ORIGINAL ARTICLE

Association of Infertility with Quality of Life among Infertile Married Couples

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ABSTRACT

Infertility is believed very difficult and sensitive issue for wedded couples, particularly those who have passed several years of married life. Infertile married couples could experience mental distress and also suffer from impaired health-related QoL.

Aims: To assess the association of infertility with quality of life among married couples.

Study Design: Cross-sectional study.

Methodology: Present study enrolled 140 couples who were actively trying for conception for 3 years visiting Hameed Latif Hospital Lahore were included. Non-probability purposive sampling technique was used. Informed written consent was taken from all the participants. The overall mean score of quality of life measured by WHOQOL-BREF questionnaire.

Statistical analysis: To check the correlation of infertility with quality of life, Spearman's/ Pearson correlation was used. The P value of < 0.05 was considered as significant.

Results: Out of 140 couples, mean age was 31.6±3.0 years. The mean age of female participants was 30.1 ± 2.8 and the mean age of male participants was 33.1 ± 2.4. The overall mean score of quality of life measured by WHOQOL-BREF questionnaire was 98.2 ± 11.5. The mean score of quality of life of male participants was 98.5 ± 11.5 and mean score of quality of life of female participants was 98.0 ± 11.6.

Conclusion: It was concluded that quality of life of majority of the couples was not affected due to infertility.

Keywords: Infertility, Quality Of Life, Physical Health, Psychological Health and Social Relationship.

INTRODUCTION

Infertility is believed very difficult and sensitive issue for wedded couples, particularly those who have passed several years of married life. Infertility is described as failure to attain pregnancy after 12 months period or longer of unprotected regular sexual contact[1]. Infertility is divided into 2 types: primary type and secondary type. World Health Organization (WHO) describes primary type of infertility as incapability to get pregnant, while secondary type of infertility is the incapability to conceive a child after a prior pregnancy[2,3].

The WHO has identified infertility like a global public health problem[4,5]. There is no limit of infertility. It is found in every culture, in various societal classes in all over the world[6]. It was declared by WHO that infertility is a significant social disease which affects 80 million individual worldwide[7,8].

The rates of prevalence demonstrates that 40% of the infertility is mainly associated with woman factors (for example endometriosis, tubal factors), 40% is associated with male factors (for example, impotence, low sperm count) while remaining 20 percent is associated with contact between both partners[9].

In Pakistan, infertility prevalence is 21.9%, 3.9% is primary while 18% is secondary infertility[10,11]. Among infertile couples, quality of life (QoL) is significantly affected due to anxiety and depression and thus, these problems need more medical attention[12,13]. According to the definition introduced by WHO, life quality is described as "individuals' perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns"[14]. It is an extensive idea affected in a difficult manner by a person's physical health[15], psychological state, social constraints, independence levels, personal values and characteristics and also their association with main characteristics of their atmosphere[16].

Currently, the health related QoL is believed as one of the major tools regarding outcome measurement among infertile couples[17]. Due to various psychological, physical and social inappropriate infertility effects, assessing the QoL components among these couples could lead to recognize various aspects of life style and help them to schedule favorable treatment more efficiently[18]. Furthermore, in spite of different techniques development regarding infertility treatment and attaining reproductive health, concerns regarding quality of life among infertile married couples have clearly been reduced caused by type of issues and its complicated association with psychological status[19]. However, infertility is still a leading problem among infertile couples which has great impact on their quality of life. Therefore, present study is undertaken to determine the association of infertility with quality of life.

Objectives: To assess the association of infertility with quality of life among married couples.

METHODOLOGY

Cross Sectional, correlational study design applied. Total number of participants was 140. All of participants were visiting Hameed Latif Hospital, Lahore for the treatment of infertility and were trying actively for conception since the last 3 years. Sampling technique for our study was Nonprobability purposive. All participants gave written informed consent. Socio-demographic information (age and gender) was obtained. World Health Organization Quality of Life questionnaire (WHO QOL-BREF) to help gauge their quality of life was given to each.

WHO QOL-BREF regarded as a good method to measure quality of life. Questionnaire has totaled 26 items and a maximum score of 130. There are four domains of questionnaire. The four domains are social relationship, physical health, psychological health, and environment. An individual's perception regarding quality of life reflected in each domain. Higher scores denote higher quality of life i.e. domain scores of this questionnaire are scaled in a positive direction. In order to calculate the domain score, the mean score of items within each domain is used. Range of score varies from 4 to 20. To make domain scores comparable to WHO QOL, we multiplied the mean scores by 4. WHO QOL has score of 0-100.

