RESEARCH
O&G Forum 2024; 34 – 2s: 60 - 63

QUALITY OF LIFE OF WOMEN WITH PRIMARY INFERTILITY -A PILOT STUDY

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Abstract
Introduction and Background:
Infertility, a prevalent global health concern, impacts millions worldwide, with estimates ranging from 48 million couples to 186 million individuals affected. Beyond physical assistance, women facing infertility necessitate mental and emotional support to enhance both fertility prospects and overall well-being. This holistic approach aims to uplift mental health and elevate the quality of life for those grappling with infertility.
Methods: This randomized control trial was conducted among women with primary infertility aged between 21 and 45 years attending OPD at selected tertiary hospitals in Puducherry. The study aims to assess the quality of life before intervention among women and to determine the effect of intervention on the quality of life among women with primary infertility. Participants were assigned to 4 blocks, a total of 30 Samples, based on the inclusion criteria after obtaining informed consent, participants were randomly assigned to the intervention and control groups within each block. On the first day for the experimental group, the researcher did direct counselling including the Coach method—aerobic exercise like walking, Jogging, Skipping, and cycling daily 30 minutes for 6 consecutive weeks. Data was analysed by Frequency & percentage, t-test. Observation and follow-up were done through WhatsApp or phone calls.
Result:
There was a statistically significant improvement in all aspects of quality of life ie, Emotional 10.326, (t=23.620 p=0.000), Mind & Body MD10.738,t=15.976 p=0.000*, Relational MD 9.776,t=20.917,p=0.000*, Social MD 3.960,t=9.025,p=0.000*,Treatment environment MD 2.776,t=4.404,p=0.001*, Treatment tolerability MD 4.185,t=13.208,p=0.000* after the intervention at p<0.05.

CONCLUSION:
Quality of life was improved after the intervention including Aerobic exercises like walking and jogging to the experimental group of infertile women.
Keyword: Primary Infertility, Quality of life, Aerobic exercises. Intervention.

INTRODUCTION

Pregnancy and childbirth Reproduction is considered a divine bestowment upon all living beings, wherein each human is granted the gift of life upon birth. Each passing day not only offers the opportunity to exist but also to procreate, thereby doubling one's joy. However, infertility, a disorder of the reproductive system, manifests when clinical pregnancy fails to materialize after twelve or more months of consistent, unprotected sexual activity.

According to estimates from the World Health Organization (WHO), the prevalence of primary infertility in India spans from 3.9% to 16.8%. This statistic varies significantly across Indian states, with states like Uttar Pradesh, Himachal Pradesh, and Maharashtra experiencing a prevalence of around 3.7%, while Andhra Pradesh stands at 5%, and Kashmir at 15%. Additionally, within the same regions, prevalence rates fluctuate among different tribes and castes, highlighting the complex interplay of cultural and genetic factors in infertility.

To address this pressing issue, a proposed study seeks to investigate the impact of aerobic exercises, such as walking, jogging, skipping, and cycling, on the quality of life among infertile women. Aerobic exercises, known for their cardiovascular benefits, have garnered attention for their potential to enhance overall well-being, including mental and emotional health. By focusing on physical activity as a potential intervention, this study aims to explore holistic approaches to improving the lives of infertile women[1-4] .

The significance of this study lies in its potential to offer practical solutions for managing infertility-related challenges. Beyond medical treatments, lifestyle modifications, such as engaging in regular aerobic exercises, hold promise in improving both physical health and psychological resilience among individuals grappling with infertility. Moreover, by considering the diverse cultural landscape of India, this research aims to tailor interventions that are sensitive to regional variations in attitudes towards health and wellness.

METHODOLOGY

A research study was conducted focusing on women aged between 21 and 45 years experiencing primary infertility, who were receiving outpatient care at selected tertiary hospitals in Puducherry. Employing a quantitative approach, the study aimed to evaluate the impact of an intervention on the quality of life among women with primary infertility, comparing an experimental group to a control group. Prior to data collection, ethical clearance was obtained from the Institutional Review Board, and formal permission was secured from relevant authorities. Participants meeting the inclusion criteria were grouped into four blocks, with a total of 30 samples, and provided informed consent before enrollment.

Within each block, participants were randomly assigned to either the intervention or control group. Baseline data were collected using questionnaires and the FertiQol standardized tool to assess the quality of life among infertile couples in both groups. For the experimental group, the intervention involved direct counseling sessions, employing the Coach method, which included aerobic exercises such as walking, jogging, skipping, and cycling for 30 minutes daily over a period of six consecutive weeks. Confidentiality of participant information was rigorously maintained throughout the study duration.

