

ORIGINAL RESEARCH ARTICLE

Socio-Cultural Perspectives on Causes and Intervention Strategies of Male Infertility: A Case Study of Mhondoro-Ngezi, Zimbabwe

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Abstract

The subject of male infertility has, to a large extent, been broached from a western perspective that often insists on the biological factor. This approach has led to a narrowed and narrowing perception of male infertility in that it often neglects other possible crucial socio-cultural dimensions pertaining to the issue. The study is purely qualitative. Focus group discussions and key informant interviews (with males and females) are used to collect qualitative data. The study notes that, unlike in western inclined discourses, male infertility is an intricate condition that transcends biology. Witchcraft and punishment either from God or angry ancestors were avowed to be the determinants of male infertility. The study notes that the Shona people in Mhondoro-Ngezi exclusively rely on socio-cultural intervention strategies to solve the problem of male infertility. The study thus recommends a holistic approach to male infertility which integrates the socio-cultural perspectives in policy and programming, if progress is to be made in unearthing the underlying causes and treatment options. (*Afr J Reprod Health 2013; 17[2]: 89-101*).

Résumé

Le sujet de stérilité masculine a été abordé, dans une grande mesure, à travers une perspective occidentale qui insiste souvent sur le facteur biologique. Cette approche a conduit à une perception réduite et le rétrécissement de l'infertilité masculine en ce qu'elle néglige souvent d'autres possibles cruciaux dimensions socioculturelles relatives à la question. L'étude est purement qualitative. Des groupes de discussion et des entrevues avec des informateurs clés (mâles et femelles) sont utilisés pour recueillir des données qualitatives. L'étude note que, contrairement à l'ouest discours inclinés, l'infertilité masculine est une condition complexe qui transcende la biologie. La sorcellerie et la punition soit de Dieu ou des ancêtres en colère ont avoué être les déterminants de l'infertilité masculine. L'étude souligne le fait que le peuple Shona dans Mhondoro-Ngezi basées exclusivement sur des stratégies d'intervention socioculturelles pour résoudre le problème de l'infertilité masculine. L'étude recommande donc une approche holistique de l'infertilité masculine qui intègre les perspectives socioculturelles dans les politiques et les programmes, si des progrès doivent être accomplis dans déterrer les causes sous-jacentes et les options de traitement. (*Afr J Reprod Health 2013; 17[2]: 89-101*).

Keywords: male infertility, ancestors, culture, treatment, intervention strategy, Mhondoro-Ngezi

Introduction

Infertility is a global health concern which affects about 8 to 15% of the world population^{1, 2,3,4,5}. In Africa, proportions of involuntary childlessness vary from 9% to 30%^{6, 7, 8}. Surprisingly, among couples affected by infertility worldwide, up to 50% of cases are related to male issues^{9, 10, 11}. Infertility studies in Zimbabwe⁹, Egypt¹², Nigeria¹³ and Mongolia¹⁴ revealed that of the infertile couples studied, 50%, 76%, 45% and 26% respectively, suffered from male factor infertility.

Despite the prevalence of male infertility as outlined above, most studies in Africa have focused on the analysis of infertility from a woman perspective. This is primarily because in African countries, women carry the burden of infertility as they appear to be 'blamed', often solely for childlessness^{9, 15, and 12,16,17,18}. On the contrary, male infertility is a dreaded health condition to be swathed at all costs because men deem paternity an important achievement and a major source of their masculine identity in the African society.

Biologically, the first definition of a male was:

*... of pertaining to, or designating the sex which can beget offspring in organisms which undergo sexual reproduction,... pertaining to or producing gametes (as spermatozoa) that can fertilize female gametes (ova).*¹⁹

Pursuant to the aforementioned definition, if biological 'maleness' is in fact constituted by begetting off-spring through the production of spermatozoa, then male infertility may come as a striking blow to men's social identities with far reaching implications in the construction of masculinity.

The Shona idea of a family is woven entirely around a home – a man and wife and his children. *'This is the purpose of life – the reason for existence on earth – the basic survival imperative'*²⁰. Pursuant to the aforementioned, it can be argued that sex is not simply a pleasurable or natural act. Its purpose is to lead to conception^{21, 22}. Culturally, the social construction of masculinity is expressed through fertility and virility. As such, child bearing is a social norm expected after marriage. Procreation resulting in pregnancy and parenthood appears to remain central to male identity. It can be noted that the essence of male masculinity, therefore, is a situation whereby men distinguish themselves and are distinguished from other men through the fathering of children. It is also expected that men assume patriarchal power in the family not only with advancing age and authority, but through the explicit reproduction of off-spring, who they not only love and nurture but also dominate and control. Resultantly, one can conclude that men are homo-socially competitive and work hard to sustain their public images as 'powerful virile' patriarchs. It can also be argued that men who do not become family patriarchs through physical and social reproduction may be deemed weak and ineffective. Thus the psychological burden of coming to terms with infertility is more strenuous in the male. Resultantly^{22, 23, 24, 12}, argued that the subject of infertile men is handled with discretion, carefulness and privacy in order to protect the male dignity.

