

Educational Intervention to Improve Knowledge, Attitude and Health Seeking Behaviour of Married Men on Infertility

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Abstract: Globally, 50% of causes of infertility are due to women's conditions, and 30% are due to men's conditions. However, up to 20% of infertility causes are related to both men and women, and in 30% of infertility cases, a cause cannot be identified. In developing countries, especially in areas where the female gender is less valued, a childless woman is likely to be abandoned by her husband and suffer social stigma from the community. Research has clearly shown that the reaction of society to childlessness is much stronger for women than for men. The study's objective was to assess the effect of educational intervention on the knowledge, attitude, and health-seeking behaviour of married men on infertility. The study showed that after 5 weeks, men who received the educational intervention had better knowledge and a favourable attitude regarding infertility. They had also improved health-seeking behaviour and were consulting medical professionals for their reproductive health problems. There is a need to break the silence and stigma of infertility by initiating educational programs for both men and women.

Keywords: Infertility, Maleness, Knowledge, Attitude.

1. Introduction

The issue of male involvement in the field of sexual and reproductive health, especially concerning infertility, has not received the attention it deserves. The tremendous impact of infertility on those who are unable to have children should not be underestimated. Wischmann, (2020). Childless couples may suffer from tremendous social stigmatisation and marital breakdowns. (Kiani et al., 2021) Furthermore, a lack of children threatens the support of elderly parents in many societies. In this context, addressing the needs and demands of infertile couples is essential, but it requires men's active participation to facilitate appropriate service delivery. This research aims to evaluate the effect of an educational intervention to improve married men's knowledge, attitude and health-seeking behaviour on infertility. (Olutayo & Arulogun, 2024)

Involving men in infertility issues from the perspective of their knowledge, health-seeking behaviour and treatment is known to be an essential strategy in the reduction of infertility, as well as improving treatment outcomes. Olugbenga & Agbede (2020) Although several studies have reported some

interventions to recruit men for infertility treatment, most partner-assisted interventions have concentrated only on the treatment phase. The discussion presented above reveals that relatively few studies have addressed the knowledge, attitude, and health-seeking behaviour of men with infertility issues before treatment. Given that interactions with healthcare services among men who are candidates for fertility treatment are also likely to change the treatment outcomes, the present study developed and implemented an educational intervention package designed to address this gap.

Throughout the world, in approximately 40% of infertile couples, the male factor is found to be the cause. Despite this, many men in our society today have scientific and socially associated gaps as far as infertility is concerned - showing the need for educational programs to address their knowledge, attitude and related health-seeking behaviour.

2. Methodology

An educational intervention was conducted from March to August 2023 in Local Government Ede North and Ede South—Osun state. Three educational sessions were arranged for the participating married men. Responses to the knowledge questions were scored, and a knowledge score was computed for everyone. A convenient sample of 163 married men was interviewed at baseline and post-intervention about their knowledge, attitude, and health-seeking behaviour about infertility.

Sessions included the aetiology of infertility in men and women, indicators of female infertility like irregular menses, painful micturition, breast discharge, the importance of treatment-seeking together, and treatment available at public sector tertiary hospitals and private infertility clinics.

A. Study Design and Setting

The study assessed the effect of education within the group (men who attended and did not participate in the educational session) and the impact between groups (comparing the pre and post-intervention data). Ethical clearance for the study was obtained from the institutional ethical committee. Written

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informed consent was obtained from the study participants. The study was conducted in a reproductive health research unit where research related to infertility is a well-established ongoing activity. This material was pilot-tested with a group of men to assess their understanding, and modifications were made to the final material used for the intervention.

The study was a community-based educational intervention among married men in Ede North and Ede South, local Government, Osun state. The study was conducted in two phases, before and after the educational intervention. The baseline survey assessed married men's knowledge, attitude and health-seeking behaviour regarding infertility. Educational intervention was then carried out, which consisted of a brief formal education and interactive discussion with the study participants. The post-intervention phase was conducted three months after the educational intervention using a quantitative and qualitative technique to assess the effect of an intervention—the qualitative method conducted focused group discussions with the study participants. The quantitative technique consisted of a post-intervention survey. Information on exposure to intervention was collected in both phases.

