The Use of Herbal Medicines for fertility Treatment amongst Attendees of an Infertility Clinic in a Tertiary Hospital.

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Abstract

Background*: Desperation and resort to unorthodox means to achieve pregnancy is common in developing societies where resources are limited and the blame for infertility is mainly on the woman. This study seeks to document the prevalence and factors associated with herbal medicine use among women seeking medical treatment for infertility.*

Methods*: A cross-sectional descriptive study was conducted using data from 171 consenting infertile women attending the infertility clinic at a University Teaching Hospital. The survey instrument was a semi-structured self-administered questionnaire designed to evaluate socio-demographic and clinical characteristics with questions concerning the use of herbal medicines and associated factors*

Results*: Overall 105(61.4%) women had used herbal/traditional medicine for the treatment of infertility.Majority (73.3%) took the drug orally. About 50% of the participants reported that herbal medications were not safe for use. Majority, 90.5% of participants did not disclose to their health care provider. The level of education and duration of infertility were found to significantly influence the use of herbal medicines ($p < 0.05$).*

Conclusion*: The high prevalence of herbal medicine use in this study reflects a strong negative socio-cultural influence on women's reproductive health decisions. Women with low education status and longer duration of infertility are more vulnerable to these influencers. Public enlightenment on the fallacy of the potency of these herbal medications with a view to propagating more appropriate and effective medical treatment is recommended.*

KEYWORDS: Infertility, Reproductive health, herbal medicine, Complementary and alternative medicine, Nigeria.

Introduction

Infertility is a major reproductive health challenge and a source of severe social and emotional distress for couples, especially in regions like sub-Saharan African where there is a high premium for childbearing.[1,2] Women are more distressed physically, mentally, and even socially owing to prevailing negative societal, religious and cultural dictums particularly in developing countries.[1-3] The attendant quest to increase chances of conception motivates the infertile woman to seek care from multiple sources. It has been previously reported that infertile women frequently use alternate or unorthodox treatment in addition to conventional orthodox therapy not only to increase the chances of pregnancy, but also to alleviate psychological, clinical and physical concerns arising from being infertile.[4-6]

The World Health Organization defined traditional medicine as the sum total of the knowledge, skills, and practices based on the beliefs and experiences of different cultures.[7] The common traditional or non-orthodox practices in use include herbs, multivitamins, mineral supplements, amulets, drinking 'holy' water (brought from pilgrimage), chiropractic, naturopathy, homeopathy, and acupuncture.[4-7]Many of these traditional practices vary from culture to culture. Recently a new terminology used to refer to some non-orthodox treatment is complementary and alternative medicine (CAM): It refers to a group of non-mainstream healthcare systems, practices, and products used either in conjunction with or in place of conventional medicine.[8] Several studies have documented increasing use of non-orthodox therapy amongst women of reproductive age.[8,9] In the Middle East, traditional medicine accounted for about 40% of all health care treatment, while a study done in Jordan reported a prevalence of 44.7% use of CAM in treatment of infertility among women seeking care.[9,10] In Europe and Asia a high prevalence of around 82% to 90% use of non-orthodox medicine in trying to achieve pregnancy has been reported.[11,12] Similarly, in Africa, up to 80% of the population uses non-orthodox or traditional methods to help meet their health care needs.[11,13]

In Africa previous research have documented frequent consultation of non-medical sources of treatment like prayer houses, herbalist, traditional healers and spiritualist as first line measure by infertile couple, and a resort to orthodox treatment when all these fail [4,13,14] Furthermore, these studies showed that even when orthodox practitioners are consulted, the women tend to combine orthodox with traditional methods of treatment and the most commonly used methods were herb and spiritual interventions.[4,14]

In Nigeria, there are many challenges to effective and affordable treatment of infertility especially in this era of assisted reproduction treatment which is expensive and beyond the reach of the average couple in most developing countries.[15]

Many patients therefore seek treatment with the traditional healers where access is perceived to be easy and the care affordable. There is a dearth of documented report on the use of unorthodox/traditional methods of treatment for infertility in Nigeria. This study seeks to document prevalence of use of herbal treatment among infertile women seeking medical treatment as well as to evaluate the associated factors with use of these methods.

Materials and Methods

This study was a descriptive cross-sectional research conducted at the Human Reproduction Research Programme (HRRP) unit of the University of Benin Teaching hospital, Benin City. The HRRP is a specialized clinic for management of infertile couple and offers conventional and assisted reproductive treatment. There are about 50 patients seen weekly at the unit with an average of 12 new patients.

The study was conducted over a period of 9 months between January to September 2018. All women participated in this study voluntarily, they were counseled about the study and informed consent obtained. The minimum sample size was determined using the formula for sample size calculation for cross-sectional study; that is: $n=z^2pq/d^2$ where n is the required minimum sample size, z is the value of test statistics (1.96),q is the probability of those not using herbal medicine (1-p), d is the degree of accuracy or standard error set at 0.06 and p is the estimated proportion of use of herbal medicine amongst women seeking fertility care. We assumed value of *p* to be 80% based on a similar study conducted in Nigeria.[11] This equation gave the minimum sample size as 170 participants, and we distributed a total of 190 survey questionnaires assuming 10% non-response rate.

