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Experiences of traditional health practitioners in the management of female infertility in Harare urban areas: A qualitative study

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Abstract

Female infertility is a health and social problem that traditional health practitioners (THPs) have been managing in African communities. This study explored the experiences of THPs in the management of female infertility, specifically focusing on their understanding, diagnosis, and treatment methods for female infertility. This was a qualitative study targeting six THPs in Harare urban areas registered with the Traditional Medical Practitioners Council (TMPC) in Zimbabwe. The Consolidated Criteria for Reporting Qualitative Research (COREQ) guidelines were followed in the description of the study design, analysis and presentation of findings. The findings revealed that the etiology of female infertility was attributed to biomedical, lifestyle, spiritual, and male factors. Management of infertility depended on the type of THP. Spirit mediums relied on divination and dreams to diagnose and treat female infertility. Herbalists focused on the physical evidence provided by the client through history taking. THPs had a client referral system within their TMPC network. All THPs ultimately used medicinal plants for treating female infertility. THPs play an important role in the management of female infertility. Understanding their contributions to the management of female infertility provides an opportunity to obtain insight into their practices, thus identifying areas that responsible Ministries can use to strengthen traditional health care systems and ultimately improve reproductive health care for women in African communities. (*Afr J Reprod Health 2024; 28 [1]: 110-122*)

Keywords: Female infertility, traditional health practitioners, traditional medicine, women

Résumé

L'infertilité féminine est un problème sanitaire et social que les tradipraticiens (PTS) gèrent dans les communautés africaines. Cette étude a exploré les expériences des THP dans la gestion de l'infertilité féminine, en se concentrant spécifiquement sur leur compréhension, leur diagnostic et leurs méthodes de traitement de l'infertilité féminine. Il s'agissait d'une étude qualitative ciblant six THP des zones urbaines de Harare enregistrés auprès du Conseil des médecins traditionnels (TMPC) au Zimbabwe. Les lignes directrices COREQ (Consolidated Criteria for Reporting Qualitative Research) ont été suivies dans la description de la conception de l'étude, de l'analyse et de la présentation des résultats. Les résultats ont révélé que l'étiologie de l'infertilité féminine était attribuée à des facteurs biomédicaux, liés au mode de vie, spirituels et masculins. La prise en charge de l'infertilité dépendait du type de THP. Les médiums spirituels s'appuyaient sur la divination et les rêves pour diagnostiquer et traiter l'infertilité féminine. Les herboristes se sont concentrés sur les preuves matérielles fournies par le client grâce à l'anamnèse. Les THP disposaient d'un système de référencement des clients au sein de leur réseau TMPC. Tous les THP utilisaient finalement des plantes médicinales pour traiter l'infertilité féminine. Les THP jouent un rôle important dans la gestion de l'infertilité féminine. Comprendre leurs contributions à la gestion de l'infertilité féminine offre l'opportunité d'avoir un aperçu de leurs pratiques, identifiant ainsi les domaines que les ministères responsables peuvent utiliser pour renforcer les systèmes de santé traditionnels et, à terme, améliorer les soins de santé reproductive pour les femmes des communautés africaines. (*Afr J Reprod Health 2024; 28 [1]: 110-122*).

Mots-clés: Infertilité féminine, tradipraticiens, médecine traditionnelle, femmes

Introduction

Infertility is a global health issue affecting millions of couples, with significant emotional, social,

psychological, and economic consequences¹⁻⁶. Infertility problems can sever family bonds and endanger public health by increasing psychological distress⁷, social stigma⁸, and intimate partner

violence (IPV)⁹ among other concerns. Additionally, affected individuals frequently engage in extramarital relationships to demonstrate their fertility, increasing the risk of sexually transmitted infections (STIs) and HIV/AIDS¹⁰. STIs also exacerbate infertility problems, as they can obstruct the fallopian tubes and thus cause scar tissue to form¹¹. The World Health Organisation in 2023 estimated that between 1990 and 2021, approximately one in six people (both male and female) globally experienced infertility in their lifetime¹². According to a meta-analysis of infertility in Africa conducted in 2020, primary infertility in Africa for both males and females ranged from 70.56% in North Africa, 41.57% in West Africa, 40% in Southern Africa, to 30.37% in East Africa¹³.

