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Quest for Conception: Exploring Treatment Patterns Associated with Infertility in Ghana

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Abstract

Due to the pronatalist orientation of the Ghanaian society and the social consequences of childlessness, infertile persons adopt several health seeking strategies in their bid to have their own children. This study therefore explored the health seeking behaviour of infertile Ghanaians and the factors that influence this behavior. The study adopted a qualitative research approach. Forty-five semi-structured in-depth interviews were used to collect data. The findings suggest that treatment seeking behaviour of infertile Ghanaians was motivated largely by perceived cause and belief in the efficacy of a treatment form. Two main treatment seeking patterns emerged from the data, hierarchical and concurrent treatment seeking behaviours. Although participants combined spiritual healing with either herbal or orthodox medicine, a combination of orthodox and herbal seemed inappropriate to them. The findings of this study should have implications for healthcare workers in general as the quest for biological parenthood and the treatment seeking behaviours employed by the infertile could be detrimental to the health of these individuals. For instance, the use of unregulated herbalists and itinerant herbal medicine sellers, as well as the over reliance on spiritual healing could have dire implications for health. *(Afr J Reprod Health 2020; 24[2]:27-39).*

Keywords: Biological parenthood, infertility, beliefs, fertility treatment, health seeking behaviour, Ghana

Résumé

En raison de l'orientation nataliste de la société ghanéenne et des conséquences sociales de l'absence d'enfants, les personnes infertiles adoptent plusieurs stratégies de recherche de santé dans le but d'avoir leurs propres enfants. Cette étude a donc exploré le comportement de recherche de santé des Ghanéens infertiles et les facteurs qui influencent ce comportement. L'étude a adopté une approche de recherche qualitative. Quarante-cinq entretiens approfondis semi-structurés ont été utilisés pour recueillir des données. Les résultats suggèrent que le comportement de recherche de traitement des Ghanéens infertiles était largement motivé par la cause perçue et la croyance en l'efficacité d'une forme de traitement. Deux principaux schémas de recherche de traitement sont ressortis des données, les comportements hiérarchiques et concomitants de recherche de traitement. Bien que les participants aient combiné la guérison spirituelle avec la médecine à base de plantes ou orthodoxe, une combinaison d'orthodoxie et de plantes médicinales leur semblait inappropriée. Les résultats de cette étude devraient avoir des implications pour les professionnels de la santé en général, car la quête de la parentalité biologique et les comportements de recherche de traitement employés par l'infertile pourraient nuire à la santé de ces personnes. Par exemple, le recours à des herboristes non réglementés et à des vendeurs ambulants de médicaments à base de plantes, ainsi que le recours excessif à la guérison spirituelle pourraient avoir de graves conséquences pour la santé. *(Afr J Reprod Health 2020; 24[2]: 27-39).*

Mots-clés: Parentalité biologique, infertilité, croyances, traitement de fertilité, comportement de recherche de santé, Ghana

Introduction

Infertility, the situation whereby a couple in their reproductive years are having sexual intercourse without the use of contraception but are unable to establish pregnancy within a year[1] is a reproductive health problem that cuts across space and time. Globally, it is estimated that about 72 million women are infertile. Majority of these women are found in developing countries, especially in Africa[2]. There are, indeed, regional variations in the prevalence of infertility. In South-Central Asia and South-East Asia, it is estimated that 28% and 24% (respectively) of couples are infertile. The

situation is even worse in sub-Saharan Africa, where it is estimated that 30% of couples are infertile, with some parts of West Africa reporting as high as 46% infertility rate among couples[2,3]. Ghana has its own share of this infertility problem with Donkor and Sandall[4] pegging the infertility rate of women in Ghana of childbearing age at 15%. Another study conducted in the Berekum District in rural Ghana revealed an infertility rate of 11.8% among women and 15.8% among men[5].