Convenient sampling was done and infertile women visiting the clinic for the first time as well as those still undergoing preliminary evaluation were eligible to take part in the survey. Women already on a treatment protocol were excluded from the survey. Only those who consented were administered the questionnaire. Ethical approval for the study was obtained from the Ethics and Research committee of the University of Benin Teaching Hospital. The research instrument was a semi-structured self-administered (interviewer guided) questionnaire designed to evaluate socio-demographic and clinical characteristics as well as questions bordering on use of unorthodox methods for fertility management and associated factors.

The completed questionnaire was analyzed using the SPSS statistical package version 20. Data was aggregated into means and proportions as appropriate and presented as frequency tables and percentages. Pearson's Chi-square test and Fisher's exact test were used as appropriate to determine the factors associated with use of herbal/ traditional methods. The results were evaluated with a 95% confidence interval, and *P* value less than. 05 was considered statistically significant.

Results

During the study period 190 women attending the infertility clinic were recruited for the study but only 171 participants completed the questionnaire, giving a response rate of 90%. Overall 105(61.4%) women amongst the 171 participants attending the infertility clinic had used herbal medicine for the treatment of infertility. The mean age of respondents was 36.7 ±6.3 years. The age ranged between 26 and 51 years. All the respondents were married.

Table 1: socio- demographic and clinical characteristics

Variable	Frequency	Percentage(%)
Age :		
≤29	24	14.0
30-34	35	20.5
35-39	41	24.0
40-44	47	27.5
45-49	22	12.9
50-54	2	1.2

Variable		Frequency	Percentage(%)
Parity	0	133	77.8
	1	24	14.0
	2	11	6.4
	3	3	1.8
Type of marriage			
Monogamous		170	99.4
Polygamous		1	0.6
Level of education			
Primary		12	7.0
Secondary		41	27.5
Tertiary		118	65.5
Religion			
Christian		168	98.2
Muslim		3	1.8
Type of infertility			
Primary		47	27.5
Secondary		124	72.5
Duration of infertility(years)			
1-5		77	45.0
6-10		59	35.5
11-15		28	16.4
16-20		5	2.9
21-25		2	1.1
Perception of cause of infertility			
Magical/supernatural causes		12	7.0
Curses		9	5.3
Medical causes		97	56.7
Unknown		53	31.0

Most of the respondents were in a monogamous relationship (99.4%) and only one was in a polygamous marriage (0.6%). Majority of the women attained tertiary level of education (65.5%) as shown in table 1. The modal parity was 0 and secondary infertility was most common (72.5%). Majority of the respondents had infertility for less than five years (45.0%). Over 50% of respondents believed their infertility was due to medical causes and 31.0% does not know the cause of their infertility.

Table 2: Patients practice and experience with use of herbal treatment

Variable	Frequency	Percentage(%)
Use of herbal/traditional medication		
Yes	105	61.4
No	66	38.6
Knows name of herbal drug		
Yes	0	0
No	171	100
Route of drug administration		
Orally	77	73.3
Bathing	2	2.0
Vaginal insertion	3	2.8
Orally plus vaginal insertion	23	21.9
Reasons for use of herbal drug		
To get pregnant	86	82.0
To melt fibroid	13	12.4
To menstruate	3	2.8
To wash the womb	2	1.9
To kill worm	1	0.9
Perceived Benefits from herbal drugs		
Yes	16	15.2
No	89	84.8
What perceived benefits		
Melt fibroid	9	56.2
Relief from dysmenorrhea	5	31.2
Regulate menses	1	6.3
Reduce internal heat	1	6.3
Perceived Side effects		
Yes	22	21.0
No	83	79.0
What side effects		
Pain	9	42.8
Menorrhagia	6	28.6
Amenorrhea	4	19.0
Abdominal bloating	2	9.5
Information to doctor		
Yes	10	9.5

The prevalence of herbal medicine use among women seeking infertility treatment was 61.4%. Majority (73.3%) took the drug orally,21.9% had both oral and vagina insertion. None of the respondents knew the name of the herbal drug given to them for treatment. Majority (82%) of respondents took the herbal medication to get pregnant. Other reasons for use of herbal medication as shown in table 2; were to melt fibroid, for menstrual problems, wash the womb and to kill worms. Overall, 15.2% of those who used herbal medication reported some benefits from it, the most common (56.2%) reported benefit being to have melted fibroids. Twenty-two women (21.0%) admitted to experiencing side effects from the herbs used and the commonest side effect reported was pain (42.8%). About 50% of the participants reported that herbal medications were not safe for use. Majority, 90.5% of participants did not disclose to their health care provider that they ever used herbal medications.

Analysis of factors associated with the use of herbal medications (table 3) showed that differences in age and parity did not affect the use or non-use of herbal medications by women seeking conception ($P > 0.05$ for each characteristic). The level of education and duration of infertility were found to significantly influence the use of herbal medicine ($p< 0.05$). While women with lower level of education were more likely to use herbal medicines, it was a longer duration of infertility that was associated with herbal use.

