

Breaking the Silence: Uncovering Factors Delaying Timely Initiation of Fertility Treatment among Infertile Couples

Sri Raghavi Vasudevan, Mohanraj Bhuvaneshwari*

Department of Social Sciences, School of Social Sciences and Languages, Vellore Institute of Technology, Vellore, India

Received April 2, 2024; Revised May 31, 2024; Accepted June 21, 2024

Cite This Paper in the Following Citation Styles

(a): [1] Sri Raghavi Vasudevan, Mohanraj Bhuvaneshwari, "Breaking the Silence: Uncovering Factors Delaying Timely Initiation of Fertility Treatment among Infertile Couples," *Universal Journal of Public Health*, Vol. 12, No. 3, pp. 600 - 608, 2024. DOI: 10.13189/ujph.2024.120317.

(b): Sri Raghavi Vasudevan, Mohanraj Bhuvaneshwari (2024). *Breaking the Silence: Uncovering Factors Delaying Timely Initiation of Fertility Treatment among Infertile Couples*. *Universal Journal of Public Health*, 12(3), 600 - 608. DOI: 10.13189/ujph.2024.120317.

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Abstract Infertility is a prominent concern, particularly in patriarchal societies such as India, that imposes considerable strain on couples seeking natural conception. However, medical advancement in Assisted Reproductive Technology (ART) helped these couples achieve their aspirations of becoming parents through biological conception. Yet, procrastination in seeking assistance from a healthcare practitioner, particularly in women over the age of 35, amplifies the likelihood of remaining infertile. This study explores the barriers associated with timely initiation of fertility treatment among infertile couples using a qualitative approach. Employing the purposive sample technique, this study included 19 individuals from a private reproductive clinic in Chennai. Semi-structured interviews were conducted to gather detailed case narratives from the participants, and the data were analyzed using content analysis. Four main categories were discerned through content analysis: social challenges, accessibility challenges, psychological hurdles, and lack of work-life balance. The current study discovered that major barriers to fertility treatments include perceived stigma, lack of spouse cooperation, financial burden, geographical barriers, fatalistic approach, increased optimism, work commitments, and time constraints. This study can assist health educators, physicians, policymakers, and psychologists in recognizing and implementing appropriate measures. Additionally, it may help couples recognize the importance of prompt intervention.

Keywords Infertility, Treatment Delay, Fertility Treatment

1. Introduction

Most adults consider parenthood the pinnacle of their life goals [1]. However, certain couples were unable to achieve their aspiration of becoming biological parents due to infertility [2]. Infertility is a medical condition affecting the reproductive system characterized by the inability to conceive a viable pregnancy following at least 12 months of consistent, unprotected vaginal intercourse [3].

Certain geographical areas, such as specific parts of Asia, Africa, and Europe, have an exceptionally high prevalence of infertility [4]. A report from the World Health Organization (WHO) reveals that 25% of couples in developing nations experience infertility [5]. Among the 60–80 million couples worldwide facing infertility annually, approximately 15-20 million, or a quarter, reside in India exclusively. According to the National Family Health Survey (NFHS IV), the prevalence of primary infertility in India was estimated to be 17.9% based on the "age but no birth" criteria [6].

Existing literature indicates that the condition of involuntary childlessness is profoundly distressing and emotionally straining for individuals aspiring to establish a

family [7,8,9]. Although medical advancement in Assisted Reproductive Technology (ART) has helped these couples achieve their aspirations of becoming parents through biological conception, a considerable proportion of couples do not seek medical advice or proceed with infertility treatment due to various reasons [10]. Identifying the specific facets of infertility that provide significant barriers and hinder individuals' inclination to pursue treatment is of the utmost importance in mitigating the psychological distress endured by couples facing infertility.

There are various treatment options available for infertility in India, offered by both traditional and biomedical service providers [11]. According to current literature, sometimes the treatment procedure can lead to the emergence of impulsive behaviours, depression, incompetence, a sense of helplessness, anxiety, and negative self-beliefs. These issues may arise before, during, and even after eventual treatment failures [12,13]. Occasionally, these sources of stress, feelings of powerlessness, and mental health issues can be the underlying cause for the delay or discontinuation of medical treatment [10].