However, socio-culturally, different societies define infertility in different ways (which may not resonate with medical definitions) based on the differing values attached to childbearing. Infertility may not necessarily denote the inability to bear children. Variations in these definitions are evident in terms of the time frame within which one is expected to get pregnant after marriage, sex preference of children, number of children one is expected to have and so on. In India, China and Korea for example, male children are preferred over their female counterparts mainly due to their economic benefits[6]. As such, women in these societies experience social pressure to produce male children and their inability to do so results in them being regarded as infertile. This preference for male children, the absence of which results in being branded as infertile is also found in some African countries such as Ghana and Nigeria[7, 8]. Tabong and Adongo[7] in their research on infertility in the Upper West region of Ghana found that the inability to have many children was defined as infertility. They further reported that, the acceptable number of children is determined by the society rather than the individual couple. Relating to time frame, some studies in Egypt and Nigeria have reported that the acceptable period for childbirth is within a year of marriage[8, 9].

Infertility, particularly in Africa, has serious social consequences for those affected, especially women. Such consequences may include abuse, humiliation, divorce, disruption in family relations, and stigmatization in general[10]. For instance, studies conducted in Mozambique and Zimbabwe report that infertile women commonly suffer isolation[11, 12]. In Ghana, infertile women are viewed as "abnormal" or "incomplete"[13]. Infertile women in Malawi, are "belittled," "made to feel like a fool," and not "respected"[14]. In Nigeria, an infertile woman is prevented from taking part in family decisions and is prohibited from inheriting her husband's property. An infertile woman is described as a "man," and has a higher chance of being divorced[3, 15]. As aptly indicated by Dyer, Abrahams, Mokoena and van der Spuy[10], in Africa, the true meaning of marriage is only fulfilled when the couple has children.

Due to the pronatalist orientation of the African society and the social consequences of childlessness, infertile persons adopt several health seeking strategies in their bid to have their own children. However, health seeking behaviour is known to be influenced by several factors including perceived cause and cost. Similarly, health seeking behaviour of the infertile is influenced by the perceived cause of infertility amongst other things[7, 11]. This subsequently has implications for the patterns of treatment seeking. Drawing on a larger study that we conducted to explore the strategies and management of infertility amongst urban Ghanaians, this paper aims at documenting the patterns of treatment seeking and how this is linked to the perceived causes of infertility.

Studies on infertility in Ghana conducted in the 1970's and the 1980's revealed a preference for traditional treatment options by infertile men and women in marital relationships to engender conception and childbirth[16-18]. These traditional treatments included the use of the services of herbalists, juju men, traditional priests, re-marriage and fostering. Orthodox treatment was often resorted to only when all these treatment options had been exhausted[18]. However, about three decades later, the use of orthodox treatment has been found as a common option amongst the infertile[4].

The existence of several treatment options has also brought into vogue the phenomenon of healer shopping - the situation whereby a patient requests care from multiple healers without a referral from the initial caregiver[19]. Although there is literature in the sub region and Ghana for that matter that shows the existence of healer shopping[20], it is related to varying health conditions other than infertility. Literature in sub

Saharan Africa about the patterns of treatment seeking associated with infertility has not been forthcoming. To date and to our knowledge, studies have focused largely on beliefs and (gendered) experiences of infertility to the neglect of treatment seeking patterns. This study therefore presents a qualitative approach to examining the treatment seeking patterns of married individuals with infertility issues presented in Ghana.

Methods

Study area

The research presented in the current paper was a multi-site study involving three healthcare facilities, namely, (1) a privately-owned modern (hi-tech) fertility clinic equipped with assisted reproductive technologies, (2) a Western-styled herbal clinic, and (3) the obstetrics and gynaecology unit of a government hospital, all located in Accra. The three were purposively selected based on the differences in their approach to solving infertility and consequently, the differences in clients who patronize these facilities. In Ghana today, with the influx of Western technologies, the use of assisted reproductive technologies is gradually increasing. In addition, there has been a proliferation of herbal clinics in recent times especially in the capital city of Accra offering Western style herbal treatment for infertility. However, most of the facilities identified within these two categories of health care providers are privately owned and thus not subsidized. The bulk of health care in the country is provided by the government. It was therefore expedient to include a publicly run health care facility. Furthermore, these sites were selected to capture more completely the health seeking behaviour of the contemporary Ghanaian as these three different sites offered different approaches to infertility treatment. These choices were also made in order to capture the diverse socio-demographic characteristics of the target group for the study to reveal any similarities or differences that may exist between them regarding their experiences of infertility and their responses to it.