Studies on possible causes of male infertility included issues to do with sperm quality and quantity^{25,9,26,27,28,29,30,31,32,4,33}, and sexually transmitted infections (STIs)^{34,35,36,24,12,17,37,29,30,4}. Childhood conditions such as cryptorchidism, mumps orchitis, testis torsion and testis trauma^{7, 4} and environmental toxicants^{7, 38, 39}, sexual dysfunction, ejaculatory dysfunction, testicular cancer^{40, 7, 4} have also been reported. However, there is dearth of literature on the socio-cultural factors underlying male infertility and the intervention strategies especially from a Zimbabwean perspective. Thus, the objective of this study is to unearth socio-cultural factors underlying male infertility and the non-bio-medical interventions among rural Zimbabweans.

Methodology

The research was carried out in the ten enumeration areas of rural Mhondoro-Ngezi area which is Ward 5 of Kadoma District of Zimbabwe. Mhondoro-Ngezi was selected because it is a rural community with people of different backgrounds and religious affiliations. Men aged 15 to 79 years were the target population. This age group was selected because sexual activity among men starts at adolescence. In addition, unlike women, fathering can go beyond the age of forty-nine. The age limit was set at seventy-nine in order to avoid memory problems. The study was purely qualitative, triangulating focus group discussions (FGDs) and key informant interviews (KII).

Data Collecting Methods and Tools

Focus Group Discussions

Six FGDs (using a FGD guide) were undertaken separately with males and females both of the younger (15-29 and 30-49 years) and older (50+ years) generation. Each FGD had ten participants (one from each enumeration area). Simple random selection and willingness to participate were the basis of the selection of participants. Females were selected so as to validate information obtained from male FGDs. FGDs provide data on what the community perceived as the socio-cultural causes and intervention strategies of male infertility.

A pilot study was conducted in the neighbouring Ward 6 area of the same district. Two FGDs (females and males aged 30-39 and 50+ respectively) were undertaken. Each FGD had ten people drawn from all the enumeration areas. This piloting was meant to test the effectiveness, validity, reliability of the instrument and its ability to bring out the desired results. Pre-testing was necessary for the researcher to check for the following: the clarity of questions; the logical flow; correcting and improving translation of technical terms. Pre-testing also helped identify the challenges in the administration of the FGD guide. These challenges included: respondents' inability to understand the question or task being asked of them; the inability of respondents to provide correct and complete answers; and whether respondents are attentive and interested in the question since attentiveness and interest may be indicators of how hard the respondent is working to provide complete and correct answers. Analysis of pilot data resulted in minor changes to the research instrument and data collection.

All FGDs were conducted in the vernacular Shona. One of the authors of this paper was a moderator whilst the other was a note-taker during FGDs. Sessions for FGDs lasted between one to one and half hours.

Key Informant Interviews

Twenty face-to-face KII (using a key informant interview guide) were undertaken. Key informants (both males and females) included religious and traditional healers, traditional leaders and selected old people aged 60+. Five people from each category were randomly selected. Key informants were interviewed because these had localised and culturally appropriate first-hand knowledge and insights into the socio-cultural causes of male infertility and how they deal with the problem.

Data Management and Analysis

Qualitative data was captured through extensive note taking and audio-taping. The data were transcribed, translated and typed. Data analysis was done using the Ethnography Software. The aforementioned software managed to analyse the data using the thematic approach. Upon entering the data into the software package, themes linked

to socio-cultural determinants and intervention strategies were grouped.

Ethical Issues

The study respected freedom to participation and adhered to research principles pertaining to privacy and confidentiality. Participants voluntarily consented to participate without coercion. All the participants signed consent forms. In addition, parental and individual ascent forms were signed for participants aged 15 years. There was no deception when informed consent was emphasized. Participants were told about the following: the purpose and objectives of the research; what was expected of a research participant; expected risks and benefits; the fact that participation was voluntary and that one can withdraw at any time with no negative repercussions; anonymity of the data collected in order to enhance confidentiality; and the name and contact information of the local investigator to be contacted for questions or problems related to the research (including one's rights as a research participant).