Studies have identified several significant barriers to accessing reproductive treatment, including advanced age, lower educational attainment, socioeconomic disadvantages, financial constraints, distrust of fertility treatments, and concerns about potential side effects [14,15,16]. The most prominent obstacle found was the geographical location and the financial burden of the treatment [17]. However, financial constraints are not always the main barrier to receiving fertility treatment. Even in countries where fertility treatment is reimbursed by national health plans, individuals often fail to initiate treatment or discontinue treatment before achieving their desired outcomes [18]. In contrast, research conducted by Cebert-Gaitors *et al.* [19] stated that factors such as strong social support, heightened aspirations for parenting, and comprehensive reproductive health education serve as facilitators for fertility treatment, despite the presence of possible obstacles.

Modern couples aim for parenthood in their early to mid-30s [20]; however, conditions like infertility and the barriers to seeking treatment further delay childbearing and reduce treatment outcomes [21].

Currently, there is limited study on the time taken to obtain a medical diagnosis for infertility, despite the recognized importance of timely diagnosis [22,23]. Thus, it is crucial to gain a deeper understanding of the attitudes and reasons behind the delays in seeking fertility treatment among infertile couples. By utilizing qualitative methods, this study intends to unravel the intricate reasons behind delays in fertility treatment, providing a comprehensive perspective that can inform targeted interventions. Ultimately, this research is poised to contribute significantly to the improvement of support systems and accessibility, aiming to alleviate the psychological distress associated with infertility and facilitate timely initiation of

treatment.

1.1. Aim of the Study

The present study aimed to understand the challenges encountered by infertile couples that hinder the prompt commencement of fertility treatment using qualitative methods.

2. Materials and Methods

2.1. Study Design

This research on primary infertile couples was conducted between April 2023 and May 2023. A qualitative design was employed to investigate and offer a more profound understanding of real-world issues. The qualitative technique enables a more comprehensive examination of the data and allows researchers to obtain subjective insights into social phenomena [24]. This study explores the barriers associated with the timely initiation of fertility treatment among infertile couples using a qualitative approach.

2.2. Study Participants and Sampling

The qualitative data was gathered from nineteen participants at a private reproductive clinic in Chennai. The researcher employed the purposive sampling approach to recruit participants. The selection of participants was based on specific inclusion criteria, which included those with primary infertility for a duration exceeding 1 year, individuals with no other medical issues, and individuals who expressed a willingness to participate. Participants with secondary infertility and not consent to participate were excluded.

2.3. Data Collection and Technique

The participants were studied at a subjective level through in-depth, semi-structured, face-to-face interviews. This research study collected data from 8 couples, constituting 16 participants, through couple-based interviews. Additionally, data from three individual women were gathered through individual interviews. Individual interviews were conducted to address potential reticence among participants in sharing sensitive information in the presence of their spouses, which could lead to the withholding of pertinent data. Therefore, both individual and couple-based interviews were conducted to mitigate response bias. However, the data obtained from individuals and couples revealed similar information, and no new themes emerged. Data collection was concluded after conducting a third individual interview due to data saturation. The questions for the participants were designed according to the study topic and the findings from

the literature review. The implementation of two pilot interviews improved the question guide. The first author (SR) conducted all the interviews. Participants' identities were not gathered during the interview. Pseudonyms were employed to conceal the true identities of the participants. The participants were instructed to explain their attitude towards treatment, barriers encountered, and factors contributing to delayed clinical appointments. The interview questions are displayed in Table 1. The researcher posed relevant leading questions such as "Could you provide further elaboration?" and "Could you please explain, as I am interested in hearing more specific details on this matter?" to gain an extensive understanding of their viewpoints. Due to the potential impact of interview dynamics and participant expectations on data collection, every effort was made to cultivate an empathetic rapport that encouraged interviewees to openly share their experiences. The data collection was limited to 19 participants due to reaching data saturation and two further interviews were undertaken to validate the state of data saturation. The stopping criterion was used to conclude data collection once every level of a code had been extracted, and no new concepts or themes had emerged to extend or add to the established codes. The duration of the interviews varied between 20 and 30 minutes depending on the information provided by the participants. Only field notes were employed to document the fundamental concepts and emergent themes during the interview, in adherence to the organization's strict prohibition on video and audio recordings. The interview formally concluded with the question, "Is there anything else you'd like to say?". To minimize potential interviewer bias, a maximum of three in-depth interviews were conducted each day. The present work conforms to the Standards for Reporting Qualitative Research (SRQR) checklist as per the EQUATOR criteria for qualitative research [25].