Participants

The study targeted only those who were married and wanting to conceive. Based on the exploratory nature of the research, saturation and other pragmatic considerations, a total sample of forty-five (45) respondents was selected for the study[32]. Purposive sampling was used to select 15 respondents from each of the identified health care facilities. The sampling was influenced by the need to understand the experiences of infertile married Ghanaian men and women from their own perspectives.

Data collection and analysis

To understand the lived experiences of the infertile, semi-structured in-depth interview was the main means of data collection for the study. The semi-structured interviews consisted of several key questions that defined the areas the research explored. With the consent of participants, some of the interviews were recorded. Some of the main questions asked are:

1. Why are you using this particular remedy?
2. How confident are you that this method would work for you and why?
3. Are there some other things you are doing at the same time to help you get a child?
4. Why do you use different method at a time?
5. Have you tried to have a child using a different remedy in the past apart from this one?
6. Why did you choose these remedies?

Thematic analysis was employed in analysing the qualitative data. The analysis was informed by the guidelines provided[21], namely, getting to know the data; generating initial codes; searching, reviewing and defining themes; and finally, producing the report[22]. The analysis began with data organisation, which involved verbatim transcription of the interviews. The interview transcripts were read several times by the researchers. Ideas for coding were documented and discussed by the researchers. After this exercise, actual coding of the data began. The coding of the data was done manually.

The various codes were placed under appropriate potential themes. The development of the themes was theory driven[21] as they were informed by the interview guide and research questions. The extracts under each code and theme were read to ensure that they fit into where they had been placed. Where necessary themes were modified or changed to reflect the codes they contained and to reduce overlap between themes. The analyses thus involved searching for repeated patterns of meanings.

Results and Discussion

Characteristics of selected studies

The study involved 45 participants, made up of 40 females and 5 males. The gender distribution reflects the fact that women often seek treatment for their health conditions as compared to men; and in relation to infertility, women are the ones who mostly bear the brunt from society when a couple is unable to have children. With respect to their infertility status, majority of the respondents (30) were experiencing primary infertility and 15, secondary infertility. Data on the socio-demographic characteristics and fertility status of the participants are presented in Table 1.

Patterns of treatment seeking behaviour

This section reports on the various patterns of health seeking behaviour that respondents employed en route to achieving conception and subsequent childbirth. Although respondents were purposively selected from the specific professional healing sectors, namely, herbal and orthodox treatment facilities, their histories regarding the various places they had sought health care in the past for their infertility were explored. Two patterns of health seeking behaviour were identified, namely, hierarchical health seeking practices and concurrent health seeking practices.

Hierarchical health seeking practices

The current study found that respondents resorted to different treatment options prior to their current treatment method. The table below (Table 2) depicts the different treatment options that respondents first resorted to categorised according to the treatment facility where respondents were sampled. From the data, orthodox treatment (bio-medicine - the use of chemically pure substances which when administered into the body produce pharmacological effects which may consequently lead to alleviation of the disease or help in the diagnosis or prevention of the disorder) was the primary treatment option for most respondents, with 19 out of 45 (42.22%) respondents indicating that was the first form of treatment they engaged in. A similar number (18) also indicated that their first point of call for treatment was herbal medicine (naturally occurring, plant-derived substances with minimal or no industrial processing that have been used to treat illness within local or regional healing practices). Eight out of the 45 (17.7%) participants also resorted to spiritual treatment (the channeling of healing "energy" from an assumed source via the healer to the patient. The central claim of healers is that they promote or facilitate self-healing in the patient. However, no scientific evidence is available to support the existence of this "energy," nor is there a scientific rationale for the concepts underlying spiritual healing) as the first option in solving their infertility problem. Indeed, the current study's interest is not in the number of persons who resorted to which treatment option first, but in the rationale behind such decisions. The various reasons that respondents provided as influencing and determining their first choice of treatment are therefore discussed in the subsequent sections.

Herbal treatment as first treatment option

Out of the 15 respondents (Table 2 Hierarchy of Options) selected from the herbal centre, seven of them revealed that, they had earlier on tried other forms of herbal treatment. Similarly, eight out of the 15 respondents selected from the government hospital revealed that the first type of treatment they had accessed was herbal treatment. Such herbal treatments were in the form of local herbs from known herbal medicine men, herbs from itinerant herbal vendors or from a 'mallam'.

