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Original Research Article

Perceptions, Experiences, and Coping Strategies Related to the Psychosocial Burden of Infertility among Women Attending Fertility Clinics in Benin City, Nigeria: A Convergent Parallel Mixed-Methods Study

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Abstract: ***Background*:** Infertility is a major reproductive health challenge that affects millions of couples worldwide and is associated with profound psychological, emotional, marital, and social consequences. In Nigeria, women experiencing infertility are particularly vulnerable to stigma, discrimination, and psychosocial distress because of prevailing sociocultural expectations regarding childbearing. ***Objective*:** This study explored the perceptions, psychosocial burdens, and coping strategies of infertility among women of reproductive age attending selected fertility clinics in Benin City, Edo State, Nigeria. ***Methods*:** A convergent parallel mixed-methods design was employed. The quantitative component involved 194 women receiving infertility care in three selected fertility clinics using a structured questionnaire, while the qualitative component consisted of in-depth interviews with purposively selected participants until data saturation was achieved. Quantitative data were analysed using descriptive and inferential statistics in SPSS version 20, whereas qualitative data were analysed using thematic analysis. Findings from both components were integrated during interpretation to provide comprehensive insights into women's experiences. ***Results*:** Overall, 84.3% of respondents demonstrated positive perceptions of infertility. A high level of psychosocial burden was reported by 73.3% of participants, with anxiety, sadness, fear of childlessness, guilt, social isolation, and marital strain emerging as the most common experiences. Respondents employed various adaptive coping strategies, particularly emotional self-control, social support, positive reappraisal, assisted reproductive planning, and religious coping. Social support and spirituality emerged as important sources of resilience. A statistically significant association was found between respondents' perceptions of infertility and their level of psychosocial burden ($\chi^2 = 24.728$, $p < 0.001$). Qualitative findings complemented the quantitative results by highlighting the emotional distress, societal expectations, relationship challenges, and coping experiences of women living with infertility. ***Conclusion*:** Infertility imposes considerable psychosocial burdens on women despite generally positive perceptions of the condition. Integrating routine psychosocial assessment, counselling services, and multidisciplinary support into infertility care may improve emotional well-being, strengthen coping capacity, and enhance the quality of life of affected women.

Keywords: Infertility, Psychosocial Burden, Perception, Coping Strategies, Mixed-Methods, Women, Nigeria.

INTRODUCTION

Infertility is a significant global reproductive health challenge that affects approximately one in six individuals during their reproductive years and remains a major cause of psychological, social, and economic distress worldwide [1]. Although infertility affects both men and women, women often bear a disproportionate share of its psychosocial consequences because of cultural expectations that closely associate femininity and marital fulfilment with motherhood. Beyond its medical implications, infertility frequently results in stigma, discrimination, marital instability, social isolation, reduced self-esteem, anxiety, depression, and diminished quality of life, particularly in low- and middle-income countries where childbearing is highly valued [2].

Sub-Saharan Africa has one of the highest burdens of infertility globally, with secondary infertility

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occurring more frequently than in many developed regions. In Nigeria, infertility remains an important public health concern, affecting an estimated 10–30% of couples of reproductive age [3]. Previous studies have shown that infertile women are commonly exposed to social pressure, emotional abuse, family conflict, economic hardship, and psychological distress. In many communities, infertility is still viewed as primarily a woman's responsibility despite evidence that male factors contribute substantially to infertility [4]. Consequently, women frequently experience blame, social exclusion, and pressure to seek repeated medical and traditional treatments, irrespective of the underlying cause [5].

The psychosocial burden of infertility is complex and multidimensional. Emotional responses commonly include sadness, grief, frustration, fear, hopelessness, guilt, and depression. These emotional challenges are often accompanied by strained marital relationships [6], sexual dissatisfaction, reduced social participation, and fear of abandonment or divorce. Financial stress associated with prolonged infertility investigations and assisted reproductive treatments further compounds these burdens [7]. Although individuals adopt different coping mechanisms—including emotional regulation, social support, religious faith, positive reappraisal, and assisted reproductive technologies—the effectiveness of these strategies varies considerably depending on individual, cultural, and healthcare-related factors [8].

Healthcare providers, particularly nurses, play a critical role in supporting women experiencing infertility. Comprehensive infertility management extends beyond medical diagnosis and treatment to include psychological assessment, counselling, emotional support, health education, and referral to appropriate mental health services where necessary [9]. International reproductive health guidelines increasingly recommend integrating psychosocial care into infertility management because addressing emotional well-being improves treatment adherence, patient satisfaction, and overall quality of life [10].

Several studies have investigated the psychological impact, quality of life, stigma, and coping strategies associated with infertility in different populations [11]. However, most Nigerian studies have relied predominantly on either quantitative or qualitative research designs, limiting a comprehensive understanding of women's lived experiences [12]. Furthermore, relatively few studies have integrated women's perceptions, psychosocial experiences, coping strategies, and socio-demographic influences using a convergent mixed-methods approach. Such an approach provides complementary quantitative evidence and rich qualitative insights that enhance interpretation and strengthen the validity of the findings [13].

Understanding women's perceptions and experiences of infertility is essential for developing culturally appropriate, patient-centred interventions that address both the clinical and psychosocial dimensions of infertility care. Therefore, this study employed a convergent parallel mixed-methods design to explore the perceptions, psychosocial burdens, coping strategies, and associated socio-demographic factors among women receiving infertility care in selected fertility clinics in Benin City, Edo State, Nigeria. The findings are expected to provide evidence to inform nursing practice, reproductive health policy, and multidisciplinary interventions aimed at improving the psychosocial well-being of women living with infertility.

MATERIALS AND METHODS

Study Design

This study employed a convergent parallel mixed-methods design, in which quantitative and qualitative data were collected concurrently, analysed independently, and integrated during interpretation to provide a comprehensive understanding of the perceptions, psychosocial burdens, and coping strategies associated with infertility among women of reproductive age. The quantitative component utilised a descriptive cross-sectional survey design, while the qualitative component adopted a phenomenological approach to explore participants' lived experiences of infertility.

