

# Effectiveness of Selected Yogaasnas on Quality of Life of Women Undergoing Infertility



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## Abstract

Infertility remains an important problem worldwide which affects men and women equally. It is a bio-psycho-social phenomenon; involving psychological, physiological, environmental, and interpersonal relation aspects. Yoga is considered as an acceptable method for improving and maintaining physical, mental and emotional health. Therefore a pre-experimental study was done to assess the effectiveness of selected yogaasnas on quality of life of women undergoing infertility treatment in selected infertility clinics of Indore. One group pre-test post-test design was adopted, 20 women were selected using purposive sampling technique. A standardized tool i.e. FertiQoL was administered to collect the data before and after the selected yogaasnas. Statistical analysis revealed that 55% scored 40-70 in pre-test whereas, in post-test 100% women scored above 80 and showed improvement in different domains of Quality of Life also. The paired 't' test value between pre-interventional and post-interventional scores of quality of life ( $t=8.31$ ) was significant at the level  $p<0.001$  which revealed the effectiveness of selected yogaasnas on quality of life of women undergoing infertility treatment. The study concluded that the quality of life of women undergoing infertility treatment can be improved with yogaasnas and can be included in the treatment plan.

**Keywords:** Quality of life, women undergoing infertility treatment, infertility clinics, FertiQoL, Selected Yogaasnas

## Background

Infertility is a critical component of reproductive health, and has often been neglected in these efforts. The inability to have children affects men and women across the globe. Infertility is a global health issue, affecting approximately 8-10% of couples worldwide. A WHO evaluation of Demographic and Health Surveys (DHS) data (2004) estimated that more than 186 million ever-married women of reproductive age in developing countries were maintain a "child wish", translating into one in every four couples in developing countries had been found to be affected by infertility. (Mascarenhas M Net.al, 2012)<sup>1</sup>

Infertility is a bio-psycho-social phenomenon, meaning that it involves psychological, physiological, environmental, and interpersonal relation aspects. Consequently, infertility is not considered an organ function disorder and its other dimensions demand precise attention. (Lukse MP, 1999)<sup>2</sup>

Seibel M et.al, 1990<sup>3</sup> reported that there are scheduled drugs and systematic treatments to cure infertility. It should also be noted that these expensive treatments have tremendous and harmful side-effects. Nevertheless, there are holistic infertility cures that give only benefits and no side-effects. Fertility yoga classes are one of the newest trends (Iyengar, 2002)<sup>4</sup>. Yoga is used by a lot of women to relax and improve flexibility and it may be helpful in promoting fertility. (Esch R et.al, 2003)<sup>5</sup>

### Need of the Study & Literature Review:

With loss of fertility, one can experience the loss of health, physiological and emotional stability, social position, fame, and confidence; one can also experience negative emotions such as anxiety and shame; these worsen as the infertility lasts for a long time (D Kumar, 2007)<sup>6</sup>

The recognition of the distressing character of infertility diagnosis and treatment has led to the development of several psychosocial interventions for infertile couples.

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At the Leuven University Fertility Centre, a bodymind marital group intervention was developed to help infertile couples cope with the distress related to infertility. (Lemmens GMD et.al,2004)<sup>7</sup>

Based on above information, the researcher felt that there was a need to study about how disciplines such as yoga promote personal growth, health and well-being. Researcher also felt, health care professionals, health educators and the like, need to be aware of the potential of yoga as an important component of a personal wellness plan, as it is a cost effective, non-invasive, and an effective strategy which makes a person fit physical mentally emotionally and spiritually and thus improving the quality of life.

### Objectives

To assess the overall quality of life among women undergoing infertility treatment in selected infertility clinics before and after the intervention.

To determine the relationship between the various domains of quality of life of women undergoing infertility treatment in selected infertility clinics.

To evaluate the effectiveness of selected yogaasanas on the quality of life of women undergoing infertility treatment in selected infertility clinics.

### Hypothesis

H<sub>1</sub>. There is significant difference on the quality of life after the intervention among infertile women, at  $p \leq 0.05$  level.

### Research Methodology

**Research Approach & Design:** Quantitative research approach with one group pre-test post-test research design was adopted in the study.

**Setting:** The present study was conducted in selected infertility clinics of Indore.

**Sampling Technique:** A non probability purposive sampling was used to select the sample from the population. During selection eligibility, feasibility, convenience and willingness of samples were considered by the researcher.