Resorting to the use of local herbs from a known traditional healer was because of a mix of factors.

Table 1: Socio-demographic characteristics and fertility status of respondents

	Government hospital (n=15)	**Herbal clinic(n=15)**	**Fertility clinic using ART (n=15)**	**Total**
Males	0	5	0	**5**
Females	15	8	17	**40**
Age of respondents:				
20-29	3	5	1	**9**
30-39	9	7	7	**23**
40-49	3	3	5	**11**
50-59	0	0	2	**2**
Years of marriage:				
0-4	6	6	3	**15**
5-9	6	3	5	**14**
10-14	2	5	4	**11**
15-19	1	0	1	**2**
20-24	0	1	1	**2**
25-29	0	0	0	**0**
30-34	0	0	1	**1**
Primary Infertility	10	10	10	**30**
Secondary Infertility	5	5	5	**15**

Source: Field interviews

Table 2: Hierarchy of Options

Current treatment facility	**First Treatment Option**			
	Herbal	Orthodox	Spiritual	Total
Herbal	7	5	3	15
Gov't Hospital	8	4	3	15
Private Fertility Hospital using ART	3	10	2	15
Total	18	19	8	45

Source: Field interviews

Such respondents mentioned the belief in the ability of that healer to cure their infertility. This belief was borne out of the proven track record of the healer which they had heard about through lay referrals (esp. from their mothers, siblings or their friends). According to them, what they had heard about and from that healer were convincing enough and therefore they decided there was no harm in trying the herbs they had to offer. This choice was also influenced by the relatively cheaper cost of treatment associated with such healers.

These findings are like that of other ethnographic research on the reasons for the popularity of ethno-gynaecologists in the treatment of infertility. Trust and confidence in traditional healers and the relatively cheaper costs were some of the determinants for the use of traditional healers who offered herbal treatment[23]. However, Mogobe[24] suggests that the popularity of traditional healers is occasioned by the fact that these healers know the people of the area and use traditional long-established medicines. The current study, which was conducted in an urban heterogeneous setting, does not support this finding. This is because the healers whose services respondents often accessed lived in other parts of the country other than the capital, Accra where the respondents lived. Respondents usually visited traditional medicine practitioners usually based on lay referrals. The situation whereby some also bought herbal medicines from itinerant medicine vendors questions the influence of trust and fame being a determinant of the popularity of such healers.

Despite the belief in these healers and the cheaper cost of their services, respondents sometimes terminate this mode of treatment, usually within a period of one year. Some of the reasons for termination of treatment that the respondents indicated included experiences of side effects such as frequent loose bowels and blood

stains in bowels, lack of ready access to the medication (evident in the distance to be travelled in order to access the treatment) and the lack of a positive result after a few months. Others also indicated that their decision to terminate treatment was due to the packaging and dosage of the drug, which requires that they drink several litres of bitter concoctions at a time. According to Vic,

> *My mother, who lives around Tarkwa, was sending me herbal medicine through my sister. After some time, I got tired of taking all that medicine, so I asked her to stop sending it. Besides, my sister was not able to go there regularly and when that happens, my mother must find someone else to send the medicine through. I felt I was worrying her, so I decided to look for a herbal clinic that was not very far away.*

The use of "mallams" as a treatment seeking option was also common as a hierarchical strategy amongst the Muslims in this study. Some of these mallams performed the dual role of offering spiritual diagnosis for their clients coupled with traditional herbal preparations as treatment for the various conditions thus explaining their importance. Just like the use of other traditional herbalists, most respondents indicated failure of the treatment to yield the desired result prompted them to terminate treatment.

