

Perceptions of Couples and Healthcare Providers on the Cost of Fertility Treatment: A Mixed-Methods Study from Two Tertiary Facilities in Rivers State, Nigeria

Confidence Echeta^{1*}, Makuachikwu Gabriel Ojide², Amininiye Manuel¹

¹Department of Nursing Science, Africa Centre of Excellence in Public Health and Toxicological Research (ACE-PUTOR), University of Port Harcourt, Port Harcourt, Rivers State, Nigeria.

²Department of Economics and Development Studies, Alex Ekwueme Federal University Ndufu-Alike, Ebonyi State, Nigeria.

*Correspondence: confidence_echeta@uniport.edu.ng; confy.echet12@gmail.com

Abstract

Background: High fertility treatment costs remain a major barrier to accessing reproductive healthcare in low- and middle-income countries such as Nigeria. Understanding the perceptions of couples and healthcare providers regarding these costs is important for developing equitable fertility care policies.

Objectives: This study examined perceptions of couples and healthcare providers on the cost of fertility treatment, its influence on access and decision-making, and factors contributing to high treatment costs in two tertiary fertility facilities in Rivers State, Nigeria.

Methods: A descriptive cross-sectional mixed-methods design was adopted. Data were collected from 276 respondents using structured questionnaires administered at the University of Port Harcourt Teaching Hospital (UPTH) and Noble Medical Consultants and Fertility Hospital (NMCFH) between November 2025 and March 2026. Six purposively selected participants participated in in-depth interviews. Quantitative data were analysed using descriptive statistics, while qualitative data were analysed thematically.

Results: Couples perceived fertility treatment as largely unaffordable, with medication expenses, repeated treatment cycles, and out-of-pocket payments identified as major financial burdens (mean ≥ 3.8). High costs discouraged treatment continuation, delayed care-seeking, and limited access to quality services. Healthcare providers agreed that treatment costs exceeded patients' income levels and contributed to poor treatment compliance, delayed presentation, and discontinuation of care. Major cost drivers included fertility drugs, diagnostic tests, IVF and ICSI procedures, inflation, exchange rate fluctuations, and dependence on imported equipment.

Conclusions: Financial barriers significantly limit access to fertility treatment in Rivers State, Nigeria. Subsidised fertility services, insurance coverage for assisted reproductive technologies, and local production of consumables are recommended to improve affordability and equitable access.

How to Cite this Article

Echeta, C., Ojide, M. G., & Manuel, A. (2026). Perceptions of Couples and Healthcare Providers on the Cost of Fertility Treatment: A Mixed-Methods Study from Two Tertiary Facilities in Rivers State, Nigeria. *Journal of Nursing, Midwifery and Allied Health Sciences*, 4(2), 114–120.

<https://doi.org/10.54117/jnmahs.v4i2.95>

Keywords: Infertility treatment cost; affordability; assisted reproductive technology; financial burden; access to care; Nigeria.



Abbreviation	Full Term
ART	Assisted reproductive technology
ICSI	Intracytoplasmic sperm injection
IUI	Intrauterine insemination
IVF	In vitro fertilization
LMICs	Low- and middle-income countries
NHIA	National Health Insurance Authority
NMCFH	Noble Medical Consultants and Fertility Hospital
SD	Standard deviation
UPTH	University of Port Harcourt Teaching Hospital
WHO	World Health Organization

1. Introduction

According to the World Health Organization (WHO), infertility is defined as the inability to conceive after 12 months of regular unprotected sexual intercourse. It is a global health issue affecting approximately one in six adults of reproductive age

worldwide (WHO, 2024) Infertility, according to ASRM, is a reproductive system disorder (ASRM, 2023); ESHRE recognises the severe psychosocial consequences for women in societies where fertility is associated with identity (ESHRE, 2022).

Infertility is prevalent in different geographic locations. In the United States, it affects around 15% of couples, and in the United Kingdom, it affects one out of every seven couples (Chowdhury & Patel, 2022). Sub-Saharan Africa suffers infertility issues in up to 20% - 30% of couples, primarily due to sexually transmitted diseases, abortions, and lack of reproductive care facilities (Ombelet, 2022; Okonofua, 2023). The problem is common in Nigeria, and infertility becomes worse due to the stigma surrounding the disease, particularly for women.