Results

Socio-Cultural Factors underlying Male Infertility

Results in this study revealed that the determinants of male infertility are interpreted in the spiritual realm both from socio-cultural and religious perspectives. All respondents were also quick to highlight that the problem of male infertility must not be seen as not necessarily aimed at the parent couple itself, but at any senior member (especially male) in the family.

Religious leaders in KII asserted that male infertility in this study was a punishment from God. One of them remarked:

God the creator is accountable for male infertility because he is the one responsible for all things in our lives (good and bad). He brings joy but can strike and cause sorrow to an unsuspecting male. God does that to display his prowess and also that we do not forget him. Read Deuteronomy 8 verse 1-5.

Unhappy ancestors (*vadzimu*) were also stated as the major sources of male infertility. The Shona people were said to derive their protection from *vadzimu*. One KII asserted that:

Everyone has eight vadzimu for his/her protection, four from each side of their parents. For example, from the father's side, there are spirits of one's dead father, mother, grandfather and grandmother. The same also applies to the mother's side. As such, if any of the abovementioned spirits may become angry, they punish the guilt directly or by withdrawing their protection from evil spirits (witchcraft).

The mother's *vadzimu* were said to be of paramount importance in causing male infertility. That is way it was unanimously agreed (in all KII and FGDs) that the Shona in Mhondoro-Ngezi always say '*midzimu yamai yadambura mabereko*' (ancestors from the mother's side have broken the baby's carrying cloth) whenever there was a calamity. When asked about issues which cause anger to the mother's *vadzimu*, KIIs asserted the non-payment of *imbwazukuru* or *chiredzwa* (a goat or cow due to the affected man's grandmother for looking after the grandson) and also *mombe yeumai* (a beast given to the mother in-law when her daughter gets married) by the son in law. It was also noted in FGDs that the female *vadzimu* on the mother's side could be angered should a husband or his son(s) kill or in any way dispose the *mombe yeumai*. Pursuant to the above, it was asserted that the grandmother on his maternal side becomes angered and her wrath will fall on her grandchildren.

Vadzimu from the father's side were said to be angered should a man elope with the wife of another man and takes along with him the children of his wife. KIIs posited that the aforestated act would bring misfortunes such as male infertility to those children. The problem was said to be solved only when the children are brought back to their true father.

Issues to do with obedience, ritual ceremonies and discipline were cited as determinants of angering all the *vadzimu* in general. One traditional leader asserted that:

Vadzimu want obedient progenies who always remember them. They expect their descendants to carry out ritual occasions to acknowledge and thank them for their protection. Note also that rituals instilled in everyone a sense of discipline and obedience. At such occasions, vadzimu will also have an opportunity to make their demands which were to be honoured and obeyed. However, it should be noted that disobedience, failure to hold ritual occasions and failure to carry out any behest even to the smallest detail if not honoured, invariably followed a wrath from the offended spirit. The wrath could be in form of male infertility.

Other instances cited in FGDs and KIIs which could anger *vadzimu* included: failure to hold the *kurova guva* ceremony (bringing back the spirit of the dead into the family) by the deceased's family after the death of a married person; marriage of a man and woman with the same totem; disturbing *matongo* (a vacant piece of land upon which the family once lived) where *vadzimu* are believed to be hovering (by destroying the vegetation at that place); and improper burial position of a deceased person in the family.

As such, it can be noted that infertility was associated with evil and wickedness of behaviour of any one of the descendants. As fertility signified the blessing of the shades, so infertility signified ancestral and God's righteous anger with descendants who impiously wronged and 'forget them'. Spiritual aspects of unsettled disputes of murder (*ngozi*) have also been attributed as causes of male infertility by all KIIs. One traditional healer asserted that:

If the dispute of ngozi is not settled, it causes male infertility. Remember ngozi and procreation are all issues to do with blood. The deceased will not be happy to 'see' the growth of his murderer's family whilst his was destroyed.

Results from the study revealed that people in Mhondoro-Ngezi believe that there are people in their society endowed with evil who become possessed at times with a bad spirit of witchcraft (*uroyi*) and cause male infertility. That is why people traditionally were not allowed to eat food

or sleep from other homesteads when they were growing up due to fear of witchcraft. However, traditional leaders and healers were quick to point out that *vadzimu* were responsible for bewitching because they will have removed their protection. One traditional leader posited that:

No witch alone can harm an individual whose mudzimu protects him. If mudzimu is annoyed with him or any one of his family, it withdraws its protection, allowing the evil person or to bewitch him.

