

Original Research Article

Fertility knowledge, care seeking behavioral pattern and attitudes of infertile men in Lagos, Nigeria

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ABSTRACT

Background: The objective was to study the extent of infertility knowledge, attitude and care seeking behavioral pattern of infertile men in Lagos.

Methods: A cross sectional study was carried out using questionnaire between 2009 and 2014. Adult males who were clinically infertile, visiting the clinics for the first time and consented were studied. Descriptive statistics were used for the analysis.

Results: Only 226 men, mean age 38±5.8 years participated. Up to 20.8% had sired a child for between >1 but <2, 20.4% for 2-5 and 58.8% for ≥6 years. Couples had coitus for once and >3 times (mean coitus 2.3±0.9 times) weekly. Only 11.1% knew about male-female factor infertility. Up to 42.9% knew about fertility and the sign of female ovulation and 38.1% correctly defined clinical infertility. Up to 40.3% switched treatment for competency of the new places and exorbitant price by 22.1%. Sixty-six (29.2%) made the first visit to a proper care place within a period >1 but <2 years, 45.1% within 2-3 years and 25.7% waited for >3 years. Majority (50 %) sought to know the causes of infertility, 14.6% how to improve fertility and 6.6% the reality of male infertility.

Conclusions: Majority of the participants sought inappropriate help and delayed in seeking appropriate care. Poor collaboration and referral system observed. There is need for edification of both care providers and seekers to be ethical in their actions. Infertility care cost intervention is needed.

Keywords: Male infertility, Nigeria, Seeking for care and lagos

INTRODUCTION

Infertility has some socio-cultural and psychological consequences.^{1,2} An estimated 15% (48.5 million) of couples are affected globally.³ Male factor accounts for 20 - 30% of infertility cases.³ Infertility were reported to be highest in Africa and Central/Eastern Europe.³ Clinically, infertility is defined as “failure of a couple

who live together, having unprotected sexual intercourse for a period not less than one year without achieving pregnancy”.^{2,4} The prevalence of infertility in Nigeria ranged from 4.0 - 15.7%.⁵⁻⁹ As a result of certain cultural and religious practices and belief, male infertility has never been defined as a disease, which has resulted in sparse data. Infertile men are prone to social ostracism, denial of inheritance and verbal abuse. One of the

consequences is peer and community pressure which raises chances of divorce, marriage separation and infidelity.¹⁰

In Africa, infertility cases are usually wrongly attributed to only female factor.^{11,12} Several reports from Africa indicate that many people interpret infertility in cultural terms instead of biomedically.¹³⁻¹⁵ In some African countries men are perceived not to be men until they have had a child.¹⁶ Some infertile couples, therefore, seek inappropriate forms of treatment, usually with awkward and bizarre consequences.¹⁷ Globally, accurate information regarding rates of male infertility is lacking. However, the Centers for Disease Control (CDC) estimates that 9.4% of males in the United States are infertile.³

Most infertility cases are treatable when promptly diagnosed. Therefore, this study was designed to study the extent of fertility knowledge, attitude and care seeking behavioral pattern of infertile men in Lagos. The study of men as key information source on their experiences and perceptions of infertility will reveal why some initial participation are low and the information will improve male infertility care.

METHODS

This study was a prospective cross-sectional study, conducted through the administration of structured questionnaire on their first clinic day. The survey was done in English and interpreted in three most popular Nigerian vernaculars (Igbo, Hausa and Yoruba). The three clinics were within Lagos metropolis and cut across places for high profile (Yaba), middle profile (Surulere) and low profile (Ikate). The choice of only three clinics was instigated by paucity of funds.

Formulating and refining survey questions was a collaborative process involving fertility consultants and survey interviewers. The survey tool contained biodata and socio-demographic information of the patients, to the aspects that covered emotional, social and psychological burdens to the patients among others. The study took place between September 2009 and November 2014; all participants were men 18 years and above and signed the informed consent form.

The bargain for consent to participate in the survey was conducted after patients’ consultation of care givers. Those who did not meet clinical definition of infertility and those that declined consent were excluded.

The study was approved by the Nigerian Institute of Medical Research Institutional Review Board. The questionnaire was completed by 226 infertile men and the data generated were analyzed by SPSS statistical instrument version 15 to generate the descriptive statistics for the study.