Current interventions used to address infertility include lifestyle modification and ovulation induction, as well as more advanced assisted reproductive technologies (ART) such as in-vitro fertilisation (IVF), intracytoplasmic sperm injection (ICSI), intrauterine insemination (IUI), gamete donation, and surrogate pregnancy. Nevertheless, affordability remains a major impediment to accessing fertility care. For example, in Nigeria, the average cost of a single cycle of IVF is approximately ₦2.1 million, which far exceeds the financial capacity of many middle- and low-income couples, especially because most payments are made out-of-pocket due to limited insurance coverage for reproductive health services (Ugwuanyi, 2024; Adebayo *et al.*, 2022).

Although more facilities in Nigeria offer fertility services, especially those located within cities or tertiary facilities, there still seems to be an obvious gap between visits to fertility clinics and treatments initiated by patients. The current study has been inspired by the observation made by the researcher who noticed that only two out of six couples referred to fertility consultations pursued treatment at two Port Harcourt facilities. This observation can be explained by the presence of financial barriers that play an important role in patient attrition, a tendency well documented in other studies (Akosu *et al.*, 2024; Dyer *et al.*, 2023).

However, very little information exists on the perceptions of both couples and healthcare providers on the cost implications of infertility treatment in the Nigerian environment, particularly within Rivers State, even though numerous pieces of literature have been published regarding the prevalence, causes, and management of infertility on a global scale. In order to bridge this knowledge gap, this study conducted a survey of couples and healthcare providers at UPTH and NMCFH in relation to their perceptions concerning the cost implications of infertility treatment.

2. Methods

2.1 Study Design

This study adopted a descriptive cross-sectional explanatory sequential mixed-methods design. The design enabled the collection of quantitative data through structured questionnaires, followed by qualitative data through in-depth interviews to further explain and enrich the quantitative findings. Quantitative data were collected first, after which qualitative data were gathered to provide deeper understanding of the numerical results.

2.2 Study Setting

The data for the study was gathered from two institutions in Obio/Akpor Local Government Area of Rivers State, Nigeria, including (i) University of Port Harcourt Teaching Hospital (UPTH), a 782-bed federal tertiary teaching hospital with a special Assisted Conception Unit in its Department of Obstetrics and Gynaecology, which sees 300-900 fertility patient attendance each quarter; and (ii) Noble Medical Consultants and Fertility Hospital (NMCFH), a private specialized institution providing assisted reproductive technology services such as IVF, ICSI, egg donation, and gestational surrogacy among others, seeing around 200-600 fertility patient attendance each quarter. Data were gathered between November 2025 and March 2026.

2.3 Population and Sampling

The study population consisted of all clients receiving fertility services in two identified healthcare facilities and all the medical personnel providing fertility services to the clients in the respective facilities throughout the research period. Considering the total number of patients and staff working within the study area, an estimated study population of 1,042 participants was obtained, comprising 700 couples and 30 staff from the UPTH, as well as 300 couples and 12 staff from the NMCFH.

For the quantitative component of the study, the required sample size was calculated based on the Taro Yamane formula

$$n = \frac{N}{1 + Ne^2}$$

- Whereas $N = 1,042$ and $e = 0.05$. This resulted into a minimum sample size of 289 respondents. Stratified proportionate random sampling design was used whereby sample sizes were allocated proportionately based on the four study strata. Hence, there were 194 couples in UPTH, 83 couples in NMCFH, 9 employees in UPTH, and 3 employees in NMCFH.
- In the qualitative part of this research, six respondents including three health care providers and three couples seeking fertility services were purposefully chosen for interview. The number of interviews was increased up to thematic saturation where no new theme emerged from the discussion.
- For inclusion, the couples must be actively using fertility services, which includes consultation, treatment, or follow-up services, in any of the two facilities under study and were willing to participate in the study by giving their consent. Whereas health care providers included those providing fertility services and having worked in the fertility clinics for six months and above.