On the determinants of witchcraft, all participants in FGDs and KIIs stated that a witch may cause male infertility to a person without any reason; if the man crosses her/his path resulting in conflicts and quarrels; jealous; failure to fulfill marriage promises; and if the man just annoys the witch. Various tactics were cited for bewitching. Participants in FGDs and KIIs cited that the witch may use familiar spirits (an animal, bird or reptile), to attack the individual. The attack can either be direct (by means of using poisonous medicines stored in calabashes which she has collected over the years or roots that were handed down from witch to witch in her family) or by visiting his bed while he sleeps to cause male infertility.

Tethering of under clothing (*kusungwa*) was cited as another cause of male infertility. One traditional healer posited that:

Men who engaged in pre-marital sex and breach the marriage promise are at high risk of kusungwa practice. When we grew up, pre-marital sex was not condoned at all costs. However, nowadays our culture seem to be slipshod about the issue, hence boys are condoned to have sex before marriage. However, such a practice is the most dangerous determinant for male infertility. Women would take the wiping cloths used after sex to a witch doctor (nánaga). A knot will be tied with some herbs on the cloth. The woman will be asked to pierce the knot with a needle whist pronouncing inter alia; male infertility should the man completely fails to marry her. After that, the cloth will be thrown in a

following river or an anthill signifying complete and irreversible infertility.

The aforementioned practice was also supported by one infertile man in a FGD of the older generation. He asserted that:

One religious healer prophesied that I was 'tied' by a woman whom I once had sex with. It was said that she took a thread from the wiping clothes used by women after sexual intercourse. She is said to have bought a very brand new lock set and placed the thread inside and locked. She is said to have thrown the entire lock set inside an anthill. Currently, the ant-hill is now very gigantic such that it will be a sheer waste of time to dig it. I really believed in this prophesy because the girl was very bitter when I failed to marry her. She had also told me that she will fix me the rest of my life, but I just thought that those were just the last kicks of a dying horse and I ignored. But now I am breathing fire!

Promises made especially using traditional medicines (*mhiko dzemishonga*) by parents or the affected male have also been attributed to male infertility in all FGDs and KIIs. One traditional healer asserted that:

Parents of the affected man, in a bid to get rich might have sought traditional medicine for crops (divisi) buses and shops. On the preparation of the medicines, the parents could also utter messages which tie the reproductive organ of their male children so that the medicine(s) work.

Another traditional healer asserted that:

In search of medicines to become rich, some relatives, grandparents and parent(s), are given female goblin(s) which will always have sex and feed on the sperms of the male child. What you should understand is that the goblin will be a female asset of the family which requires sexual satisfaction among its needs. However, sexual intercourse with this goblin causes male infertility.

In some cases, one traditional healer in a KII asserted that:

There are situations where by the mother or father of the affected male bewitchingly have sexual intercourse with him. At times the sperms will also be used for ritual purposes whilst at times it will be just sexual gratification. If the mother is the one who will be having sex with the boy child, the manifestation is a scenario where all boys in the family do not marry or a scenario where the man's mother will always have problems with the daughter in law.

Improper handling of the child at birth and STIs have also been said to cause male infertility. If the mother's nipples accidentally come in contact with the child penis, key informant interviewees stated that this could cause male infertility. Respondents in FGDs and KIIs also stated that STIs such as gonorrhoea can also cause male infertility.

Intervention Strategies for Male Infertility

Treatment

In the event of male infertility, respondents in Mhondoro-Ngezi propounded that they had traditional and religious treatment interventions. Key informant interviewees were quick to point out that the concept of using traditional medicine in the treatment of male infertility is not a modern phenomenon. Instead, the practice dates back to the Shona culture where boys were given traditional medicines at the men's meeting place (*dare*) as part of their socialisation. One male in a FGD of the older generation stipulated that:

When we grew up, we were given traditional medicines (maguchu) at the dare. We used to chew or drink the medicines as a group. The elders would not tell us that they were treating male infertility. Instead they would just tell us that mishonga yekusimbisa misana (strengthens the backbone). However, I was fortunate enough because my grandfather once told me that the medicines among other things were taken as a preventative measure of male infertility. Some of the medicines like muzadzagomba and mukandandirimhiri

actually depicted the erectile power which was to be desirable for a fertile man.

