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# An Exploratory Study to Assess the Quality of Life of Infertile Couples at Selected Infertility Clinics in Haryana

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***Abstract***
***Introduction:*** *Infertility is defined as the inability to achieve pregnancy after one year of unprotected intercourse. An estimated 15% of couples around the world meet this criterion and are considered infertile.*
***Objective:*** *An exploratory study to assess the quality of life of infertile couples at selected infertility clinics in Haryana.*
***Design:*** *Exploratory correlational survey design*
***Setting:****The study was conducted at selected infertility clinics i.e. MMIMSR& Hospital, Mullana, infertility clinics at district Ambala and Karnal*
***Participants:*** *100 infertile couples were selected at MMIMSR& Hospital, Mullana, infertility clinics at district Ambala and district Karnal by purposive sampling technique.*
***Measurements and tool:*** *A standardised tool i.e. FertiQol tool was administered to collect data and an informational booklet on "Coping with Infertility" were also given to the infertile couples.*
***Findings:*** *Findings revealed that male partners had better quality of life than the infertile female partners in all the domains of quality of life i.e. emotional, mind/body, relational, social, environmental and tolerability domain and there was a significant difference in the quality of life of infertile male and female partners. The correlation between the various domains of infertile male and female partners showed that the emotional domain was positively correlated to other domains (except the environmental domain in female partners). Infertility had influenced all the domains of infertile couples but it had major impact on the emotional domain. There was a significant association between levels of Fertility Quality of life scores and occupation of male partners and age, religion, type of family, age at marriage, duration of marriage, trying for conception self and with doctor's help and number of miscarriages of female partners.*
***Conclusion:****The study concluded that the infertility affects all the domains of quality of life but it has major impact on the emotional aspect of the infertile couples hence health professionals need to include assessment of psychological symptomatology to plan more efficient interventions to infertile patients.*
***Keywords:*** *quality of life, infertile couple, infertility clinics, selected variables, informational booklet*.

## I. Introduction

Infertility remains an important problem worldwide which affects men and women equally. It does affect a large percentage of the population and are on the rise in many countries. There are millions of couples right now struggling with infertility. It can be a hard struggle as couples see other people with their babies and wonder why it is not so easy for them.[1,2]

The World Health Organization (WHO,2004) estimates that 60 to 80 million couples worldwide currently suffer from infertility[3]. Infertility varies across regions of the world and is estimated to affect 8 to 12 per cent of couples worldwide[4,5]. According to WHO, primary infertility is the Inability to conceive within two years of exposure to pregnancy (i.e. - sexually active, non-contracepting, and non-lactating) among women 15 to 49 yr old[6]. Secondary infertility refers to the inability to conceive following a previous pregnancy. Globally, most infertile couples suffer from primary infertility[7].

Health related quality of life now is considered as an important outcome measure in many clinical settings. Since infertility and its treatment has several psychosocial effects on infertile couples, studying health related quality of life in these group of people is very crucial[8,9].

A study was conducted in which it was found that infertile women attained higher neurotic scores in the Madzeli questionnaire as compared to fertile women[10]. Findings from earlier studies on marital relationship in infertile individuals, showed a significant correlation between stressful life events and marital quality [11].
A study was carried out that showed that the individual's marital relation was related to characteristics such as socio-economic status, personality, mental health, communication and duration of marriage. For both the

infertile males and females, their marital relationship could be influenced by the above factors directly or indirectly[12].

Men also suffer because of gender norms and there is increasing recognition of this fact. A WHO study of 5,800 infertile couples in 22 developed and developing countries found that men were either the sole cause or a contributing factor to infertility in more than half of the couples. Further it was found that in only 12.8 percent of cases infertility was solely due to the female with no demonstrable cause in the male[13].

There is some evidence that with technical advancements and increasing awareness that there are treatments for a failure to conceive, women in India have started approaching qualified medical providers for help though they still also turn to religious practices for "treatment". In a study, of 225 cases, 109 childless women sought treatment within one year and all sought allopathic or religious treatments at some point[14].

Women experience stigma and isolation. Infertility can threaten a woman's identity, status and economic security and consequently, be a major source of anxiety leading to lowered self-esteem and a sense of powerlessness. According to a study in Mumbai, "*She is called waanj (barren). There is a superstition that if she touches a baby, the baby will die*[13]." A study in Andhra Pradesh showed that, anticipating taunts and hostile behaviour from others, many women shun social functions[15].

Factors that predicting quality of life may vary in different infertile populations, different gender and different ethnic backgrounds. Thus, the identification of factors associated with better or worse quality of life in different domains is vital in order to propose and test scientifically based interventions for infertile populations.