Convergent Parallel Mixed-Methods Design

The study adopted a convergent parallel mixed-methods design in which quantitative and qualitative data were collected concurrently during the same phase of the study. Both strands were analysed independently using appropriate analytical methods before being integrated during interpretation. The quantitative component quantified participants' perceptions, psychosocial burdens, coping strategies, and associated socio-demographic characteristics, whereas the qualitative component explored participants' lived experiences and personal narratives regarding infertility. Integration of findings enabled corroboration, complementarity, and a more comprehensive understanding of the psychosocial burden of infertility among women attending fertility clinics in Benin City, Edo State, Nigeria.

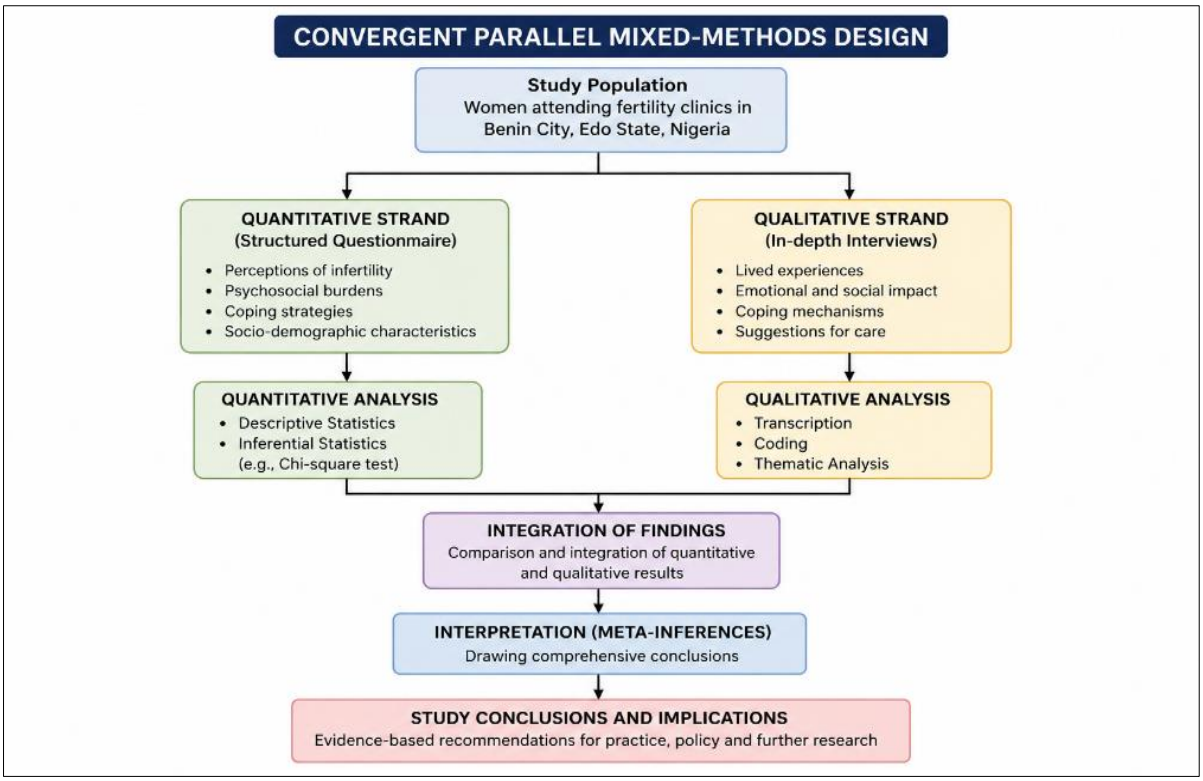

Figure 1: Convergent Parallel Mixed-Methods Design Adopted for the Study

Study Setting

The study was conducted in three fertility clinics in Benin City, Edo State, Nigeria: the Fertility Clinic of the University of Benin Teaching Hospital (UBTH), St. Philomena Catholic Hospital Fertility Unit, and Maviscope Fertility Centre. These facilities are among the major centres providing infertility evaluation, counselling, and assisted reproductive services within Edo State and neighbouring states.

Study Population

The study population comprised all women of reproductive age receiving infertility evaluation or treatment in the selected fertility clinics during the study period. A total of 207 eligible women attended the clinics during the data collection period.

Eligibility Criteria

Inclusion Criteria

Women were eligible to participate if they:

- were between 18 and 49 years of age;
- had been clinically diagnosed with primary or secondary infertility;
- were receiving care in one of the selected fertility clinics;
- were mentally and physically capable of participating; and
- Provided written informed consent.

Exclusion Criteria

Women were excluded if they:

- declined participation;
- were critically ill during data collection;
- had severe psychiatric disorders that could impair participation; or
- Returned substantially incomplete questionnaires.

Sample Size and Sampling Technique

Because the accessible population was relatively small (N = 207), a census sampling technique was adopted for the quantitative component, allowing all eligible women attending the selected fertility clinics during the study period to participate. Of the 207 questionnaires distributed, 194 were correctly completed and included in the final analysis, representing a response rate of 93.7%.

For the qualitative component, participants were selected purposively to ensure variation in age, duration of infertility, educational level, and infertility experiences. Recruitment continued until thematic data saturation was achieved, whereby no new information or themes emerged from subsequent interviews.

Study Instruments: Data were collected using two complementary instruments.

Quantitative Instrument

The quantitative data were obtained using a structured, researcher-developed questionnaire consisting of five sections:

- Section A: Socio-demographic characteristics
- Section B: Perceptions of infertility
- Section C: Psychosocial burdens of infertility

- Section D: Coping strategies
- Section E: Factors associated with infertility experiences

Items assessing perceptions, psychosocial burden, and coping strategies were measured using a four-point Likert scale ranging from Strongly Agree (4) to Strongly Disagree (1). Negatively worded items were reverse scored before analysis.

Qualitative Instrument

Qualitative data were collected using a semi-structured in-depth interview guide designed to explore participants' perceptions, emotional experiences, social challenges, coping mechanisms, healthcare experiences, and recommendations for improving infertility care.

Validity of the Instruments

Face and content validity were established through expert review by specialists in nursing science, reproductive health, research methodology, and measurement and evaluation. Their recommendations were incorporated to improve the clarity, relevance, comprehensiveness, and appropriateness of the instruments before data collection.