The sentiments of the respondents in relation to diagnosis, dosage and effectiveness of the herbal preparations were aptly captured by a female respondent when she remarked:

> *Hmm…, he told me that I had too much heat in my womb which was being caused by an evil eye. So, he gave me some herbal medicine to take which he said will regularise the temperature in my womb. It was in three voltic bottles- the big ones. I drank it all but I am still not pregnant. Now, I don't even believe that I had too much heat in my womb. Otherwise, the medicine he gave me should have worked. Besides, I don't feel any heat inside me so what else can I say? At least I should have been experiencing some symptoms, or?*

With regards to respondents selected from the private fertility hospital, three had resorted to herbal medicine before accessing high tech treatment. This goes to show that, not all people accessing herbal treatments first are doing so because they cannot afford high tech treatments. One of these respondents explained that she had received such medication from her mother who believed in the efficacy of these herbs. The remaining two reported having resorted to herbal medicine from a medical herbalist because of their belief in the efficacy of herbs and the hope that a more natural form of treatment would remedy their situation. An embryologist at the high-tech treatment facility also indicated that the non-use of reproductive technologies may be because they are unaware that such facilities exist: "… people do not know we exist. Others too think IVF is expensive and they can't afford it so let's try something less expensive". The current study thus shows that infertile persons chose herbal treatment as their first option not necessarily because they cannot afford orthodox treatment but partly because of lay referrals or personal belief in the efficacy of herbal medicine.

Preference for orthodox treatment

For respondents selected from the herbal centre, orthodox treatment was the next common form of initial treatment (five out of fifteen) and from the low-tech treatment facility (four out of fifteen respondents). It was also the most common first form of treatment for those selected from the high-tech treatment facility (ten out of fifteen respondents). These respondents indicated that the reason for accessing orthodox treatment first was in search of a scientific diagnosis for their condition and a general belief and orientation towards orthodox treatment. They believed in the efficacy of Western orthodox medicine and hoped to get a sound explanation as well as the necessary medication that will remedy their conditions. According to one respondent,

> *Well, I have always gone to the hospital when I am sick. That is what I believe in and it is what I grew up with. It works well for me. I have never thought of trying*

> *anything different. So, it's only natural that I continue to tow this line in this situation. The only other thing that I must admit I tried sometime in the past was acupuncture. But obviously, that didn't work that is why I am back here.*

However, in some situations, the diagnosis received, and suggested treatment option given at the orthodox clinic as well as the lack of positive results after a period of taking orthodox medication led some respondents to opt for herbal treatment as an alternative. One very common diagnosis that led patients to resort to herbal treatment was the diagnosis of a fibroid which required a surgical operation to increase chances of conception. However, the fear of death associated with surgical operations and the promise of a cure which did not require a surgical operation offered at the herbal centre served as a strong reason to access herbal treatment. Thirty-five-year-old Rachel expresses her sentiments regarding this,

> *I was first diagnosed with having fibroids when I was in the UK about eight years ago. I was hoping that I could still have children but as the years went by, nothing was happening. Then, sometime last year, I went to Ridge hospital and the doctor told me it has gotten worse, so he has to operate to take out the fibroids. When he said that, my heart skipped a beat. I am very scared of operations. I will never wish it for even my enemy. I just don't like the whole idea. After some time, I gathered the courage to go and book for the operation and make all the necessary preparations but on the day, I was supposed to have the operation, I did not go. I could not bring myself to go. Then I heard that herbal medicine too can remove the fibroids. As for me, any amount of medicine you give me, I will take it without a problem. Even if it is injection, I will prefer it. But as for operation, hmm… I've told God that, I beg him, I don't want that one.*

Additionally, male respondents who had been diagnosed with low sperm count at the orthodox clinic and had been on medication without any positive results had been informed through conversations with their peers that, herbal medicine from this particular health centre (where respondents were drawn) was very effective in remedying such conditions. This explained their choice of herbal treatment as a second option. According to Francis,

> *I was given some medicine at the hospital to take but I am not seeing any improvement…it's getting to 6 months now. Every time I go for tests, it's the same thing. If anything, only a little improvement (referring to sperm count). So, me and my boys [male peers] were talking about it and one of them said that the herbal medicine being provided here is very good so I decided to try it.*

The preference for spiritual treatment

Spiritual treatment as a first option was reported as the least common form of treatment at all the centres. Three respondents out of 15 who were selected from the herbal clinic had initially sought spiritual treatment; another three out of 15 respondents selected from the low-tech treatment facility had also sought spiritual treatment initially; and two out of 15 respondents selected from the high-tech treatment facility had sought spiritual treatment initially. The phenomenon of 'hoping and praying' and/or vice versa was the main reason for resorting to spiritual treatment first and is most common during the early stages when one is trying to conceive. It is also common among those experiencing secondary infertility since the belief is that, the ability to have a child is an assurance of the ability to have subsequent children. The reliance on God for children is borne out of the belief that children are gifts from God and as such the reliance on God for children. This form of treatment seeking starts off as a passive one and intensifies with time to include more strategic spiritual exercises such as fasting, weekly prayer

sessions, all-night prayer sessions, 'seed-sowing' and the like. However, due to the eagerness to establish a pregnancy/bear a child, this phase does not last long and is soon complemented with other treatment seeking options.

