



A STUDY TO ASSESS THE QUALITY OF LIFE AMONG WOMEN UNDERGOING IVF TREATMENT IN SELECTED CLINICS AND HOSPITALS OF GUWAHATI, ASSAM

Tage Mamung¹, Moirangthem Sumita²

¹M.sc Nursing, Department of Obstetrics and Gynaecological Nursing, Army Institute of Nursing, Guwahati, Assam, India

²Associate professor, Department of Mental Health Nursing, Army Institute of Nursing, Guwahati, Assam, India

ABSTRACT

Introduction: A large number of people are affected by infertility in their lifetime, according to a new report published by WHO in April 2023, of which around 17.5% of the adult population roughly 1 in 6 worldwide experience infertility. Women undergoing IVF treatment face various life crises, leading to numerous consequences. Negative responses to infertility and its treatment impact well-being, treatment outcomes, and willingness to continue. **Objectives:** To determine the quality of life among women undergoing IVF treatment. **Methodology:** A quantitative research approach and descriptive research design were used to evaluate the quality of life of women undergoing IVF treatment in various clinics and hospitals in Guwahati, Assam. 118 Participants were selected using purposive sampling technique. Data was collected using socio-demographic questionnaire and the ESHRE and ASRM FertiQoL tools. Data was analyzed using descriptive and inferential statistics. **Results:** The emotional domain shows a mean score of 68.0 ± 19.3 , indicating variability in emotional well-being among participants. Similarly, the mind/body domain has a higher mean of 74.4 ± 19.4 , suggesting even greater variability. The relational domain exhibits a higher mean score of 75.6 ± 18.9 , implying relatively consistent scores among participants in this aspect. Social domain scores have a mean of 70.4 ± 18.2 , indicating moderate variability. Environment scores show a highest mean of 84.8 ± 14.4 , suggesting substantial variability in how participants perceive their environmental quality of life. Tolerability domain scores have the lowest mean of 53.0 ± 12.9 , implying considerable variability in how participants tolerate the IVF treatment process. There was no significant association between quality of life among women undergoing IVF treatment with their demographic variables. However, it is worth noting that a trend towards significance was observed

for the domain emotional and mind/body with parity; domain social with infertility type; and domain tolerability with monthly income, suggesting a potential influence that warrants further investigation with a larger sample size. **Conclusion:** The study concluded that women undergoing IVF treatment had the highest quality of life in the environment domain, with a mean score of 84.8 (SD=14.4), whereas the lowest quality of life was found in the tolerability domain, with a mean score of 53 (SD=12.9).

Keywords: Assess, Quality of life, Women, In Vitro Fertilization treatment.

INTRODUCTION

Children are a source of happiness, so a dream of every married couple. Parenthood as a fundamental human need is based on biological, psychological, and societal views. Biologically, the desire to reproduce and secure the survival of one's genes is a natural inclination shared by most organisms, including humans. Psychologically, the desire for parenting is associated with the achievement of personal and emotional goals such as nurturing, legacy, and continuation of family traditions. Many countries consider family formation and childrearing essential to societal structure and continuity. The family unit is frequently viewed as a microcosm of society, with significant roles in socialisation, support, and the transfer of cultural and moral values. A woman is often deemed truly fulfilled and authentic upon becoming a mother, as it is thought to affirm her femininity and strengthen the bond of her marriage¹.

A Large number of people are affected by infertility in their lifetime, according to a new report published by the World Health Organization on April 2023, of which Around 17.5% of the adult population roughly 1 in 6 worldwide experience infertility, this prevalence remains consistent across high-income, middle-income and low-income countries, emphasizing that infertility is a global health challenge, showing the urgent need to increase access to affordable, high-quality fertility care for those in need, as financial burden for infertility care including IVF treatment drives patients into financial hardship making crucial journey toward parenthood².