**Sample:** In this study, the sample comprised of a total of 20 women undergoing infertility treatment fulfilling the inclusion criteria.

**Tools:** The tools used in the study were:-

Socio-demographic variables 15 items

Fertility Quality of Life ( FertiQoL) A standardized tool developed by Jacky Boivin, Janet Takefman & Andrea Braverman, 2002. FertiQoL consists of 36 items.

**Validity and Reliability:** Validation was done by 7 experts in the field of psychiatry nursing, psychiatry, psychology and gynecology.

Fertility Quality of Life tool has a good test-retest reliability and stability over time of the quality of life measured. Cronbach reliability statistics for the Core and Treatment FertiQoL (and subscales) was satisfactory, in the range of 0.72 and 0.92.

**Pilot Study:** The pilot study was conducted at Morpheus international infertility clinic, Indore. The analysis of the pilot study revealed that objectives of the study could be fulfilled.

**Procedure for Data Collection:** Written permission from the authority was taken. An informed consent was obtained from the clients and confidentiality was assured. A total of 20 women were enrolled for the study. All 20 clients were explained thoroughly about the intervention. Timings were 11.30am to 12pm. Pre-test was taken. Selected yogaasnas were performed in 15 sessions. Total of 10 yogaasnas were selected by the yoga expert. Before implementation of yogaasnas, researcher took the training from the yoga therapist. They were made to do twice in a day, one in front of the researcher in the morning and 2<sup>nd</sup> in the evening which was reminded by the researcher through phone.

### Findings

**Section 1: Socio demographic characteristics of clients:**

The present study shows that the majority 13(65%) of the infertile female partners are in the age group of 20-30 years. Considering their educational status more than half of the clients, 13(65%) have completed with their graduation and 1(5%) has never been to school. Regarding their occupational status, majority of women 17(65%) were housewife and only 3(15%) out them were working. 16(80%) clients were having a nuclear type of family and among 20, 4(20%) belonged to joint family. None of the clients were having a family history of

infertility. On viewing the duration of their married life, out of 20 clients, 8(40%) had between 1-5years, 7(35%) had 6-10years and 5(25%) had more than 10years. Regarding the type of infertility, majority of them, 18(90%) were primary infertile clients and 2(10%) were secondary infertile. Considering the cause of infertility treatment more than half of the women clients, 13(65%) were diagnosed as infertile and other causes for treatment were male, combined and unexplained which comprised 3(15%), 1(5%) and 3(15%) respectively. According to Kuppuswamy socio-economic status scale, majority of clients 15(75%) fell under upper middle class and a small portion 1(5%), 2(10%) and 2(10%) belonged to upper, middle/lower middle and lower/upper class respectively.

### Section II: Assessment of quality of life before selected yogaasans

**Table: 1: Pre-test Raw scores of FertiQoL of women undergoing infertility treatment N=20**

Samples	Core (C)	Treatment (T)	FertiQoL (C+T)
Sample 1	63	19	82
Sample 2	55	15	70
Sample 3	48	23	71
Sample 4	44	19	63
Sample 5	52	21	73
Sample 6	27	16	43
Sample 7	47	22	69
Sample 8	59	24	83
Sample 9	51	21	72
Sample 10	52	18	70
Sample 11	47	17	64
Sample 12	60	24	84
Sample 13	55	18	73
Sample 14	57	25	82
Sample 15	59	22	81
Sample 16	61	22	83
Sample 17	58	23	81
Sample 18	52	15	67
Sample 19	62	22	84
Sample 20	68	25	93

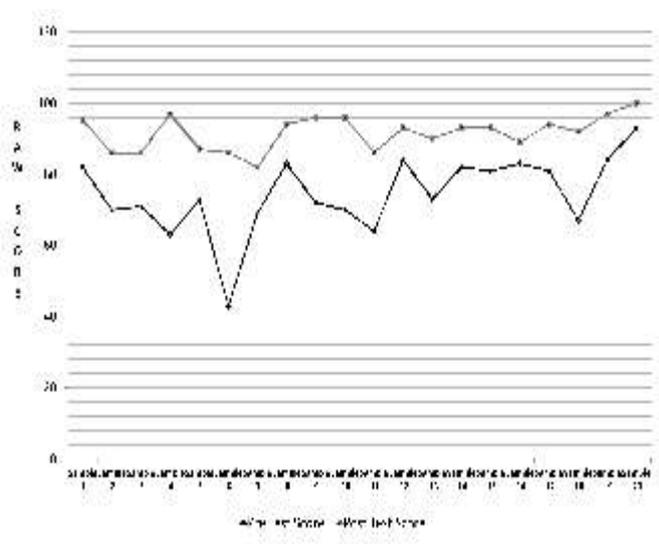
Table 1 shows the pre-test raw score of women before the