In African culture, traditional health practitioners (THPs) have been relied upon for managing female infertility. These practitioners have remained prevalent in most communities regardless of advancements in modern methods of management of infertility. This is due to many factors, including affordability and the importance that African culture places on traditional practices and methods of living^{14–16}. THPs mainly use traditional treatment approaches such as herbal medicine, rituals and other spiritual practices that have been passed down from generation to generation. They also maintain the importance of African culture and traditional ways of living. Their approach in the management of diseases is holistic, taking into account physical, spiritual, and emotional aspects¹⁷.

Although there is still limited scientific evidence on the efficacy and safety of traditional management of infertility in Africa, a review by Akbaribazm *et al.* conducted in 2021 of 128 worldwide articles on the role of herbal medicine provided solid evidence that compounds in plants used for treating female infertility are beneficial to reproductive health in women¹⁸. Studies performed in Africa have also documented medicinal plants used for treating infertility^{19–23}. In Zimbabwe, Maroyi in 2013 identified 93 medicinal plant species in South Central Zimbabwe, 10 of which were used to treat infertility²¹. In another study in the Nhema area in the Midlands Province (southern-central part of Zimbabwe), 61 plant species were identified for the treatment of 34 different human health problems,

8 for the treatment of both female and male infertility²⁰.

Studies have reported considerable cases of unexplained female infertility^{24–26}. A study by Madziyire *et al.* reported that the most common cause (22%) of female infertility in Zimbabwe was ‘unexplained’.²⁴ This may result in some women opting to consult THPs. However, there is limited documentation available on the traditional health care systems in Zimbabwean communities. This is because THPs have been cited as protective of their management practices for fear of having their knowledge stolen²⁷. Thus this study set out to delve deeper into this field so as to give insight on how THPs understand and manage female infertility. Understanding THPs' methods of managing female infertility is critical since it acknowledges the cultural significance and role of traditional medicine in resolving infertility in a holistic approach. It also helps to preserve indigenous knowledge systems for continued respect and legitimacy. This study was thus conducted to explore the experiences of THPs in the management of female infertility. The specific objectives of this study were to explore how THPs conceive, diagnose, and treat infertility in women.

Methods

The Consolidated Criteria for Reporting Qualitative Research (COREQ) guidelines were followed in the description of the study design, analysis and presentation of findings.²⁸

Research team and reflexivity

All interviews were performed by the lead author and research assistant (both females) who are based at the University of Zimbabwe Faculty of Medicine and Health Sciences. The lead author is a research administrator and PhD scholar with a background in social studies. The research assistant was a research nurse and PhD scholar at the same institution, and they both had prior experience in participating in research projects. The researchers introduced themselves as PhD students and briefed participants on the purpose of the study at the beginning of the interviews. The researchers had no prior relationship with any of the selected study participants. Participants were taken through the consent process and given time to read and understand about the

study. During the consent process, the research team built a rapport with the participants to make them feel comfortable during the interviews. Participants gave their written informed consent to be interviewed.

Study design

This was a qualitative approach using a phenomenological design within the interpretivist paradigm to explore the experiences of traditional health practitioners (THPs) in the management of female infertility. This approach provides detailed investigations of personal lived experiences; thus, it is useful for examining phenomena that are complex and emotional.²⁹ The study targeted THPs who are currently registered with the Ministry of Health and Child Care through the Traditional Medical Practitioners' Council (TMPC) and practiced in Harare urban.

In this study, the lead author contacted the TMPC registrar, who gave her a list of 11 THPs who are experts in the management of infertility. The researcher contacted all the participants through telephone to inform them about the study. Out of the 11 THPs, 6 agreed to participate in the study, 4 refused citing issues of protection of their intellectual property, and 1 was unreachable. Those who were not willing to participate were excluded from the study. All 6 THPs who agreed were selected as study participants. Appointments were set up with the 6 participants, and agreement was made on the date, time, and place for conducting the interviews, which was convenient for the THPs. All interviews were held face-to-face, 5 of them were held at THPs' workplace in the presence of the THP, researcher, and research assistant, and one was held at a public place. Written consent was given before the interviews.

