers children as the source of financial security and carers for parents during old age. Ghanaian society expects every couple to have children, take good care of them so the children will in return take care of their parents when they are old and unable to provide for themselves. In addition, the current analysis suggest that society puts pressure on couples to have children because pension benefits are not enough so children become the basic sources of care during old age. These findings affirm Caldwell's theory of intergenerational wealth flows which states that each additional child adds positively to a parent's wealth, security in old age and social and political wellbeing (Kaplan & Bock, 2001).

In some cases, society perceives couples who are unable to have children as cursed due to sins committed by great grandparents of either the woman and/or the man. In addition, participants reported that couples who are infertile are left out of decision making and disrespected in Ghanaian societies. Also, it was found that no matter the number of properties a person acquires in life, if one dies without a child, society considers him or her as dying without leaving a legacy. Persons who die without children are not accepted in the ancestral world according to Ghanaian culture. Our study concurred with previous studies that reported negative perception about infertility in Ghana (Alhassan et al., 2014; Gyekye, 1996; Riessman, 2000; Tabong & Adongo, 2013).

Marrying without children in many low and middle-income countries is unacceptable and couples are supposed to go the extra mile to have their own children. As a result, couples and individuals without children experience stigmatization and prejudices in their various communities, which affects them negatively. In this study, it has been revealed that couples with fertility problems experience social exclusion and are often disregarded by families, friends, and neighbors. This study has confirmed that sociocultural implications of infertility metamorphosed into stigmatization of couples who are unable to conceive naturally as found in previous studies (Gerrits, 1997; Hasanpoor-Azghdy et al., 2015; Inhorn, 2003; Karaca & Unsal, 2015). In some instances, immediate family members are those who perpetuate these forms of stigmatization. Even though Ghanaian society expects couples to have their own children, prestige is given to children born naturally. Children conceived and delivered through ART are most often disregarded and discriminated against when community members are informed. As a

result, couples in desperate situations for children do hide their identity when accessing ART in Ghana.

This study has shown that children are the priority of any marriage or relationship in Ghana. Marriage without children is frowned upon by society and attracts intense pressure from the families of the couples. A few years after marriage without children raises concerns about infertility and most couples try to find remedy for it. The most available and reliable remedy for persons to find solution to their fertility problem is the use of ART (Inhorn & Birenbaum-Carmeli, 2008). However, ART as an alternative means of having children is not acceptable in most African communities (Savage, 1992). As a result, individuals who have children by accessing ART tend to face intense stigma and prejudices.

Despite these intense pressures from the community, individuals without children ignore these pressure and stigma to proceed with their pursuit of having a child by accessing ART. In this study, persons who accessed ART as an alternative means of having children shared their experiences about society's negative perceptions about ART. However, they believed that life without a child is more unbearable than being stigmatized for having a child through ART. This affirms the theory of planned behavior regarding why participants access ART despite the challenges associated with it. Participants' personal evaluation of accessing ART made them understand that all society wants is for one to have a child. Therefore, there is a greater possibility that they would get a child after accessing ART, which shaped their intentions to access ART. Thereafter, participants came to the realization that the means by which they want to have a child is not acceptable and frowned upon by the community.

Accessing ART is challenged in low and middle-income countries due to the cost implications, medical complications and psychological trauma as confirmed by the findings of the study and research findings of other studies (Belva et al., 2006; Gourounti, 2016; Kiely, 1998; Lin et al., 2013; Lu et al., 2013; Morreale et al., 2011; Reynolds et al., 2003). Despite these challenges, couples find all other means to access the processes of ART in Ghana and other parts of the world in order to skip stigmatizations portrayed by society and enjoy their marriage.

4.1. Limitations

The study focused on two hospital facilities in Southern Ghana hence the findings may not reflect on other countries with different cultural settings. It is recommended that future studies should extend investigations to other parts of the world to explore the experiences of persons who have accessed ART as an alternative means of childbirth.

5. Conclusions

The findings of the study and the literature reviewed indicated that infertility is a sociocultural concern in Ghana due to the value placed on children. Therefore, not having a child can be a serious personal and social problem. Children are important as they are supposed to continue the lineage of parents upon their demise. Also, in a country where daycare centers for the aged are limited and not encouraged to a larger extent, adults in their reproductive ages are required to have children who will take care of them in their old age. Not having children, therefore, becomes a problem, which may attract negative responses from the wider community.

Being married for years without a child in Ghana attracts stigmatization and prejudices. As found in this study, couples without children were perceived differently. They faced verbal and emotional abuse in their respective communities. This led to discrimination in their extended families when it comes to decision making. These and other challenges associated with infertility compel persons without children to adopt other alternative means such as ART in order to conceive. It has been revealed in this and other studies that, accessing ART contradicts the traditional means of having children in Ghana and some other low and middle-income countries. As a result, persons who resort to ART to have children are stigmatized and discriminated against; these discriminations do not exclude the children that are born. Furthermore, parents go through a myriad of psychosocial problems after ART to conceive. They are faced with the problem of disclosing information to members of the community and resulting children, regarding their decision to conceive and have children through ART.

Aside from the sociocultural challenges of accessing ART as an alternative means to conceive, its accessibility is also very costly and not all persons can afford it. In addition, the use of ART to conceive may result in health complications, and persons who access it may experience headaches, dizziness and other medical side effects. Also, accessing ART has resulted in some miscarriages among persons who have accessed it (even though participants acknowledge miscarriage occurs in natural pregnancy, the rate of miscarriages among persons who have accessed ART was high). The study has shown the negative perceptions of people in low and middle-income countries like Ghana have about infertility and the challenges in trying to access ART as a means to conceive. The findings will educate the public about the need to accommodate people who are unable to conceive naturally and inform people about the general preparedness needed before accessing ART.

Based on the findings, practitioners of ART and social workers are recommended to offer counseling services for couples and persons with fertility problems to maximize clients' social functioning and wellbeing. This

will help build their coping skills and functioning capacities. Due to the values the society places on children, it is important that clients with fertility problems are empowered in order to deal with everyday challenges associated with infertility. In addition, it is recommended that governments in low and middle-income countries should offer public education and sensitization to create awareness of ART to limit the negative perceptions about infertility.

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Data availability statement

The dataset used and/or analyzed during the current study are available from the corresponding author.

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