

Quality of Life Assessment among Infertile Couples

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Abstract

Background: Quality of life is an important indicator for the assessment of individual's health, decision-making, and passing judgment on the overall community health. Infertility in most societies across the world is considered as a stain and shame, which leads to the infertile couples suffering. **Aim:** It was to assess the quality of life among infertile couples through utilizing the quality of life's domains. **Design:** A descriptive exploratory design was utilized. **Subjects:** A convenient sample was obtained; all infertile couples who attended and accepted to participate in study at the previously mentioned setting. **Setting:** The study was conducted at the outpatient infertility clinics, at the Maternity Hospital-Ain Shams University. **Data Collection:** 1. Arabic Structured Interviewing Questionnaire, developed by the researcher. 2. A Ferti QOL, is the 2nd tool and the 1st internationally validated self-report questionnaire, it is adopted from Jat Ky Boivin, et .al (2002), and adapted by the researcher. **Results:** Findings showed highly statistically significant relations between levels of education of the infertile couples and all the QOL sub-domains. Also, there were statistical significant relations between levels of OOL of the infertile couples and their type of infertility. Meanwhile, a confirmed positive statistically significant correlation was between infertility and QOL of the study sample. **Conclusions:** Although infertility affects all the QOL domains of infertile couples, but it has a major impact on their psychological and emotional aspects. **Recommendations:** Develop different health awareness programs for infertile couple in different health settings in order to enhance their knowledge and QOL. Also, health awareness is needed for health professionals to include the psychological symptoms assessment of the infertile patients to their plan for more efficient interventions.

Key words: Infertility, Quality of life, awareness, and domains.

Introduction

Infertility is a traumatic event, which affects all aspects of infertile couples' quality of life (QOL). Infertility is a life crisis with a wide range of socio-cultural, emotional, physical, and financial problems. World Health Organization (WHO) identified infertility as a social disease, where the incidence of infertility is about 10-15% among the couples at the reproductive age and one in six or seven couples has an infertility problem. Almost more than 80 million people are affected from infertility. While, the infertility is not a disease, it and its treatment can affect all aspects of people's lives. It can cause various psychological-emotional disorders

and its consequences include turmoil, frustration, depression, anxiety, hopelessness, guilt, and feelings of worthlessness in life (Zegres-Hochschild, F., Adamson, G., Dyer, S., Racowsky, C., deMouzon, J., Sokol, R. & Simpson, L., 2017).

Patients who are infertile and receive infertility treatments may have a negatively affected QOL. Infertile clients may have more stress and tension in their relationships; therefore, clinicians who deal with infertile patients must regard QoL as an integral part of their clinical routine. QoL has different scales, such as emotional and social, which may be evaluated with either generic or

more disease specific measures (**Poomalar & Arounas salame, 2013**).

Factors that affect a person's QOL may be physical or emotional. Although, these factors are important for everyone, it is especially important for infertile couples, which include: **(1) Physical factors:** Exercise, diet, physical comfort, safety, hygiene, and pain relief; **(2) Intellectual factors:** Stimulation, and engaging in activities; **(3) Emotional factors:** Privacy, dignity, approval, psychological security, autonomy; **(4) Social factors:** Social contact, social support (**Uysal, M., Sirgy, J., Woo, E & Kim, L. 2016**).

Aim of the Work:

The aim of this study is to assess the quality of life among infertile couples through:

1. Assess the effect of infertility on physical health.
2. Assess the effect of infertility on psychological health.
3. Assess the effect of infertility on social health.
4. Assess the effect of infertility on quality of life.

Subjects and Methods:

I. Technical Design:

The technical design used for the present study involved the following four main items: Research design, setting, sample, and tools for data collection.

A. Research Design:

A descriptive design was used for the current study.

B. Research Setting:

The study is conducted at the outpatient infertility clinics affiliated to Ain

Shams Maternity University Hospital. The hospital works all day, but the outpatient's clinics works from 9 am to 1 pm. The study is conducted during the period started from October 2017 to April 2018.

C. Research Subjects:

• **Type of Sample:** A convenient sample is used.

• **Sample Size:** It consisted of 330 infertile couples, who attended at the previously mentioned settings, started from October 2017 to April 2018. This sample is detected by using Epi-info™ statistical package, version 3.3 with power 80%, a value of 2.5 was chosen as the acceptable limit of precision(D) at 95% level of confidence (CI), actual sample size was estimated to be 300 couple, where 30 couples excluded as a pilot study.