RESULTS

Out of the 1,066 infertile men administered the questionnaire, only 226 met the inclusion criteria for this study. The participants had mean age of 38±5.8 years. Only 2.6% had no formal education, 10.2%, 52.2% and 35% had primary, secondary and tertiary education respectively Table 1.

Majority (42.4%) were traders, 31.9% were public/civil servants and others. On the ethnic nationality, majority (45%), followed by 38% were of Igbo and Yoruba respectively. Majority (70%) were from middle class, 55% christians and 43% muslims among others.

Only 20.8% had desired child/more children for between > 1 but < 2 years, 20.4 % for 2 - 5 years and 58.8% for ≥ 6 years. On the proximity of couples, 85.8% lived together and 14.2% apart. Majority, 34.5% had coitus for 3 times, 34.1% for 2 times, 23.5% once, while 8.0% had sex more frequently per week; mean coitus 2.3±0.9 times per week.

Only 29.2% accepted having had pervious fertility medication, 22.1% were alcoholic (persons with a habitual alcoholic consumption), 3.5% hypertensive and none had cancer medication history.

Other conditions/attitude include: 20.1% that were coffee or caffeinated beverage takers, 4.9% had chicken pox and 7.1% measles as childhood diseases. Table 2, showed descriptive statistics of the knowledge and attitudes of infertile men attending the clinics in Lagos: Reasons for switching treatment was attributed to competency of the new care places by 40.3% of the respondents, failed treatment at the previous care places by 26.5% and exorbitant price by 22.1% among others.

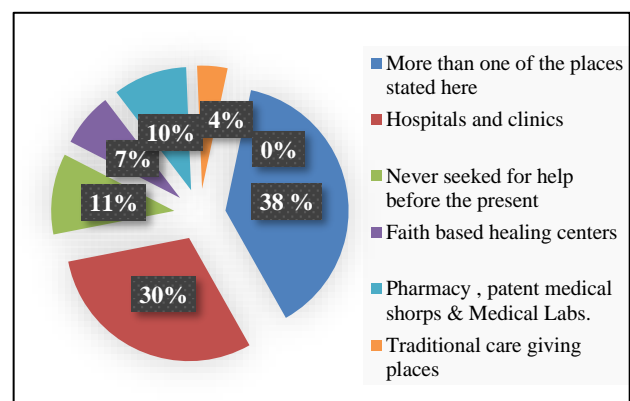


Figure 1: The care-seeking attitude of patients studied.

On the knowledge of the factors responsible for infertility, majority (45.1%) knew about female factor infertility, 27.4% male factor and only 11.1% knew about male-female factor. Merely 2.2% held, though wrongly, that gods/witches were responsible for infertility.

Table 1: Biodata and socio-demographic factors of infertile male patients attending fertility clinics in Lagos (N = 226).

Patients' parameters		Number	Percentage
Age (Years)	20-30	26	11.5
	31-40	121	53.5
	41-50	77	34.1
	51 years and above	2	0.9
Education background	No formal education	6	2.6
	Primary education	23	10.2
	Secondary education	118	52.2
	Tertiary education	79	35
Duration of infertility	≥ 1 but < 2 years	47	20.8
	2-5 years	46	20.4
	≥ 6 years	133	58.8
Social class	Apparently low	59	26
	Apparently middle	158	70
	Apparently High	9	4
Religious belief	Christian	124	55
	Muslim	97	43
	Others	5	2
Previous fertility medication (clomid or hormones and others)	Yes	66	29.2
	No	146	64.6
	Not sure	14	6.2
Terminal illness/conditions	Alcoholic	50	22.1
	Diabetic	7	3.1
	Successful surgery	4	1.8
	Hypertensive	8	3.5
	None	157	69.5
Cancer medication history	Yes	0	0
	No	226	100
Coffee or caffeinated beverages	Yes	46	20.4
	No	180	79.6
Occupation	Public/civil servant	72	31.9
	Trader	96	42.4
	Driver/artisan	40	17.7
	Others	18	8.0
Ethnicity	Yoruba	86	38
	Igbo	102	45
	Hausa	11	5
	Others	27	12
Religion	Christianity	124	55
	Muslim	97	43
	Others	5	2
Childhood infection	Chicken pox	11	4.9
	Measles	16	7.1
	Mumps	0	0
	Others	0	0
Occupational history	Chemical factory	4	1.8
	Pesticides factory	2	0.88
	Radiation	0	0
Duration of first presentation to orthodox care place	> 1 but < 2 years	66	29.2
	2 to 3 years	102	45.1
	> 3 years	58	25.7