The research was conducted in Harare urban, Zimbabwe. The setting was purposively chosen because it has the largest number of registered THPs in the country (33%). Furthermore, THPs and traditional medicines are readily available and accessible to many as they are openly sold in streets or markets. THPs advertise their services using various media, including radio and print media, as well as flyers. Harare urban areas are the economic hub of the country and consist of many

ethnic groups, most of which have migrated from rural areas.

A data collection interview guide was developed based on a review of the literature and considering the study design. The interview guide was pretested prior to the interviews to check the flow of procedures and questions, to check clarity and inconsistencies and to estimate the interview time length. The interview guide had built probes to allow the participants to elaborate on the issues that were discussed. Each of the interviews lasted between 50-90 minutes. The interviews were audio recorded using a digital audio recorder and cellphone. Field notes were also taken to capture visual observations and reflections. Demographic data, including age, sex, education, income, denomination, type of THP, and length of practice in traditional medicine, were collected.

Data analysis

Data were analysed through open coding and thematic analysis approaches. Audio-recorded data were transcribed verbatim into Shona transcripts, which is the local language used in the interviews. The Shona transcripts were translated into English by the researchers and an independent translator. The researchers then listened repeatedly to the audio recordings to familiarise themselves with the words of the participants to obtain a holistic view. Meanings were isolated through open coding, leading to the formation of major and subthemes. To ensure scientific rigour, the Lincoln and Guba (1985) model was used to evaluate trustworthiness³⁰. Credibility was ensured through the use of audio recorders, taking of field notes and engagement of an independent assistant to check on the coding and themes. Dependability and confirmability was achieved through an audit trail of the data collection, analysis and interpretation process which was checked by an independent assistant. To enhance transferability sufficient description of the research process and participants has been provided. The THPs were not engaged to provide feedback on the findings. The THPs' remarks are presented anonymously to illustrate themes that were derived from the data. The study was approved by the Joint Research and Ethics Committee of the University of Zimbabwe Faculty of Medicine and Health Sciences

and Parirenyatwa Group of Hospitals (JREC/200/2020) and Medical Research Council of Zimbabwe (MRCZ/A/2689).

Results

Interviews were held with six participants, and their demographic characteristics are highlighted in Table 1. The six research participants were aged 51-84 years, five considered themselves spirit mediums and one herbalist. Spirit mediums used spiritual powers by engaging their ancestors as their source of power to diagnose and prescribe medication to patients. THPs had been practising for a minimum of 18 years and a maximum of 74 years. Two of the THPs reported that they started practicing when they were young children, THP 1 at the age of 4 years and THP 2 at the age of 10 years. All female spirit mediums (n=3) indicated that they used the spirit of the mermaids (*shavi renjuzu*), while the males (n=3) used the ancestral (*sekuru*) and royal ancestral spirit (*mhondoro*).

Four main themes emerged: Theme 1: Understanding infertility; Theme 2: Causes of female infertility; Theme 3: Diagnosis of female infertility; and Theme 4: Management of female infertility. Subthemes are also described under these main themes, as outlined in Figure 1 below.

Theme 1: Understanding of infertility

The participants recognised two types of infertility: primary and secondary. They defined primary infertility as the absence of a live birth following a period of more than a year of regular unprotected sexual activity. Secondary infertility was characterised as the inability to have a live birth after a previous live birth. They noted that a person who can conceive and have miscarriages is also defined as infertile since there is no live birth.

THP 5 stated that *“a person can become pregnant but does not give birth we put them again in the infertility category”*.

When asked how long it takes for a person to be deemed infertile, the answers indicated a minimum of one year. THP 5 emphasised that *“...a person can't say in 1 year that they have an infertility problem....you need to give it time”*

Theme 2: Causes of female infertility

Participants gave examples of causes of primary and secondary infertility. These causes have been grouped as biomedical, lifestyle, spiritual, and male factors.

Subtheme: Primary infertility

Based on their knowledge and experiences through interacting with their clients and the training sessions they have gone through, the following are examples of causes of infertility.

Biomedical causes: Period pain (dysmenorrhea) is widely believed to be the major cause of infertility. THPs believed that this problem can be identified at a young age so that treatment may start at that early age. Other biomedical causes that were commonly mentioned included hormonal imbalances, which they believed to cause longer menstrual periods (over 5 days), heavy bleeding, and irregular cycles. For instance, THP 6 remarked, *“I will look at the cycle, if I see that you have a period more than 5 days ... normally it's very difficult for you to conceive”*.