Reliability of the Questionnaire

A pilot study involving approximately 10% of the target population was conducted among women attending a fertility clinic outside the selected study sites. Responses obtained during the pilot study were excluded from the final analysis. Internal consistency reliability should be assessed using Cronbach's alpha coefficient, with an acceptable threshold of $\alpha \geq 0.70$ for each questionnaire domain.

Data Collection Procedure

Following ethical approval and administrative permission from the participating health facilities, three trained research assistants, who were registered nurses working in the selected hospitals, assisted with questionnaire administration. Eligible participants received information about the study objectives, confidentiality, voluntary participation, and their right to withdraw at any stage without consequences.

Completed questionnaires were collected immediately after completion to minimise missing responses.

For the qualitative component, eligible participants were contacted individually and interviewed in a private room within the hospital on scheduled clinic days. Interviews were conducted in English or the participant's preferred local language where necessary, lasted approximately 30–45 minutes, were audio-recorded with participants' permission, and supplemented with field notes documenting non-verbal observations.

Data Analysis

Quantitative Analysis

Data were entered, cleaned, and analysed using Statistical Package for the Social Sciences (SPSS) version 20.

Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarise respondents' characteristics and study variables.

Composite scores were computed for perceptions, psychosocial burden, and coping strategies. Mean scores equal to or above the predetermined cut-off values indicated positive perception, higher psychosocial burden, or greater utilisation of coping strategies, respectively.

Inferential analyses included Chi-square tests to determine associations between categorical variables. Statistical significance was established at $p < 0.05$.

Qualitative Analysis

Audio recordings were transcribed verbatim and checked for accuracy against the original recordings. Data were analysed using thematic analysis following familiarisation with the transcripts, open coding, development of categories, generation of themes, and interpretation of findings. Two researchers independently reviewed the coding process to improve analytical rigour, while representative participant quotations were used to illustrate the major themes.

Integration of Quantitative and Qualitative Findings

The findings from the quantitative and qualitative components were integrated during interpretation using a side-by-side comparison approach. Areas of convergence, complementarity, and divergence between both datasets were examined to produce comprehensive meta-inferences regarding women's perceptions, psychosocial burdens, and coping strategies associated with infertility.

Ethical Considerations

Ethical approval for the study was obtained from the Health Research Ethics Committee of the University of Benin Teaching Hospital before commencement of data collection. Administrative approval was subsequently obtained from the management of St. Philomena Catholic Hospital and Maviscope Fertility Centre.

Written informed consent was obtained from all participants before enrolment. Participation was entirely voluntary, anonymity was maintained through the use of identification codes rather than names, and all information obtained was treated as confidential. Participants were informed of their right to withdraw from the study at any time without prejudice to the care they received.

RESULTS

A total of 207 questionnaires were distributed to women of reproductive age in the selected health facilities and 194 were properly filled and valid for data analysis, giving a return rate of 93.7%

Table 1a: Socio-demographic characteristics of respondents

Variable	Frequency (n = 194)	Percent (%)
Age in years		
18-24 years	14	7.2
25-34 years	44	22.7
35-44 years	78	40.2
45-49 years	58	29.9
State of Origin		
Edo	74	38.1
Delta	36	18.6
Anambra	10	5.2
Akwa-ibom	4	2.1
Imo	14	7.2
Oyo	4	2.1
Benue	4	2.1
Rivers	8	4.1
Cross River	4	2.1
Abia	14	7.2
Bayelsa	4	2.1
Ogun	4	2.1
Lagos	2	1.0
Ondo	2	1.0
Ekiti	2	1.0
Enugu	2	1.0
Ebonyi	2	1.0
Jos	2	1.0
Kogi	2	1.0
Marital Status		
Married	190	97.9
Separated	4	2.1
Age Getting Married		
15-24	84	43.3
25-34	78	40.2
35-44	30	15.5
45-49	2	1.0
Living with Partner		
Yes	152	78
No	42	22
No of Children		
None	132	68.0
One child	52	26.8
Two children	10	5.2

Table 1a presents the socio-demographic characteristics of the respondents. The largest proportion of participants were aged 35–44 years (40.2%), followed by those aged 45–49 years (29.9%), while women aged 18–24 years constituted the smallest age group (7.2%). Most respondents were from Edo State (38.1%), followed by Delta State (18.6%). Nearly all respondents were married (97.9%), and 78.0% reported living with their partners. Regarding age at marriage, 43.3% married between 15 and 24 years, whereas 40.2% married between 25 and 34 years. Furthermore, the majority of respondents (68.0%) had no children, while 26.8% had one child and 5.2% had two children.

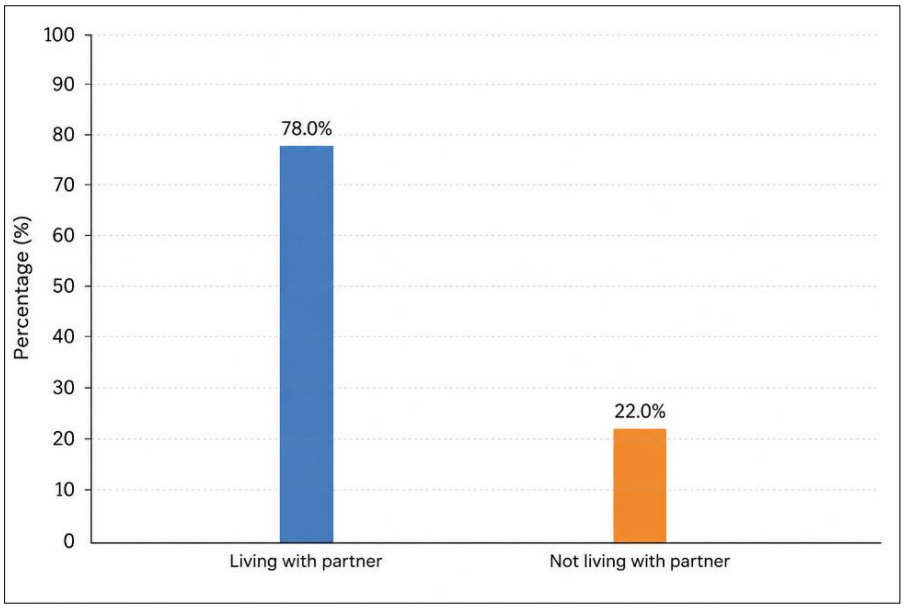

Figure 1: Distribution of Respondents According to Living Arrangement with Their Partners

The bar chart illustrates the distribution of respondents according to their living arrangement with their partners. The majority of respondents (78.0%) reported living with their partners, whereas 22.0% indicated that they were not living with their partners. This finding suggests that most women receiving infertility care were cohabiting with their spouses or partners during the study period, while approximately one-fifth were living separately from their partners.