intervention. Core and treatment section were the subscales of FertiQoL. Out of 34 questions the first 24 questions of FertiQoL comes under core subscale and remaining 10 questions from the treatment subscale, and sum of scores of core and treatment subscale gives the total FertiQoL score. The maximum and minimum scored obtained by the samples in FertiQoL were 43 and 93 respectively. From the table it shows that to an extent all the clients have a good quality of life but on verbalization it has been found out that in some domains of FertiQoL such as emotional, mind/body, or treatment tolerability women were facing problems and had low scores.

Present study revealed that 9(45%) clients scored FertiQoL above 80 and remaining 11(55%) were between 40-70 scores. This depicted that out of 20, 9(45%) were having a good quality of life but the investigator found that in certain domains of quality of life they scored low scores.

### Section III: Comparison of overall quality of life before and after yogaasans

#### Pre-Test Post-Test Raw Scores Of FertiQoL



**Figure 1:Line diagram showing the distribution of clients according to pre-test post-test Raw scores of FertiQoL**

Present study revealed that in pretest 9(45%) clients scored FertiQoL above 80 and remaining 11(55%) were between 40-70 scores. The post-interventional scores of FertiQoL revealed that majority of clients, 20(100%) women scored above 80, with increase in scores in each domain, thus indicating an improved quality of life.

**Section IV: Comparison of quality of life in different domains of FertiQoL before and after selected yogaasans**

**Table: 2: Comparison of mean of pre-test & post-test raw scores across each domain of FertiQoL**

(N=20)

Domains	Pre-Test Mean	Post-Test Mean
Emotional	12.8	17.05
Mind/Body	13.1	18.8
Relational	11.05	11.55
Social	16.4	18.4
Environment	13.65	13.95
Tolerability	6.9	11.85

Table 2 shows the mean of pre-test and post-test raw scores of FertiQoL across each domains.. Emotional, Mind/Body and Treatment Tolerability domains had low scores i.e.12.8, 13.1 and 6.9 respectively which got increased after intervention to 17.05, 18.8 and 11.85 respectively. Thus it indicates that the overall quality of life of women undergoing infertility treatment had improved.

Emotional domain of women was affected to a great extent as they were emotionally more weak and experienced grief, sad, depressed and anger due to fertility problems. Mind/body domain had major impact on the quality of life as evidenced by women with impaired thought and concentration due to fertility problems. They felt more drained out, pain and physical discomfort because of fertility problems. Infertility had also affected the tolerability domain to an extent as they were bothered with the side effects of the medications and treatment and they found it complicated in dealing with the procedure carried out for infertility treatment(s).

**Section V: Determination of the relationship between various domains of quality of life**

**Table 3: Correlation between various domains of quality of life**

N=20

Domain	Mind/Body	Relatlional	Social	Enviro nment	Tolera bility
Emotional	2.79	0.52	2.21	0.56	2.13
Mind/Body	-	1.34	2.61	0.69	2.56
Relational	-	-	0.95	-0.39	0.95
Social	-	-	-	0.83	1.75
Environment	-	-	-	-	1.92

df 19= 0.389 at 0.05 level of significance

Table 3 depicts that infertility had an impact on total quality of life. The study showed that each domain of quality of life is positively correlated with each other except relational and environmental domain which is negatively correlated with each other which means as the relational commitment strengthens; the treatment environment becomes less severe. The study showed that total quality of life of women got affected by all the domains of quality of life and all the domains had influence of infertility on their quality of life i.e. infertility had an impact on total quality of life.