Table 3: analysis of factors associated with use of herbal medicine

Variable	Frequency Total(171)	Herbal medication users n = 105	Herbal medication non-users n = 66	P value
Age				
<30	24	13	11	
30-40	76	42	34	0.123
>40	71	50	21	
Parity				
0	133	85	48	
≥1	38	20	18	0.257
Level of education				
Primary	12	12	0	
Secondary	41	26	15	0.013*
Tertiary	118	67	51	
Duration of infertility (years)				
≤5	77	40	37	
6-10	59	38	21	0.033*
>10	35	27	8	

* $p< 0.05$

Discussion

This study found that 61.4% of the women seeking treatment at the infertility clinic had used herbal medicine.The high prevalence recorded is consistent with observations from several studies in Nigeria and across the regions of the world, where between 40 and 96% had used herbal medicine before seeking orthodox medical treatment.[6,11-13,16,17]Lower prevalence of 36.5% has been reported in similar study in Sierra Leone.[18]The observed differences in utilization rate with other countries may be partly due to socio-cultural differences on how herbal medicine use is perceived, variation in the availability and access to orthodox treatmentas well as the heterogeneity in study design and designation of non-orthodox therapy used. Our finding further corroborates the fact that the use non-orthodox treatment among infertile couple is high worldwide. We also observed that despite widespread perception and knowledge of medical reasons as main aetiological factor for infertility, majority of women still used herbal medications in order to achieve pregnancy. This reflects a strong socio-cultural influence on the health seeking behavior of the infertile population in our setting. Previous research noted that the pattern of alternative therapy utilization reflects socioeconomic, cultural practices and beliefs of the population.[19] So that a high prevalence of herbal medicine use is observed where these methods are easily available and accessible.[9,12,19]

Although the use of herbal medicines was higher among women who had never conceived, parity was not significantly associated with its use. We observed that all the respondents who had primary education had used herbal medicine for treatment of infertility, with a significant association between lower level of education and use of herbal medications. This is similar to finding by Addo and colleagues in Ghana that underprivileged women attending the gynecological clinic were more likely to utilize herbal medications in the management of their infertility.[20] In contrast to our observation similar studies in Uganda and the United Kingdom reported a lower use of herbal medicines among less educated women.[13,16] The high use of herbal medicine among women of lower educational background in this study may suggest that due to less exposure and knowledge about infertility management these women are unable to develop capacity to debunk socio-cultural and religious myths. In addition the socioeconomic constraints may make standard medicare less affordable and accessible. In contrast, previous researchers in Australia and Uganda observed that those who were less educated were less likely to use herbal medicines owing to financial constraints whereas women who are educated are more likely to have some income that they could use to pay for herbal medical treatment.[13,17]

The desperation for child bearing increases with age and duration of infertility; this is further fuelled by external pressures especially in sub-Saharan Africa. The foregoing may influence the desire to attempt all measures to solve the infertility problem by the woman. We found that age did not significantly influence the use of herbal medications however the longer the duration of infertility the more the use of non-orthodox methods. This may be due to the longer period of exposure to various counsel and pressure.

Majority of the respondents did not disclose their use of herbal medicine to the physician. This is similar to the findings in Lebanon that showed that disclosure of herbal medicine use to the attending physician was low.[9] Some reasons for non-disclosure cited in literature include failure of health care provider to ask about use of herbal medications or fear that health providers' reaction to disclosure could potentially affect the care they would receive.[18] These reasons may also suffice in our setting. The expectation for childbearing following marriage is very high in the African setting and if a woman

fails to conceive after marriage, she may resort to seeking for any available help.[14,18,20,21] This may lead to uptake of herbs and concoctions from the traditional healers who are culturally acceptable and deemed affordable and accessible. We observed that majority of these women only come to the hospital after failure of the alternative medicine and some may combine both herbal and orthodox treatment regardless of knowledge that these herbal medications were not entirely safe for use. The use of herbal medications has been reported to also reduce the chances of conception and phyto-estrogen present in some herbal medications may exert negative estrogenic effects on implantation.[22-24]

This study had some limitations: It was an institutional based study with no data from the rural setting where the use of herbal medicines is expected to be more. The practices by men with infertility and their influence as well as other external factors influence on women's decision to use herbal medicine were not scrupulously explored. A large multi-centre community survey is recommended.

In conclusion we found that, use of herbal treatment is high in our setting. This practice reflects a strong negative socio-cultural influence on women's reproductive health decisions. Women with low education and longer duration of infertility were more vulnerable to these influencers. Disclosure of this practice(s) to health care professional was very low. It is recommended that health care givers routinely inquire from women seeking infertility treatment about past or current use of herbal medicine in a non-judgmental way. In addition public enlightenment on the fallacy of the potency of these herbal medications is advocated, with a view to re directing the vulnerable women to appropriate and effective medical treatment.

Conflict of interest: there is none

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