Ernst & Young's Call to Action report highlights that the fertility industry in the country has been expanding by 15-20% annually over the past five years. Currently, around 250,000 to 300,000 IVF treatments are conducted each year. In August 2023, Goa became the first state in India to offer free IVF therapy to help reduce financial stress for couples. According to a report by Times of India, Chief Minister Pramod Sawant launched this initiative at Goa Medical College in Bambolim, which included assisted reproductive technology (ART) and intrauterine insemination (IUI)³.

The World Health Organization defines quality of life (QOL) as "an individual's perception of their position in life in the context of the culture and value systems in which they live and concerning their goals, expectations, standards, and concerns"⁴. Infertility may contribute to sexual dysfunction, depression, anxiety, and social isolation. It poses significant challenges for women and impacts various aspects of their quality of life.

In vitro fertilization being self-funded with high costs, social stigma, and fear of treatment failure influences the quality of life among women in an enormous way. The review by Gameiro et al found that many people stop

infertility treatment because it causes a lot of psychological stress. This stress is one of the main reasons why they decide to discontinue the treatment⁵.

NEED OF THE STUDY

Assisted reproductive technology (ART), particularly in vitro fertilization (IVF), has been a widely used medical procedure since its clinical introduction in 1978, revolutionizing human reproduction. Globally, more than 2.5 million IVF cycles are performed annually. In India, the current number is around 200,000 to 250,000 cycles per year, with projections suggesting this could increase to 500,000 to 600,000 cycles by 2027⁶.

Guwahati has emerged as a key healthcare center for North-eastern India, featuring modern medical facilities that offer a wide range of specialized treatments. IVF centers in Guwahati have assisted numerous infertile couples from North East India in achieving successful pregnancies. There are approximately 14 IVF centers in Guwahati, with the Institute of Human Reproduction (IHR) being the oldest IVF center in Assam, having started its IVF services in 1990⁷. Pratiksha Hospital, on the other hand, established its IVF center later and delivered its first IVF baby on February 13, 1997, with a success rate of 40% to 60% per cycle for women under 35 years old as mentioned on the website⁸. The total number of IVF cycles performed in Guwahati varies across different centers. On average, the IVF cycle in Guwahati ranges from Rs. 1,25,000 to Rs. 2,50,00 per cycle depending on the clinic and specific treatments and services required⁹. Huge cost per cycle is one of the factors leading to poor quality of life among women undergoing IVF treatment. Modern science provides great opportunities to treat infertility like In vitro fertilization but failure does happen which could be due to a variety of factors such as personal factors and the lifestyle of a person also failed IVF cycle could put couples under a lot of mental discomfort, anger, and confusion.

Ya'arit Bokek-Cohen (Jan 2024) conducted a study on the impact of relationship status on the quality of life (QoL) of women undergoing in vitro fertilization (IVF) treatment. It specifically examines whether being in a relationship acts as a psychological buffer against the decline in QoL during IVF treatment. Using the FertiQoL questionnaire, the study compares the QoL of 422 women in relationships ("attached") with 117 women who are not in relationships ("unattached"). The results show that women in the relationship reported significantly higher FertiQoL scores, particularly in the Core FertiQoL and Treatment FertiQoL subscales. The study concludes that being in a long-term relationship can help mitigate the decline in QoL for women undergoing IVF treatments¹⁰.

QoL studies are vital for enhancing the overall well-being of women undergoing IVF and ensuring that the care provided is holistic and patient-centered. Women receiving IVF treatment experience life crises in many ways which becomes a silent cause of many consequences. Negative reactions to infertility and its medical treatments can impact both the well-being of patients and the success of the treatments. This outcome can also affect patients' willingness to continue with the treatment. Therefore, it is crucial to monitor and enhance the quality of life for women undergoing IVF. Therefore, the researcher is interested in Assessing the quality of life among women undergoing IVF treatment as it will be a great source of information for investigation and beneficial in developing therapeutic interventions.