When asked on whether the traditional medicines for the prevention of male infertility are still presently available, traditional healers in KIIs highlighted that they still have the medicines and they would only prescribe such medicines to their patients. One female traditional healer echoed that:

I still prescribe traditional medicines to prevent male infertility to my patients and my male grandsons. Such medicines include mudenhatsindi, machemedzachembere and musatanyoko. Nowadays the medicines are mixed with mazondo, tea, knuckle bones and cokes while some of them are just prepared as concoctions.

Another treatment of male infertility (as was highlighted in KIIs and FGDs) was the widespread consultation of the traditional and religious healers by infertile men. This practice was unanimously agreed that it is still prevalent. Respondents highlighted that traditional and religious healers were first choice practitioners because they uphold principles of privacy and confidentiality which are very important to the male infertility problem. In addition, all respondents concurred that unlike medical practitioners who concentrate on the physical aspect of the calamity; traditional and religious healers go beyond and always practice divination of the underlying causes of the physical aspects. One infertile man in a FGD of males aged 30-49 asserted that:

I always seek traditional and religious treatment because doctors would always tell me issues to do with deformity of sperms. But I want to understand the underlying factors to such deformities. In our culture we have proverbs like ('Chiripo chariuraya, zizi harifi nemhepo') "Something has killed the owl; it cannot just be the wind". In order to get to the bottom of the issue, some traditional healers would use hakata, spirits, horns and knives or a combination of both to unearth the underlying cause of my problem. On the other hand religious healers use the spirit, mirrors and bottles.

Traditional and religious healers were also consulted for rituals to be performed in most cases by the entire family. One KII asserted that:

If the cause of infertility is a result of avenging spirits (ngozi), then the traditional healer will instruct the affected family on how the grieved would want the problem resolved. In many cases a virgin girl would be sent to the family of the grieved person where she becomes a wife of the family and start child bearing. It is believed that as she starts giving birth, the affected male will also start reproduction.

Another KII also highlighted that:

If the cause is due to unhappy ancestors, then the traditional healer would instruct the affected family to brew beer and do all things necessary to appease the spirit. Among other things, the affected family would ask for forgiveness from their ancestors if ever they wronged him/her knowingly or unknowingly. They would also ask their ancestor to forgive them so that reproduction would enable the growth and continuation of the clan and its name.

If male infertility was a result of a generational curse (*zvedzinza*) one traditional leader stated that:

Traditionally, when a boy was around eight years old, a round pole and dagga hut was built at the homestead. However, during the construction of this hut, a space big enough to fit the boy's penis was left. The boy was told to get into the hut and fit his penis in the space while the mother licked it from outside. This practice was done to all boys in that family. This is so because the parents wanted to avoid the tragedy of male infertility to any one of their boys.

On the other hand, if infertility was perceived by traditional healers to be a result of witchcraft especially goblins, one traditional healer asserted that:

There was a need to go to the affected man's family to trap and kill the goblins. However, it was not an easy task because goblins could kill even the traditional healer. Once the traditional healer is killed by the goblins, it would mean a double tragedy in that family.

If it was a result of witchcraft which include *kusungwa*, one traditional healer stipulated that:

There was need for the affected male to get and drink urine of the woman who bewitched him. If the woman dies before the affected man gets the urine, then that was the end of the man's endeavours and dreams of procreation.

If the problem was just mere witchcraft, traditional healers and leaders, selected old people and all FGDs asserted that traditional medicines (obtained from traditional healers and to some people knowledgeable about traditional medicine) in the form of powders, decoctions, infusions, inhalations, fumigation (using *mbanda*) and scarification would be administered. It was stated that the traditional medicine is always prescribed to neutralise the previously used medicine by a witch.

Religious leaders also highlighted that prayer is the only solution to correct problems of infertility. As one religious leader argued:

It is only God who will have mercy on the infertile man and is the only one who will set him free. Prayer unties all the evil bondages.

Another religious leader also asserted that:

*In addition to prayer, the infertile man is given either holy water with a stone inside (*munyengetero*) or a mixture of raw eggs and sterilized milk. These have an impact of improving the quality and quantity of sperms.*

***Kupindira* (Young brother or nephew having seual intercourse with the affected man's wife)**

The Shona culture believed in appositional complementarity. Traditionally, when a problem arises in a marriage, KIIs highlighted that elders would try by all means possible to keep the marriage intact. Hence, whenever a problem like male infertility arose, it was the responsibility of all duty bearers to make sure that the problem was solved amicably. Assuming that traditional treatment options of male infertility proved null and void, KIIs and FGDs of the older generation highlighted *kupindira* as the major practice and last resort used to solve the problem. However, it was also highlighted in all the aforementioned

research methods that *kupindira* was supposed to be a top secret in the family and mostly to the infertile man. One KII stated that:

Traditionally, knowledge about male infertility was exposed by a woman whose husband had the problem. The woman would tell her aunts after one year of unprotected sexual intercourse that she suspects that her husband was infertile.