2.4 Data Collection Instruments

The survey questionnaire ('Perceptions of Couples and Healthcare Providers on the Cost of Fertility Treatment in UPTH and NCMFH') was structured into 50 items by the researcher and pre-tested for face validity by two independent research experts and supervisors of the study. Section A included questions on sociodemographic data, while Section B examined perceptions on the cost of fertility treatment, influence on decision making, accessibility, and factors that determine the cost using a four-point Likert scale (1 = Strongly Disagree; 4 = Strongly Agree). The reliability was confirmed by splitting the pilot test group of 32 respondents who were not part of the study area to produce a coefficient of 0.86, which is higher than the minimum of 0.60. The qualitative data collection tool was the interview guide consisting of five open-ended questions regarding the experiences of the health providers and couples on fertility treatment cost.

2.5 Data Analysis

Quantitative data was analyzed using IBM SPSS version 24 software. Measures of central tendency (mean and standard deviation) were calculated for all Likert scale data. An acceptance criterion of mean ≥ 2.50 was applied to determine levels of agreement.

Qualitative data was directly transcribed and analyzed using deductive thematic analysis approach of Braun and Clarke (2006). The transcripts were independently coded and checked for accuracy by three research analysts. The codes were grouped under themes consistent with the measures used in quantitative section.

2.6 Ethical Considerations

Ethical approval was sought from all institutions involved. All participation was entirely voluntary with written informed consent from all participants. Anonymity of all data collected was maintained throughout the study. Withdrawal of participants was allowed without penalty at any time.

3. Results

3.1 Response Rate and Participant Characteristics

From the questionnaires distributed, a total of 280 (96.9%) were recovered, and 276 (95.5%) were fully completed. The sample was predominantly made up of females (66.7%), who were married (67.4%), and their ages ranged from 31 to 40 (38.8%), in line with the peak reproductive age group (Table 1). From among the nine (9) healthcare professionals, most belonged to the cadre of doctors (55.6%), and 66.7% had more than six years' experience.

Table 1: Sociodemographic Characteristics of Respondents (N = 276)

Characteristic	Frequency	Percentage (%)
Age (years)		
20–30	89	32.3
31–40	107	38.8
41–50	44	15.9
≥ 51	36	13.0
Sex		
Male	92	33.3
Female	184	66.7
Marital Status		
Married	186	67.4
Single	82	29.7
Widowed	8	2.9
Healthcare Provider		
Cadre (n = 9)		
Nurse	2	22.2
Midwife	2	22.2
Doctor	5	55.6
Years of Service (n = 9)		
1–5 years	3	33.3
≥ 6 years	6	66.7

3.2 Perceptions of Couples on the Cost of Fertility Treatment

Most variables associated with cost perceptions surpassed the criterion mean of 2.50, reflecting the widespread perception that fertility treatment is expensive and financially burdensome. Respondents strongly disagreed that fertility treatment was affordable for their household income (Mean = 1.1 ± 0.32). Making payments for fertility services was unanimously viewed as challenging (Mean = 4.00 ± 0.00), and respondents agreed that fertility treatment placed a serious financial burden on their families (Mean = 4.00 ± 0.00). High treatment costs were perceived as barriers to continuing treatment (Mean = 3.9 ± 0.32), delayed access to treatment (Mean = 3.9 ± 0.31), limited the number of affordable treatment cycles (Mean = 3.8 ± 0.41), and hindered access to quality fertility care (Mean = 3.9 ± 0.32). Respondents also agreed that they would continue treatment if costs were reduced (Mean = 4.00 ± 0.00). However, respondents disagreed that the benefits of fertility treatment justified the costs paid (Mean = 2.1 ± 0.99) (Table 2).