Table 1. Samples of Interview Questions

Questions
1. What prevented you from seeking treatment at a fertility center?
2. How long did it take you to visit a fertility center following your marriage?
3. How do you feel about fertility treatments?

2.4. Participants Description

The demographic and clinical data collected from participants are presented in Table 2.

2.5. Data Analysis

The data was analyzed using the qualitative content analysis techniques developed by Graneheim and Lundman [26]. The researchers thoroughly reviewed the transcribed interviews umpteen times and found the meaningful segments (statements derived from the

subjects' responses). Subsequently, a code was allocated to each condensed significance, symbolizing the participants' expressions more conceptually. Ultimately, comparable codes were organized into subcategories, and categories were established through the process of induction. The analyses were manually conducted on the computer using MS Word for easy modification of text and tables. The researcher chose to use a computer for data processing instead of handwritten materials. This allowed for transparent data handling and facilitated the sharing of the analytical processes with the co-author.

Table 2. Participants' demographic and clinical characteristics

Demographic and clinical characteristics	n (%)
Age (Range)	23-37
Gender	
Male	8 (42.10%)
Female	11 (57.89%)
Educational Qualification	
Graduates	17 (89.47%)
Non-Graduates	2 (10.52%)
Occupational status	
Employed	15 (78.94%)
Unemployed	4 (21.05%)
Family dynamics	
Joint family	7 (36.84%)
Nuclear Family	12 (63.15%)
Causes of Infertility	
Male Factor	6 (31.57%)
Female Factor	9 (47.36%)
Mixed	3 (15.78%)
Unexplained	1 (5.26%)
Year of involuntary childlessness	
Less than 2 years	5 (26.31%)
2-4 years	9 (47.36%)
4-6 years	2 (10.52%)
More than 6 years	3 (15.78%)

2.6. Rigors

Trustworthiness was established by employing the characteristics of confirmability, credibility, dependability, and transferability [27]. Confirmability was improved by the use of bracketing and maintaining a transparent audit document for every interview. To establish credibility, the confirmation of participation was carried out by allowing respondents to review the researcher's notes and interpretation at the end of the interview. Dependability was ensured by including other researchers in the analysis of the data. In order to improve the generalizability of the study findings, participants were chosen from diverse demographic backgrounds.

The researchers presented qualitative data in English

that accurately reflected the original Tamil words as uttered by the participants. Every possible attempt was made to preserve the original meaning of the participants' comments as expressed in the Tamil language.

2.7. Ethical Considerations

The research adheres to the protocols established by the International Committee of Medical Journal Editors (ICMJE) and the American Psychological Association (APA). This work constitutes a part of the author's doctoral study. The Vellore Institute of Technology's Institutional Ethical Committee for Studies on Human Subjects (IECH) has approved (Ref. No. VIT/IECH/XIII/2022/04d) the proposed doctoral research project. Furthermore, the participants were briefed about the research objectives, and their consent was obtained before collecting the data. Participants were informed that they had the option to withdraw their participation in the research at any time. They were also assured that their

personal informations would be kept anonymous during and after the study.

3. Results

The content analysis identified four categories, including social challenges, accessibility challenges, psychological hurdles, and lack of work-life balance, with eight subcategories presented in Table 3. The frequency and percentage distribution of the qualitative data and its subcategories are presented in Table 4. From the table, it can be inferred that the highest number of participants (87%) claimed a lack of work-life balance as a potential barrier to starting fertility treatment on time. Out of 19 participants, the majority of them (57.89%) reported having a positive attitude towards fertility treatment. The results also indicated that respondents waited an average of 3.3 years (39 months) before seeking medical attention and treatment for infertility.