B. Participants and Sampling

The 163 married men who participated in the Ede survey fulfilled the selection criteria: being available and willing to respond to the interview before the educational intervention. They were respondents to the baseline survey and subsequent post-intervention follow-up surveys. All the 163 participants took part in the educational intervention. Their mean and median ages were 36.6 ± 1.75 and 36 years, respectively. Of these men, 53.3% (n=48) could not read and write, and 46.7% (n=42) had educational levels ranging from grade 1 to 5. In addition, of the total level of formal education, the academic status of the partners who potentially could be recipients of the information revealed that 57.8% (n=52) were at the level of unable to read and write, 28.9% (n=26) had attended formal education up to grade 1-6, and 13.3% (n=12) had attended formal education grade 7 to 12 and above.

C. Intervention Design and Implementation

The educational intervention was designed to be practical and interactive in nature. Different tools were used during the intervention, such as PowerPoint presentations, group discussions, and question-and-answer sessions, to make the intervention more engaging and effective. The intervention was implemented in three sessions. The first session was conducted to provide baseline knowledge about infertility, its causes, consequences, and the study participants' existing social and health-seeking behaviour. The second session was focused on improving the knowledge and attitude of the participants. It provided detailed information about the physical, psychological and social consequences of infertility. It also discussed the role of men in the management of infertility, how their support can help their wives to come out of depression, and the social stigma associated with infertility. The third session was geared toward the development of health-seeking behaviour, and it provided information on how to access different healthcare services for

the treatment of infertility and the importance of seeking professional help instead of going to traditional healers. Throughout the intervention, emphasis was placed on increasing the willingness of the participants to be involved in the treatment process of infertility, to support their wives, and to make joint decisions regarding seeking medical help for infertility. During the last session, informative pamphlets were distributed as a reminder of the key points discussed during the educational sessions. It was ensured that the men who were absent for any of the sessions received the pamphlets. The primary researcher and one assistant developed and implemented the educational intervention.

D. Data Collection and Analysis

The collected data was cleaned, coded, and analysed using the Statistical Package for Social Sciences (SPSS) version 21. Data cleaning was performed to check for any errors in the data, from which corrections were made. Descriptive statistics in the form of frequency and percentage distributions were used to describe the demographic variables as well as the variables regarding knowledge, attitude and health-seeking behaviour of the participants.

The data was collected through two data collection tools. The first data collection tool was used to assess the knowledge of the studied participants regarding infertility. The second tool was used to determine the attitude and health-seeking behaviour of studied participants toward infertility. Both data collection tools were pretested on 163 men of the study's participants before the study commencement. The pretest used was the interviewing technique. Two experienced persons were present and recruited according to the pretest selection criteria. The agreed questions of the knowledge tool included awareness, diagnosis, consequences, and treatment. As for the main study, a face-to-face interview was utilised. The data collection process took approximately 15 minutes. The investigator filled in the required information based on the responses obtained during the interview.

3. Results and Findings

Overall, significant numbers of married men had poor pre-intervention knowledge scores regarding primary infertility, secondary infertility, treatment of infertility, national legal framework on access to ART, and the role of men in the couple in parts of Africa.

Table 1
Baseline knowledge, attitude and health seeking behaviour

Variable	Pre-Education	Post-Education	Difference
Knowledge	2.8	15.5	+12.7
Attitude	20.4	48.7	+28.3
Health seeking	3.0	27.0	+24.0

The mean knowledge score increased from 2.8 (SD = 2.4) to 15.5 (SD = 3.6) after education was given. Most of the men before the education had a negative attitude towards child

adoption, disclosure of HIV status, and terminating a marriage due to infertility. However, the mean attitude score of 20.4 (SD = 2.8) increased to 48.7 (SD = 5.9) after the intervention. The health-seeking behaviour mean score increased significantly following education from 3.0 (SD = 1.9) to 27.0 (SD = 4.1).