For 30-year-old Akua, however, her sole reliance on spiritual treatment for four years was borne out of her deep faith in God to give her a child of her own and by the fact that, she was experiencing spiritual symptoms which suggested the existence of a spiritual problem. Additionally, neither she nor her husband was experiencing any physical symptoms which could suggest the existence of a physiological disorder. On that basis, she did not see the need to go to the hospital initially.

> *At first, there was no problem, so I was just waiting for it to happen. Then there was a time when I started having strange dreams. When I sleep at night, I will see myself having sex with someone other than my husband. So, I started praying seriously about it. My pastor said it was a sign that I was in a spiritual marriage with someone, so we needed to break that yoke. We fasted and prayed a lot and eventually, by the grace of God, I stopped having those dreams. It has been some time now and still no pregnancy, so we decided to come to the hospital and check.*

Active spiritual consultations as a first option for infertility treatment were not restricted to the church but extended to the services of traditional spiritualists as well. However only respondents with lower educational background usually below the junior secondary level reported this.

In summary, much as some respondents seek spiritual treatment as a first option, others seek it as a secondary or last resort. When other sources of treatment do not yield the desired results as discussed, some respondents then intensify their search for a spiritual remedy. It is at this stage that other explanations such as the interference from witches and other supernatural entities also come up. This finding corroborates the assertion that perceived aetiology of a disease may change depending on treatment outcomes and the disease trajectory[25].

Simultaneous health seeking practice

The above sections show the order in which patients sought the three main types of treatment. However, one major finding of the current study was the issue of concurrent treatment patterns. We found that many respondents sought spiritual intervention alongside orthodox or herbal medicine. Contrary to what most of the literature (cite) reports, even where respondents did not believe their infertility is spiritually caused, they still believed it was important to augment their current treatment option with a spiritual intervention. The case study below is illustrative of this pattern of treatment seeking.

Case study Two - Orthodox and spiritual treatment,

> *Amanda, aged forty, is a successful employee in corporate Ghana. She has been married for the past two years to her current partner who has two children of his own. Her previous marriage lasted for five years and although during that time she conceived once, she subsequently lost the pregnancy. She has not been able to conceive again. She is currently trying to conceive through in-vitro fertilization. She is also heavily reliant on God to give her a child. Ever since she realized conceiving was a difficulty for her, she has been visiting several spiritual healers and orthodox clinics/hospitals in search of a treatment. She believes strongly that divine intervention is a necessary complement to scientific/orthodox treatment. As such, she never misses an opportunity to consult with pastors and spiritual healers (sometimes recommended by her siblings) who are noted for such purposes. She also attends prayer sessions and has a personal pastor who prays with and for her regarding this intention/desire to have a child.*

It was clear from the findings of the current study that respondents did not only seek spiritual

intervention when they believed their infertility is spiritually caused; they also believed that even if it is naturally caused, spiritual intervention could remedy the situation. Respondents thus sought the blessings of God when it comes to conception. This was because, according to them, children were gifts from God. However, God chooses the right time to bless his children with this gift. As such, it was necessary to continually pray for this gift until the time when it becomes manifest. A common saying to buttress this point, which several respondents alluded to, is the fact that: "God's time is the best". Again, as an explanation for the reason why this gift from God was delaying/not readily forthcoming, some respondents fell on such explanations as "all the fingers are not equal" and "God's ways are not our ways".