Table 2: Perceptions of Couples on the Cost of Fertility Treatment

Item	Mean	SD
The cost of fertility treatment is affordable for my household income	1.1	0.32
High treatment cost discourages me from continuing treatment	3.9	0.32
Paying for fertility treatment places a serious financial burden on my family	4.0	0.00
Treatment cost limits the number of cycles I can afford	3.8	0.41
Fertility treatment costs cause delays in seeking care	3.9	0.31
Out-of-pocket payment makes treatment difficult to sustain	4.0	0.00
Fertility drug costs significantly increase overall treatment expenses	3.8	0.42
I would continue treatment if costs were reduced	4.0	0.00
The benefits of fertility treatment justify the cost paid	2.1	0.99
Treatment cost affects my access to quality care	3.9	0.32

Decision rule: Mean ≥ 2.50 = Agreement; SD = Standard Deviation

3.3 Perceptions of Healthcare Providers on the Cost of Fertility Treatment

The healthcare professionals showed excellent concordance regarding the prohibitive nature of the cost of fertility treatments compared to patients’ income levels (Mean = 4.0 \pm 0.00). Cost emerged as an important factor for cessation of treatment (Mean = 3.9 \pm 0.32), limiting access (Mean = 3.9 \pm 0.32), as well as adherence to treatment regimens (Mean = 3.9 \pm 0.32). It was also acknowledged that cost considerations affected clinical decision-making (Mean = 3.7 \pm 0.48), patients raised affordability issues (Mean = 3.9 \pm 0.32), and that lack of health insurance worsened their financial position (Mean = 3.9 \pm 0.32). Lowering the cost of treatment was likely to enhance success (Mean = 3.9 \pm 0.32) (Table 3).

Table 3: Perceptions of Healthcare Providers on the Cost of Fertility Treatment (n = 9)

Item	Mean	SD
Cost of treatment is high relative to patients’ income levels	4.0	0.00
Financial constraints are a major reason patients discontinue treatment	3.9	0.32
Treatment costs limit patient access to care at UPTH/NMCFH	3.9	0.32
High costs negatively affect patient compliance with treatment plans	3.9	0.32
Fertility treatment costs influence clinical decision-making for patients	3.7	0.48
Patients frequently express concern about treatment affordability	3.9	0.32
Absence of insurance coverage increases the financial burden on patients	3.9	0.32
High costs contribute to delayed presentation for fertility treatment	3.9	0.32
Treatment cost affects patient satisfaction with care	3.3	0.82
Reducing costs would improve treatment uptake and outcomes	3.9	0.32

3.4 Impact of Cost on Decision-Making

Financial factors were unanimously listed as influential factors in the start of fertility treatment (mean = 4.0 \pm 0.00), in determining how many cycles couples would be ready to undergo (mean = 4.0 \pm 0.00), whether they would opt for advanced treatment techniques (mean = 4.0 \pm 0.00), and whether couples would continue with treatment when its cost is lower (mean = 4.0 \pm 0.00). The choice of fertility treatment, postponement of treatment, and changes in fertility treatment methods were also found to be influenced by financial factors (mean = 3.9 \pm 0.31, mean = 3.9 \pm 0.32, and mean = 3.8 \pm 0.42, respectively) (Table 4).

Table 4: Impact of Costs on Couples’ Decision-Making

Item	Mean	SD
Cost influences my decision to start treatment	4.0	0.00
Financial considerations determine the type of treatment I choose	3.9	0.31
Cost affects how long I continue fertility treatment	3.7	0.47
High costs influence my decision to postpone treatment	3.9	0.32
Cost affects the number of treatment cycles I am willing to attempt	4.0	0.00
Financial constraints influence switching between treatment options	3.8	0.42
Cost affects joint decision-making between my partner and me	3.7	0.47
Cost concerns influence my willingness to seek advanced procedures	4.0	0.00
Financial burden affects overall satisfaction with treatment decisions	3.8	0.41
Reduced costs would positively influence my decision to continue/repeat treatment	4.0	0.00

3.5 Couples’ Level of Access to Fertility Treatment

Although fertility treatments were found to be available when necessary (mean = 3.7 \pm 0.47), access to the same was generally found poor (mean = 1.9 \pm 0.31), clearly pointing to a large discrepancy between the availability of the service and its actual accessibility at an affordable level. Access challenges posed by costs incurred in treatment (mean = 3.6 \pm 0.95) and costs of fertility medications (mean = 3.8 \pm 0.42) seemed to be the biggest deterrents. While structural issues such as distance to the fertility clinic (mean = 3.1 \pm 0.31), availability of specialists (mean = 3.4 \pm 0.49) and hospital infrastructure (mean = 3.1 \pm 0.57) followed a relatively secondary role, waiting time for appointments was not found to be an important access barrier (mean = 2.0 \pm 0.47) (Table 5).