• **Criteria of the Sample:**

- Infertile couples who had different types of infertility, within the reproductive age starting from 18 - 49 years old.
- Infertile couples who were undergoing infertility treatment, regardless of their age, and socio-economic stander or residency (Urban / Rural).
- Infertile couples who can read & write.

D. Data Collection Tools: (Appendix D).

Two tools were used for data collection:

1. A Self-administered Arabic Questionnaire: It is specially developed by the researcher and utilized to collect the necessary data from the infertile couples. It is based on relevant literature. The questionnaire is reviewed and validated by the jury committee, which is composed of panel of 5 experts of Obstetrics and Gynecological Nursing Professors (Ain Shams University), who reviewed the tool for clarity, relevance, comprehensiveness, understanding, and applicability. The questionnaire included the following items:

First Part:**1.Socio-demographic Characteristics of the Study Sample:**

The collected information includes the age of the infertile couples, occupation, income, place of residence; live with whom, and duration of marriage (questions 1-8).

2.Menstrual History:

It includes age of menarche, duration, interval regularity and amount of menstruation (questions 9-13).

3.Obstetrical History:

It includes number of (pregnancy, parity, and children) (questions 14-17).

4.Infertility History:

It includes type, duration, causes of infertility, and kind of current treatment (questions 14-17).

Second Part:**A. Fertility Quality of Life Scale (2002):** (Questions Number: 1-36)

*FertiQOL is the 1st internationally validated self-report questionnaire that can be considered as a tool to assess the QOL of an individual with infertility.

*FertiQOL was developed by Jat Ky Boivin, Janet Takcfman, and Andrea Braverman with sponsorship from the European Society for Reproductive Medicine (ASRM), and Mtrk Scrono (an affiliate of Merck KGaA, Darmstadt).

* FertiQoL questionnaire consists of two parts: The Core and the treatment parts.

1. The Core FertiQoL: It contains 24 questions categorized into four subscales, including the Emotional, Mind-Body, Relational and Social subscales. The Emotional subscale score shows the impact of fertility problems (e.g. jealousy&

resentment, sadness, and depression) on physical health and quality of life. The Mind-Body subscale score shows the impact of fertility problems on physical health (e.g. Fatigue, pain) cognitions (e.g. Concentration).

Regarding the impact of fertility problems on behavior of the infertile couples include (e.g. disrupted daily activities, and delayed life plans). The Rational subscale score shows the impact of fertility problems on the marriage or partnership (e.g. sexuality, communication, and commitment). The Social subscale score shows the extent to which social interactions have been affected by fertility problems (e.g. social inclusion, expectations, stigma, and support).

2. The treatment FetiQOL part: It contains 10 questions categorized into two subscales, including the treatment environment and treatment tolerability subscales. The treatment environment subscale score shows the extent to which the accessibility and quality of treatment impacts QOL. The treatment tolerability subscale score shows the extent to which fertility medical services impact on daily life.

Two additional items (marked A and B on the FertiQOL questionnaire) capture an overall evaluation of physical health and satisfaction with QOL. These are used for background information but are not used in the FertiQOL total or subscale score.

III- Administrative Design:

An official approval was obtained from the director of the Ain Shams University Maternity Hospital as an approval for data collection to conduct the study through written letter clarifying the purpose and aim of the study.

IV- Statistical Design and Analysis:

All statistical analyses were performed using SPSS for windows version 19.0 (SPSS, Chicago, IL). Continuous data were expressed as mean \pm standard deviation (SD), while categorical data were expressed in number and percentage. The differences between two groups or more were determined using independent samples Student's t test or one-way analysis of variance (ANOVA test) respectively for variables with continuous data or chi-square test for variables containing categorical data. The Pearson correlation test was used to determine the correlation between two variables containing continuous data. Statistical significance was set at p -value <0.05 , highly Statistical significance was set at p -value <0.001 .

Results:

Table (1): Shows that 56.44% and 50.0% of the studied wives and husbands' age ranged from 25 to less than 40 years, respectively. Wives who got married before 20 years old represent 33.3% while, 46.6 % of the husbands got married after 30 years old. Regarding level of education 15.3% and 29.3% of the studied wives and husbands have preparatory level, respectively. In addition, 90% of the studied husbands are working compared to only 18.6% of the studied wives.

Table (2): Reveals that 26.6% of the studied wives have pregnancy for one up to two times. While, abortion represent 26.6% of the studied wives who aborted for one time. Meanwhile, 63.3% of the studied wives have secondary infertility. 92% of the studied wives have no operation for treatment of infertility. Treatment outcomes represent 70% of the studied couple has failed trial.