RESEARCH METHODOLOGY

The present study was conducted to assess the quality of life among women undergoing IVF treatment in selected clinics and hospitals of Guwahati, Assam.

Research approach: Quantitative research approach

Research design: Descriptive research design

Target population: Age group of 21-50 years

Accessible population: Available during data collection

Sample size: 118

Sampling technique: Purposive sampling technique

Theoretical Framework- The conceptual framework chosen for the study is based on Roy Adaptation Model, which was developed by Sister Callista Roy in 1976.

Setting of the study: The study was conducted in Pratiksha Hospital, Matrikas Women's Clinic and IVF Centre, and Maa IVF and Infertility Clinic, Guwahati, Assam.

Tools for data collection: **Tool I:** Demographic perfoma, **Tool II:** ESHRE and ASRM FertiQoL tool

PLAN FOR DATA ANALYSIS:

Descriptive statistics:

1. Demographics of women undergoing IVF treatment, computed by frequency and percentage.
2. Assessing the quality of life among women undergoing IVF treatment as described by mean, standard deviation, median, number, maximum, minimum, range, mean percentage, and rank.

Inferential statistics:

1. Determining the association between quality of life among women undergoing IVF treatment with their demographic variables as described by the Kruskal-Wallis test and Mann-Whitney test.

Descriptive Statistics- Demographics of women undergoing IVF treatment, computed by frequency and percentage. Mean, standard deviation, median, number, maximum, minimum, range, mean percentage were used to assessing the quality of life among women undergoing IVF treatment.

Result

Analysis of the collected data was done using SPSS version 18.

Table no. 1: Descriptive statistics of domain wise of quality of life among women undergoing IVF treatment.**n=118**

Descriptive Statistics	Emotional	Mind/Body	Relational	Social	Environment	Tolerability	Overall
Mean	68.0	74.4	75.6	70.4	84.8	53.0	71.0
S.D.	19.3	19.4	18.9	18.2	14.4	12.9	17.2
Median	66.7	79.2	77.1	70.8	83.3	58.3	72.6
Number	118.0	118.0	118.0	118.0	118.0	118.0	118.0
Maximum	95.8	100.0	100.0	100.0	100.0	66.7	93.8
Minimum	16.7	16.7	25.0	20.8	50.0	12.5	23.6
Range	79.2	83.3	75.0	79.2	50.0	54.2	70.1
Mean %	68.04	74.40	75.56	70.41	84.82	52.97	71.03

The table no. 1 presents descriptive statistics for six dimensions (Emotional, Mind/Body, Relational, Social, Environment, and Tolerability) along with an overall score. The mean scores indicate that the highest average is in the Environment dimension (84.8), while Tolerability has the lowest mean (53.0). The overall mean score is 71.0. Standard deviations, which measure the spread of scores, range from 12.9 for Tolerability to 19.4 for Mind/Body, indicating varying levels of variability across dimensions. Median values show the middle point of the data distribution, with the highest median in the Environment dimension (83.3) and the lowest in Emotional (66.7). Each dimension has data from 118 respondents. The maximum scores reached 100 in several dimensions, while minimum scores highlight significant variability, especially in Tolerability (12.5). The range of scores shows the difference between maximum and minimum values, with the Environment dimension having the smallest range (50.0) and Mind/Body the largest (83.3). Mean percentages reflect similar trends to the mean scores, and the ranks highlight that Environment is ranked highest and Tolerability lowest in terms of average scores. Overall, the data indicates that Environment is the most positively perceived dimension, while Tolerability is the least.