Table 1b: Socio-demographic characteristics of respondents

Variable	Frequency (n= 194)	Percent (%)
Education Level		
Primary	16	8.2
Secondary	72	37.1
Tertiary	108	55.6
Employed		
Yes	118	60.8
No	76	39.2
Occupation		
Student	18	9.3
Trader	28	14.4
Business	58	29.9
Banker	4	2.1
Civil servant	26	13.4
Stylist	16	8.2
Pharmacist	2	1.0
Farmer	4	2.1
Songwriter	2	1.0
Fashion designer	4	2.1
Housewife	8	4.1
Teacher	6	3.1
Lawyer	6	3.1
Lecturer	10	5.2
Police	2	1.0
Religion		
Christian	170	87.6
Muslim	24	12.4
Have You Smoked Before or Do You Smoke		
No	194	100

Table 1b presents the educational, occupational, and lifestyle characteristics of the respondents. More than half of the respondents (55.6%) had attained tertiary education, while 37.1% and 8.2% had secondary and primary education, respectively. Most respondents were employed (60.8%), with business owners (29.9%), traders (14.4%), and civil servants (13.4%) constituting the largest occupational groups. Christianity was the predominant religion (87.6%), whereas 12.4% of respondents identified as Muslims. None of the respondents reported a history of cigarette smoking.

Table 2: The perception of infertility burdens

Items	Strongly Agree (%)	Agree (%)	Disagree	Strongly Disagree	Mean	Equiv. (%)	Remark
Infertility is a medical condition	98 (50.52)	88 (45.4)	6	2	4.41	88.25	Positive
Infertility is a public health problem	56 (28.87)	99 (51)	22	17	3.82	76.40	Positive
Infertility is a shared problem for couples	32 (16.49)	69 (35.6)	53	40	3.12	62.47	Positive
People can still lead fulfilling lives despite infertility	139 (71.6)	47 (24.2)	4	4	4.59	91.86	Positive
Infertility does not mean childlessness	75 (38.66)	72 (37.11)	23	24	3.79	75.88	Positive
Infertility is not Socio-culturally constructed	99 (51.03)	61(31.4)	17	10	4.13	82.58	Positive
Infertility affects both women and men.	162 (83.51)	28(14.4)	0	4	4.77	95.36	Positive
Infertility is caused by factors in both women and men	146 (75.26)	44 (22.7)	2	2	4.70	93.92	Positive
Infertility have complex causes, like medical, social, and spiritual factors	91(46.91)	59 (30.4)	25	19	3.97	79.38	Positive
Infertility is a medical condition, not a punishment	80 (41.24)	74(38)	25	15	3.95	78.97	Positive
Infertility is a threat to procreativity/continuity of lineage	113 (58.25)	35 (18)	20	26	4.01	80.10	Positive
Infertility often has medical causes not due to destiny/Spiritual attack/Witchcraft.	89 (45.88)	35(18)	56	14	3.73	74.69	Positive
Previous contraceptive use is rarely the sole cause of infertility	58 (29.90)	45 (23.20)	73	18	3.26	65.26	Positive
Children conceived through IVF are equally accepted	113 (58.25)	47 (24.23)	18	12	4.22	84.43	Positive
Women coping with infertility demonstrate resilience and strength	100 (51.55)	66 (34.)	16	10	4.19	83.81	Positive
Infertility is a condition with multifaceted challenges, but support and resources can help couples manage it	90 (46.39)	65 (33.5)	14	25	3.97	79.38	Positive
Infertility is a shared responsibility for couples	148 (76.29)	25(12.9)	8	11	4.51	90.21	Positive
The social effects of infertility should not include abuse or stigma	108 (55.67)	64 (33)	17	5	4.31	86.29	Positive
Infertile women need social support, not just psychological support	114 (58.76)	72 (37)	8	0	4.51	90.21	Positive
Infertile women require holistic care beyond just depression treatment	102 (52.58)	84 (43)	4	4	4.42	88.56	Positive
Women coping with infertility should receive empathy and support from loved ones.	119 (61.34)	61(31.4)	3	11	4.45	89.07	Positive
Average Score					4.16	83.18	

Mean cut-off mark=3.0. Equivalent % cut-off mark=60

Table 2 summarises respondents' perceptions of infertility. Overall, respondents demonstrated positive perceptions across all measured items, with an overall mean score of 4.16, corresponding to an equivalent percentage score of 83.18%. The highest levels of agreement were observed for the statements that infertility affects both women and men (mean = 4.77; 95.36%), infertility is caused by factors affecting both partners (mean = 4.70; 93.92%), and women experiencing infertility require social support (mean = 4.51; 90.21%). High levels of agreement were also recorded for the need for empathy and holistic care for infertile women, as well as the recognition of infertility as a medical condition rather than a punishment. Although respondents generally exhibited positive perceptions, comparatively lower agreement was observed regarding previous contraceptive use as a cause of infertility (mean = 3.26; 65.26%) and the belief that infertility often has medical rather than spiritual causes (mean = 3.73; 74.69%).

Table 3: Overall Perception of Infertility among Respondents

Category	Mean Decision Criteria	F	(%)
Positive	≥ 3.0	163	84.3
Negative	< 3.0	31	15.7
Total	**4.16 (Overall Mean)**	**194.0**	**100.0**

Table 3 presents the overall perception of infertility among the respondents. The findings showed that 163 respondents (84.0%) demonstrated a positive perception of infertility, whereas 31 respondents (16.0%) exhibited a negative perception. The overall mean perception score was 4.16, indicating that respondents generally possessed favourable perceptions regarding infertility and its management.