The aforementioned practice was also supported by females in their FGD as they all unanimously agreed that it was the woman who would blow the male infertility trumpet by telling her aunt(s). One of the female participants echoed that:

The wife would tell her aunts that because the husband's infertility problem means that she had just come for traditional staple food (sadza), nothing more.

Key informant interviews revealed that upon receiving the news of possible infertility, the aunts would relay the message of possible infertility to the husband's relatives especially the uncles through the go-between (*munyai*). It was the responsibility of the husband's relatives to organise the top secret and strongly supervised practice of *kupindira*. On the stages of *kupindira*, one key informant interviewee stated that:

Kupindira was an issue handled with utmost care. There were supposed to be top secret pre-kupindira discussions between the infertile man's uncles and his wife. The discussions were held in the absence of the affected husband. In these discussions, the wife was told about the benefits and importance of child bearing in the same family in order to maintain the husband status as a man and customary lineage (Dzinza haringaparari). The wife was also told about the procedures of kupindira and the issue of top secrecy being emphasised always. Secrecy was emphasised because the Shona were quite aware of some of the detrimental impacts of kupindira such as bloodshed and suicide should the affected husband discover the arrangement.

On who was supposed to have sexual intercourse privately with affected wife, all KIIs and FGDs stated the affected husband's young brothers and

nephews. One man in a FGD of the older generation stated that:

The affected husband's young brothers and nephews were the ones targeted by kupindira. The young brother was mostly preferred because it was argued that their blood was the same with the affected male, hence a child resulting from this arrangement is easily conceptualized as 'his'. In fact, the Shona people were quite aware about the possibility of male infertility in their culture. As such, culture had phrases and registers which promoted flexibility when problems such as male infertility were encountered. A phrase such as 'mbuya mudzimai wangu', grandmother is my wife or vice versa, and 'maiguru mukadzi wangu', my brother's wife is mine also and vice versa were, all meant to provide ground work for the easy discussion in the event of the need for kupindira.

As of when *kupindira* was to be performed, one traditional leader stated that:

The wife was supposed to be taught about identification of fertile days and possible strategic sexual positions which were said to facilitate conception. Traditionally, the husband was sent on a hunting spree together with other men in the community for at most one week. It was traditionally emphasised that a man was supposed to be brave and braveness was displayed in hunting. As such, a brave man would not return home whilst others were still in the thicket hunting. However, it should be noted that such an arrangement facilitated the practice of kupindira.

During the absence of the infertile man, one man in male FGD asserted that:

These were days of extensive sexual intercourse for the kupindira practice. The young brother or the nephew was expected to 'empty' all his sperms during this period.

It was stated in FGDs of the older generation that after the stipulated days of hunting, the affected man would come back home. Everything was supposed to be normal from the woman's side including her sexual performance.

If the wife conceives, KIIs and FGDs also highlighted that the Shona had discrete language in form of idioms and phrases which solved harmoniously some of the anticipated infertility problems in life and also prepared men for the 'social' ownership of children. One female in a key informant interview stated that:

The Shona people had idioms such as 'Gomba harina mwana', (when a man bears children with someone else wife, the off-springs are not his).

One man in a FGD also asserted that:

The Shona people had phrases such as 'kune nhodzera' (a child can be identical to someone). Nhodzera therefore in infertility cases, would mean that the child is identical to his 'father's young brother or nephew' (those people in the kupindira line up). In addition on the 'social' father's part, minor organs like finger nails will be said to be identical to the child's, thus guaranteeing that the child is biologically his.

It was also interesting to note that the practice of *kupindira* would continue until the woman reached menopause. As one traditional leader stated that:

There was no stipulated number of children to be born from the kupindira practice. As long as the woman was still in the child bearing age, children would biologically be fathered by the infertile man's young brother or nephew. I know of a family which had nine children, all off-springs of the kupindira practice.

When asked about the prevalence of the *kupindira* practice nowadays, respondents had mixed feelings. Key informant interviewees highlighted that the practice is still prevalent in Mhondoro-Ngezi. One KII stated that:

The practice is still prevalent in our area. Remember the practice is a top secret that you need to be in the inner circle of the affected family to know about the existence of the practice. The procedures of kupindira are still the same. The only difference is that nowadays the affected man is given a specific assignment like conveying family messages to relatives in town.