Data collected were analyzed using descriptive and inferential statistics to discern any significant differences between the experimental and control groups. Observation and follow-up procedures were conducted using digital communication platforms such as WhatsApp or phone calls to ensure continued engagement and monitor progress among participants.

By adopting this structured approach, the study sought to provide insights into the efficacy of aerobic exercises combined with counseling in enhancing the quality of life for women experiencing primary infertility. The utilization of standardized tools and rigorous ethical protocols aimed to uphold the integrity and reliability of the findings, contributing valuable evidence to inform future interventions and healthcare practices in the field of infertility management

RESULTS

Table 1: The frequency and proportional distribution of women having primary infertility based on socio-demographic characteristics N=15+15=30

SL.NO	DEMOGRAPHIC VARIABLES	Experimental Group		Control Group	
		f	%	f	%
1.	**AGE (in years)**				
	21-30 yrs	10	66.7	7	46.7
	> 30 yrs	5	33.3	8	53.3
2.	**Religion**				
	a. Hindu	15	100	15	100
3.	**Educational status**				
	a. Primary	3	20	4	26.67
	b. Secondary	7	46.7	7	46.7
	c. Graduate	5	33.3	4	26.66
4.	**Occupation**				
	a) Housewife	8	53.3	7	46.67
	b) Employee	6	40	5	33.3
	c) Business	1	6.67	3	20
5.	**Income (per month)**				
	a. Rs.10,001 – 30000	8	53.3	12	80
	b. Rs. 30001 – 50000	7	46.7	3	20
6.	**Breadwinner of the family**				
	a. Husband	12	80	11	73.33
	b. Both	3	20	4	26.67
7.	**Type of family**				
	Joint	3	20	2	13.33
	Nuclear	12	80	13	86.67
8.	**Residence**				
	a) Urban	6	40	6	40
	b) Rural	9	60	9	60
9.	**Reason for infertility**				
	a) Male factor	2	13	3	20
	b) Female factor	13	87	12	80

Table 1 illustrates the demographic characteristics of participants in the experimental and control groups. Among women in the experimental group, 10 (66.7%) were aged between 21 to 30 years, while in the control group, 8 (53.3%) were in the same age bracket (>30 years). All participants in both groups identified as Hindus. In terms of education, 7 (46.7%) women in each group had completed only secondary education. The majority of women, 8 (53.3%) in the experimental group and 7 (46.67%) in the control group, were housewives. Regarding family income, 8 (53.3%) participants in the experimental group and 12 (80%) in the control group reported a family income ranging from Rs. 10,001 to 30,000. Similarly, the husbands were the primary breadwinners for 12 (80%) participants in the experimental group and 11 (73.33%) in the control group. Nuclear families were predominant in both groups. Moreover, the majority of participants, 9 (60%) in the experimental group and an equal number in the control group, hailed from rural areas. Male factor infertility was the primary reason for infertility in most cases, with 13 (87%) participants in the experimental group and 12 (80%) in the control group attributing infertility to this cause.

Table 2: Comparison of Quality of life of Women with primary infertility among the Control Group and Experimental Group after the Intervention.

N=15+15=30

Test	Experimental Group		Control Group	
	f	%	f	%
Pre Test	15	46.6	15	42.5
Post Test	15	83.1	15	43.5

The above table shows that post-test scores of the Quality of life of women in the experimental group are higher (83.1%) than women in the control group (46.6%).

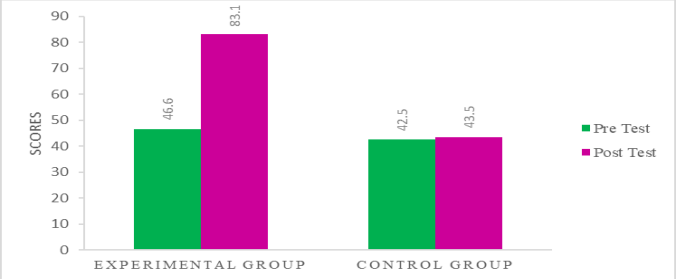

Fig 2: Pre and post-test scores of quality of life of participants in experimental and control group

Table 3: –Comparison of mean & standard deviation ofpre and post-test scores of the experimental group and the Quality of life of women with primaryinfertility