## Objectives

1. To assess the quality of life among infertile couples and compare the quality of life of male and female partners.
2. To determine the relationship between various domains of quality of life of infertile couples; emotional, mind/body, relational, social, environmental and tolerability.
3. To determine the association of levels of quality of life of infertile couples with the selected variables.
4. To develop and validate the information booklet on "coping with infertility".

## HYPOTHESIS

$H_1$: There will be a significant difference in Quality of life (QOL) of infertile male and female partners as measured by fertility quality of life (FertiQoL) tool at 0.05 level of significance.

$H_2$:There will be a significant relationship between various domains of quality of life of infertile couples; emotional, mind/body, relational, social, environmental and tolerability at 0.05 level of significance.

$H_3$: There will be a significant association of levels of quality of life of infertile couples with the selected variables at 0.05 level of significance.

# II. Materials And Methods

It was a non-experimental study in which exploratory correlational survey design was usedto assess the Quality of life of infertile (QOL) of infertile couples.Sample for the present study included 100 infertile couples attending selected infertility clinics in Haryana. Data was collected after obtaining the ethical approval from the Institutional Ethical Committee for conducting the study.

## Data Collection Procedure

- 100 infertile couples those meeting the inclusion criteria and were attending selected infertility clinics were selected using purposive sampling.
- Purpose of the study was explained to the samples, the confidentiality of their responses was assured and their written consent was taken prior to the study.
- Data was collected by the researcher using self-administered questionnaire i.e. Fertility quality of life (FertiQoL) questionnaire.
- Both male and female partners filled the questionnaire separately.
- A validated informational booklet titled "COPING WITH INFERTILITY" was distributed to the infertile couples after administration of the questionnaire.

## Plan For Data Analysis

- Selected variables of sample were described using descriptive statistics i.e. frequency and percentage distribution.
- Assessment of quality of life was analysed by using descriptive statistics i.e. frequency and percentage distribution (%) and findings regarding significant difference in the Quality of Life of infertile male and female partners was analysed by using unpaired 't' test.

- Karl Pearson correlation of coefficient method was used to find the correlation between various dimensions.
- Association of quality of life with selected variables was analysed by using inferential statistics i.e. chi-square test.

## Findings

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.

Majority (67%) of the infertile couples together had good quality of life, 31% had fair quality of life while very few (2%) of them had very good QOL (Figure 1).

Gender-wise frequency and percentage distribution of infertile male and female partners according to level of quality of life indicates that majority (82%) of the male partners had good quality of life whereas less than half (43%) of the female partners had good quality of life, only 12% of the male partners had fair quality of life whereas more than half (55%) of the female partners had fair quality of life and 6% of the male partners had very good quality of life whereas very few (2%) of the female partners had very good quality of life (Figure 2).

The table 1 thus shows that the mean of fertility quality of life scores of male partners were higher than the female partners indicating male partners had better quality of life than female partners of infertile couples.

**TABLE 1**

***Mean, Median & Standard Deviation of Fertility Quality of Life Scores of Infertile Couples***

***N=200***

| | Range | Mean | Median | Standard Deviation |
|---|---|---|---|---|
| Male (n= 100) | 61-129 | 94.39 | 94 | 10.99 |
| Female (n= 100) | 59-129 | 83.97 | 83 | 11.82 |

Table 2 shows that the mean fertility quality of life scores of the male partners were greater than the female partners of the infertile couples in all the domains of quality of life i.e. emotional, mind/body, relational, social, environmental and tolerability domain which indicates that the male partners had better quality of life than the female partners in all the domains. Infertility had influenced all the domains but emotional domain was the most affected domain in both male and female partners of the infertile couples. Domain wise ranking of Quality of Life (QOL) scores showed that the emotional domain had the lowest rank (VI) in both male and female partners indicating that the emotional domain was the most affected domain having the greatest impact on their quality of life of both male and female partners followed by mind/body, environmental and tolerability domain. Relational domain got the second (II) rank for male partners whereas for female partners it was I and social domain of the male partners had got the highest rank (I) whereas for female partners, social domain had the second (II) rank.