Table 5: Couples' Level of Access to Fertility Treatment

Item	Mean	SD
Fertility treatment services are readily available when I need them	3.7	0.47
Cost of fertility treatment limits my access to services	3.6	0.95
Distance to the treatment centre affects my access to care	3.1	0.31
Waiting time for appointments affects access to services	2.0	0.47
Availability of fertility specialists influences my access to treatment	3.4	0.49
Cost of fertility drugs affects my ability to access treatment	3.8	0.42
Information about fertility services is easily accessible to me	3.2	0.42
Hospital environment and service delivery facilitate access to treatment	3.1	0.57
Financial support or subsidies would improve my access to treatment	3.2	0.79
Overall, I have adequate access to fertility treatment services	1.9	0.31

3.6 Factors Influencing the Cost of Fertility Treatment

Use of fertility medications (mean = 4.0 ± 0.00), laboratory tests (mean = 4.0 ± 0.00), advanced reproductive procedures (IVF and ICSI) (mean = 4.0 ± 0.00), and macroeconomic issues (inflation and exchange rate) (mean = 4.0 ± 0.00) were uniformly recognized as major sources of cost. The number of treatment cycles (mean = 3.9 ± 0.32), lack of health insurance (mean = 3.9 ± 0.32), and reliance on imported equipment and consumables (mean = 3.9 ± 0.32) were also unanimously recognized as major sources of cost. Hospital fees (mean = 3.2 ± 0.42) and specialist professional fees (mean = 3.1 ± 0.32) formed part of the cost components but at a moderate lower level of magnitude (Table 6).

Table 6: Factors Influencing the Cost of Fertility Treatment (N = 276)

Item	Mean	SD
Cost of fertility drugs significantly increases overall treatment costs	4.0	0.00
Laboratory investigations and diagnostic tests contribute substantially to costs	4.0	0.00
Use of advanced ART (IVF, ICSI) increases treatment costs	4.0	0.00
Number of treatment cycles required significantly influences total costs	3.9	0.32
Professional fees charged by specialists increase overall costs	3.1	0.32
Hospital service charges (theatre use, admission) contribute to high costs	3.2	0.42
Lack of health insurance coverage increases the cost burden	3.9	0.32
Imported medical equipment and consumables increase treatment costs	3.9	0.32
Financial-constraint-related delays increase overall fertility care costs	3.2	1.00
Inflation and exchange rate fluctuations influence treatment costs	4.0	0.00

3.7 Qualitative Findings

Qualitative interviews with healthcare providers corroborated and enriched the quantitative findings, with three major themes emerging:

Theme 1: Fertility Medications as the Primary Cost Driver

In addition, drug prices were seen as the biggest fluctuating factor affecting treatment costs. For example, one participant explained, "*It is costly, yes... every month drug prices are going very high*" (Participant 1). Drug prices were related to instability in the economy by another participant, who said, "All drugs are imported.... You know how many dollars there are." (Participant 2).

Theme 2: Technological and Operational Infrastructure Costs

The high cost of running a specialized fertility lab was one concern expressed by many of the providers: "*You must have reliable power supply because your incubator should not stop... You need embryologists all the time*" (Participant 3). The importation of certain consumables as well as the specialized expertise necessary for servicing equipment is an inevitable cost factor that has to be borne by patients.

Theme 3: Patient Financial Distress and Determined Treatment-Seeking

However, despite these high costs, the interviewees found that many couples who had a high desire for having children would stick it out regardless of how financially difficult it was: "*No matter whether there's any money or not, you see that they take out a loan... It's like an obligation*" (Participant 1). This was in comparison to the fact that people on minimum wages could not afford fertility treatments: "Minimum wage? Probably not..." (Participant 3).

4. Discussion

4.1 Cost as a Universal Barrier to Fertility Treatment

The most important insight from this study relates to the widespread opinion, shared between couples and healthcare professionals, about fertility treatment being unaffordable in this study context. In this case, there is substantial empirical support in the sub-Saharan Africa and other LMIC literature regarding out-of-pocket payments as the most significant barrier to ART access (Dyer *et al.*, 2023; Mackay *et al.*, 2023; Ombelet, 2022). It should be noted that healthcare professionals' absolute

consensus that the price of treatment is higher than their patients' incomes (mean = 4.00, SD = 0.00) indicates the structural problems of this type of financing for the target population.