N=15+15=30

Fertiqol Scale	Group	Test	Mean	S.D	SE	Mean Difference	Statistical analysis
Emotional	Experimental	Pre Test	5.33	1.175	303	10.326	t=23.620 p=0.000*
		Post Test	14.80	1.207	.312		
Mind & Body	Experimental	Pre Test	6.07	1.486	.384	10.738	t=15.976 p=0.000*
		Post Test	15.53	1.187	.307		
Relational	Experimental	Pre Test	5.33	1.047	.270	9.776	t=20.917 p=0.000*
		Post Test	14.20	1.265	.327		
Social	Experimental	Pre Test	11.87	1.187	.307	3.960	t=9.025 p=0.000*
		Post Test	15.07	.799	.206		
Treatment Environment	Experimental	Pre Test	12.13	1.060	.274	2.776	t=4.404 p=0.001*
		Post Test	14.00	1.309	.338		
Treatment Tolerability	Experimental	Pre Test	5.93	1.163	.300	4.185	t=13.208 p=0.000*
		Post Test	9.53	640	.165		

Table: 3 depicts that there is statistically significant improvement in all aspects of quality of life, Emotional (t=23.620 p=0.000), Mind-(t=15.976 p=0.000*), Relational (t=20.917, p=0.000*), Social (3.960, t=9.025, p=0.000*), Treatment environment (2.776, t=4.404, p=0.001*), Treatment tolerability (t=13.208, p=0.000*) after the intervention at p <0.05

DISCUSSION

The study's results indicate a notable improvement in various aspects of quality of life following the intervention within the experimental group. Specifically, significant enhancements were observed in emotional well-being (t=23.620, p=0.000), mental health (t=15.976, p=0.000*), relational satisfaction (t=20.917, p=0.000*), social interactions (t=9.025, p=0.000*), treatment environment perception (t=4.404, p=0.001*), and treatment tolerability (t=13.208, p=0.000*) at a significance level of $p < 0.05$.

These findings echo those of a study conducted by Aulakh et al., focusing on the impact of nursing interventions, including meditation, progressive muscle relaxation exercises, and counseling, on lifestyle and dietary modifications among women undergoing infertility treatment. Their research revealed a marked improvement in marital relationships, with a mean difference in marital satisfaction of 4.633 (t29=10.640, p=0.001). Furthermore, the mean difference between the experimental and control groups was 3.867 (t58=4.215, p=0.001), indicating a statistically significant improvement at the 0.001 level. These findings underscore the importance of holistic interventions in addressing the multifaceted challenges

associated with infertility, particularly in the context of the post-COVID era, where such cases are on the rise.

In the wake of the COVID-19 pandemic, there has been a notable increase in infertility cases, further underscoring the significance of interventions aimed at improving the quality of life for affected individuals. The psychological toll of infertility, exacerbated by the stress and uncertainty brought about by the pandemic, highlights the urgent need for comprehensive support measures. The findings of our study, alongside those of Aulakh et al., emphasize the effectiveness of integrative approaches, encompassing physical, emotional, and relational dimensions, in addressing the complex needs of individuals experiencing infertility.

The observed improvements in emotional well-being, mental health, and relational satisfaction following the intervention are particularly noteworthy, as these areas are often profoundly affected by infertility. The implementation of aerobic exercises, coupled with counseling, not only fosters physical fitness but also promotes emotional resilience and strengthens interpersonal bonds. By enhancing treatment environment perception and tolerability, our intervention empowers individuals to navigate the challenges of infertility treatment with greater confidence and optimism.

Furthermore, the parallels between our study and that of Aulakh et al.[5-11] underscore the reproducibility and generalizability of our findings across different populations and intervention modalities. Both studies highlight the transformative potential of holistic interventions in improving overall well-being and marital satisfaction among individuals undergoing infertility treatment. As such, these findings have far-reaching implications for healthcare professionals, policymakers, and researchers seeking to address the burgeoning crisis of infertility in the post-COVID era.

Moving forward, it is imperative to continue exploring innovative approaches to infertility management that prioritize the holistic needs of affected individuals and couples. Integrating evidence-based interventions, such as aerobic exercises and counseling, into routine clinical practice can significantly enhance the effectiveness and inclusivity of infertility care. By fostering a supportive and empowering environment, we can empower individuals to confront infertility with resilience and hope, ultimately improving their quality of life and marital satisfaction in the face of adversity

CONCLUSION

The intervention involving aerobic exercises such as walking and jogging led to improved quality of life among infertile women in the experimental group. However, to validate and generalize these findings, further research with a larger sample size is warranted.

Conflict of Interest: Nil
Ethical issues addressed
No external financial aid

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