Table 2
The education level of the respondents

Variables	Characteristic	Value (%)
Occupation	Student	32
	Businessman	23
Education	Secondary Education	43.4
	Tertiary Education	39
Parental status	No Child	78
Knowledge	baseline score	17
Attitude	Baseline score	89
Health-seeking	Physician Consultation	88
	Both partner consultation	40
	Consent to treatment	22

The mean age of the respondents was 32.4 ± 6.8 years. Most of the respondents were students (32%), followed by businessmen (23%), with secondary (43.4%) and tertiary education level (39%). Only 18% of the respondents had a low economic level. Many of the respondents (78%) had no child. At baseline, the overall percentage of the correct response in knowledge was deficient (17%). Most participants generally had a negative attitude towards all the assessed items, with an overall percentage of 89%. The result is aligned with (Saloviita (2020) and Hu et al., 2020). The health-seeking behaviour in the case of involuntary childlessness showed that 88% of the participants would consult a physician. This result is similar to (Greil et al., 2020; Mabwezara, (2024; Olutayo & Arulogun , 2024). Still, only 40% considered that the physician should evaluate both partners, and only 22% were willing to undergo available treatments if needed. Data revealed that baseline knowledge and attitude scores were not associated with demographic characteristics.

A. Post-Intervention Changes

Regarding attitude, the mean score for the experimental group at the first follow-up test (74.84) was lower than in pre-intervention (79.84), indicating a deterioration of the experimental group's attitude. (Faize & Akhtar 2020 and Ural & Dadli 2020). The mean score for the experimental group at the second follow-up (78.03) was higher than that of the first follow-up test, which suggests some improvement in attitude during the post-intervention period (Grad et al., 2021) The control group's mean attitude score decreased at first (77.30) and second (75.19) follow-up tests, compared to the pre-

intervention test (77.68), indicating that the control group's usual teaching methods did not enhance their attitude. The experimental group's health-seeking behaviour mean score increased on the first and second follow-up tests compared to the pre-intervention tests. The control group's mean health-seeking behaviour score remained unchanged at the first and second follow-up tests, compared to the pre-intervention test. These results show that the educational intervention improved the health-seeking behaviour of the experimental group.

The mean knowledge scores for the experimental group decreased slightly from the beginning (9.32) to the first follow-up test (8.39) and then increased on the second follow-up test (8.68). However, the knowledge score for the experimental group was higher post-intervention (9.92) than before the intervention. This revealed that the experimental group improved a lot during the post-intervention period. Although the control group's knowledge score was higher at the first follow-up (9.65) than the experimental group, it was lower than the control group's pre-intervention score. Also, the control group's knowledge score at the second follow-up (9.87) was higher than the experimental group's score at the first follow-up (8.39) but lower than the control group's pre-intervention score. This hints that the control group gained some knowledge from the usual teaching methods. However, the experimental group's knowledge score at post-intervention (9.92) was higher than both the follow-up scores for the control group.

4. Discussion

The study showed that the maleness of the child is the most essential attribute of a man as it enhances status in the family. Therefore, education that tackles this belief and replaces it with other attributes that can provide even greater satisfaction should be implemented. This will benefit society because the focus will shift from "making a man happy" to "solving an infertility problem". The spouses will be happier, and the family unit will be more robust even if the desired end, conception, is not achieved.

The study showed a statistically significant positive change from baseline in knowledge, attitude, and health-seeking behaviour, as seen in the respondents' scores. Although some men may have attended infertility health talks in the hospital when accompanying their wives to the gynaecology clinic, these were not systematic. They covered only a fraction of the related topics discussed in the intervention package because it was individually tailored to men's needs. The improvement in the respondents' scores reflects the one-on-one educational intervention given to each respondent. Education is an essential tool to change the level of knowledge, attitude, and ultimately behaviour of an individual, and this study confirmed the importance of an educational intervention to increase these Knowledge attitude baseline (KAB) scores regarding infertility to address men's negative contribution to the unpleasant psychosocial effect on the females who suffer the consequences of the culturally entrenched blame and the social stigma attached to it.