Participants also believed that amenorrhea, fibroids and cysts, blocked tubes, back pain, stomach pain before the menstrual period (*nzoni*), age, abnormalities of the uterus (collapsed uterus or uterus not in the correct position) and contraceptives, both natural and allopathic, caused infertility in women.

Lifestyle causes: Participants believed that lifestyle factors contributed to infertility. Poor diet was mentioned as a factor, and pepper, coffee, pawpaw, and turmeric were cited as anti-fertility foods. Unhealthy habits such as drug and alcohol use were believed to have an impact on fertility. Poor sanitation during menstruation, particularly for young girls, was thought to induce infection, which could lead to infertility later in life.

Spiritual causes: All the participants agreed that spiritual factors influenced female infertility. They claimed that curses/evil spirits, witchcraft, and ancestral spirits all influenced women's fertility. The following excerpts aptly summarise this:

THP 5: *“the issue of ancestral spirits, some of the spirits if they are not appeased, not all ancestral*

Table 1: Characteristics of participants

Number	Current Age (Years)	Sex	Level of Education	Average Monthly Income US\$	Type of Healer	Duration of Practice (Years)
THP 1	84	Male	Standard 6	\$200	Spirit medium	74
THP 2	74	Female	None	\$50-\$100	Spirit medium	70
THP 3	51	Male	Tertiary	\$300	Herbalist	18
THP 4	61	Female	Grade 7	\$150	Spirit medium	34
THP 5	55	Female	Tertiary	\$1000-1500	Spirit medium	18
THP 6	59	Male	Tertiary	N/A	Herbalist and Spirit medium	30+

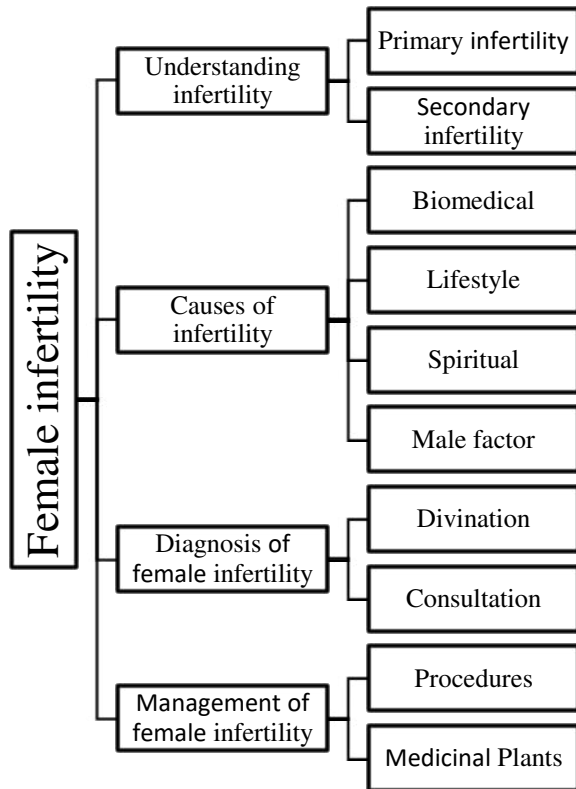


Figure 1: Themes and subthemes

spirits are soft, some of them become very angry at the end of the day they cause infertility".

THP 3: "Another issue is witchcraft, which is caused by aunts who swear you will never have a child".

THP 5: "Some do not bear children because they have been cursed in their families that they will never have children".

Male factor: Female infertility was thought to be caused by a partner’s promiscuity. This was not in reference to diseases that their partner would bring into the relationship but to the spiritual consequences that would befall the perpetrator as

punishment and that they would also obtain evil spirits from their extra marital partners.

Subtheme: Secondary infertility

Biomedical causes: Contraception and sexually transmitted infections were reported as the most common causes of secondary infertility by individuals. The most mentioned STIs were gonorrhoea and chlamydia. THP 5 stated, *"Secondary infertility can be caused by family planning, a person who used jadelle or depo (Depo-Provera®) then decides to have another child, they will fail, it is because those things used in family planning most of them destroy ovaries and hormones become low..."*

Lifestyle causes: Like in primary infertility, a poor diet was the cause of infertility reported by the participants.

