

Perception of Married Men About Male Infertility: A Case Study from Ede. Osun State, Nigeria

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Abstract: This study explores the perception of married men regarding male infertility in Ede North Local Government Area (LGA), Osun State, Nigeria. The aim is to assess married men's awareness, understanding, and perception of male infertility in the region. A qualitative approach was employed, involving interviews and surveys among married men in Ede North and South LGA. Participants were asked about their perception of male infertility, its causes, and the social implications associated with it. Data analysis focused on identifying common themes and patterns in the responses. The findings revealed varied levels of awareness and understanding of male infertility among married men in Ede North and South LGA. While some participants demonstrated a good grasp of the issue, others held misconceptions, such as linking infertility to the use of oral contraceptives or supernatural causes. The study highlighted the need for targeted education and awareness campaigns to improve knowledge and dispel myths surrounding male infertility. In conclusion, the study underscores the importance of enhancing awareness and understanding of male infertility among married men in Ede North and South LGA, Osun State, Nigeria. Addressing misconceptions and promoting accurate information can contribute to better reproductive health outcomes and support couples facing infertility challenges. Efforts to improve understanding and perception of male infertility are essential for comprehensive reproductive health care in the region.

Keywords: male infertility, perception, knowledge, reproductive health.

1. Introduction

Infertility has been a significant health concern and is believed to be a social problem [1]. People's perception of what entails fertility is often unilateral; that is, most people associate fertility problems mainly with women. Previous studies, both in Nigeria and various parts of the world, have focused extensively on female infertility without paying attention to male infertility [2], [3].

Male infertility has been a misery, and couples who experience this stressful condition are placed in a position of social, emotional, psychological, spiritual, and financial turmoil. Having a child is often the fulfillment of marriage, a blessing, and the main desire of most women. In most cultures and societies, women are blamed when their marriages produce no children, even though women's fertility matters rest on the men [4], [5]. In the context of Ede in Osun State, Nigeria, the perception of married men towards male infertility is a critical

area of study. Understanding how married men in this region perceive and comprehend male infertility.

The frequency of infertility in men with regional variations, male factor infertility accounts for around 40–50% of all instances of infertility in Nigeria. For example, the prevalence of male factor infertility was estimated to be 40.8% in Kano, 46% in Ile-Ife, and 55–93% in Enugu, Eastern Nigeria [6], [7]. It is essential for addressing reproductive health challenges effectively—the prevalence of Male Infertility in Osun State, Nigeria, and Worldwide. According to a WHO report on the characteristics of infertility in Nigeria, the prevalence of infertility nationally was 41% (95% CI 36.6–45.5). [6]-[8] The prevalence was higher among the rural population (9.5%), and infections were responsible for 24.7% of cases of infertility. However, specific data on the prevalence of male infertility in Ede, Osun State, is not explicitly provided in the sources reviewed [9]. It is important to note that male infertility is a significant reproductive health issue in Nigeria, contributing substantially to overall infertility rates.

The variety of factors to which the infertility was attributed includes both sociocultural and medical ones. The perceived causes of infertility in the study area are categorized into biological, physiological, traditional, and supernatural causes. These results are consistent with the literature, indicating that male infertility is linked to factors such as male sexual and urological health problems/malfunctions, lifestyle, occupational, environmental, and chemical damages, and even genetic defects.

This study seeks to bridge this gap by exploring the awareness, understanding, and perceptions of male infertility among married men in Ede. By delving into the perceived levels, beliefs, and attitudes of married men toward male infertility, the research aims to provide insights that can inform targeted interventions and support mechanisms.

2. Materials and Methods

A. Study Design and Location

Southwestern Nigeria's Osun State is home to Ede Town. It is located at the junction of the Osun River with the routes leading to Oshogbo, Ogbomosho, and Ile-Ife. Ede has two local government areas: Ede North and Ede South, which have a

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population of over 159,866 and male populations of over 82,571. Ede has 20 wards and ten wards in each Local Government area. The study was a descriptive cross-sectional study.

B. Sample Size Determination

A Cochran method ($n = z^2pq/d^2$) was used to determine the sample size. The calculation took into account the following factors: p was the proportion of good perception of infertility in Ede (69.6%), q was $(1-p)$, and d was the degree of precision (0.05%). The estimated minimum sample size was denoted by n , and the z -level of significance at 95% confidence level was 1.96.

After consent was approved, participants in the study who were 20 years of age or older were recruited, with a minimum sample size of 380. The study excluded those who were unwell or did not provide informed permission.