In FGDs, while some respondents suggested that the practice could be still prevalent, the majority of respondents (especially in FGDs of the younger generation) argued that the practice is being eroded by the advent of HIV and AIDS. One male participant asserted that:

Men in this area are now afraid of kupindira because nowadays most women do not marry as virgins. You might be infected with HIV if the woman was infected before marriage. In addition, some woman who have infertile husbands engage aliens (who might be HIV infected) to perform the kupindira practice. Thus, kupindira is now a bee hive!

One male respondent in a FGD of the older generation was very bitter about women's rights which he argued are eroding their culture of *kupindira*. He echoed that:

These silly 'rights' brought by whites have destroyed our tradition and culture. Women no longer adhere to lineage rules. If you still want to insist on kupindira, you will regret as you will end up languishing in police custody as women would argue that you will have infringed their rights of making decisions free of coercion.

Discussion of Findings

Medical practitioners examine the causes of male infertility from a bio-medical perspective which focuses on sperm quality and quantity^{9, 26, 28, 33}. However, in this study, determinants of male infertility included: angry God or ancestor(s); avenging spirits; witchcraft; use of sperms for ritual purposes (*mhiko dzemishonga*); issues to do with payment of bride prize; improper handling of a child at birth and STIs. Wide consultation of religious and traditional healers on the factors undergirding male infertility and its treatment options bear a testimony that diseases are considered by the Shona culture to have physical, mental, social, spiritual, and supernatural causes. That explains why the Shona have proverbs such as '*Chiripo chariuraya zizi hariurayiwi nemhepo*', "Something has killed the owl; it cannot just be the wind." Instead of looking only at the symptoms, the traditional and religious healers are said to explore what unfolds at the

deeper levels of situations and how the situations could have been prevented or could now be handled. This means that, apart from the observable signs, there are always some underlying and unforeseen causes of male infertility and misfortune. The aforementioned views are similar to Westerlund's outlines of the three categories of causes: the natural, the social, and the religious as quoted by Laurenti⁴¹.

Male infertility has also been interpreted as supra-human causality aggravated by God or angry ancestral spirits. Similar views were also echoed by Ani⁴². It was noted in this study that ancestral spirits intrude in human affairs to perpetuate corporate kin interests. However, male infertility was interpreted as a sign of aggrieved spirits to reprimand those who have not met expectations. It was noted in this study that disgruntled guardian spirits can also withdraw their protection, making an individual vulnerable to forces of evil that can cause suffering. When the ancestral spirits withdraw their protection, people carry out mollification, confession, compensation, and symbolic conciliatory rituals to restore health and order. Thus, the traditional Shona healing practices include the self, extend beyond the self, and attend to other broader realities of human experience, especially the spiritual realm.

In this study, witchcraft has also been alluded to as a cause of male infertility. A similar assertion was stated by Inhorn²⁴ and Dyer et al¹⁷. The only difference is that the above stated studies did not explicitly explain the etiology and processes of witchcraft. In addition, it was noted that witchcraft was allowed by angry ancestors who will have failed to protect their descendants. It was pointed out in this study that witchcraft (as involving use of harmful traditional medicines) was goaded by jealousy people, quarrels and conflicts with other people and failing to fulfill marriage oaths. In addition, *mhiko dzemishonga* (where one of the parents uses the boy's sperms for ritual purpose or the boy having sexual intercourse with a female gobbling) were also said to be another form of witchcraft associated with male infertility.

Improper handling of a male child (where his penis comes into contact with his mother's nipples) is said to cause male infertility. In addition, STIs especially gonorrhoea have been

attributed to risks of male infertility. Though respondents in Mhondoro-Ngezi did not give the biological explanation, their views are similar to assertions by Inhorn^{24, 12, 37} and Nederberger⁷.