As per the Health Belief Model, barriers represent perceptions that can affect a person's decision to receive or stop a treatment. Indeed, once the cost of a procedure outweighs its perceived benefits, people tend to stop receiving it (Becker, 1974). The hesitation among couples about whether it would be worthwhile for them to invest in treatment (mean = 2.1) implies that several failures could make patients feel the same way and thus drop the treatment.

4.2 Financial Barriers and Decision-Making

Financial considerations appear to impact every single step in fertility treatment decision-making, ranging from whether treatment is sought to whether the couple is willing to pursue more complicated procedures. These results echo earlier studies conducted in other developing countries such as Nigeria and Ghana (Dyer & Patel, 2025; Damalie *et al.*, 2025; Okonofua, 2023). The selection of ineffective treatments due to high costs not only directly affects the treatment outcome but will eventually translate into higher costs if repeat cycles become necessary.

The discovery that financial issues affect the couple's decision-making process adds the psychological component which is typically missing from previous cost-of-care studies. Financial difficulties can lead to increased marital conflicts and a decrease in decision-making ability (Greil *et al.*, 2010), and it seems that the cost of fertility treatment affects the couple not just in the medical setting but at home as well.

4.3 The Availability–Access Paradox

The comparison between relatively moderate scores for the availability of services (mean = 3.7) and extremely low scores for accessibility (mean = 1.9) highlights what might be called the availability–access paradox, whereby the presence of services is insufficient for their use by those who need them most. This trend, which is consistent with the Inverse Care Law, has been repeatedly reported in reproductive health literature from sub-Saharan Africa (Ombelet & Campo, 2022; Mesfin *et al.*, 2025). Importantly, waiting time did not emerge as a major problem in this study compared to other countries where public patients often face extended waiting lists. This may be because only individuals who can afford the basic treatment costs seek medical care.

4.4 Multifactorial Cost Drivers

Identification of the cost factors such as medication costs, diagnostic tests, and ART process itself, all rated at the highest level of 4.00, corroborates findings from other research conducted internationally and regionally (Dyer *et al.*, 2023; Mackay *et al.*, 2023; KFF, 2024). In the case of Nigeria, however, there is an additional factor to consider in the combination of importation of consumables and economic instability: inflation rates and foreign currency exchange fluctuation, which are also rated at 4.00 ± 0.00 , increasing the already high costs of the procedure, which couples find difficult to cope with financially.

Data from provider interviews give specific insight into the costs associated with running the business: continuous electricity supply, specialist embryologists, and imported lab reagents are examples of costs incurred by the clinics and must therefore be passed on to the patient despite the absence of state-sponsored subsidies. It is clear that, at least partly, this accounts for why the providers cannot reduce costs despite their understanding of the patient's financial situation.

4.5 Sociodemographic Determinants of Cost Perception

These associations between age, gender and couples' cost perceptions are also reflective of larger social-economic phenomena associated with infertility treatments in Nigeria. The differences by gender can be explained by differential distribution of economic responsibilities in managing infertility, where females are subjected to more stigma than males in society to prove themselves fertile (Donkor & Sandall, 2007). Differences based on age groups regarding their cost perceptions can also be attributed to differential resource endowment, sense of urgency and risk aversion.

In the case of health professionals, the linkages between professional cadre and years of experience with cost perceptions are intuitive since individuals with more years of experience and those working in frontline positions will have acquired a better understanding of the financial constraints faced by patients.

5. Conclusions

The results of this study strongly suggest convergent evidence from the couples and health-care providers that the cost of fertility treatment is the major determinant in access, provision, and utilization of fertility services in the two tertiary hospitals in Rivers State, Nigeria, given the funding environment in which almost all costs are out-of-pocket, lack of government funding of ART, and macroeconomic conditions that continually increase the price of imported supplies.