C. Sampling Technique

A multi-stage probability sampling technique was used for the inquiry. During the initial phase, two LGAs (local government areas), Ede North and Ede South, were randomly sampled. In step two, a random selection method using ballots picked five wards from the list of ten and ten wards in the designated LGAs, respectively. In the third stage, five streets were chosen at random from the list of streets provided by the LGA council secretariats, one by one, using ballots in each ward. In step four, five houses were chosen at random from each street by a simple ballot. Thankfully, in stage five, more than two families who satisfied the requirements were chosen by simple random sampling via a ballot. This process was carried out on each street until five households were chosen. One responder was chosen at random via the ballot in each of the chosen homes if several respondents satisfied the requirements. Until the necessary respondents were found, this process was repeated.

D. Ethical Clearance

Moral reflection The Human Research and UI/UCH Ethical Review Committee granted ethical permission (approved number/EC/19/0660). Each responder gave their written informed consent, guaranteeing information confidentiality, the freedom to leave the study at any time, and voluntary participation.

E. Data Collection Tool

Respondent data was gathered using a pretested, self-administered questionnaire. The questionnaire was adjusted using adaptations made from earlier research. There were two sections in the questionnaire. Sociodemographic data were presented in Section A, while nine questions on a three-point Likert scale (agree, neutral, and disagree) assessed respondents' perceptions on the causes of infertility. And the impact of the session C community on male infertility. The study population speaks Yoruba as their native tongue, so the English versions of the questionnaires were translated into that language and then back-translated into English.

F. Data Analysis

The data was analysed using version 22 of the statistical tool Statistical Package for Social Sciences (SPSS). Regarding knowledge questions, the correct response was worth one point, while the incorrect response was worth zero. 17 was the highest score, and 0 was the lowest.

3. Result

There were 380 respondents recruited for the general survey of this study. The mean age of respondents was 40.41 ± 11.73 , and more than half (59.1%) were below the age of 40 years. Almost all the respondents were of Yoruba ethnicity (96.3%); Islam was the most practiced religion by most respondents (76.6%), with more than half of the respondents having secondary school education (53.4%). Respondents' occupations were dominated by trading (24.3%) and artisans (23.6%). The mean age of children was 3.51 ± 2.20 . Most of the respondents had stayed more than 7 years in the respective study sites (88.5%). Prevalence of smoking was 12%, while alcohol drinking was 30.3%. History of Sexually transmitted diseases (STDs) were given at 19.1%. 30.1% of the respondents were exposed to chemical substances. More than half of the respondents (69.9%) were unsure where they were exposed.

Table 1
Perception of respondents about causes of male infertility

Infertility caused by:	Percentage %		
	Agreed	Undecided	Disagree
Witches, witchcraft, and evil people	64.3	13.6	22.1
Watery sperm	91.4	5.7	2.9
Circumcision of male child	12.0	30.5	57.5
Eating certain foods or vegetables	27.4	22.2	50.4
Sperm backflow (EDA)	80.1	12.5	7.4
Sexual promiscuity	63.9	18.4	17.6
Smoking	30.8	30.9	38.3
Excessive alcohol consumption	36.3	26.4	37.2
Obesity	22.2	28.7	49.1

Source: Field Survey

Table 1 shows the results of the causes of male infertility. 64.3% believe that witchcraft and evil people can cause infertility in males, while 22.1% disagree, and 13.6% are undecided. 91.4% agree that watery sperm can lead to infertility, 2.9% disagree, and only 5.7% are undecided. The result shows that 57.5% believe that circumcision can predispose males to infertility, 12% agree that it can cause infertility, and 30.5% are undecided. Eating all kinds of food and vegetables can cause infertility in males 50.4% disagreed, 27.4% agreed, and 22.2% undecided. Sperm backflow (EDA) is also a causative factor of infertility; 80.1% agreed, 12.5% were undecided, and 7.4% disagreed. Sexual promiscuity caused 63.9% to agree, while 18.4% were undecided, and 17.6% disagreed. Of smoking, 30.8% agreed that it can cause infertility, 38.3% disagreed, and 30.9% undecided. Alcohol consumption also can cause infertility 36.3% agreed, 26.4% were undecided, and 37.2% disagreed, and obesity shows a tendency to cause infertility 22.2% agreed, 28.7% were undecided, and

49.1% disagreed.

Table 2
Perception of respondents about awareness of male infertility

Variables	% Frequency True	% Frequency False
It can be inherited	35.1	64.9
It is not serious because it's treatable	62.3	37.2
It is only severe in Africa	64.3	35.7
It is not a serious problem	17.2	82.8
It is a severe problem	87.2	12.8
Only those who are under a spell became infertile	42.4	57.6
Infertility responsibility		
Anybody can be infertile through medical confirmation	64.9	35.1

Table 2 shows the result of the perception of respondents about male infertility; 35.1% believe that it's true that infertility may be inherited, while 64.9% say it's false. 632.3% say it's true that infertility is treatable, and 37.2% claim it is false. Male infertility is severe in Africa 64.3% is accurate, while 35.7 is false. 17.2% claim is valid that male infertility is a severe problem, 82.8% is false, and 12.8% claim is false that it's severe, while 87.2% say it's true. 42.4% support that only those who are under a spell became infertile, while 57.6% say it's false, 64.9% agree that only through medical confirmation can be sure of infertility, and 35.1% disagree.