Table no. 2: Association between quality of life [Emotional] with selected demographic variables.**n=118**

Sl. No.	Demographic variable	f	Mean Rank	KW, U	df	P Value	Result
1.	Age						
	21-20 years	45	53.49	3.23	2	0.199	NS
	31-40 years	58	61.22				
	41-50 years	15	70.87				
2.	Religion						
	Hindu	82	59.28	1.55	3	0.672	NS
	Muslim	12	55.25				
	Christian	19	58.50				
	Others	5	77.10				
3.	Education Qualification						
	Graduate and above	74	55.52	6.31	3	0.097	NS
	High school	26	58.40				
	Middle school	17	78.44				
	Primary school	1	60.50				
4	Occupation						
	Government employee	31	61.89	0.53	4	0.970	NS
	Private employee	23	56.65				
	Self-employee	10	61.10				
	Daily wager	6	53.42				
	Homemaker	4	59.57				
5	Monthly Income						
	≥ 249044	9	79.61	6.07	6	0.415	NS
	124489-249043	12	52.75				
	93381-124488	20	59.73				
	62273-93880	25	54.10				
	37325-62272	29	54.53				
	12445-37324	13	65.58				
	≤12444	10	69.05				
6.	Parity						

	Null	84	56.06	5.20	2	0.047	NS
	One	24	73.60				
	>One	10	54.55				
7	Infertility Type						
	Primary	84	56.06	1139.00	2	0.084	NS
	Secondary	34	68.00				
8	Duration of Infertility						
	2 years	22	60.82	0.55	2	0.761	NS
	3 years	33	55.79				
	≥ 4 years	63	60.98				
9	Duration of Treatment						
	< 6 months	86	58.78	0.71	2	0.916	NS
	1 years	24	60.81				
	≥ 2 years	8	63.31				

NB: KW= Kruskal-Wallis Test, U= Mann-Whitney Test, df= degree of freedom, NS= Non-significant, S=Significant at 0.05 level.

Table no. 3: Association between quality of life [Mind/Body] with selected demographic variables.
n = 118

Sl. No.	Demographic Variables	f	Mean Rank	KW, U	df	P Value	Result
1.	Age						
	21-20 years	45	57.67	0.24	2	0.888	NS
	31-40 years	58	60.29				
	41-50 years	15	61.93				
2.	Religion						
	Hindu	82	59.70	2.19	3	0.534	NS
	Muslim	12	62.08				
	Christian	19	52.45				
	Others	5	76.90				
3.	Education Qualification						
	Graduate and above	74	56.06	4.10	3	0.251	NS
	High school	26	60.96				
	Middle school	17	69.53				

	Primary school	1	105.50				
4.	Occupation						
	Government employee	31	63.50	1.39	4	0.846	NS
	Private employee	23	56.50				
	Self-employee	10	56.40				
	Daily wager	6	48.17				
	Homemaker	48	60.42				
5.	Monthly Income						
	≥249044	9	83.44	8.23	6	0.222	NS
	124489-249043	12	55.58				
	93381-124488	20	57.80				
	62773-93380	25	58.58				
	37325-62272	29	50.53				
	12445-37324	13	60.69				
	≤12444	10	72.80				
6	Parity						
	Null	84	57.75	5.19	2	0.075	NS
	One	24	71.75				
	>One	10	44.80				
7.	Infertility Type						
	Primary	84	57.75	1281.00	2	0.380	NS
	Secondary	34	63.82				
8.	Duration of Infertility						
	2 years	22	65.55	0.92	2	0.380	NS
	3 years	33	56.91				
	≥4 years	63	58.75				
9.	Duration of Treatment						
	< 6 months	86	57.81	0.79	2	0.675	NS
	1 years	24	63.88				
	≥ 2 years	8	64.56				

NB: KW= Kruskal-Wallis Test, U= Mann-Whitney Test, df= degree of freedom, NS= Non-significant, S=Significant at 0.05 level.

