Effect of Infertility on the Quality of Life, A Cross-Sectional Study

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ABSTRACT

Introduction: Infertility is a major life crisis which causes serious mental problems and stressful experience of infertile couples. Therefore, the aim of the present study was to compare the quality of life in fertile and infertile women.

Materials and Methods: In a cross - sectional study compared the quality of life in 450 women attending both public and private health centers in Ilam, western of Iran, in 2013. Participants were divided in two groups' fertilities and infertilities women. Data was collected by trained research midwives using demographic and SF-36 questionnaires. SPSS software Package 16 was used to analyze the data of this project. Differences were regarded statistically significant with an alpha error of 0.05.

Results: Significant difference was reported in mean age between fertile and infertile women (p=0.003). Mean scores of all Mental dimensions of quality of life were higher in fertile women in comparison with infertile women. This difference was statistically significant (58.35±19.43 vs 56.56±13.18 respectively) (p= 0.000). The mean score of all physical dimensions have not statistically significant difference in fertile and infertile women (79.77± 23.19 vs 74.96±23.45 respectively) (p= 0.441).

Conclusion: In most infertile women, the mean score of Mental dimensions of quality of life is lower in comparison with fertile women, therefore, it is necessary the used of counseling and treatment programs in infertile women.

INTRODUCTION

The word quality of life (QOL) is mentions "an individual's 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, values and concerns incorporating physical health, psychological state, level of independence, social relations, personal beliefs and their relationship to salient features of the environment quality of life refers to a subjective evaluation which is embedded in a cultural, social and environmental context" [1]. The quality of life is affected by several factors, including individual and societal factors [2]. Quality of life can be interpreted in three ways. The first definition focuses on the welfare and tranquility of life, second definition of the potential economic, social, physical symptoms or specific diseases and third definition focuses on disability and disease [3]. SF-36 is one of the most significant tests for assessing health-related quality of life.

Considering the importance of women's health, many studies have been done in this area [4]. Some of these studies have been done on pregnant women [5] and nonpregnant women have been the study population of other studies [6, 7].

The prevalence of infertility is increasing from 1955 to now and today 15-10% of all couples in worldwide suffer from infertility [8]. As in many cultures, having a child is considered major social and cultural values; the infertility is a major problem in today's medicine.

Infertility is a major life crisis which causes serious Mental problems and stressful experience for infertile women [9]. Many women are faced with the difficult challenges of individual, familial, social and economical, especially in traditional societies [10]. Infertile women are prone to depression and anxiety. Neglect about the emotional disorders and others adverse outcomes of infertile couples, can have a negative impact in the treatment of this couple [11].

More than one million infertile couples living in Iran and infertility is one of the major causes of their divorce [12]. Therefore the aim of the present study was to compare the quality of life in fertile and infertile women.

MATERIALS AND METHODS

In a cross - sectional study compared the quality of life in 450 women attending both public and private health centers in Ilam, western of Iran, in 2013. The participants were selected by the simple random sampling method. Data was collected by trained research midwives.

Inclusion criteria consisted of married women, 15-55 years old, non-pregnant and non-lactating. All menopausal women and women with known Physical and Mental illness were excluded. Participants were divided into two groups of fertile and infertile women. Fertile women were included all women who could become pregnant with regular intercourse without using contraception. Infertile women were included all women who experiencing primary or secondary infertility during study sampling.

This study was undertaken with the approval of the Ethical Committee of the Ilam University of Medical Sciences. The aim of the study was described an informed consent was obtained from all participants before the enrollment in the study.

We used of the demographic characteristics and SF-36 quality of life questionnaire for data collection. Both questionnaires were completed by trained research midwives. The content of the SF-36 questionnaire is included 36 questions and measures the quality of life in eight dimensions: physical function, role limitations due to physical problems, bodily pain, general health, vitality, social functioning, role limitations due to emotional problems and mental health. Each dimension contains 2-10 questions. Validity and reliability of SF-36 questionnaire have been confirmed in Iranian infertile women undergoing in vitro fertilization [13].

STATISTICAL ANALYSIS

The sample size was determined by p=0.05, d=0.03 and confidence interval 95%. Mean± SD, median and percentages were used to describe the data. When a normal distribution of continuous data

Characteristics	Group		Total	p- value
	fertile	infertile		
Age*	32.17±3.09	35.93±8.07		0.003
Menarche age*	13.89±1.45	14.68±2.4		0.000
Married age*	21.99±4.41	22.53±5.15		0.003
Education**				0.000
Illiterate	15(3.3)	12(2.7)	27(6)	
Elementary	15(3.3)	4(1.1)	19(4.4)	
Secondary	108(24)	14(3.1)	122(27.1)	
Collegiate	197(43.8)	85(18.9)	282(62.7)	
Occupation**				0.078
Housekeeper	159(36.1)	65(14.8)	224(50.9)	
Non-governmental jobs	3(0/7)	0(0)	3(0.7)	
Governmental jobs	169(38.4)	44(10)	213(48.4)	

[Table/Fig-1]: Comparison of characteristics between groups
*Values are given as mean ± Standard Division
**N (%)