Table 4: Psychosocial Burdens Experienced by Women with Infertility (n = 194)

Domain/Item	Strongly Agree n (%)	Agree n (%)	Disagree n (%)	Strongly Disagree n (%)	Mean ± SD	Equivalent (%)
Emotional Burden						
Shock and disappointment following infertility diagnosis	94 (48.5)	84 (43.3)	10 (5.2)	6 (3.1)	3.37 ± 0.71	84.25
Fear of never having a child	62 (32.0)	58 (29.9)	35 (18.0)	39 (20.1)	2.89 ± 1.13	72.25
Worry about the future	74 (38.1)	74 (38.1)	26 (13.4)	20 (10.3)	3.25 ± 0.95	81.25
Anxiety about infertility	86 (44.3)	92 (47.4)	12 (6.2)	4 (2.1)	3.51 ± 0.67	87.75
Sadness and depression	75 (38.7)	87 (44.9)	12 (6.2)	20 (10.3)	3.27 ± 0.93	81.75
Hopelessness	29 (15.0)	49 (25.2)	74 (38.1)	42 (21.6)	2.45 ± 1.00	61.25
Persistent thoughts about infertility	53 (27.3)	65 (33.5)	55 (28.4)	21 (10.8)	2.92 ± 0.98	73.00
Guilt over inability to make husband a father	67 (34.5)	59 (30.4)	34 (17.5)	34 (17.5)	2.97 ± 1.10	74.25
Crying during menstruation	66 (34.0)	76 (39.2)	38 (19.6)	14 (7.2)	3.12 ± 0.90	78.00
Frustration with infertility treatment	60 (30.9)	49 (25.3)	58 (29.9)	27 (13.9)	2.76 ± 1.06	69.00
Feeling worthless	25 (12.9)	48 (24.7)	78 (40.2)	43 (22.2)	2.30 ± 0.97	57.50
Sleep disturbance	33 (17.0)	46 (23.7)	66 (34.0)	49 (25.3)	2.44 ± 1.04	61.00
Suicidal thoughts	22 (11.3)	22 (11.3)	37 (19.1)	113 (58.2)	1.86 ± 1.08	46.50
Marital/Relationship Burden						
Husband unwilling to participate in treatment	80 (41.2)	42 (21.6)	33 (17.0)	39 (20.1)	2.84 ± 1.21	71.00
Discussions lead to arguments	57 (29.4)	59 (30.4)	38 (19.6)	40 (20.6)	2.85 ± 1.14	71.25
Fear of relationship breakdown	67 (34.5)	51 (26.3)	23 (11.9)	53 (27.3)	2.94 ± 1.22	73.50
Husband has extramarital children	57 (29.4)	46 (23.7)	49 (25.3)	42 (21.6)	2.72 ± 1.17	68.00
Pressure regarding sexual activity	52 (26.8)	52 (26.8)	44 (22.7)	46 (23.7)	2.76 ± 1.19	69.00
Social Burden						
Difficulty attending family gatherings	68 (35.1)	64 (33.0)	40 (20.6)	21 (10.8)	2.93 ± 0.99	73.25
Comparing oneself with friends who have children	66 (34.0)	56 (28.9)	33 (17.0)	39 (20.1)	2.90 ± 1.17	72.50
Insults from family and friends	80 (41.2)	50 (25.8)	35 (18.0)	29 (14.9)	3.12 ± 1.08	78.00
Feeling lonely	73 (37.6)	56 (28.9)	29 (14.9)	36 (18.6)	3.01 ± 1.15	75.25
Difficulty spending time with friends who have children	69 (35.6)	38 (19.6)	36 (18.6)	51 (26.3)	2.80 ± 1.24	70.00
It does not bother me when people ask about children†	19 (9.8)	8 (4.1)	37 (19.1)	130 (67.0)	1.63 ± 0.93	40.75
Overall Mean Score					**2.92 ± 0.49**	**73.11**

Note: Items were rated on a four-point Likert scale (1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree). Mean scores ≥2.50 indicate higher psychosocial burden. †Reverse-scored item.

Table 4 presents the psychosocial burdens experienced by women receiving infertility care in the selected health facilities. Overall, respondents reported a high level of psychosocial burden, with an overall mean score of 2.92 ± 0.49, corresponding to an equivalent percentage score of 73.11%. Emotional burden was the most prominent domain, with anxiety (mean = 3.51), shock and disappointment following infertility diagnosis (mean = 3.37), sadness and depression (mean = 3.27), and worry about the future (mean = 3.25) being the most frequently reported experiences. Feelings of guilt, persistent thoughts about infertility, and emotional distress associated with menstruation were also commonly reported.

Marital and relationship challenges were evident among the respondents. Many women reported concerns regarding inadequate partner involvement in infertility treatment, frequent disagreements related to infertility, fear of relationship breakdown, and pressure associated with sexual relationships. Social burdens were similarly pronounced, with respondents reporting experiences of loneliness, insults from family members and friends, difficulty attending family gatherings, and frequent comparisons with peers who had children. Although suicidal ideation had the lowest mean score among the emotional burden indicators, a proportion of respondents acknowledged experiencing such thoughts. Collectively, these findings demonstrate that infertility exerts substantial emotional, marital, and social burdens on affected women.

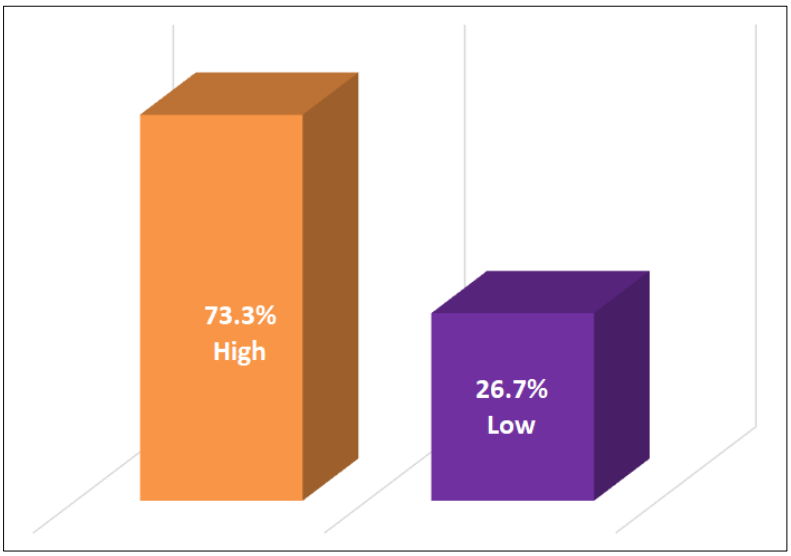

Figure 2: Distribution of Respondents According to the Level of Psychosocial Burden

Figure 2 illustrates the distribution of respondents according to their overall level of psychosocial burden. The majority of respondents (73.3%) experienced a high level of psychosocial burden, whereas 26.7% reported a low level of psychosocial burden. These findings indicate that psychosocial challenges associated with infertility were prevalent among women receiving infertility care in the selected health facilities.