**Section VI: Effectiveness of yogaasnas on quality of life**

**Table No.4: Mean, Mean difference, Standard Deviation, d.f. and 't' value of pre-test and post-test of FertiQoL score**

N=20

FertiQoL	Mean	MD	SD	SE	df	't' Value	Table value
Pre Test	54.70	12.64	6.83	1.52	19	8.31	1.729
Post Test	67.34						

Data in table no.4 depicts that the mean pretest FertiQoL was 54.70 and mean posttest was 67.34. The mean difference was 12.64 with SD of ± 6.83. The mean scores of the pre-test and post-test of various domains showed marked difference after the intervention. The computed 't' value was 8.31 at degree of freedom 19. This indicates that there was a significant difference in pre-test and post-test score of FertiQoL after the selected yogaaasnas at the level of p≤0.001. Hence H<sub>1</sub> was accepted at the level p≤0.05.

**Discussion**

**Socio-Demographic Variables**

The present study shows that the majority 13(65%) of the infertile female partners are in the age group of 20-30 years. 16(80%) clients were having a nuclear type of family and among 20, 4(20%) belonged to joint family. Considering the cause of infertility treatment more than half of the women clients, 13(65%) were diagnosed as infertile and other causes for treatment were male, combined and unexplained which comprised 3(15%), 1(5%) and 3(15%) respectively.

Similar study was done by Rebecca D (2013)<sup>8</sup> were findings regarding selected variables revealed, more

than half (53%) of male partners and 44% female partners were in the age group of 25-31 years. Most (82%) of the infertile female partners were in the age group of 18-24 years at the time of their marriage. Half (50%) of female partners had 1-5 years of the duration of their marriage. Majority (64%) of female partners had primary infertility. It was noticed that half (50%) of female partners were trying self for conception and with doctor's help since 1-5 years.

### **Pre-Interventional Quality of Life of Women Undergoing Infertility Treatment**

Present study revealed that 9(45%) clients scored FertiQoL above 80 and remaining 11(55%) were between 40-70 scores. This depicted that out of 20, 9(45%) were having a good quality of life but the investigator found that in certain domains of quality of life they scored low scores. Similarly **Cox S, (2006)**<sup>9</sup> reported low levels of self esteem among women with infertility. **Wischman T, (2001)**<sup>10</sup> indicated in his study infertile women showed higher scores of depression. **Remah M, (2010)**<sup>11</sup> reported the feelings experienced by infertile women as depression, grief, guilt, shame, inadequacy, anger, frustration, feeling alone, grieving, hopelessness etc.

### **Correlation of Various Domains of Quality of Life**

The study showed that each domain of quality of life is positively correlated with each other except relational and environmental domain which is negatively correlated with each other which means as the relational commitment strengthens; the treatment environment becomes less severe.

The findings of the present study was supported by a similar study done by **Rebecca D, (2013)**<sup>8</sup> where she stated that emotional domain was found to be positively correlated with all the domains mind/body, relational, social, environmental and tolerability domain and total quality of life of both male and female partners got affected by all the domains of quality of life and all the domains had influence of infertility on their quality of life.

### **Effectiveness of Yogaasnas on Quality of Life of Women**

The result revealed that the mean difference of pre-interventional and post interventional score was 12.64. The computed 't' value was 8.31 at the degree of freedom 19. This indicated that there was significant difference in pre-test and post-test score after

yogaasnas at the level of  $p \leq 0.001$ . Result suggests that the selected yogaasnas is efficacious in bringing about improvement in quality of life of women undergoing infertility treatment. Therefore, **H<sub>1</sub>** was accepted at the level  $p \leq 0.05$ .

The findings of the study was supported by the study done by **Smith C et.al, (2007)**<sup>12</sup> where yoga was found to be as effective as relaxation in reducing stress, anxiety and improving health status. Even **Domar AD, et.al (1990)**<sup>13</sup> also suggested that yoga exercises should be considered for couples with infertility before or in conjunction with reproductive technologies such as intrauterine insemination and gamete intrafallopian transfer.

### **Conclusion**

The study concluded that selected yogaasnas was successful among women undergoing infertility in improving their quality of life. As it was an interactive therapy, clients felt free to share their problems related to infertility, the social pressure they have over them for a child, problem they have in their marital relationship due to infertility, followed by depression they face when results come out negative. Researcher felt that there is a need to do further studies related to problems affecting the infertile couples.

**Acknowledgment:** I am grateful to all who have helped me to carry out this research project.

**Conflict of Interest:** There is no conflict of interest.

**Sources of Funding:** Study was conducted on personal expense.

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