Treatment options of male infertility in Mhondoro-Ngezi involve the administration of traditional herbs. It should be noted that this practice is not a modern phenomenon, but dates back to the Shona culture where boys were given *maguchu* by elders at the *dare* when they were growing up. In this study, treatment options for male infertility were exclusively done by traditional and religious healers. This shows that the Shona people in Mhondoro-Ngezi believed in traditional practices where religion and spirituality constitute key elements of the health and healing practices. Traditional and religious leaders were given the first priority because it was unanimously agreed that they were capable of assuring the most confidentiality of their patients. In addition, the consultation of the aforementioned practitioners for the treatment of male infertility in this study also portrays the dominant Shona worldview which affirms that medical practitioners just address the physical (and not the whole) aspect of the problem. Yet, male infertility is perceived as a physical impairment with social, natural, and religious factors underlying. Hence, health and healing practices should address the diseases according to all these causes. The traditional Shona healing practices help people identify and address the root and source of their suffering, thereby freeing infertile men from being trapped in sickness and suffering. Healing practices of male infertility in Mhondoro-Ngezi do not only involve the administration of herbs and other concoctions (like raw eggs and sterilized milk, *munyengerero*) or other physical treatments, they also involve divination, cleansing rituals (supported by the family), sacrifices (in the case of avenging spirits), protective amulets and prayers.

Performing ritual ceremonies brought comfort and ensured a sense of belonging, thus strengthening the individuals and the communities. The idea of solving the problem of male infertility by making family correction rituals supports deCoppin⁴³ assertion that the Shona believe that a human being is truly a multidimensional being with several interconnected and interacting

'natures' or 'aspects.' Pursuant to the aforementioned, it can be argued that the Shona in Mhondoro-Ngezi believed that proper healing takes place when the whole is treated. To the traditional Shona, health is not merely the absence of disease but also the presence of harmony and correct relationship with the surrounding boundless spiritual worlds. In many cases families make formal addresses to the ancestral spirits while pouring a libation of beer and making pleas for the guardianship of the spirits. Maintaining healthy relationships with the natural and supernatural is always the foundation for healthy living.

The study noted that the Shona people in Mhondoro-Ngezi believed in appositional complementarity. As such, when faced with marriage problems such as male infertility, they tried by all means to keep the marriage intact by arranging the *Kupindira* custom. Gelfand^{21, 20} also noted the prevalence of the *kupindira* practice by the Shona. However, it should be argued that he did not fully explain the details of *kupindira* such as the pre-*kupindira* discussions and the different assignments given to infertile husbands to facilitate the opportunity for *kupindira*. In addition, Gelfand (ibid) asserted that among the Shona, an infertile man may make secret arrangements with a close kinsman to impregnate his wife in his name (provided the wife agrees). However, in this study respondents posited that *kupindira* was facilitated by the affected husband's uncles and the whole process was supposed to be encased such that it was beyond the reach of the affected husband.

Whilst some respondents in this study highlighted that the *kupindira* practice might be less common as a result of HIV and AIDS, the majority asserted that the practice could soon disappear because of the advent of a stricter enforcement of women's rights (especially making decisions to reproduction free of coercion) enshrined in different international human rights policies to which Zimbabwe is a signatory. Such instruments include: the 1948 United Nations International Declaration of Human Rights; The International Covenant on Civil and Political Rights; The International Covenant on Economic, Social and Cultural Rights; The Convention on the

Elimination of All Forms of Discrimination Against Women; African Charter on the Rights of Women in Africa; Convention on the Elimination of Racial Discrimination; the Convention on the Rights of the Child; African Charter on the Rights of the Child; The African Charter on Human and People's Rights; New Economic Partnership for Africa's Development; and the SADC Declaration on Gender and Domestic Violence Against Women and Children. The consent of the wife and husband receives primacy in the new dispensation if the *kupindira* practice is not to violate international law.

Conclusion

The Shona in Mhondoro-Ngezi demonstrated that they have their own African (socio-cultural) approach to male infertility different from the bio-medical perspective provided in existing literature. They believed that the determinants of the issue are socio-cultural (emanating from an angry God, angry ancestors, or witchcraft). Thus, intervention strategies to male infertility also encase the socio-cultural perspective. In addition, the belief in appositional complementarity among the Shona people in Mhondoro-Ngezi also facilitates the *kupindira* practice as an intervention strategy of male infertility. Traditionally, the practice was organized secretly by the affected husband's aunts and uncles. Nowadays, it was asserted that some women affected by the male factor infertility are now having secret arrangements with aliens. The advent of 'human rights' and HIV and AIDS have also made the *kupindira* practice unpopular. Being Africans, with a strong belief in God, ancestors and witchcraft, it is important to incorporate socio-cultural beliefs in policy and programming pertaining to male infertility issues.

Contribution of Authors

Stanzia Moyo conceived the idea and drafted the topic and objectives of the study. She jointly collected data, prepared the manuscript, analysed data with co-author and formatted the manuscript. She unconditionally approved the manuscript.

Itai Muhwati jointly collected data and prepared the manuscript and analysed data with corresponding author. He unconditionally approved the manuscript

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