Table (3): Indicates that 36.3%, 30.7% and 24.3% of the studied couples

mentioned that infertility problems do not affect their partner relation, infertility problem does not bother them, and they do not feel uncomfortable because of infertility, respectively.

Table (4): Reveals that 53.7%, 48% and 46% of infertile couple reported that infertility problem very often affect their psychological QOL on the following; goal & plan, experience of grief & feeling of loss and impaired their attention and concentration respectively.

Table (5): Shows that 24%, 23%, and 18% of the infertile couples' social health QOL are affected and represent; Social pressure to have children, partner support, and feeling of isolation & withdrawn, respectively.

Table (6): Points out that there is a highly statistical significance relation between husbands' age and social and physical domains of QOL.

Table (7): Indicates that there is a highly statistical significance relation between wives' age and social and physical domains of QOL.

Table (8): Reveals that there is a highly statistical significance relation between infertile wives' level of education and all subdomains of QOL except effect of treatment.

Table (9): Shows that there is a highly statistical significance relation between infertile husbands' level of education and all subdomains of QOL.

Table (10): shows that there is statistically significant relation between infertile couples residence and QOL.

Table (11): This table shows that there were statistically significant relations between the level of quality of life and their type of infertility, with p -value ($p<0.05$).

Table (12): This table shows that there were statistically significant relations between the level of QOL and their treatment outcome, with p -value ($p<0.05$).

Table (1): Distribution of Infertile Couple according to their General Characteristics (n=300).

Items	Wife		Husband	
	No	%	No	%
Age (years):				
• <25.	61	40.6	57	38
• 25-40.	83	56.44	75	50
• >40.	6	4	18	12
<i>Mean±SD</i>	29.05±6.39		30.38±6.68	
Age at marriage:				
• <20 years.	50	33.3	65	43.3
• 20-30 years.	63	42	15	10
• >30 years.	37	24.6	70	46.7
<i>Mean±SD</i>	22.15±4.87		23.16±5.10	
Level of education:				
• Not read and write.	15	10	5	3.3
• Primary education.	17	11.3	6	4
• Preparatory education.	23	15.3	44	29.3
• Secondary education.	78	52	78	52
• University.	17	11.3	17	11.3
Occupation:				
• Work.	28	18.6	135	90
• Not Work.	122	81.3	15	10

Table (2): Distribution of Infertile Wives Regarding their Obstetric History (n=150).

Obstetrics History	Frequency	Percent
Number of Gravida:		
• G1.	40	26.6
• G2.	40	26.6
• G3.	15	10
Number of abortions:		
• 1.	40	26.6
• 2.	18	12
• More than 2 times.	37	24.6
Number of Para:		
• P1.	80	53.3
• P2.	15	10
Type of infertility:		
• Primary.	55	36.6
• Secondary.	95	63.3
Treatment outcome:		
• Pregnant.	45	30
• Failed Trial.	105	70

Table (3): Distribution of Infertile Couple according to their Physical Health Quality of Life.

Items	Not at all %	A little %	Moderate %	Very much %	Extreme %
• Relationship between partners affected by infertility.	36.3	17	23.7	16.3	6.7
• Infertility problems bother couples.	30.7	12.7	31.3	16	9.3
• Satisfied with marital relationship.	23	15	24.3	27.7	10
• Uncomfortable and tired because of infertility.	24.3	18.7	20.3	22	14.7

Table (4): Distribution of Infertile Couple according to their Psychological Health Quality of Life.

Items	Never	Quite Seldom	Quite often	Very often	Always
	%	%	%	%	%
• Attention and concentration impaired.	6.7	18.7	16.3	46	12.3
• Infertility affect on goal and plan.	11.3	10	9	53.7	16
• Experience of grief and feeling of loss.	13.3	17.3	8.7	48	12.7
• Able to cope with infertility problem.	15	14.7	11	37	22.3
• Infertility cause feeling of jealousy and resentment.	28.3	8	11	42.3	10.3
• Fluctuate between hope and despair.	23	8.7	6.7	43.7	18
• Feel sad and depressed.	14	9.7	3.7	39.3	33.3
• Infertility make you angry.	17.3	18.7	11	36.7	16.3
• Infertility make you inferior to people with children.	23.7	8.3	9.3	29.3	29.3
• Had a negative impact on relation with your partner.	29	16	6.7	34.7	13.7
• Difficult to talk with partner.	27.3	21.3	8	25.7	17.7

Table (5): Distribution of Infertile Couple according to their Social Health Quality of Life.