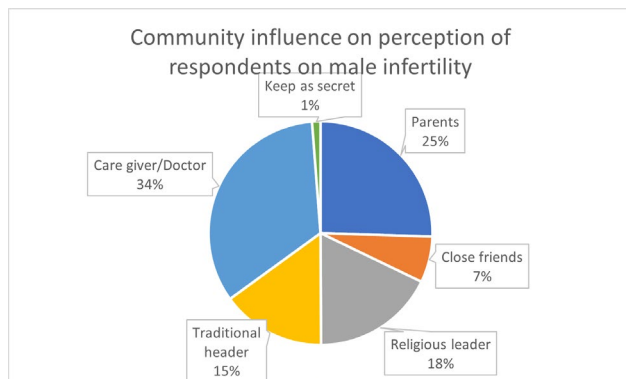


Fig. 1. Community influence on the perception of respondents on male infertility

Most of the respondents (88.4%) believed that doctors or caregivers are the right persons to tell or disclose infertility problems to. Also, more than half (67%) believed that infertility problems should be disclosed to the parents. While 46.7% believed religious leaders are the right people to tell.

4. Discussion

Perception of married men on causes of infertility is often attributed to supernatural causes. This belief justifies the attempt to ostracize some couples that are affected within the community and to expel them from their households. The state of infertility and witchcraft may be held responsible for any subsequent misfortune that would typically be attributed to the woman or family.

On the perception of infertility, most reflected on the witches and witchcraft as a causative factor of male infertility and

smoking, excessive alcohol, and obesity. Watery sperm, sperm backflow, and sexual promiscuity were also perceived to be causal factors [10], [11]. This can be compared with the study conducted by [12], [13] showing that the perception of participants on Infertility reflected that the majority believed that sexually transmitted infections could cause infertility while opined that previous abortion causes infertility [14], [15]. In addition, it is alleged that unsafe abortion is related to infertility. Moreover, half of the respondents believed that smoking and alcohol can cause infertility and believed that certain kinds of jobs can cause infertility [16]. Furthermore, it was shown in the study by [17] that consumption of sugar can cause infertility and that low back pain can cause infertility. Some stated that erectile dysfunction can cause infertility but agreed that sexual prowess is related to infertility. Some respondents believed that wearing tight nylon underwear could cause infertility, and selected respondents knew that a previously fertile person could later become infertile. Most of the respondents believed that specific family planning methods can cause infertility, while they knew that the awareness of a safe and fertile period is essential when couples are trying to achieve a pregnancy [18].

Consequently, this was evident in the study conducted by [11], [14], [16], [17] as being 'trapped' and 'weighed down' is extreme, indicating and describing the severity of the emotions that men have. The general public believes that supernatural factors such as black magic and demonic spirits can be the cause of infertility. We included these two possibilities to the list of reasons for infertility in order to find out what individuals thought about these ideas. We discovered that 30% of the individuals we spoke with thought it was the reason for infertility, whereas nearly 40% thought it might be due to black magic. Some respondents opined that infertility could be inherited from parents [19], [20]. This was at variance with the study conducted by the American Society for Reproductive Medicine study (2011), which documented that some Individuals may have a genetic reproductive abnormality that causes infertility.

5. Conclusion

The conclusion drawn from the study on the perception of married men about male infertility in Ede, Osun State, Nigeria, reveals varying levels of awareness, understanding, and perception among the participants. The findings indicate suboptimal knowledge and perception of infertility, with cultural beliefs persisting despite the high education levels of the respondents. Recommendations include community-based education to enhance understanding and perception of infertility among men in the region. Overall, the study underscores the importance of targeted interventions to improve knowledge and perception of male infertility among married men in Ede, Osun State, Nigeria.

References

[1] A. Ullah *et al.*, "Batting the invisible infertility agony: A case study of infertile women in Khyber Pakhtunkhwa Pakistan," *Journal of Ethnic and Cultural Studies*, vol. 8, no. 2, pp. 89–105, 2021.