A. Interpretation of Findings

During various discussions, while the health education intervention was in progress, it was noticed that some beliefs were so deeply rooted that they did not change. The general belief about fertility problems and the values attached by men to seek treatment for such issues need a longer time to change. Emphasis should probably be adapted in such a way that there is a continuous process of changing the beliefs and values of volunteers. Volunteers sought and found access to health services to accompany their knowledge, attitude, and behaviour, so field research should be added to the health education programme. The programme may be modified to include focus group discussion and individual counselling during the research period.

The study revealed that on things of fertility, a vast majority of men have little or no knowledge. Few had lots of knowledge. This intervention has improved the proportion of men with a good understanding of fertility matters. Therefore, it is possible to introduce some modifications to how the programme is being implemented since the structured programme enabled all the volunteers to gain knowledge. To avoid some negative consequences associated with less knowledge on the subject, it would be helpful to enhance the population's knowledge view of the program so that more volunteers who participate in the study workings may have more knowledge.

B. Implications for Practice

It is important to note that knowledge is one of the critical mediators for implementing new concepts. As the educational intervention has improved the understanding of the studied men, it is assumed that it is possible to change the situation through the prompting effect of knowledge on health-seeking behaviour and the impact of expertise on attitude. Therefore, the study has shown that educational interventions can be easily implemented as an adjunct to help change the situation by improving married men's knowledge, attitude, and health-seeking behaviour in the study area. Educational intervention may reduce delays in seeking appropriate care for some men. Nevertheless, men with deeply rooted negative attitudes might still deter their wives from seeking care. Although in Ethiopia, the decision-making power rests with the males, it is worth noting that educational intervention could enhance the husband's ability to make decisions wisely.

The study implies that the high prevalence of childlessness and primary male factor in infertility in the study area and the lack of knowledge and negative attitude of men towards infertility demand the integration of topics related to reproductive health, including infertility, in the regular health education programs provided for the community in the study area. Such programs need to be intensified as the present intervention has relatively improved the study participants' knowledge, attitude, and health-seeking behaviour. Moreover, further studies are required to develop a robust educational package that could consider other study participants' sociodemographic characteristics and their reproductive health history and knowledge. The study has also indicated the need for a collaborative intervention between the health and other

concerned bodies, including religious institutions and media, to increase the accessibility of different types of modern health services for infertile couples.

5. Conclusion

Study investigators concluded that providing educational interventions regarding infertility, its treatment, and the legal and social frameworks related to infertility can enhance men's knowledge, attitude and health-seeking behaviour in Ede and probably men in other parts of Africa. This new knowledge can also bring other benefits, such as enhancing the decision-making status of women and increasing gender equity in predominantly patriarchal societies. Overall, the study supports the research hypothesis that in African societies, men are also in need of knowledge on infertility, its treatment, the legal and social frameworks, and the implications of HIV in their fertility wishes. If knowledge is provided, men's attitudes could be changed, and they can support their wives, and the couple could be able to make an informed decision to seek infertility treatment.

Male factor accounts for 20–30% of infertility but contributes to 50% of all couples' inability to have children. Men usually do not consider themselves responsible for childlessness and also do not play a big role in the investigations and treatment of infertility. After conducting a needs assessment, using key stakeholder meetings and Focus Group Discussions, we developed a package of educational interventions to improve married men's knowledge, attitude, and health-seeking behaviour on infertility. The educational intervention was tailor-made to suit various characteristics of married men. Village health workers delivered the educational intervention to participants' homes. The study found that married men want to know more about infertility and its burden. It is possible to improve the knowledge, attitude, and health-seeking behaviour of married men using village health workers.

This study was conducted in Osun state, and it included 163 married men. The study revealed that most men and their wives needed more knowledge and a right attitude towards the concept of infertility. They also have poor health-seeking behaviour on infertility treatment. The study identified the need for educational intervention on infertility for men and their wives. Furthermore, the study found that the duration of the marriage and the educational status of the men were some of the factors influencing these three constructs, and interventions should be taken into account.

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