Table 3. Qualitative results from content analysis

Themes	Categories	Subcategories
Barriers to timely initiation of treatment for infertility	Social challenges	<ul style="list-style-type: none"> • Fear of being diagnosed as infertile. • Perceived stigma • Lack of spouse cooperation
	Accessibility challenges	<ul style="list-style-type: none"> • Financial burden • Geographical barriers
	Psychological hurdles	<ul style="list-style-type: none"> • Fatalistic approach • Increased optimism
	Lack of work-life balance	<ul style="list-style-type: none"> • Work commitments and time constraints

Table 4. Frequency and percentage distribution of the qualitative results

Qualitative Results	n (%)
1. Barriers to timely initiation of fertility treatment	
Social challenges	
• Fear of being diagnosed as infertile	6 (31.57%)
• Perceived stigma	12 (63.15%)
• Lack of spouse cooperation	10 (52.63%)
Accessibility challenges	
• Financial burden	9 (47.36%)
• Geographical barriers	7 (36.84%)
Psychological hurdles	
• Fatalistic approach	6 (31.47%)
• Increased optimism	3 (17.34%)
Lack of work-life balance	16 (87%)
2. Attitude towards fertility treatment	
Positive	11 (57.89%)
Neutral	6 (31.57%)
Negative	2 (10.52%)
3. How long did it take you to visit a fertility centre following your marriage?	
Less than 2 years	4 (21.05%)
2-4 years	10 (52.63%)
More than 4 years	5 (26.31%)
Average = 3.3 years (39 months)	

3.1. Social Challenges

Using the content analysis technique by Graneheim and Lundman, it was determined that factors such as partner hesitation, embarrassment, and fear of infertility diagnosis and its aftermath effects potentially influence the decision to seek fertility treatment.

3.1.1. Fear of Being Diagnosed as Infertile

Few individuals (31.57%) expressed a reluctance to face the possibility of infertility, leading to prolonged absences from medical consultations. One of the participants' statements highlighted the fear and apprehension of seeking a medical diagnosis for infertility and its profound impact within the context of a marriage.

"I wasn't ready for the diagnosis. We hadn't been to the doctor in two years because I was afraid that the diagnosis would cause problems in our marriage". (Female, age 27)

3.1.2. Perceived Stigma

63.15% of the participants reported that they were apprehensive about friends and relatives discovering their choice to pursue medical assistance for infertility, which underscores the stigma surrounding reproductive health challenges. From the interview, it was identified that this societal concern delays or deters individuals from seeking timely medical assistance.

"We were scared that friends and relatives would find out about our decision to seek fertility treatment." (Male, age 29)

3.1.3. Lack of Spouse and Family Cooperation

Participants (52.63%) reported familial and social resistance to seeking early intervention for infertility. Societal standards that determine the appropriate timing for medical intervention contributed to delayed treatment initiation.

"We began trying for a child soon after our marriage. Since I was unable to conceive, we assume that one of us may be having problems. Yet, my family and friends stopped us from obtaining treatment, claiming that it was too early." (Female, age 26)

It was claimed by most of the participants that their partner's initial hesitation and embarrassment delayed seeking medical assistance.

"My partner hesitated and felt embarrassed about going to the fertility clinic initially. Consequently, it took longer for us to seek medical help." (Female, age 30)

3.2. Accessibility Challenges

Accessibility challenges emerged as a strong theme when analyzing the factors hindering the timely initiation of medical diagnosis for infertility among couples. The

results emphasize two subcategories: Financial Burden and Geographical Barriers.

3.2.1. Financial Burden

Economic considerations played a pivotal role, with the high cost of fertility treatment and the absence of insurance coverage hindering timely initiation. The financial strain led to prolonged intervals between treatment attempts.