Table no. 4: Association between quality of life [Relational] with selected demographic variables.**n=118**

Sl. No	Demographic Variables	f	Mean Rank	KW, U	df	P Value	Result
1.	Age						
	21-20 years	45	57.10	1.42	2	0.491	NS
	31-40 years	58	63.07				
	41-50 years	15	52.90				
2.	Religion						
	Hindu	82	61.05	6.06	3	0.109	NS
	Muslim	12	70.08				
	Christian	19	43.37				
	Others	5	69.90				
3.	Education Qualification						
	Graduate and above	74	55.79	4.31	3	0.230	NS
	High school	26	61.37				
	Middle school	17	73.91				
	Primary school	1	40.50				
4.	Occupation						
	Government employee	31	61.66	1.24	4	0.872	NS
	Private employee	23	60.24				
	Self-employee	10	51.05				
	Daily wager	6	68.67				
	Homemaker	48	58.36				
5.	Monthly Income						
	≥249044	9	62.17	3.22	6	0.780	NS
	124489-249043	12	50.83				
	93381-124488	20	63.93				
	62273-93380	25	57.92				
	37325-62272	29	54.24				
	12445-37324	13	68.81				
	≤12444	10	65.75				
6.	Parity						
	Null	84	59.68	1.25	2	0.534	NS
	One	24	63.25				
	>One	10	48.95				

7.	Infertility Type						
	Primary	84	59.68	1412.5	2	0.926	NS
	Secondary	34	59.04				
8	Duration of Infertility						
	2 ears	22	62.43	0.42	2	0.810	NS
	3 years	33	56.58				
	≥4 years	63	60.01				
9.	Duration of Treatment						
	<6years	86	61.64	1.68	2	0.432	NS
	1 years	24	51.48				
	≥ 2 years	8	60.56				

NB: KW= Kruskal-Wallis Test, U= Mann-Whitney Test, df= degree of freedom, NS= Non-significant, S=Significant at 0.05 level.

Table no. 5: Association between quality-of-life [Social] with selected demographic variables. n=118

Sl. No	Demographic Variables	f	Mean Rank	KW, U	df	P Value	Result
1.	Age						
	21-20 years	45	54.41	1.64	2	0.439	NS
	31-40 years	58	62.33				
	41-50 years	15	63.83				
2.	Religion						
	Hindu	82	60.60	0.82	3	0.845	NS
	Muslim	12	56.63				
	Christian	19	54.55				
	Others	5	67.10				
3.	Education Qualification						
	Graduate and above	74	56.41	5.37	3	0.147	NS
	High school	26	56.50				
	Middle school	17	77.00				
	Primary school	1	69.00				
4.	Occupation						
	Government employee	31	64.19	3.93	4	0.415	NS
	Private employee	23	65.78				
	Self-employee	10	52.45				

	Daily wager	6	40.08				
	Homemaker	48	57.35				
5.	Monthly Income						
	≥ 249044	9	74.61				
	1244789-249043	12	63.04				
	93381-124488	20	61.43				
	62273-93380	25	58.62	4.01	6	0.676	NS
	37325-62272	29	51.76				
	12445-37324	13	56.38				
	≤12444	10	66.50				
6.	Parity						
	Null	84	55.89				
	One	24	73.02	4.76	3	0.093	NS
	>one	10	57.35				
7.	Infertility Type						
	Primary	84	55.89	1125.00	2	0.071	NS
	Secondary	34	68.41				
8.	Duration of Infertility						
	2 years	22	66.09				
	3 years	33	58.79	1.04	2	0.595	NS
	≥4 years	63	57.57				
9.	Duration of Treatment						
	< 6 months	86	57.58				
	1 years	24	64.42	1.01	2	0.604	NS
	≥2 years	8	65.38				

NB: KW= Kruskal-Wallis Test, U= Mann-Whitney Test, df= degree of freedom, NS= Non-significant, S=Significant at 0.05 level.