Characteristics	Group		Total	p- value
	fertile	infertile		
16-25	83(18.4)	15(3.3)	98(21.8)	0.002
26-35	139(30.9)	38(8.4)	177(39.3)	
≤ 36	117(26)	58(12.9)	175(38.9)	
Total	339(75.3)	111(24.7)	450(100)	

[Table/Fig-2]: Compare the age group of study participants
* N (%)

Group*	Marriage age groups **						Total
	≥15	16-20	21-25	26-30	31-35	≤ 36	
Fertile	14 (3.3)	108 (25.6)	119 (28.2)	23 (5.5)	11 (2.6)	4(0.9)	279 (66.1)
Primary infertility	0(0)	17(4)	2 (0.5)	16 (3.8)	4 (0.9)	0(0)	39 (9.2)
History of primary infertility	0(0)	0(0)	17(4)	0(0)	0(0)	0(0)	17(4)
Secondary infertility	0(0)	8 (1.9)	25 (5.9)	13 (3.1)	0(0)	0(0)	46 (10.9)
History of secondary infertility	0(0)	0(0)	15 (3.6)	0(0)	0(0)	0(0)	15 (3.6)
Both primary and secondary infertility	8 (1.9)	0(0)	0(0)	0(0)	0(0)	0(0)	8(1.9)
Never been pregnant	6 (1.4)	2 (0.5)	6(1.4)	0(0)	4(0.9)	0(0)	18(4.3)
Total	28 (6.6)	135 (32)	184 (43.6)	52 (12.3)	19 (4.5)	4(0.9)	422 (100)

[Table/Fig-3]: Compare marriage age groups in study participants
* N (%),   **Years

Characteristics	Group		Total p- value
	fertile	infertile	
Physical function	60.17± 13.65	55.28±15.3	0.001
Role limitations due to physical problems	33± 39.95	23.54±18.01	0.021
Bodily pain	68.33±22.41	65.34±23.73	0.136
General health	49.3 ±17.28	54.37±12.43	0.000
Vitality	53.18± 15.25	53.51± 15.27	0.042
Social functioning	67.61±27.5	73.18 ± 22.67	0.000
Role limitations due to emotional problems	27.25±38.65	3.3 ±16.17	0.000
Mental health	54.14±16.48	61.69 ±17.87	0.030

[Table/Fig-4]: Comparison of quality of life scores between groups
*Values are given as mean ± SD

women (p=0.003). Demographic and obstetric characteristics of study participants are presented in [Table/Fig-1].

The most frequent age group was 26-35 years. All age groups are presented in [Table/Fig-2].

Most of the participants were married at 21-25 years. All marriage age groups are presented in [Table/Fig-3].

The mean ± SD scores for physical functioning, role limitations due to physical problems, general health, vitality, social functioning, role limitations due to emotional problems and mental health were significantly different in fertile and infertile women. But the physical pain scores were not significantly different in fertile and infertile women. Comparison of quality of life scores are presented in [Table/Fig-4].

DISCUSSION

This study compared the quality of life in fertile and infertile women. Based on our results, age is one factor affecting the quality of life. Khyata et al., reported that aging caused a reduction of the quality of life in infertile women [14]. In contrast, a study showed that long-term treatments in infertile couples caused better accept of their living conditions and hence increase the quality of life in older infertile couples [13].

The findings emerged from the study indicate that the major dimension quality of life of infertile women is lower than in fertile women. Infertile women have a worse situation, in the mean scores: physical function, role limitations due to physical problems, general health, vitality, social functioning, role limitations due to emotional problems and mental health. Other studies have shown that infertility is a devastating and painful experience, especially for women. Consistent with our results, a study showed that infertile women experience more feelings of helplessness in comparison to fertile women. Also, infertile women are more at risk of mental and emotional disorders, depression, anxiety, low self esteem and marital dissatisfaction. Apart from infertility factors, even when the male infertility is diagnosed, infertile women can experience anxiety more than fertile women [15].

Researchers have studied different dimensions of infertility impacts on couples. They concluded that infertility can be considered as life crisis, chronic illness and the combination of these. Due to the complicated treatments and high levels of stress, infertility has become a feature of chronic physical illness [16]. Other studies have confirmed the reduced quality of life after infertility [17,18].

El-Messidi et al., evaluated the effect of failure treatment on the quality of life in infertile couples. In this study participated 150 couples. The first group consisted of 50 couples with a history of treatment failure. Second group consisted of 50 infertile couples who have not received treatment. The control group consisted of 50 couples who have at least one child and had not history of infertility.

was not assumed, Mann–Whitney correlation was used to analyze the correlation between different variables. Categorical variables such as education, and job were analyzed by x^2 analysis of 3×2 contingency tables or by Fisher's exact test as appropriate, followed by a similar analysis by 2×2 tables for differences within the groups. SPSS software Package 16 was used to analyze the data of this project.

RESULTS

A total of 450 women was studied. The Mean ± SD age was 32.17 ± 3.9 years in fertile and 35.93 ± 8.07 in infertile women. Significant difference was reported in mean age between fertile and infertile

The results showed that infertility is associated with reduced quality of life. The quality of life in the control group was significantly higher in compression with other groups [19].

CONCLUSION

In most infertile women, the mean score of Mental dimension of quality of life is lower in comparison with fertile women, therefore, it is necessary the used of counseling and treatment programs in infertile women.

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