"The cost of treatment is far more than the average middle-class person earns. There are no insurance plans that cover fertility treatment. After our first failure, it took nine months for us to save enough money for our second attempt." (Male, age 34)

3.2.2. Geographical Barriers

The geographical distribution of fertility clinics emerged as a significant barrier. 36.84% of the participants highlighted the difficulty of traveling considerable distances for treatment, which underscores the disparities in accessibility in India.

"Our biggest issue is treatment accessibility. There were no fertility clinics in our area. We traveled to Chennai for this treatment." (Male, age 37)

3.3. Psychological Hurdles

Psychological hurdles have been identified as another factor contributing to the delay in seeking treatment. Two subcategories, the fatalistic approach and increased optimism, have emerged in this regard.

3.3.1. Fatalistic Approach

31% of participants believed that their ability to conceive was predetermined and that there was no available treatment to change this condition. This perspective implies a sense of resignation, accepting that external forces were guiding the outcome of their conception, and that medical intervention was not considered a viable option for altering this predetermined path.

"There is no treatment that will help us get pregnant; everything was predetermined and is happening for a reason." (Female, age 29)

3.3.2. Increased Optimism

It was observed that 17% of participants clung to the psychological optimism of achieving natural conception without pursuing medical intervention, while the remaining 83% of participants did not share this perspective but had suspicions about their reproductive health yet didn't visit the clinic due to other reasons. This influenced their decision to postpone the initial visit to the clinician, reflecting a psychological reluctance to engage in fertility treatments.

"We spent our last 7 years hoping that we would

conceive naturally without any treatment, which delayed our early visit to the clinician." (Male, age 35)

3.4. Lack of Work-Life Balance

87% of the participants stated that they find it difficult to manage ongoing fertility treatment alongside work commitments and time constraints.

"Unlike other treatments, fertility treatment requires daily visits to the clinic. It's hard for us to come because both of us work." (Female, age 28)

4. Discussion

The current study highlights the potential barriers experienced by patients and their partners, especially when it comes to receiving a medical diagnosis for infertility. The study found that respondents waited an average of 39 months before seeking medical attention and treatment for infertility. Even though infertility is typically defined as the inability to get pregnant after a year of regular, unprotected sex, the respondents in this study reported waiting for an average of 3.3 years (39 months) before seeking a medical diagnosis for infertility.

The results indicate that social challenges, accessibility challenges, psychological hurdles, and poor work-life balance all contribute to delays in the timely initiation of treatment.

The most pervasive stigma associated with IVF is the belief that the child born as a result of this procedure "is someone else's and not our own." This study identified that couples delay seeing a doctor out of fear of the reaction of family, friends, and society as a whole and waste their valuable time. Even individuals who seek assistance desire the utmost privacy and confidentiality [28,29]. This demonstrates that the presence of stigma around infertility has been found to have an impact on individuals' adherence to treatment protocols as well as their susceptibility to experiencing psychological distress. The results of this study align with the research conducted by Sambasivam et al. [30], which revealed that experiencing feelings of powerlessness, lack of support, and stigma from family members can contribute to a decline in treatment adherence and result in psychological distress.

It is important to take into account the various legal, social, economic, and cultural constraints that might frequently restrict couples from seeking treatment. Reproductive tourism is an expanding sector that has arisen in response to the increasing number of infertile individuals and reproductive collaborators who seek treatment in another country or cities due to the illegality, unavailability, or high cost of such services in their native nations [31]. The preponderance of fertility clinics and centres in urban areas of India relative to rural regions causes rural residents to postpone their clinical appointments. The lack of accessibility to fertility clinics in

their specific geographic area constitutes an additional significant obstacle to attaining fertility treatment for infertile couples [32].