Table no. 6: Association between quality of life [Environmental] with selected demographic variables.

n=118

Sl. No.	Demographic variables	f	Mean Rank	KW, U	df	P Value	Result
1.	Age						
	21-20 years	45	62.69				
	31-40 years	58	57.39	0.66	2	0.720	NS
	41-50 years	15	58.10				

2.	Religion						
	Hindu	8	58.55	3.70	3	0.296	NS
	Muslim	12	74.13				
	Christian	19	58.97				
	Others	5	41.90				
3.	Education Qualification						
	Graduate and above	74	55.99	2.37	3	0.500	NS
	High school	26	63.92				
	Middle school	17	68.12				
	Primary school	1	57.50				
4.	Occupation						
	Government employee	31	56.26	4.08	4	0.395	NS
	Private employee	23	62.17				
	Self-employee	10	46.05				
	Daily wager	6	46.50				
	Homemaker	48	64.74				
5.	Monthly Income						
	≥249044	9	79.72	9.54	6	0.145	NS
	124489-249043	12	38.88				
	93381-124488	20	63.20				
	62273-93380	25	64.66				
	37325-62272	29	60.21				
	12445-37324	13	53.04				
	≤12444	10	52.10				
6.	Parity						
	Null	84	62.10	1.99	2	0.369	NS
	One	24	54.96				
	> One	10	48.55				
7.	Infertility Type						
	Primary	84	62.10	1209.50	2	0.187	NS
	Secondary	34	53.07				
8.	Duration of Infertility						
	2 years	22	48.73	3.04	2	0.219	NS
	3 years	33	59.48				
	≥4 years	63	63.27				
9.	Duration of Treatment						
	<6 months	86	59.85	0.77	2	0.681	NS

	1 year	24	55.60				
	≥2 years	8	67.38				

NB: KW= Kruskal-Wallis Test, U= Mann-Whitney Test, df= degree of freedom, NS= Non-significant, S=Significant at 0.05 leve

Table no. 7: Association between quality of life [Tolerability] with selected demographic variables.

n=118

Sl. No.	Demographic variables	f	Mean Rank	KW, U	df	P Value	Result
1.	Age						
	21-20 years	45	54.33	2.11	2	0.349	NS
	31-40 years	58	61.40				
	41-50 years	15	67.67				
2.	Religion						
	Hindu	82	62.04	2.15	3	0.543	NS
	Muslim	12	50.58				
	Christian	19	52.84				
	Others	5	64.60				
3.	Education Qualification						
	Graduate and above	74	57.27	2.67	3	0.445	NS
	High school	26	62.79				
	Middle school	17	61.32				
	Primary school	1	108.00				
4.	Occupation						
	Government employee	31	58.00	3.74	4	0.443	NS
	Private employee	23	50.33				
	Self-employee	10	59.10				
	Daily wager	6	76.50				
	Homemaker	48	62.82				
5.	Monthly Income						
	≥249044	9	83.56	11.60	6	0.071	NS
	124489-249043	12	36.50				
	93381-124488	20	62.55				
	62273-93380	25	56.18				
	37325-62272	29	59.86				
	12445-37324	13	56.73				

	≤ 12444	10	70.20				
6.	Parity						
	Null	84	59.48	0.52	2	0.772	NS
	One	24	62.25				
	> One	10	53.10				
7.	Infertility Type						
	Primary	84	59.48	1426.00	2	0.990	NS
	Secondary	34	59.56				
8.	Duration of Infertility						
	2 years	22	51.43	3.08	2	0.214	NS
	3 years	33	55.42				
	≥ 4 years	63	64.45				
9.	Duration of Treatment						
	<6 months	86	61.73	2.51	2	0.285	NS
	1 year	24	49.83				
	≥ 2 years	8	64.50				

NB: KW= Kruskal-Wallis Test, U= Mann-Whitney Test, df= degree of freedom, NS= Non-significant, S=Significant at 0.05 level.