Major conclusions include: (i) fertility treatment is viewed as expensive by the large majority of the couples, with the cost being an important determinant in treatment choice, treatment mode, cycle frequency, and cessation; (ii) health-care providers share the same view and understand the ethical dilemma in providing high-quality specialized care to poor patients; (iii) there is a significant availability–access divide, in that the services are available but not accessible because of financial constraints;

and (iv) costs of medication, diagnostics, ART procedures, and macroeconomic instability are the major determinants of the cost of fertility treatment.

References

- Adebayo, O. A., *et al.* (2022). Out-of-pocket expenditure and fertility care in Nigeria. *African Journal of Reproductive Health*, 26(3), 78–85.
- Akosu, P. T., Musa, U., Akorede, S. N., & Nguemo, K. (2024). Perceptions and challenges of fertility treatment costs among Nigerian couples. *Advance Journal of Science, Engineering and Technology*, 9(7), 44–52.
- American Society for Reproductive Medicine (ASRM)**. (2023). *Infertility definitions and terminology*. ASRM Practice Committee.
- Becker, M. H. (Ed.). (1974). *The health belief model and personal health behavior*. *Health Education Monographs*, 2(4), 324–473.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Chowdhury, S., & Patel, M. (2022). Global infertility burden and disparities in ART access. *Global Reproductive Health*, 7(2), 44–58.
- Damalie, F. J. M. K., Senaya, C. M., Damalie, E. A., *et al.* (2025). Barriers to assisted reproductive technology (ART) services in Ghana: A countrywide cross-sectional quantitative survey of fertility health workers and women with infertility. *BMC Health Services Research*, 25, 1228. <https://doi.org/10.1186/s12913-025-1228-x>
- Donkor, E. S., & Sandall, J. (2007). The impact of perceived stigma and mediating social factors on infertility-related stress among women seeking infertility treatment in Southern Ghana. *Social Science & Medicine*, 65(8), 1683–1694. <https://doi.org/10.1016/j.socscimed.2007.06.003>
- Dyer, S. J., Hammarberg, K., & Patel, M. (2025). Economic burden of infertility and ART care in low- and middle-income countries. *BMC Health Services Research*, 25(1), Article 13457.
- Dyer, S., Vander Borcht, M., Chene, G., & Ombelet, W. (2023). Financial costs of assisted reproductive technology for patients in low- and middle-income countries: A systematic review. *Human Reproduction Open*, 2023(2). <https://doi.org/10.1093/hropen/hoad007>
- European Society of Human Reproduction and Embryology (ESHRE)**. (2022). *Infertility and psychosocial impact*. ESHRE Position Statement.
- Greil, A. L., Slauson-Blevins, K., & McQuillan, J. (2010). The experience of infertility: A review of recent literature. *Sociology of Health & Illness*, 32(1), 140–162. <https://doi.org/10.1111/j.1467-9566.2009.01213.x>
- Kaiser Family Foundation (KFF)**. (2024). *Access to fertility care: Findings from the 2024 KFF women's health survey*.
- Mackay, A., Taylor, S., & Glass, B. (2023). Inequity of access: Scoping the barriers to assisted reproductive technologies. *Pharmacy*, 11(1), 17. <https://doi.org/10.3390/pharmacy11010017>
- Mesfin, M. D., Galgalo, D. A., Atmaca, L., Kovács, K. A., Várnagy, Á., & Prémusz, V. (2025). Systematic review of challenges and prospective recommendations of medically assisted reproductive technology in developing countries. *Frontiers in Reproductive Health*, 7, 1678033. <https://doi.org/10.3389/frph.2025.1678033>
- Okonofua, F. E., & Ibe, B. (2023). Health financing gaps and infertility care in Nigeria: Challenges and policy implications. *African Journal of Reproductive Health*, 27(1), 43–55.
- Ombelet, W., & Campo, R. (2022). Affordable infertility care in low-income countries: Dream or reality? *Fertility Research and Practice*, 8(1), 12–19. <https://doi.org/10.1186/s40738-022-00135-4>
- Ugwuanyi, C. (2024). Cost of IVF in Nigeria: Current figures and implications. *Nigerian Health Journal*, 24(1), 12–17.
- World Health Organization (WHO)**. (2024). *Infertility definitions and prevalence*. WHO.