Spiritual causes: In terms of spiritual causes, curses, evil spirits, and ancestral spirits were included as well. Different understanding of the concept of and interpretation of *Sare* (a growth or lump, part of hymen or skin tags on the genitalia). This is believed to hinder a woman from conceiving or from delivering a live birth. Some of the THPs expressed that this does not have any effect on infertility, as this is just a skin tag or part of the hymen. The mentioned causes of female infertility are summarised in Table 2.

The participants also mentioned that through assisting their clients, they noticed that at times the infertility problems were caused by male partners’ issues rather than female ones. Hence, they underlined that infertility should not be handled as a one-sided problem but rather as a problem that must be addressed for both partners involved.

Table 2: Summary of reported causes of infertility

Reported causes of Infertility	Biomedical	Lifestyle	Spiritual	Male Factor
Primary infertility	Period pains (dysmenorrhea)	Poor diet e.g., pepper, coffee, pawpaw, turmeric	Curses/evil spirits Witchcraft	Promiscuous partner
	Hormone imbalances – long period cycles (over 5 days), heavy bleeding, irregular cycles Amenorrhea Fibroids and cysts Blocked tubes Back pain Stomach pain before a period (<i>Nzoni</i>) Age Birth control contraceptives (natural and allopathic) Uterus Abnormalities (collapsed uterus or uterus not in the correct position)	Drugs and alcohol Poor sanitation – during menstruation	Ancestral spirits <i>Growth/lump/skin tag (Sare)</i>	
Secondary Infertility	Birth control contraceptives (natural and allopathic)	Poor diet e.g., pepper, coffee, pawpaw	Curses/evil spirits Ancestral spirits (punishment because of extramarital affairs)	
	Sexually Transmitted Infections	Prior abortions		

Therefore, their treatment techniques included managing both partners.

Theme 3: Diagnosis of female infertility

The diagnosis of female infertility varied based on the type of healer.

Subtheme: Divination: Spirit mediums use divination as a way of diagnosing female infertility. They would consult their ancestors to determine the client's problem, eliminating the need for the client to describe their concern.

THP 2 stated, "You arrive at my house and sit down, and then we go into my traditional clinic where I consult my ancestors, and I tell you that you have an infertility problem."

Subtheme: Consultation: Herbalists (n=2) reported that they mainly received clients who had already been diagnosed with infertility.

THP 6 indicated that "...what we do is people will go to their gynecologists and then they are treated, but they don't get any joy then.... then after talking with the client, I can pinpoint the problem which I will treat..." However, they would also conduct a consultation process with the client, reviewing their history, including family history, and any records that the client may have, to develop a treatment plan. THP 3 commented, "...basically the person comes with the problem then they describe to you what the issue is and the history then from there we know what's to be done and what's not to be done. I have come up with a protocol as to how can I approach this".

Theme 4: Management of female infertility

Subtheme: Procedures

The participants managed infertility in various ways. Spirit mediums consult their ancestral spirits for

guidance on how to treat their patients. When they throw their bones in their consultation rooms or through dreams overnight, they are informed of the approaches to take.

THP 2 and 6, who are spirit mediums, indicated that “*you use what the ancestral spirits tell you to use, I don’t do what I want*”, “*...I am also told in my dreams it’s not standard for all patients, in most cases it’s a spiritual power which does that (heals the woman)*”.

When using plants for treatment, they still consult the ancestors for a favourable outcome. THP 2 stated that “*When I have dug up the medicine, I will present it to the spirits and speak to it so that ancestral spirits can now help the client, then I leave the medicine in the shrine and return later to prepare it for the client and the spirits will do their work*”.

Herbalists, on the other hand, treat infertility with medicinal plants. Their knowledge is based on what they have acquired and learned through the years, and they also collaborate with clinical pharmacologists and chemists who are knowledgeable about the toxicity issues of various medicinal plants to develop appropriate dosages. It is worth noting, however, that when the herbal medicine does not function as expected, they refer their clients to spirit medium within their networks to remove the evil spirits or curses from the client and then manage the client using their herbal medicine afterwards.

For all THPs, treatment started with uterine cleansing. This is known as the standard procedure. Cleaning the uterus was said to be efficient in eradicating all infections from the womb.

THP 3 stated “*basically there has to be a cleansing of the uterus (kugeza chibereko) that is like standard procedure for all our fertility clients*”.