**TABLE 2**

***Domain Wise Mean, Standard Deviation, Mean Percentage and Rank of Fertility Quality of Life Scores of Male and Female Partners of Infertile Couples***

***N=200 (male=100 female=100)***

| Domains | Range | Mean+SD | Mean % | Rank |
|---|---|---|---|---|
| **Emotional** | | | | |
| Male | 05-24 | 11.99+ 3.32 | 49.6 | VI |
| Female | 04-24 | 8.7+3.46 | 36.25 | VI |
| **Mind/body** | | | | |
| Male | 05-24 | 15.73+3.20 | 65.54 | V |
| Female | 04-22 | 11.86+3.38 | 49.4 | V |
| **Relational** | | | | |
| Male | 12-23 | 18.64+2.19 | 77.67 | II |
| Female | 11-23 | 18.58+2.57 | 77.4 | I |
| **Social** | | | | |
| Male | 07-24 | 19.64+ 3.01 | 81.83 | I |
| Female | 10-24 | 17.19+3.23 | 71.6 | II |
| **Environmental** | | | | |
| Male | 09-23 | 16.59+ 2.31 | 69.13 | IV |

| | | | | |
|---|---|---|---|---|
| Female | 07-23 | 16.44+2.17 | 68.5 | IV |
| **Tolerability** | | | | |
| Male | 07-16 | 11.80+ 2.13 | 73.75 | III |
| Female | 4-15 | 11.20+2.17 | 70.00 | III |

**Maximum Score= 24; Minimum Score= 0**

Item wise percentage fertility quality of life scores of infertile male and female partners on domains of quality of life depicts that the emotional domain of both male and female partners was affected to a great extent due to infertility and among them female partners were emotionally more weak than the male partners as they experienced grief, feeling of loss, sad, depressed and anger due to fertility problems. Mind/body domain had major impact on the quality of life of female partners as compared to the male partners as evidenced by female partners' impaired thought and concentration due to fertility problems. Female partners felt more drained out, pain and physical discomfort because of fertility problems.

Relational domain of quality of life of both male and female partners was not much affected due to infertility as the male and female partners were satisfied and content with their relationship. They never felt difficult in talking about their fertility problems with their partners. Social domain was less affected domain of both the male and female partners as the couples were satisfied with the support they received from their friends and family and never felt inferior to the couples with children. They hardly felt any social pressure to have children.

Environmental domain of both male and female partners was less affected by the infertility as the couples were satisfied with the surgical or medical treatment they received, they were satisfied with their interactions with the fertility medical staff and with the quality of services available to them to address their emotional needs. Infertility had affected the tolerability domain of both the male and female partners to some extent as the couples were bothered a little 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).

The computed 't' value (table 3) indicated that there was a significant difference in the Quality of life of male and female partners of infertile couples as evidenced by the significant difference in the domain total of male and female partners at the 0.05 level of significance. It indicated that male partners of infertile couples had better quality of life than the female partners of infertile couples.

## TABLE 3

***Mean, Mean difference, Standard Error of Mean Difference and 't' Value of Fertility Quality of Life (QOL) Scores of Male and Female Partners of Infertile Couples***

***N=200***

| Domains | Mean | Mean Difference | $S.E._{MD}$ | $S.D._D$ | 't' Value |
|---|---|---|---|---|---|
| **Emotional** | | | | | |
| Male (n=100) | 94.39 | | | | |
| | 83.97 | 10.42 | 2.49 | 11.62 | 6.45* |
| Female (n=100) | | | | | |

**df (98)=1.97 at 0.05 level significance**

Table 4 depicts that emotional domain was found to be positively correlated with all the domains mind/body, relational, social, environmental and tolerability domain as well as the domain total of male and female partners except for environmental domain in female partners which indicates that the emotional domain is the main link that has the impact on the other domains. The study showed that 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. The study also depicted that total quality of life of both male and female partners was significantly related to all the domains and got affected by all the domains of quality of life i.e. infertility had an impact on total quality of life of both male and female partners of infertile couples.

## TABLE 4

***Correlation between various domains of the male and female partners of infertile couples***

***N=100***

| DOMAIN | | MIND/BODY | RELATIONAL | SOCIAL | ENVIRONMENTAL | TOLERABILITY | DOMAIN TOTAL |
|---|---|---|---|---|---|---|---|
| **EMOTIONAL** | **Male** | **0.72*** | **0.41*** | **0.39*** | **0.21*** | **0.21*** | **0.79*** |
| | **Female** | **0.75*** | **0.46*** | **0.61*** | **0.08NS** | **0.37*** | **0.86*** |
| **MIND/BODY** | **Male** | | **0.37*** | **0.56*** | **0.31*** | **0.17NS** | **0.84*** |
| | **Female** | | **0.42*** | **0.7*** | **-0.00NS** | **0.30*** | **0.84*** |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **RELATIONAL** | **Male**<br>**Female** | | | **0.27***<br>**0.54*** | **0.03NS**<br>**0.01NS** | **0.27***<br>**0.18NS** | **0.57***<br>**0.66*** |
| **SOCIAL** | **Male**<br>**Female** | | | | **0.25***<br>**-0.06NS** | **0.28***<br>**0.30*** | **0.72***<br>**0.81*** |
| **ENVIRONMENTAL** | **Male**<br>**Female** | | | | | **0.29***<br>**0.17NS** | **0.5***<br>**0.22*** |
| **TOLERABILITY** | **Male**<br>**Female** | | | | | | **0.50***<br>**0.53*** |