Furthermore, religious explanations are sought in cases of unexplained infertility or biomedical conditions which by themselves are not strong enough to account for one's infertility. The belief is that evil forces could be working in tandem with such physiological factors to aggravate the situation. Martha, a 42-year-old respondent who has been married for the past ten years without a child had this to say;

> *I do not understand why I am not getting pregnant. I have done a lot of tests and Doctor says he has not seen anything wrong with me or my husband… God's ways are not our ways. Deep down in my heart, I know I have children. I strongly believe that, sometimes, God does these things so that He can glorify his servant at the right time and thus show us all His greatness. I do not doubt it at all; just look at the story of Sarah in the Bible…for me, that is enough proof. Because of that, I do not joke with my prayer life at all.*

Another reason provided for accessing spiritual treatment was for 'deliverance' from anyone who could be preventing them from achieving conception or maintaining a pregnancy. In such situations, spiritual explanations for infertility included the interference of external agents such as witches and the devil. This is because, for some, evil forces were the cause of their physiological disorder which then accounted for their inability to bear children. These evil forces most of the time operated out of envy or jealousy and resided in their ex-spouses, in-laws, siblings and other relatives. For instance, Michael, a 33-year-old successful businessman who has been married for about a year, has been diagnosed with a low sperm count. He, however, seeks help from a spiritual healer as well because, he believes his sisters caused this physiological disorder. According to him,

> *My sisters do not want me to have children of my own. I believe they are the cause of this problem. They want me to use all my hard-earned money to take care of their illegitimate children for them. During my last two relationships, I was able to make the women I was dating pregnant, so I do not believe this is natural. It's just that, I was not ready at that time that is why I asked them to abort the pregnancies. Now that I am married and ready to have children, look at what is happening? It is my sisters' fault. I know it.*

Michael's sentiments stem from the fact that he had on several occasions in the past had arguments with his sisters concerning their promiscuous lifestyle which had resulted in they bringing forth of children with irresponsible fathers whose financial upkeep had become his responsibility. On one such occasion, one of his sisters told him that "you will also give birth for us to see" (literally translated) implying that he will not be able to have children of his own and interpreted by the respondent as a curse. According to Michael, having his own children will mean that, his sisters' illegitimate children will have to compete with his own children for money for their upkeep putting his sisters at the losing end. He has been on medication for the past three months but there has been no significant improvement in his condition which only goes on to strengthen his belief. Therefore, Michael seeks spiritual intervention in addition to biomedical herbal treatment. During these prayer sessions, he actively prays for a restoration of his reproductive ability.

Studies conducted on the work of charismatic/Pentecostal churches in Ghana over the years have revealed the role played by these churches in delivering people from supernatural entities (e.g. witchcraft, demons etc.) that afflict them and are a cause of their misfortune[26, 27]. Meyer[28] contended that Christianity in Ghana is a localised process whereby the witches and gods from the traditional religious beliefs have become diabolised by Christians into demons from which one has to obtain deliverance. Some of these respondents exhibit a similar belief and is evident in their treatment seeking behaviour in the spiritual realm. These local understandings of Christianity thus influence perceived causal explanations for infertility and subsequently treatment seeking behaviour for infertility.

These reasons explain why some respondents complemented biomedical treatment with spiritual healing. Some respondents indicated that they requested for the scan and laboratory results from their doctors to take to church to pray over them to obtain healing. Others also reported that their pastors expressly requested for such medical results to substantiate the existence of their disorder and to serve as a poof in instances of successful spiritual healing.

In the same vein, anecdotal evidence from healing sessions being telecast on the radio and television stations reveal the emphasis spiritual healers place on prayers for the disappearance of fibroids, regulation of menstrual cycles, clearing of blocked fallopian tubes and improved sperm production amongst others.

Interestingly, the service providers that we interacted with, namely the doctors, embryologists and the like also exhibited the belief in complementing biological healing with spiritual healing. They did not fail to mention the role of the supreme God in addressing the reproductive challenges of their clients. For instance, after an embryo transfer, one of the embryologists at one of the fertility clinics remarked: "we are going to leave everything in God's hands, we are merely instruments". We also observed that during embryo transfers, the doctor often said to his patients, "say a prayer for them". A similar situation occurred at the herbal clinic where the medical herbalist often told his patients not to worry and to make sure they take their medications and "God will do it". These type of responses to treatment seeking reveals the reliance of the Ghanaian on the supernatural being especially in circumstances that are beyond their control/inexplicable.