Furthermore, the financial implications of IVF treatment are noteworthy, particularly for couples who bear the full cost of these procedures, a situation commonly observed in India. In India, the majority of assisted reproductive technologies were predominantly provided by the private sector, primarily in urban metropolitan cities. The cost per treatment cycle, with a take-home baby as low as 20–30%, was estimated to range between Rs. 50,000 and Rs. 75,000 (US \$1,200–1,800). These expenses were exclusive of subsequent obstetric-related costs [33]. IVF becomes significantly more expensive as the woman ages (beyond 40) and the male partner's semen analysis reveals abnormalities [34]. According to the findings of the current study, the financial burden associated with infertility treatment also serves as a key contributing factor for delayed promptitude for early medical intervention. Despite the development of ART 40 years ago, its accessibility remained limited for a significant portion of the middle- and lower-middle-class population in India [35]. Based on the results, it was well understood that not only IVF treatment and its accompanying medications induce psychological distress [36], but the pursuit of this treatment itself places an imposing burden on couples, primarily due to the cost and societal stigma associated with it. The findings of the current study were consistent with the findings of a similar study on US participants [37]. There are still significant gaps and potential areas for improvement in research, program, and policy development related to infertility treatment within health systems. Further investigation is necessary in this domain to effectively tackle and alleviate these concerns while also safeguarding the preservation of reproductive rights [31].

Another significant factor discovered in the qualitative analysis was psychological hurdles, such as increased fatalism and optimism toward natural conceptions. Few participants firmly believe that conception will eventually occur at the right moment. This belief often leads individuals to delay seeking medical intervention or fertility treatments, as they remain hopeful that their desired pregnancy will happen naturally. However, this delay can result in missed opportunities for early diagnosis and intervention, potentially exacerbating the underlying causes of infertility. Public awareness, health education and cognitive restructuring would help these couples understand the necessity of timely intervention and reframe their irrational thoughts [38].

Amidst the prevailing hustling culture, it became apparent that individuals prioritize their professional lives over their personal lives. A significant number of participants, especially working women, have challenges managing their hormonal health and fertility treatment along with their professional responsibilities. Few women stated that they should quit their jobs to do IVF because the procedure necessitates regular clinic visits. This hinders

the prompt commencement of their treatment, particularly when they are the primary breadwinner for their family. The results were consistent with previous research on the effects of infertility on employment [39]. The majority of organizations offer maternity leave and other benefits to their employees. Providing supportive work environments and offering paid leave for IVF treatments, similar to maternity benefits, would enable women to balance their reproductive treatment and professional aspirations [40].

This study on barriers to the timely initiation of fertility treatment in India provides valuable insights into the social, psychological, and logistical challenges faced by infertile couples. This study reiterated previously documented findings in the literature regarding impediments to treatment [10,19] and also produced novel data on the barriers to commencing fertility treatment. Furthermore, the Indian population, one of the previously understudied samples, was examined in this study. It is important to prioritize cultural education among nurses, physicians, and allied health workers to effectively address stigma and resentments surrounding fertility treatment, hence facilitating culturally sensitive and feasible healthcare services. Addressing the financial barriers and enhancing government assistance through subsidies along with services can significantly facilitate patients' access to ART on a broad scale. Screening for psychological problems and facilitating the necessary referral and care may serve as a viable approach to addressing these barriers and providing comprehensive assistance to patients, encompassing both mental and physical well-being.

Although the study has significant strengths, it also has a few limitations. These limitations include the use of a small and self-selected sample, which may have resulted in a disproportionate representation of individuals with either exceptionally positive or negative experiences. Secondly, the sample exhibited a dearth of variety, consisting of heterosexual, primarily infertile individuals. It was also characterized by an inadequate number of male participants and the absence of those who had secondary infertility. Due to the sensitivity of the issue and the challenges in recruiting volunteer participants, it was not feasible to include a more varied sample in this study. Finally, the generalizability of the results is constrained, as is the case with all qualitative investigations.

5. Conclusions

The current study highlighted the barriers that prevent infertile couples from seeking medical interventions. The results suggest that social challenges, accessibility challenges, psychological hurdles, and poor work-life balance are significant barriers to the timely initiation of fertility treatment. The identified categories highlighted the need for a holistic approach involving healthcare professionals, policymakers, and society to facilitate timely intervention and reduce the psychosocial burden on

couples seeking fertility treatments.

Conflict of Interest

The authors of this article declare no conflict of interest.

Financial Support and Sponsorship

No external fundings, agencies and support are associated with this study.

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