**df (98) =0.197 at 0.05 level of significance**

There was a significant association at 0.05 level of significance of levels of fertility quality of life and occupation of the male partners and there was a significant association between the levels of fertility quality of life and age at marriage, duration of marriage, trying for conception and trying for conception with doctor's help and number of miscarriages of female partners (data not shown).

## III. Discussion

The collected data for the present study was analysed statistically and the results based on the objectives of the study are discussed below:

The present study shows that the majority (44%) of the infertile female partners are in the age group of 25-31 years which was similar to the findings of a study conducted by **Paul C. Adamson et al.** which showed that most of the infertile women were in the age group of 16-30 years[100].

The present study shows that the majority of the female partners (64%) are having primary infertility while 36% are suffering from secondary infertility which is consistent with the findings of the report of Haryana[23] which showed that more than three-fourths (76.7 percent) of married women reported to have experienced problems in conceiving for the first time.

Present study indicates that the majority (82%) of the male partners had good quality of life whereas only 43% of female partners had good quality of life. Similar finding was described by **BatoolRashidi et al. (2008)[80] who reported** that there were significant differences between women and men indicating that male patients had a better health-related quality of life.

The findings of the present study which showed that women scored lowest in the emotional domain were in accordance of the study as by **Ofovwe&Aziken(2005)** who reported mood disturbance was the most frequent symptom expressed by the infertile women[94].

The present study findings suggests that levels of fertility quality of life of female partners is dependent upon the duration of infertility which is inconsistent with the findings of a study conducted by **Mohammad Hossein et al(2011)** which showed that was no relation between the duration of infertility and general health scores[70].

A finding inconsistent to the present study reported by **BatoolRashidi et al. (2008)** states that younger age was found to be a significant predictor of poorer condition whereas present study indicated that there the majority (63.63%) of female partners who belonged to 25-31 years of age had fair quality of life[80].

The present study showed that there was significant difference in the mind/ body and social domains of fertility quality of life of male and female partners which is consistent with the findings of a study conducted by **Bolsoy N, Taspinar A, Kavlak O and Sirin A (2010)** which indicated that physical health and social relations domain score did not show significant differences between infertile women and infertile men[78].

The present study indicated that the female partners of the infertile couples had low scores on mind/body, social and emotional domain than the male partners which is similar to the study conducted by **Chachamovich JR et al (2010)** which showed that infertile women had significant lower scores on mental health, social functioning and emotional behaviour[79].

According to present study there was a significant association of level of fertility quality of life with the age, duration of marriage and length of trying for conception by female partners which is dissimilar to the findings of the study conducted by **Aliyeh G. and Laya F. (2007)** which showed that there was no significant correlation was found between quality of life and age, length of married life, or length of time seeking treatment.

Present study suggested that majority (81%) of the female partners of the infertile couples were satisfied with the sexual relationship with their male counterparts which is consistent with the findings of the study conducted by **Manoj Monga et al (2004)** which showed that no statistically significant impact on sexual functioning in women was noted[86].

The present study suggested that none of the male partners had problem with erection and/or ejaculation which is inconsistent with the findings of the study of **Florence E Omu and Alexander E Omu (2010)** which indicated that 14.9% experienced premature ejaculation, 5.2% weak ejaculation and 7.9% had impotence.

## IV. Conclusion

The study illuminates that male partners had better quality of life than the infertile female partners and there was a significant difference in the quality of life of infertile male and female partners. Infertility affects all the domains but it has the major impact on the emotional aspect of the infertile couples hence it is needed that health professionals should include assessment of psychological symptomatology to plan more efficient interventions to infertile patients. Nurses are in key positions where they can identify the factors that affect quality of life and should plan to meet their needs accordingly.

## V. Conflict Of Interest

There was no conflict of interest existed between the author (or the author's institution) and reviewer and there was no conflict in the financial or personal relationships that could inappropriately influenced (biased) her actions.

## Recommendations

- A study can be done to assess the effectiveness of traditional methods of treatment on the quality of life of infertile couples.
- Qualitative study can be done to explore the perception of infertile couples regarding their quality of life.

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