Table 5a: Coping Strategies Used by Women to Manage the Psychosocial Burden of Infertility (n = 194)

Coping Strategy	Strongly Agree n (%)	Agree n (%)	Disagree n (%)	Strongly Disagree n (%)	Mean ± SD	Equivalent (%)
Self-Control Coping						
I try to control my emotions	94 (48.5)	84 (43.3)	10 (5.2)	6 (3.1)	3.37 ± SD	84.28
I keep my feelings to myself	70 (36.1)	54 (27.8)	52 (26.8)	18 (9.3)	2.91 ± SD	72.68
I avoid showing others how difficult my situation is	78 (40.2)	78 (40.2)	28 (14.4)	10 (5.2)	3.60 ± SD	90.00
I prevent my emotions from interfering with daily activities	76 (39.2)	77 (39.7)	19 (9.8)	22 (11.3)	3.38 ± SD	84.52
I constantly think about having children	92 (47.4)	77 (39.7)	21 (10.8)	4 (2.1)	3.58 ± SD	89.58
Infertility makes me feel emotionally distressed	52 (26.8)	68 (35.1)	44 (22.7)	30 (15.5)	2.91 ± SD	72.80
I feel rejected or incomplete because of infertility	62 (32.0)	56 (28.9)	22 (11.3)	54 (27.8)	3.25 ± SD	81.33

Coping Strategy	Strongly Agree n (%)	Agree n (%)	Disagree n (%)	Strongly Disagree n (%)	Mean ± SD	Equivalent (%)
Escape-Avoidance Coping						
I leave when discussions about pregnancy or children arise	60 (30.9)	55 (28.4)	23 (11.9)	56 (28.9)	3.17 ± SD	79.22
I avoid pregnant women or children	36 (18.6)	34 (17.5)	56 (28.9)	68 (35.1)	2.34 ± SD	58.52
I keep myself busy with work	58 (29.9)	41 (21.1)	27 (13.9)	68 (35.1)	2.54 ± SD	63.43
I refuse to accept that I may not have children	110 (56.7)	24 (12.4)	26 (13.4)	34 (17.5)	3.22 ± SD	80.38
I use alcohol, smoking, or drugs to cope	2 (1.0)	9 (4.6)	55 (28.4)	128 (66.0)	1.45 ± SD	36.30
I avoid television programmes about pregnancy or childbirth	28 (14.4)	23 (11.9)	73 (37.6)	70 (36.1)	2.21 ± SD	55.14
Positive Reappraisal Coping						
I engage in creative activities	56 (28.9)	56 (28.9)	52 (26.8)	30 (15.5)	2.77 ± SD	69.21
I focus more on my career	32 (16.5)	68 (35.1)	70 (36.1)	24 (12.4)	2.73 ± SD	68.13
I have planned to adopt a child	50 (25.8)	45 (23.2)	55 (28.4)	44 (22.7)	2.78 ± SD	69.46
I have planned to undergo assisted reproductive treatment	116 (59.8)	41 (21.1)	19 (9.8)	18 (9.3)	3.57 ± SD	89.31
Overall Mean Score					**3.15 ± SD**	**78.78**

Note: Items were rated on a four-point Likert scale (1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree). Mean scores ≥2.50 indicate greater utilisation of the coping strategy.

Table 5 presents the coping strategies adopted by women to manage the psychosocial burden associated with infertility. Overall, respondents demonstrated a high level of utilisation of coping strategies, with an overall mean score of 3.15, corresponding to an equivalent percentage score of 78.78%. Self-control coping emerged as one of the most frequently employed strategies. Most respondents reported controlling their emotions (mean = 3.37), concealing the extent of their family challenges (mean = 3.60), preventing emotional distress from interfering with daily activities (mean = 3.38), and persistently maintaining thoughts about having children (mean = 3.58).

Escape-avoidance coping strategies were used to a moderate extent. Many respondents reported leaving situations where discussions centred on pregnancy or children (mean = 3.17) and refusing to accept that they might remain childless (mean = 3.22). However, maladaptive coping behaviours, including the use of alcohol, smoking, or drugs, were rarely reported, recording the lowest mean score (mean = 1.45).

Positive reappraisal coping strategies were also commonly utilised. A substantial proportion of respondents indicated plans to undergo assisted reproductive treatment (mean = 3.57), while others reported engaging in creative activities (mean = 2.77), focusing on career development (mean = 2.73), or considering child adoption (mean = 2.78). Overall, these findings suggest that women predominantly relied on adaptive coping strategies, particularly emotional self-control and positive reappraisal, to manage the psychosocial challenges associated with infertility.