Another participant indicated that she puts all her clients first on STI treatment using traditional medicines to ensure that all infections are removed. Once the client has completed the STI treatment course, they are then given medication for infertility.

Sub- theme: Medicinal plants reported as useful in traditional management of female infertility

All the participants ultimately used medicinal plants for treating female infertility. Two of the participants

were hesitant to inform the researcher of some of the key plants they use for protection of their intellectual property; thus, they showed the researcher containers that had pseudo names. Participants indicated that they use the fruit, leaves, bark, and roots of the plants. Roots were said to be more potent and tended to be used for a shorter period.

THP 6 remarked, “*...on fertility issues unless if there are no roots we can use the leaves but for a longer period, the roots are for a shorter period*”.

Harvesting of the plants was done by the THPs from forest in rural areas, except for the THP 3, who is purely an herbalist who grows the plants, harvests, prepares, and packages them himself at his house. When they go searching for the plants in the forest, they first have to ask for permission from forest spirits so that these spirits guide them to pick the correct medicinal plants. A variety of medicinal plants were listed by participants. The common ones included avocados, ginger, cabbage/*Brassica oleracea*, *Zanha africana*, *Vernonia amygdalina*/Bitter leaf, *Pterocarpus angolensis* DC./Blood wood, *Asparagus Africanus*, Whitei – Ginger/*Mondia-whitei*, Stinging nettle, Female marula, *Corchorus tridens L.*, *Azanza garckeana*, Shona cabbage and *Kegilia africana*. Table 3 highlights these medicinal plants, what they are used for and how they are administered and figure 2 shows the pictorial samples of the medicinal plants.

In terms of dosages, participants reported that their usual dosages were 1 teaspoon once or twice a day for most of the medicinal plants. This is because they believed that herbal medicine is quite strong and needs to be administered in small dosages while monitoring the progress of the client. The following were some of their responses when asked about dosages and duration of the treatment:

THP 3 said, “*For example, on fertility, Zannah cleanses the uterus, but one cannot continue to take it for a month because they would probably have conceived, and continual use of the medicine might result in a miscarriage, so we prescribe that they use it for 3 days.*”

THP 5 said “*what happens is that traditional herbs are very powerful and I have researched if you see where it is written a teaspoon, teaspoon we have put it as our maximum dose*”.

THP 6 stated “*take a teaspoon once or twice a day 3 times a week so that the medication gets into the system*”.

Table 3: Medicinal plants reported as useful in traditionally managing female infertility

Botanical name	Vernacular name	Parts Used	Usage	Preparation & administration
Avocado	Mukotopeya	Roots Bark	Pro-fertility	Boil in water and drink or use in porridge
Ginger*	Tsangamidzi	Roots	Pro-fertility	Crush and drink as tea or cook in food
Cabbage/ <i>Brassica oleracea</i>	Kabichi	Leaves	Warming the body Pro-fertility	Mix with pineapple, lemon, ginger, and water
Zanha Africana	Muchenya	Bark	Cleanses womb & tubes Painful periods Uterus prolapse. STIs	Crushed or boil as is to make tea. Use in porridge. 3-4 times per week only Can add lemon or honey
Vernonia amygdalina/Bitter leaf	Musikavakadzi	Roots	Balancing hormones Cleaning the uterus	Ground as powder or use in porridge
Pterocarpus angolensis DC./Blood wood	Mubvamaropa	Bark	Amenorrhea Period pain	Soak in hot water as tea In porridge Twice a day May add honey
Asparagus Africanus	Rukato	Roots	Cleaning the uterus	Ground as powder or use in porridge
Whitei – Ginger/Mondia-whitei	Mugondorosi	Roots	Promotes ovulation. Aphrodisiac	Boil dry plant or ground as powder and use as tea
Stinging Nettle	Kajeni/Mbavazani	Bark Leaves	Amenorrhea, Dysmenorrhea	Crush and boil in water
Female marula	Mupfura	Fruits Bark	Fibroids & polycystic ovarian syndrome	Crush into powder or boil in water
Corchorus tridens L.	Derere	Leaves Roots	Pro-fertility	Crush and mix in hot water or cook
Azanza garckeana Shona cabbage	Matohwe	Fruits	Pro-fertility	Eat the fruit
Kegilia Africana	Munyevhe/Runi Mubvee	Leaves Fruit	Pro-fertility Fibroids & polycystic ovarian syndrome	Crush into powder, use in porridge, soup, mahewu

All the participants mentioned that they treat both partners; thus, when the woman consults them, they would request that she bring her partner. This is because they believe that sometimes the partner would also have the same problem. However, if the partner refuses, they would give the woman medication for the partner to use in his food or drink without his knowledge. Below are some of the responses:

THP 2 stated that “we give both of them medication the man and woman because a child comes from

both mother and father so we give both of them”.