Statistical Analysis: The data was analyzed using software SPSS version 20.0. Mean ± SD was used to present the numeric data. Frequency and Percentages were used to present the qualitative data. To check the correlation of infertility with quality of life, Spearman's/ Pearson correlation was used. The P value of < 0.05 was considered as significant.

RESULTS

A total of 140 couples with age ranging from 25-35 years were selected. 31.6 ± 3.0 was the mean age of participants. The female respondents mean age was 30.1 ± 2.8 years while male respondents mean age was 33.1 ± 2.4 years as shown in figure-1.

The first question was "**How would you rate your quality of life?**" The response to this question showed that 74 (26.4%) participants agreed on option very good, 159 (56.8%) participants were agreed on option good, 40(14.3%) care givers were agreed on option neither good nor poor, 4(1.4%) participants were agreed on option poor and 3(1.1%) participants were agreed on option very poor as shown in table-1. The second question was **"How**

satisfied are you with your health?" The response to this question showed that 45 (16.1%) participants chose option very satisfied, 137 (48.9%) participants indicated option satisfied, 67 (23.9%) participants indicated option neither satisfied nor dissatisfied, 137 (48.9%) participants indicated option dissatisfied and 45 (16.1%) participants indicated the option very dissatisfied.
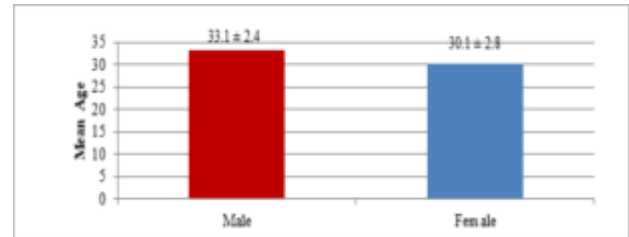

Figure 1: Mean age of study participants

Table 1: Participant's responses to the following questions

Question	Very Poor n (%)	Poor n (%)	No response n (%)	Satisfied n (%)	Very Satisfied n (%)
How would you rate your quality of life?	3 (1.1%)	4 (1.4%)	40 (14.3%)	159 (56.8%)	74 (26.4%)
How satisfied are you with your health?	6 (2.1%)	25 (8.9%)	67 (23.9%)	137 (48.9%)	45 (16.1%)

Almost 98.2 ± 11.5 was the overall score of quality of life, as determined by the WHO QOL-BREF. This questionnaire has range of 46 to 124. 98.5 ± 11.5 was the mean score of quality of life of males and 98.0 ± 11.6 was the mean score of quality of life of female participants as shown in table-2.

Table 2: Mean score and distribution of quality of life score

Quality of life	Mean ± SD	Median (Q₁ – Q₃)	Range	p-value
WHOQOL-BREF Score	98.2±11.5	99.0 (91.0-105.0)	46-124	-
Gender wise comparisons				
Male	98.5±11.5	98.0 (90.3-105.0)	74-124	0.845
Female	98.0±11.6	100.0 (92.0-105.0)	46-124	

Shapiro Wilk test was applied to assess the normality of data. Upon applying the test there was no normal distribution of data. So, we applied Mann Whitney test. For comparing the median life quality score between male & female respondents, Mann Whitney test was applied, to compare the median score of each domain of WHOQOL between male and female respondents. The outcomes revealed insignificant difference in mean score of public health domain and environment domain score between male and female respondents. The mean score of social relationship domains of female participants was considerably elevated as compared to male participants while the mean score of psychological health domain was higher in male participants as compared to females' participants as shown in table-3.

Table 3: Mean score and distribution of WHOQOL-BREF Domains

Whoqol-Bref Domains	Mean ± SD	Median (Q₁ – Q₃)	Range	p-value
Physical health				
Male	26.8 ± 4.1	27.0 (24.0 – 30.0)	15 – 34	0.290
Female	26.3 ± 3.8	26.0 (24.0 – 29.0)	16 – 44	
Overall	26.6 ± 3.9	26.0 (24.0 – 29.0)	15 – 34	
Psychological health				
Male	21.5 ± 2.9	22.0 (19.3 – 23.0)	16 – 29	0.024*
Female	20.7 ± 3.0	21.0 (18.3 – 23.0)	11 – 29	
Overall	21.1 ± 3.0	21.0 (19.0 – 23.0)	11 – 29	
Social relationship				
Male	11.9 ± 1.9	12.0 (11.0 – 13.0)	7 – 15	0.017*
Female	12.4 ± 2.1	12.0 (12.0 – 14.0)	3 – 15	
Overall	12.2 ± 3.0	12.0 (11.0 – 14.0)	3 – 15	
Environment				
Male	30.5 ± 4.3	31.0 (28.0 – 33.0)	19 – 39	0.404
Female	30.9 ± 4.4	32.0 (28.0 – 34.0)	11 – 40	
Overall	30.7 ± 4.3	31.0 (28.0 – 34.0)	11 – 40	