So far, this paper has shown that respondents complemented either orthodox or herbal treatment with spiritual healing. This configuration in treatment seeking is of interest since it clearly excludes the combination of herbal treatment with orthodox treatment. It implies that it is acceptable to combine spiritual treatment with either herbal treatment or orthodox treatment but unacceptable to combine herbal and orthodox treatments. This pattern of simultaneous treatment seeking from spiritual healing centres as well as biomedical healing centres reflects the situation of medical pluralism. Medical pluralism has been shown to exist in Ghana as well as some other African contexts[29, 30]. This is largely due to the existence of both ethno-medical and biomedical health care systems on the African continent. Respondents' utilisation of these plural medical systems can be explained by the fact that each system provides a unique and different treatment for different purposes. They thus complement one another. As Senah[31] states,

> *…the African may visit the hospital, the healer, and the prophet …without feeling any sense of contradiction… because to him, all these health facilities are along the same continuum; their explanatory models may differ but together they constitute one cosmology.*

Intensity of spiritual health seeking behaviour

Findings from the current study revealed two groups of respondents based on the type or way they sought spiritual intervention. There was one group of respondents who actively sought intervention in the form of spiritual healing by continually visiting noted spiritual healers, attending church services targeted at praying for the ability to have children and engaging the

services of spiritual leaders who constantly prayed for them. Some of these would make time and travel to other regions in the country such as the Northern, Ashanti and Eastern regions to access the services of a known spiritual healer. Others travel to neighbouring Nigeria in search of the services of the notable Prophet T. B. Joshua, who is believed to have the gift of curing all kinds of ailments including infertility.

The other group of respondents were more passive in their search for divine intervention. Their use of spiritual treatment is categorised as passive because it did not involve conscious spiritual acts such as travelling away from home to engage the services of a spiritual healer, attending special prayer services for the infertile etc. Rather, they mentioned acts of praying to God on their own and trusting in him for a solution. The data thus suggest that even where infertility is attributed to the supernatural, the degree or intensity of such attribution may differ, which consequently impact the extent to which infertile persons go in the search for spiritual treatment.

Conclusion

This paper explored the treatment seeking behaviours of infertile Ghanaians. Two main patterns of treatment seeking emerged from the data, namely, hierarchical and concurrent treatment patterns. With the hierarchical pattern, different treatment forms are sought serially. The paper showed that health seeking behaviours are hinged on the perceived causes of infertility. Evidence emanating from the data showed that where respondents considered their infertility as a personalistic illness, attributing external supernatural agents such as witches as the cause, spiritual treatment was the first form of treatment they sought. Likewise, those who attributed the cause of their infertility to reproductive disorders accessed biomedical or herbal medicine as the first treatment option. When participants felt their treatment was not yielding desired outcomes, there is a rethink about the perceived aetiology and the treatment option, usually leading them to seek another treatment form. The findings revealed that majority resorted to herbal or orthodox medicine as the first treatment option and a significant minority also resorted to spiritual treatment as first treatment option.

The second pattern, concurrent treatment seeking behaviour involved combining different treatment forms simultaneously. An interesting finding in this regard was the fact that respondents combined spiritual healing with either herbal or orthodox medicine but not orthodox and herbal medicine. These treatment seeking behaviours by infertile is also a manifestation of medical pluralism and the phenomenon of healer shopping. The findings of this study should have implications for health promoters, public health practitioners and healthcare workers in general as the quest for biological parenthood and the treatment seeking behaviours employed by the infertile could be detrimental to the health of these individuals. For instance, the use of unregulated herbalists and itinerant herbal medicine sellers, as well as the over reliance on spiritual healing could have dire implications for health.

Conflict of interest

Acknowledgment

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Ethics Approval and Consent to Participate

Ethical clearance was first received for the study from the Institutional Review Board of the Noguchi Memorial Institute for Medical Research, University of Ghana. All the necessary steps were taken to ensure that no physical or psychological harm was suffered by any of the respondents.

Competing Interests

The authors declare that they have no competing interests.

Consent for Publication

Not applicable

Author's Contribution

RAH was the primary researcher and conducted the interviews and analyzed the data. IMB contributed to the conceptualization of the paper, the preparation of the manuscript, edited and approved the final manuscript.

Availability of Data and Materials

In view of the confidential nature of the data, and in consonance with the conditions of ethics approval, data cannot be shared presently. Moreover, analyses of the data are still ongoing.

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