THP 6 mentioned that “we want both of you usually because you can’t get pregnant on your own, what if the man is the one who has the problem”.

Some of the THPs had written down recipes for treating health ailments, including infertility. THP 3 had prepared pamphlets of every medicinal plant he uses, which he delivered to clients along with the herbal medicine. The leaflets contained summary information on the medicinal plants, the nutrients in



Figure 2: Pictorial samples of medicinal plants reported as useful in traditionally managing female infertility

the plants, the health benefits of the plants, the ailments the plants are said to treat, doses, and THP contact information.

Given that the THPs within this network (TMPC) refer clients to each other, they were also asked to provide their views in terms of conventional methods of treating female infertility. Their sentiments were that conventional methods are expensive, do not address ‘real’ issues faced by clients, and have side effects unlike traditional medicine, which they believed did not have side effects. Herbalists recognise the value of conventional methods specifically for diagnosis purposes, such as measuring the size of fibroids using scans, while traditional methods provide medication to shrink and remove fibroids without the need for surgery. They also mentioned that traditional methods can do what conventional methods cannot. They gave examples of changing the sex of the child in the womb (*kuchinja mbereko*),

ensuring that a person gets the sex of the child they want (*kuchinja nyoka*) and restoring fertility (*kuiichika*). Ultimately, they echoed the need to work together, as they believed that the end goal for both conventional and traditional management is the same, ensuring that the woman becomes fertile.

Discussion

This qualitative study sought to explore the experiences of THPs in the management of female infertility. The findings show that THPs tend to have similar definitions of female infertility as the medical definitions³¹. Similar community studies conducted in Nigeria found that participants considered an average of 1 year as the length of time to which a person can be considered infertile³². Notably, the participants felt that infertility should not be considered as one-sided, but it is critical to involve the male counterpart in the treatment of the

condition. This holistic approach ensures that partners seek help as a unit, thus minimising the stigma, which is usually on the female partner, and encouraging psychological support to the partners.

Our findings show that divination and relying on dreams is central to the diagnosis and treatment of female infertility by spirit mediums. Other studies in Ghana and South Africa echoed similar views that ‘dreams, ancestors and ‘throwing of bones’ were used to diagnose an illness^{33–35}. Herbalists, on the other hand, tended to rely on the physical evidence available through prior medical reports and history taking. Therefore, this emphasises the incorporation of spiritual as well as biomedical factors into their diagnostic techniques. This hybrid method enables THPs to combine both traditional and modern elements into their practice, perhaps allowing possible room for integration of traditional and conventional management of infertility.

Perceived causes of female infertility included biomedical, lifestyle, and spiritual elements. Studies in Zimbabwe, Ghana, South Africa and Nigeria also revealed similar findings, although they noted another cause mentioned by the participants, that of unexplained infertility, which can be because of natural occurrence or incompatibility of blood^{24,32,34,36,37}. Our study findings are consistent with other studies in Africa that have cited that THPs view contraceptives as a major cause of both primary and secondary female infertility despite the efforts that governments are making in reproductive health education awareness campaigns^{32,34,36,38–41}. This has a public health implication, as it is a barrier to the uptake of contraceptives. Therefore, more effort is needed in community engagement strategies to address the misconceptions that contraceptives have a negative effect on infertility.

There was a belief that promiscuity by male partners caused infertility. The explication for this as put forward by the THPs was not in the sense of contracting STIs but that the ancestors would punish the couple. This notion is similar to a study in Ghana on cultural perspectives of infertility among couples, where participants cited infertility as a punishment of being promiscuous⁴². In addition, when men have extra marital sexual relationships, they will acquire evil spirits, which will cause infertility. This view

comes from the belief that evil spirits can be transferred through sexual intercourse⁴³.