- [2] R. Bala, V. Singh, S. Rajender, and K. Singh, "Environment, Lifestyle, and Female Infertility," *Reproductive Sciences*, vol. 28, no. 3. Springer Science and Business Media Deutschland GmbH, pp. 617–638, Mar. 01, 2021.
- [3] S. Dierickx, K. O. Oruko, E. Clarke, S. Ceesay, A. Pacey, and J. Balen, "Men and infertility in the Gambia: Limited biomedical knowledge and awareness discourage male involvement and exacerbate gender-based impacts of infertility," *PLoS One*, vol. 16, no. 11 November, Nov. 2021.
- [4] M. Dessalegn *et al.*, "Gender inequality and the sexual and reproductive health status of young and older women in the afar region of ethiopia," *Int J Environ Res Public Health*, vol. 17, no. 12, pp. 1–14, Jun. 2020.
- [5] R. A. Hiadzi, "Living in a man's world: An exploratory study of the experiences of Ghanaian women with infertility problems."
- [6] A. Muniyati, "An investigation into the demographic and socio-economic factors associated with female infertility; its risk factors and treatment seeking behavior among infertile women in Lusaka urban district: A case study of residents of Misisi, Libala and woodlands townships of Lusaka," 2020.
- [7] N. M. Abdo *et al.*, "Seroepidemiology of *Treponema pallidum*, *Mycoplasma hominis*, and *Ureaplasma urealyticum* in fertility treatment-seeking patients in the Emirate of Abu Dhabi, United Arab Emirates," *J Infect Public Health*, vol. 17, no. 1, pp. 163–171, Jan. 2024.
- [8] E. Adofo, E. J. Dun-Dery, A. M. Kotoh, F. Dun-Dery, J. A. Avoka, and M. E. Ashinyo, "Fear of infertility limits contraceptive usage among first-time mothers in Ghana: A cross-sectional study," *SAGE Open Med*, vol. 9, 2021.
- [9] F. E. Okonofua, L. F. C. Ntoimo, A. O. O. Ayodeji, C. Olafusi, E. Unuabonah, and V. Ohenhen, "Causes and Risk Factors for Male Infertility: A Scoping Review of Published Studies," *International Journal of General Medicine*, vol. 15. Dove Medical Press Ltd, pp. 5985–5997, 2022.
- [10] A. Alesci, N. Nicosia, A. Fumia, F. Giorgianni, A. Santini, and N. Cicero, "Resveratrol and Immune Cells: A Link to Improve Human Health," *Molecules*, vol. 27, no. 2. MDPI, Jan. 01, 2022.
- [11] S. De Vincentis, G. Tartaro, V. Rochira, and D. Santi, "Hiv and sexual dysfunction in men," *Journal of Clinical Medicine*, vol. 10, no. 5. MDPI, pp. 1–25, Mar. 01, 2021.
- [12] J. A. Oke, A. A. Onyeaghala, and R. A. Dada, "Thesis and Antithesis of Infertility in Nigeria: A Review and Implications on Medical Laboratory Science Practice," 2020.
- [13] K. A. Agyapong, "An Evaluation of Akan and Konkomba Witchcraft Trials & Beliefs in Ghana: In Dialogue with the Biblical, Anthropological and Psychiatrists Perspectives," *Pentecostalism, Charismaticism and Neo-Prophetic Movements Journal*, pp. 92–102, Dec. 2020.
- [14] M. Pai, S. Venkatesh, and P. Gupta, "The role of infections in infertility: A review," *International Journal of Academic Medicine*, vol. 6, no. 3. Wolters Kluwer Medknow Publications, pp. 189–196, Jul. 01, 2020.
- [15] F. Jabeen, S. Khadija, and S. Daud, "Prevalence of Primary and Secondary Infertility," *Saudi Journal of Medicine*, vol. 7, no. 1, pp. 22–28, Jan. 2022.
- [16] M. Basic, D. Mitic, M. Krstic, and J. Cvetkovic, "Tobacco and alcohol as factors for male infertility - a public health approach," *Journal of Public Health (United Kingdom)*, vol. 45, no. 2, pp. E241–E249, Jun. 2023.
- [17] P. Shokri *et al.*, "Non-spinal low back pain: Global epidemiology, trends, and risk factors," *Health Science Reports*, vol. 6, no. 9. John Wiley and Sons Inc, Sep. 01, 2023.
- [18] R. Simmons and V. Jennings, "Fertility Awareness-Based Methods of Family Planning," 2019.
- [19] T. O. Yahaya *et al.*, "Chromosomal abnormalities predisposing to infertility, testing, and management: a narrative review," *Bull Natl Res Cent*, vol. 45, no. 1, Dec. 2021.
- [20] A. M. Woolner and S. Bhattacharya, "Intergenerational trends in reproduction: Infertility and pregnancy loss," *Best Practice and Research: Clinical Obstetrics and Gynaecology*, vol. 86. Bailliere Tindall Ltd, Feb. 01, 2023.