Key: > Greater than, < Less than, ≥ Equal to or greater than social class. The information concerning the social class were according to Olusanya et al.¹⁸ Previous fertility medication: It was quite difficult describing the drugs, as majority of the patients could not memorize names of previous medications. Occupation: 'Others' included persons who claimed to be in school and out of job at that time, poultry farmer and some who live in Lagos but indulge in farming in Ogun state. Ethnicity: 'Others' included persons from South South states, Kwara state, Kogi states and Benue state. Religious belief: 'Others' included persons that claimed to be atheist, traditional worshipers and one person that claimed to be of a Rosicrucian order. Childhood Infection: It was difficult for people to recollect having had childhood infections. Only very few described successfully history or scars associated with such previous exposure.

Table 2: Descriptive statistics of the knowledge and attitude of infertile men attending fertility clinics in Lagos (n = 226).

Knowledge and attitude	No	Percentage
Reason for switching of care place		
Failed treatment	60	26.5
Referral from former care places	11	4.9
competence of the present place	91	40.3
Exorbitant charges	50	22.1
Relocation	10	4.4
Others	4	1.8
Knowledge of the signs of female ovulation		
Yes	97	42.9
No	129	57.1
Knowledge of factor responsible for infertility		
Male factor	62	27.4
Female factor	102	45.1
male and female factor	25	11.1
The gods/witches	5	2.2
Do not know	32	14.2
Clinical definition of infertility		
Correct	86	38.1
Incorrect	140	61.9
Individual knowledge request		
Cause of infertility	113	50
How to achieve pregnancy	38	16.8
How to improve female fertility	33	14.6
Reality of male infertility	15	6.6
No knowledge request	27	12
No of coitus per week		
Once per week	53	23.5
Two times per week	77	34.1
Three times per week	78	34.5
More frequently	18	8
Primary versus secondary infertility		
Primary infertility	177	78.3
Secondary infertility	49	21.7
Proximity of the couple		
Lived together	194	85.8
Lived separately	32	14.2
Life time sex behavior		
One sex partner	102	45.1
Two sex partners	63	27.9
More than 2 sex partners	61	27
Previous history of STD symptoms		
Penial discharge	25	11.1
Painful urination or itching	63	27.9
Testicular swelling or pains	21	9.3
Population with no history	117	51.8
Extent of fertility evaluation		
Normal assay claim	85	37.61
No hormonal assay	81	35.85
No idea	60	26.54

“Individual Knowledge Request” implies that at the end of each episode of discussion and completion of the questionnaire each participant was requested to volunteer a question of interest to the facilitator bothering on fertility knowledge. Roughly, 42.9% knew basic information about fertility and knew the sign of female ovulation and 38.1% correctly defined clinical infertility. Figure 1 below, shows the fertility care seeking attitudes and places. Majority (38.5 %) sought for care from multiple places, 30.1% sought for help from appropriate fertility care places and only 7.0% from faith-based healing centers etc.

In Figure 1, majority sought for help from multiple places, including appropriate and inappropriate places, 38% verged blue from combination of places listed above and 30% from orthodox (hospitals/clinics) places. Only 4% sought care from traditional medicine places and 11% never sought for help until the episode that brought them to the care places. The data underscore the need for proper education of infertile male patients to seek appropriate help. Only 29.2% claimed to have had either clomiphene or other hormone therapy. Majority (64.4%) had no treatment. Others were not sure whether the medications they were given was related to hormonal correction or bacterial treatment or otherwise, Table 2.

In Figure 2, majority (50.4%) had visited laboratory for fertility related tests for three or more times without formal request. Only 27 % had their first visit on the episode at which this study was conducted.

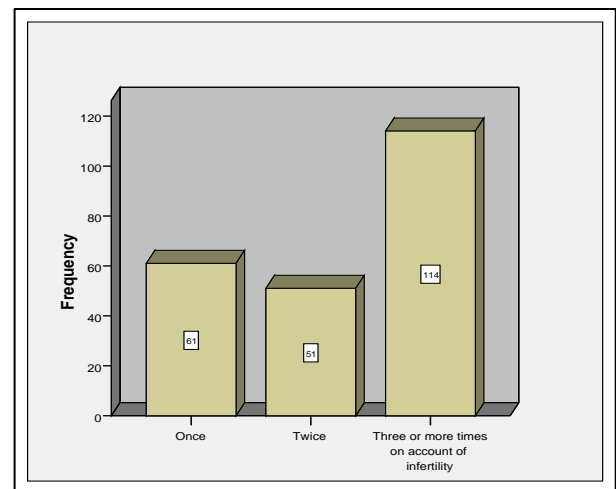


Figure 2: The pattern of patients’ visits to diagnostic laboratories for fertility care.