Furthermore, the study identified a diverse spectrum of medicinal plants utilised by THPs to treat female infertility. These plants were thought to have qualities that aided fertility and reproductive health. This is consistent with studies performed in Africa that have revealed the use of medicinal plants for treating female infertility^{19–23}. Research has been done on some of the infertility medicinal plants reported in this study. A review performed on the botany, medicinal uses and biological activities of *Zanha africana* showed that its “extracts, cyclitols and saponins isolated from the species have antibacterial, antifungal, antiviral, antidiabetic, anti-inflammatory, insecticidal, anti-trypanosomal and cytotoxicity activities”.⁴⁴ Recommendations were made for further evaluations on the phytochemistry, pharmacological and toxicology of the plant. A randomised controlled trial on the efficacy of *Asparagus recemosus* (Satavar) in India showed that its effect was comparable to that of the control drug (clomiphene citrate) in stimulating follicular growth and ovulation but less effective in achieving conception⁴⁵. An experimental study on the effects of *Vernonia amygdalina* or bitter leaf on adult male rats reported an improvement in sperm quality⁴⁶. Medicinal herbs symbolise the value placed in African culture on traditional practices and ways of living. However, research into the efficacy and safety of these plants is needed to provide evidence-based advice to both THPs and medical practitioners who specialise in the management of female infertility.

Another outcome in this study was that the THPs emphasised that both partners need to be treated for infertility. This potentially alleviates the stigma and obligation that infertility treatment imposes on women. A study in Zimbabwe by Moyo, 2013 reported that traditionally in the Shona culture, when a man is considered infertile, the issue is solved by the family elders in secret where one male family relative is asked to impregnate the wife of the infertile man, which is known as ‘*kupindira*’⁴⁷. However, there is concern when the male partner is treated without his knowledge, which violates his rights. The findings of this study demonstrated that THPs follow somewhat similar approaches in the diagnosis and management of female infertility,

although there might not be written standard protocols. Management is individualised and focused on using either divination or the use of herbs or both based on the diagnosed causes of infertility. The study also revealed that there are inconsistencies in the dosages of the medicinal plants that are used to manage infertility. It also showed that THPs believed that traditional medicine was not toxic to their clients. This raises concerns about the overdosages and safety of these medicines. This has always been a major issue in the usage of traditional medicines⁴⁸⁻⁵⁰. Further study is needed on the safety and appropriateness of dosages that are used in traditional medicine. As such, regulatory bodies and policy makers will need to be engaged in their perceptions and regulatory frameworks available in the country that guide, regulate and monitor the practice of THPs to ensure the safety and quality of the services they provide in communities.

The study was limited to registered THPs in Harare who specialise in infertility; thus, their views might not be generalizable to other THPs who operate in different settings. However, the study provided information for further research on the efficacy of medicinal plants used for treating female infertility, as well as identifying potential areas of collaboration between traditional and conventional medicine. The paper was focused on the perceptions and management approaches of THPs, and it is also critical to engage women and their partners who seek these traditional health care systems.

Conclusion

The objective of our study was to explore the experiences of THPs in the management of female infertility in Harare urban areas. The study highlights the traditional understanding of the causes of female infertility, with some of the causes being similar to conventional medicine. The study also shows the misconceptions in the cause of female infertility. It also highlights the potential for collaboration between traditional medicine and conventional medicine, which could create a platform for knowledge exchange and mutual understanding, ultimately leading to improved reproductive healthcare outcomes for infertile women in African communities.

TMPC Traditional Medical Practitioners Council

Ethical approval and consent to participate

The study was approved by the Joint Research and Ethics Committee of the University of Zimbabwe Faculty of Medicine and Health Sciences and Parirenyatwa Group of Hospitals (JREC/200/2020) and Medical Research Council of Zimbabwe (MRCZ/A/2689). The participants gave written consent for participating in and recoding the interviews.

Availability of data and materials

All the data, transcripts and supporting documents used for this current study are available from the corresponding author upon reasonable request.

Competing interests

The authors declare that they have no competing interests

Authors' contributions

The author contributions are as follows: Conceptualisation TM, JJ and EG; Writing - original draft TM; Writing – review and editing EG, JM, MGM, JJ. All the authors proofread the manuscript and approved the final version.

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