DISCUSSION

- The present study showed that the mean total Fertile score was 71(SD=17.2) where the environment domain had the highest mean score with a mean value of 84.8(SD=14.4) while the tolerability domain had the lowest score with a mean value of 53(SD=12.9). In consistent of the present study, supported by Lawrence M Sikuku (Jan 2019) to “Determine the quality of life of subfertile patients seeking fertility care”. The study was done at two urban fertility centres in Nairobi using the FertiQoL tool”. Findings revealed that the highest score was for the relational domain with a mean of 72.5 and the lowest mean score was for emotional domain with mean of 57.5¹¹.
- The present study reveals that there is no significant association between quality of life among women undergoing IVF treatment with their demographic variables (Age, Educational qualification, Occupation, Monthly family Income, Infertility type, duration of Infertility, duration of treatment). However, it is worth noting that a trend towards significance was observed for the domain emotional and mind/body with parity; domain social with infertility type; and domain tolerability with monthly income, suggesting a potential influence that warrants further investigation with a larger sample size. These findings were supported by wadadekar GS, Inamdar DB, Nimbargi VR (Mar 2021) on “Assess the impact of infertility & its treatment on quality of infertile couples using FertiQoL questionnaire”. Findings revealed that there were association between sociodemographics and quality of life of women. Domain environment and mind/body with age;

domain relational with residence; domain relational with type of infertility; domain emotional, mind/body and tolerability with cause of infertility; domain environment with duration of infertility; and domain emotional, mind/body, social with no. of ovulation induction +/- IUI cycle had shown association¹².

CONCLUSION

Infertile women experience a complex interplay of emotional, mind/body, relations, and social factors. While IVF offers hope for parenthood, it also presents challenges such as stress, anxiety, and financial strain. The quality of life among women undergoing IVF treatment is influenced by various aspects, including treatment outcomes, coping mechanisms, and the strength of their support networks. The most and least affected domain of quality of life of women undergoing IVF treatment have been highlighted in this study, which might greatly contribute to the health sector. Future research should prioritize interventions to enhance well-being during the IVF journey.

ACKNOWLEDGEMENT

I am deeply grateful to Capt Dr Minimol Louis (Retd) for their invaluable support, my dissertation guide Mrs. Moirangthem Sumita for her expert guidance, and my parents, Mr. Tage Kapa and Mrs. Tage Yaba, for their unwavering encouragement. I also sincerely appreciate the insightful feedback and support from my friends, Ms. Pragati Rawat and Mr. Duyu Apa, whose contributions have been instrumental in shaping this thesis. Their collective expertise and generosity have played a crucial role in its completion.

REFERENCES

1. McQuillan J, Greil AL, Shreffler KM, Tichenor V. The importance of motherhood among women in the contemporary United States. *Gender Soc.* 2008 Aug;22(4):477-496.
2. World Health Organization. 1 in 6 people globally affected by infertility: WHO. 2023 April 4.
3. Economic Times. In a first in India, Goa to give free IVF treatment in govt hospital. *Economic Times.* 2023 Aug 15.
4. World Health Organization. WHOQOL - Measuring Quality of Life. 2012 Mar 1.
5. Gameiro S, Boivin J, Dancet E et al. ESHRE guideline: routine psychosocial care in infertility and medically assisted reproduction—a guide for fertility staff. *Hum Reprod.* 2015 Nov;30(11):2476-2485.
6. Kumar P, Sharma A. Assisted Reproductive Technology in India: Current Scenario and Future Prospects. *J Reprod Health.* 2023;10(2):123-130.
7. <https://www.ihrfertility.com/>
8. <https://pratikshahospitals.com/>

9. <https://www.indiraivf.com/ivf-cost-in-guwahati>
10. Bokek-Cohen, Y. (2024). The impact of relationship status on IVF patients' quality of life. *Women and Health*, 64(1), 14-22.
11. Sikuku LM. Quality of life and its determinants in subfertile patients seeking fertility care at two urban fertility centres in Nairobi [master's dissertation]. Nairobi: Aga Khan University; 2019.
12. Wadadekar GS, Inamdar DB, Nimbargi VR. Assessment of Impact of Infertility & its Treatment on Quality of Life of Infertile Couples using Fertility Quality of Life Questionnaire. *J Hum Reprod Sci*. 2021 Jan-Mar;14(1):3-10.