*Statistically Significant

As per data, average score regarding social relationship domain was higher followed by environment and physical health domain score as compared to the psychological health domain score. The psychological health domain score was lowest as compared to all 4 domains' score. Normality of data was assessed by Shapiro Wilk test. Data were not normal; therefore, Kruskal Wallis test was applied to compare the median score of each domain of WHOQOL. The results showed insignificant difference in median score of physical health and environment domain scores. The social relationship domains mean score was considerably elevated as compared to remaining domains. While the mean score of psychological health domain was notably lower as compared to remaining domains in infertile couples as shown in table-4.

Table 4: Comparison of transformed score of WHOQOL-BREF domains

Whoqol-Bref Domains	Mean ± SD	Median (Q₁ – Q₃)	Range	p-value #
Physical Health	69.9±14.1	67.9 (60.7 – 78.6)	29–96	< 0.001
Psychological Health	63.0±12.3	62.5 (54.2 – 70.8)	21–96	
Social Relationship	76.3±16.5	75.0 (66.7 – 91.7)	0–100	
Environment	70.9±13.5	71.9 (62.5 – 78.1)	9–100	

*Statistically Significant

DISCUSSION

The study was conducted regarding association of infertility with quality of life at Hameed Latif Hospital Lahore. 33.1 ± 2.4 years was the mean age of male participants. Female participants were having mean age of 30.1 ± 2.8. 31.6 ± 3.0 years was the overall mean age of participants. Similar results were shown by many researchers in their study[20]. In this study male participants were

having mean age of 33.8 ± 5.8 years whereas 29.4 ± 5.2 years, was the mean age of female participants. Similar results were also given in another study in which, 31+9.3 years, was the mean age of participants[21].

Study showed very encouraging results that major proportion (73.2%) of respondents had graduation degrees or above while 26.8% of them had matriculation/intermediate certificates. Results of our study are almost comparable with another study[22] who reported that majority (66.0%) of participants had graduation degrees or above and 34.0% participants had studied upto intermediate.

The results of our study indicated that significant majority (83.2%) believed that their quality of life was good/very good while only 2.5% said poor/very poor and 14.3% said neither poor nor good. The findings of our study are comparable but exhibited better scenario than the study which asserted that more than half (52.6%) of participants said they spend high quality of life, 37.2% said moderate and only 10.0% said low quality of life[23]. Likewise among participants, major proportion was satisfied/very satisfied, followed by neither poor nor good and dissatisfied/very dissatisfied.

The findings of our study demonstrated that no significant difference was found in mean score of quality of life between both female and male respondents. Study highlighted that total mean quality of life score was 98.2 ± 11.5 while 98.5 ± 11.5 for males and 98.0 ± 11.6 for females. A study carried out by researchers asserted that total mean quality of life score was 66.0 ± 14.5[24]. Similarly one study[20] confirmed in their study that total mean quality of life score was 61.8 ± 2.9.

According to WHOQOL-BREF, it was found during study that regarding physical and psychological health domains males had higher mean score while about social relationship and environment domains females had higher mean scores. But the findings of a study[25] indicated that regarding physical, psychological and social relationships domains males showed an elevated mean scores while only for environment domain females showed higher mean score.

According to data, social relationship domain was having highest score as compared to psychological health domain. Environment and physical health domain followed the social relationship domain when we compared with psychological health domain. Overall, in comparison with all four domains, psychological health domain score was lowest.

Study further disclosed that among infertile couples mean score about social relationship domains was 76.3±16.5 which was significantly higher, followed by environment domain (70.9±13.5), physical health domain (69.9±14.1) and psychological health domain (63.0±12.3) which was significantly lower. The results of a similar study[26] indicated that in infertile couples mean score about physical relationship domains was higher (78.39±12.31) followed by physical domain (74.71±12.10), social relationship domain (72.50±16.04) and environment domain (61.70±13.56) which was considerably lower.

Limitations: Our study had limitations like financial constraints, lack of resources, genetic workup and short duration of study.

CONCLUSION

Present study assessed the association of infertility with quality of life. Study concluded that quality of life of majority of the couples was not affected due to infertility.

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