Figure 2, only 61/226 claimed to have made their first appearance at the orthodox fertility care places and being referred by a gynecologist/urologist for the first time. Many (37.61%) respondents claimed to have had normal hormonal assay level, 35.85% had no hormonal assay, while 26.54% had no idea about hormonal assay and what it portends.

Figure 3 shows orthodox (clinics and hospitals) and unorthodox (unauthorized places, including traditional practitioner’s places) treatment seeking pattern. Majority (52.2%) have had antibiotics either as tablet or injectable, 11.9% had no formal treatment before the visit to care place, at least by their reckoning. About 26.6% had a combination of orthodox and unorthodox treatment and only 9.3% were exposed to natural herbal concoctions.

In Figure 3, majority (52.2%) of the participants claimed to have had antibiotic (tablets, capsules and or injectable

or in combinations) treatment, mainly from unauthorized sources in the course of seeking fertility care.

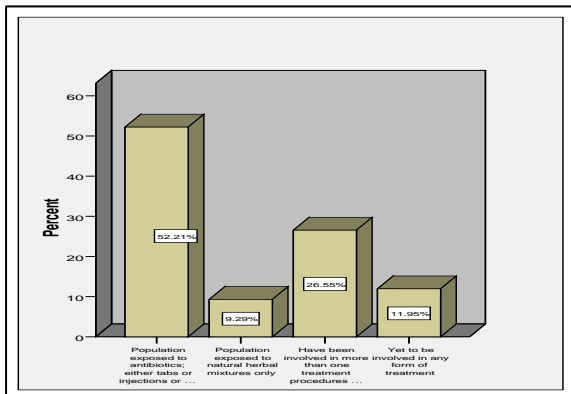


Figure 3: The pattern of orthodox and non-orthodox treatment alternatives of the patients studied.

Sixty-six (29.2%) made the first visit to a proper orthodox care places for fertility reasons within a period > 1 but <2 years of desiring for a child primarily or after the last child. Majority (45.1%) made their first visit within 2-3 years seeking for a child. Many (25.7%) waited for as much as greater >3 years before they commenced search for help.

Majority (50%) sought to know the major cause of infertility, 14.6% requested to know how to improve fertility and 6.6% wanted to know the reality of male infertility, Table 2.

DISCUSSION

The WHO considers urethritis and prostatitis as part of male accessory gland infections that could contribute to male infertility.¹⁹ However, poor knowledge and awkward care seeking attitudes underscore why treatable cases of infertility are sometimes neglected.

The mean age of the patients was 38 ± 5.8 years. Jeje et al, concurrently reported 35.6 ± 4.8 years, in Lagos.²⁰ The reports are comparable. It has been reported that men's spouses >45 years, are at risk of delay in time to achieve pregnancy.²¹ Following the later, majority of the participants were within the reproductive active stage.

About 52.2% had secondary and 35% tertiary education, this is indicative of moderately enlightened society. This is in accord with the fact that majority (70%) was from apparently middle class, and only 26% were of low-class society. Although 42.4% were traders they were moderately educated. Only 6.6% doubted the reality of male factor infertility and 27.4% acknowledged the reality. However, the knowledge about male/female infertility factor was poor, only 11.1% knew and this is worrisome. Again, 26.5% switched to new care places as a result of presumed competence of such new places; these claims were not properly verified. About 40.3%

switched places on the ground of impatience and supposed failed treatment. The implication is that most of the fertility seekers do not appreciate that infertility treatments are staged systematically.

Poor (4.9%) referral index (Table 2) shows that some general practitioners withheld fertility seekers unnecessarily, instead of referring them to urologists/gynecologists. This is indicative of poor inter-professional collaboration; hence the report of 58.8 % rate of infertile men with long (> 6 years) delays before presenting to appropriate care places. Again, high cost of treatment was a reason for many (22.1%) to switch treatment places. The latter highlights the need for advocacy and intervention.