Table 5b: (Continued). Social Support and Other Coping Strategies Used by Women with Infertility (n = 194)

Coping Strategy	Strongly Agree n (%)	Agree n (%)	Disagree n (%)	Strongly Disagree n (%)	Mean ± SD	Equivalent (%)
Social Support Coping						
I talk to someone about how I feel	86 (44.3)	77 (39.7)	21 (10.8)	10 (5.2)	3.29 ± SD	82.26
I spend time with children believing I will have mine someday	98 (50.5)	82 (42.3)	10 (5.2)	4 (2.1)	3.44 ± SD	86.07
I seek advice from women who previously experienced infertility	108 (55.7)	64 (33.0)	16 (8.2)	6 (3.1)	3.49 ± SD	87.19
I seek information about infertility from others	86 (44.3)	82 (42.3)	20 (10.3)	6 (3.1)	3.32 ± SD	83.08
I accept sympathy and understanding from others	66 (34.0)	73 (37.6)	29 (14.9)	26 (13.4)	2.92 ± SD	73.08
I obtain information from television, radio, or other media	106 (54.6)	61 (31.4)	15 (7.7)	12 (6.2)	3.48 ± SD	86.96
I receive financial support from relatives for infertility treatment	62 (32.0)	47 (24.2)	41 (21.1)	44 (22.7)	2.80 ± SD	69.97

Coping Strategy	Strongly Agree n (%)	Agree n (%)	Disagree n (%)	Strongly Disagree n (%)	Mean ± SD	Equivalent (%)
Other Coping Strategies						
I pray to God for a miracle	166 (85.6)	15 (7.7)	3 (1.5)	10 (5.2)	3.74 ± SD	93.44
I have accepted moving on with life	24 (12.4)	40 (20.6)	40 (20.6)	90 (46.4)	2.15 ± SD	53.66
I engage in physical exercise	28 (14.4)	63 (32.5)	39 (20.1)	64 (33.0)	2.50 ± SD	62.46
I relax or sleep to reduce emotional distress	26 (13.4)	45 (23.2)	37 (19.1)	86 (44.3)	2.37 ± SD	59.29
I confront my partner about infertility	14 (7.2)	36 (18.6)	60 (30.9)	84 (43.3)	1.99 ± SD	49.74
I advise my partner to marry another wife	4 (2.1)	4 (2.1)	32 (16.5)	154 (79.4)	1.34 ± SD	33.61
Overall Mean Score					**2.97 ± SD**	**74.28**

Note: Items were rated on a four-point Likert scale (1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree). Mean scores ≥2.50 indicate greater utilisation of the coping strategy.

Table 5b (continued) presents respondents' use of social support and other coping strategies to manage the psychosocial burden of infertility. Overall, respondents demonstrated a relatively high utilisation of these coping strategies, with an overall mean score of 2.97. Social support was commonly sought, with respondents reporting that they discussed their feelings with trusted individuals (mean = 3.29), sought advice from women who had previously experienced infertility (mean = 3.49), and obtained information regarding infertility from healthcare providers and other sources (mean = 3.32). Spending time with children while maintaining hope of future parenthood (mean = 3.44) and obtaining information through television and other media (mean = 3.48) were also frequently reported.

Religious coping emerged as the most commonly utilised strategy, with praying to God for a miracle recording the highest mean score (mean = 3.74). In contrast, advising a partner to marry another wife (mean = 1.34), confronting a partner over infertility (mean = 1.99), and accepting life without pursuing further options (mean = 2.15) were among the least utilised coping strategies. These findings indicate that respondents predominantly relied on adaptive coping approaches centred on social support, information seeking, and religious faith rather than maladaptive or relationship-disruptive behaviours.

Table 6: Association between Perception of Infertility and Level of Psychosocial Burden (n = 194)

Perception of Infertility	High Psychosocial Burden n (%)	Low Psychosocial Burden n (%)	χ^2	df	p-value
Positive	118 (75.2)	39 (24.8)	24.728	1	<0.001
Negative	12 (32.4)	25 (67.6)			

Note: Pearson's Chi-square test was used to examine the association between respondents' perception of infertility and their level of psychosocial burden. Statistical significance was established at $p < 0.05$.

Table 6 presents the association between respondents' perception of infertility and their level of psychosocial burden. The analysis revealed a statistically significant association between the two variables (χ^2 = 24.728, df = 1, $p < 0.001$). Among respondents with positive perceptions of infertility, 75.2% experienced a high level of psychosocial burden, whereas 24.8% reported a low level of psychosocial burden. In contrast, among respondents with negative perceptions, 32.4% experienced a high psychosocial burden and 67.6% experienced a low psychosocial burden. These findings indicate that respondents' perceptions of infertility were significantly associated with their level of psychosocial burden.

DISCUSSION

This study explored the perceptions, psychosocial burdens, and coping strategies associated with infertility among women attending selected fertility clinics in Benin City, Edo State, Nigeria, using a convergent parallel mixed-methods design. The integration of quantitative and qualitative findings provided a comprehensive understanding of the emotional, marital, and social challenges experienced by women living with infertility.

The majority of respondents were aged 35–44 years, were married, lived with their partners, and had no children. These findings are consistent with those reported by Obuna and Igwe (2023) [14], and Esan *et al*., (2022) [15], who observed that women seeking infertility care in Nigeria were predominantly married and in their third and fourth decades of life. Similarly, Azize Diallo *et al*., (2024) [17], reported comparable demographic characteristics among infertile women attending fertility clinics in Ghana. The relatively high educational attainment observed in this study also agrees with the findings of Fledderjohann and Barnes (2018) [16], who reported that women with higher educational levels are more likely to utilise specialist reproductive health

services because of greater health literacy and awareness of available fertility treatment options. The consistency of these findings across different African settings suggests that educational attainment may positively influence healthcare-seeking behaviour among women experiencing infertility.

The findings demonstrated that most respondents had positive perceptions of infertility, recognising it as a medical condition affecting both men and women rather than solely a woman's responsibility. This finding is consistent with the reports of Barnes and Fledderjohann (2020) [19], and Agarwal *et al.,* (2021) [20], who noted increasing awareness that infertility is a shared reproductive health condition resulting from male, female, or combined factors. Likewise, Dierickx *et al.,* (2018) [18]**,** observed that although biomedical understanding of infertility has improved in many African communities, traditional beliefs and cultural misconceptions continue to influence perceptions and treatment-seeking behaviour. In the present study, some respondents still associated infertility with previous contraceptive use, spiritual attacks, or supernatural causes. Similar misconceptions were reported by Azize Diallo *et al*., (2024) [17], among women in Ghana, indicating that cultural beliefs continue to coexist with biomedical explanations of infertility. These findings suggest the need for sustained reproductive health education aimed at correcting misconceptions and promoting evidence-based understanding of infertility.

One of the major findings of this study was the high level of psychosocial burden experienced by women with infertility. Anxiety, sadness, depression, fear of childlessness, guilt, loneliness, marital strain, and social stigma were the most frequently reported psychosocial challenges. These findings are consistent with those of Simionescu *et al*., (2021) [22], who reported that infertility is strongly associated with psychological distress, emotional instability, and impaired quality of life. Similarly, Greil *et al.*, (2018) [23], found that infertility frequently results in depression, social isolation, reduced self-esteem, and marital dissatisfaction across different cultural settings. Furthermore, Rooney and Domar (2018) [24], demonstrated that prolonged infertility-related stress significantly contributes to anxiety and depressive symptoms, particularly among women undergoing repeated fertility treatments.

The qualitative findings further reinforced these observations by revealing that many women experienced profound emotional suffering arising from fear of marital instability, family pressure, social rejection, and feelings of inadequacy. Comparable findings were reported by Dierickx *et al*., (2018) [18], who found that infertile women in The Gambia experienced persistent stigma, emotional distress, and social exclusion because motherhood was regarded as an essential component of female identity. Similarly, Azize Diallo *et al*., (2024) [17], reported that infertile women in Ghana commonly experienced family pressure, marital conflict, and psychological distress. The consistency of these findings across African countries suggests that sociocultural expectations regarding childbearing continue to amplify the psychosocial burden associated with infertility.

Women employed a variety of coping strategies to manage infertility-related distress. Emotional self-control, information seeking, social support, positive reappraisal, religious faith, and intentions to pursue assisted reproductive technologies were among the most frequently reported adaptive coping mechanisms. These findings are consistent with those of Kyei *et al*., (2022) [26], who reported that women undergoing fertility treatment commonly relied on positive reappraisal, spirituality, and emotional regulation to cope with infertility-related stress. Likewise, Martins *et al*., (2019) [27], found that women who actively sought emotional and informational support experienced lower levels of infertility-related stress and better psychological adjustment.

Religious coping emerged as the most frequently utilised strategy in the present study. This finding agrees with those of Azize Diallo *et al*., (2024) [17], and Kyei *et al.*, (2022) [26], who identified prayer and spiritual support as major sources of hope and resilience among infertile women in Africa. The prominence of religious coping may reflect the strong religious orientation of Nigerian society, where spirituality often serves as an important psychological resource during stressful life events. Conversely, maladaptive coping behaviours such as substance use and relationship-disruptive behaviours were rarely reported. This finding differs from that of Greil *et al*., (2018) [23], and Schmidt (2020) [28], who reported greater use of avoidant coping strategies among infertile individuals in some Western countries. These differences may be explained by variations in cultural values, family support systems, and religious beliefs across populations.

The study demonstrated a statistically significant association between respondents' perceptions of infertility and their level of psychosocial burden. This finding suggests that women's understanding and interpretation of infertility may influence how they experience its psychological and social consequences. Women with more positive perceptions appeared better able to adopt adaptive coping strategies, whereas misconceptions regarding infertility were associated with greater emotional distress and social stigma. Although few African studies have specifically examined this relationship, the findings support the recommendations of the European Society of Human Reproduction and Embryology (Eshre) (2023) [29], which emphasise that accurate reproductive health education, psychosocial counselling, and patient-centred care improve emotional adjustment and treatment

outcomes among individuals experiencing infertility. Similarly, the World Health Organization (2023) [30], recognises infertility as both a medical and psychosocial condition requiring integrated care that combines medical treatment with psychological and social support.

Overall, the integration of quantitative and qualitative findings demonstrates that infertility is not merely a reproductive health condition but a multidimensional experience encompassing emotional, marital, social, and cultural challenges. These findings reinforce the recommendations of the World Health Organization (2023) [30], and Eshre (2023) [29], which advocate comprehensive infertility care that incorporates routine psychosocial assessment, counselling services, family education, multidisciplinary collaboration, and culturally sensitive nursing interventions to improve the quality of life of affected women.

Implications for Nursing Practice

The findings of this study highlight the need for nurses to adopt a holistic approach to infertility care by addressing both the physical and psychosocial needs of affected women. Routine psychosocial assessment, patient-centred counselling, and health education should be integrated into infertility management to promote emotional well-being, reduce stigma, and encourage effective coping strategies.

Nurses should also collaborate with multidisciplinary healthcare professionals to provide comprehensive psychosocial support and facilitate access to counselling and support groups. Integrating these services into routine fertility care may improve treatment adherence, patient satisfaction, and the overall quality of life of women experiencing infertility.

CONCLUSION

This study demonstrated that infertility imposes substantial psychosocial burdens on women of reproductive age, affecting their emotional well-being, marital relationships, and social interactions. Although most respondents exhibited positive perceptions of infertility, a high proportion experienced significant psychological distress. Women adopted various adaptive coping strategies, particularly emotional self-control, social support, positive reappraisal, and religious coping, to manage these challenges. Furthermore, respondents' perceptions of infertility were significantly associated with their level of psychosocial burden.

The findings underscore the need to integrate routine psychosocial assessment, counselling, and comprehensive support services into infertility care. Strengthening multidisciplinary and patient-centred interventions may improve the psychological well-being and quality of life of women experiencing infertility.

RECOMMENDATIONS

1. **Integrate Psychosocial Support into Infertility Care:** Fertility clinics should incorporate routine psychological assessment, counselling, and emotional support services into infertility management to address the significant psychosocial burdens experienced by women.
2. **Strengthen Public Awareness and Health Education:** Healthcare providers and public health agencies should implement community-based educational programmes to improve knowledge of infertility, dispel misconceptions and stigma, and promote shared responsibility between men and women in infertility management.
3. **Promote Couple-Centred Care:** Infertility services should encourage the active involvement of male partners in diagnosis, treatment, and counselling to enhance mutual support, improve communication, and reduce relationship-related stress.
4. **Establish Peer Support Programmes:** Hospitals and fertility clinics should facilitate support groups where women experiencing infertility can share experiences, receive emotional support, and learn effective coping strategies from healthcare professionals and peers.
5. **Conduct Further Multicentre Research:** Future studies involving larger, more diverse populations across different regions of Nigeria should be undertaken to validate these findings and evaluate the effectiveness of psychosocial and counselling interventions in improving the well-being of women experiencing infertility.

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