The mean intercourse frequency was 2.3 ± 0.9 times per week, 34.5% had sex 3 times and 0.8% more frequently; indicating sexually active population. Consistent intercourse 2 - 3 times per week is adequate for fertile couples to conceive.²² Majority (58.8%) have been married for > 2 years and 85.8% lived together with their spouses; ruling out proximity factor.²³

Secondary infertility of 21.7% and 78.3% primary were reported as defined.²⁴ This result is comparable with Jeje et al, of 37.1% and 62.9% respectively from Lagos and Nwofor and Ugezu's report on South East Nigeria.^{20,25} These are clear departure from the record of 1 - 6% primary and secondary infertility of 5 - 25% report for the period 1977 - 2000 from 29 sub-Saharan African countries, including Nigeria.²⁶ Although, the former was on men and the latter, couples were evaluated as a unit. There is paucity of information on male infertility against female factors more widely studied.²⁴ However, the inclination in the present report could further be justified within southern Nigeria, since significant decline on infertility in Cameroon and Nigeria was, associated with secondary infertility by Larsen.²⁶

In the south, higher education and knowledge may have improved sexual hygiene practices but in the north, primary infertility constituted 32.8%, while secondary infertility was 67.2%.²⁷ In contrast Owolabi et al, reported 70 % cases of secondary and 30% of primary infertility from the south.²⁸ It has been stated that bacterial contamination of semen causes STI and by extension secondary infertility.^{29,30} These reports show poor research indices and lack of coordinated national survey on infertility. For instance, polygamy and poor sexual hygiene practices are associated with bacterial contamination and majorly implicated in secondary infertility in the Northern parts of Nigeria.^{27,28}

The prevalence rates of 4-15.7% of infertility reported above calls to doubt the reports that infertility was on the decline in Nigeria.³¹ Also, the data from World Fertility and Demographic and Health Survey claimed decline rates among all age groups younger than 40 years, from 5.6 to 4.2% in Nigeria.³¹ The gap in the period (1995

versus 2014) an issue. It is apparent that the government and developmental partners are mainly concerned though wrongly, with population control policies.³²

About 45% claimed to have had only one, 27.9% and 27.0% had two and more than two lifetime sex partners respectively. Those with multiple partners (54.9%) may be because of quest to prove fertility or cultural (polygamy), thereby contributing to public health hazards. A positive correlation of higher HIV infection rates with infertile women, than in fertile control group was reported in Tanzania.³³ In addition, in Mozambique, a significantly higher sero-prevalence of syphilis antibodies in infertile women was reported, apparently trying to prove fertility.³⁴ This is apt because, 11.1% of the participants had history of penial discharge, 27.9% painful urination/itching, 9.3% testicular swelling and 20.4% other STI cases. Men with recurrence penile discharge, painful urination, and testicular pain were more likely to be infertile.^{7,9} Though majority (51.8%) had no history of previous genital contamination before the episode that brought them to the hospitals; those with infections that had multiple sex partners constitute risk of spreading diseases.

Majority (38.5%, Figure 1) sought for treatment from more than one appropriate or in appropriate places; this attitude is bad. Impatient and lack of understanding of the protocols required for tracking infertility may be blame. Figure 3 shows that 26.6% were involved in > 1 form of treatment procedures simultaneously, 9.3% were involved in herbal treatment alone. These are inappropriate care seeking behaviors. For instance, 63.7% visited diagnostic laboratories for infertility before appropriate care places, Figure 2. Specifically, 38.5% had multiple care seeking approaches, 9.3% sought for care from patent medicine dealers, 7.1% from faith-based places and only 10.6% never sought for help before presenting to the present appropriate care places. Unorthodox medications have been associated with increased infertility cases.⁹

Although it was reported that infertility assessed mainly by hysterosalpingogram, laparoscopy, and hysteroscopy is the most common outpatient gynecologic diagnosis in Nigeria; yet 26.5% had no knowledge about the roles of hormone in fertility cases and many (37.6%) claimed they had normal hormonal assay.³⁵ In Kano, northern Nigeria hormonal abnormalities were detected in 22% of male fertility seekers.³⁶ Lack of systematic infertility evaluation is apparent.

CONCLUSION

It was concluded that majority of infertile men in Lagos sought inappropriate help and long delay was apparent in seeking appropriate care. There should be focus on enlightenment - social education on male infertility. There is need for intervention on infertility care cost. The

necessity for national policy on male evaluation infertility is highlighted.

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