Items	Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
	%	%	%	%	%
• Satisfied with friend's support.	12.3	9.7	33.7	32	12.3
• Satisfied with marital status.	9.3	9.3	16	45	20.3
• Feel of isolation and withdrawn.	18	18	19.3	25.3	19.3
• Satisfied with partner support.	23	17	19	20.7	20.3
• Infertility problems interfere with your daily work and commitments.	13.7	17	21.7	32	15.7
• Practice normal social life e.g. attend concerts and events.	12	17	19.3	25.3	26.3
• Your family understand what you are going through.	14	14.3	15.7	29	27
• Social pressure to have children.	24	9.7	17.7	25.3	23.3

Table (6): Relationship Between infertile husbands' Age and Quality of Life Domains.

QOL domains	Husbands' age			X ²	P value
	<25 (n=57)	25-40 (n=75)	>40 (n=18)		
	%	%	%		
Psychology:					
• Low.	35.1	26.7	33.3	1.972	0.741
• Moderate.	31.6	33.3	22.2		
• High.	33.3	40.0	44.4		
Social:					
• Low.	29.8	36.0	16.7	13.640	0.009*
• Moderate.	43.9	49.3	27.8		
• High.	26.3	14.7	55.6		
Physical:					
• Low.	35.1	33.3	16.7	9.204	0.046*
• Moderate.	52.6	46.7	38.9		
• High.	12.3	20.0	44.4		
Effect of treatment:					
• Low.	31.6	16.0	16.7	5.479	0.242
• Moderate.	33.3	44.0	50.0		
• High.	35.1	40.0	33.3		
Medical Service:					
• Low.	21.1	20.0	16.7	2.836	0.586
• Moderate.	33.3	46.7	44.4		
• High.	45.6	33.3	38.9		

*p-value <0.05 S; **p-value <0.001 HS

Table (7): Relationship between Infertile Wives' Age and Quality of Life Domains.

QOL domains	Wives' age			X ²	P value
	<25 (n=61)	25-40 (n=83)	>40 (n=6)		
	%	%	%		
Psychology:					
• Low.	41.0	30.1	50.0	4.790	0.309
• Moderate.	32.8	34.9	50.0		
• High.	26.2	34.9	0.0		
Social:					
• Low.	32.8	34.9	33.3	21.004	0.003*
• Moderate.	29.5	81.9	66.7		
• High.	37.7	18.1	0.0		
Physical:					
• Low.	45.9	24.1	33.3	12.974	0.011*
• Moderate.	37.7	39.8	66.7		
• High.	16.4	36.1	0.0		
Effect of treatment:					
• Low.	29.5	24.1	33.3	3.764	0.439
• Moderate.	44.3	42.2	66.7		
• High.	26.2	33.7	0.0		
Medical Service:					
• Low.	26.2	18.1	33.3	6.651	0.156
• Moderate.	26.2	44.6	50.0		
• High.	47.5	37.3	16.7		

*p-value <0.05 S

Table (8): Relation between Wives' Level of Education and Quality of Life.

QOL domains	Level of Education					X ²	p-value
	Not read & wrights (n=15) %	Primary (n=17) %	Preparatory (n=23) %	Secondary (n=78) %	University (n=17) %		
Psychology:							
• Low.	20.0	17.6	26.1	15.4	70.6	43.95	0.001**
• Moderate.	53.3	17.6	30.4	64.1	11.8		
• High.	26.7	64.7	43.5	20.5	17.6		
Social:							
• Low.	13.3	23.5	13.0	20.5	17.6	20.26	0.009**
• Moderate.	46.7	52.9	21.7	53.8	17.6		
• High.	40.0	23.5	65.2	25.6	64.7		
Physical:							
• Low.	13.3	70.6	13.0	47.4	29.4	37.71	0.001**
• Moderate.	66.7	11.8	30.4	19.2	58.8		
• High.	20.0	17.6	56.5	33.3	11.8		
Effect of treatment:							
• Low.	13.3	29.4	13.0	24.4	23.5	5.517	0.701
• Moderate.	53.3	58.8	47.8	51.3	52.9		
• High.	33.3	11.8	39.1	24.4	23.5		
Medical service:							
• Low.	20.0	11.8	13.0	24.4	11.8	24.67	0.002*
• Moderate.	53.3	76.5	56.5	28.2	76.5		
• High.	26.7	11.8	30.4	47.4	11.8		

*p-value <0.05 S; **p-value <0.001 HS

Table (9): Relation between Husband's Level of Education and Quality of Life.

QOL domains	Level of Education					x ²	P-value
	Not read & wright (n=5) %	Primary (n=6) %	Preparatory (n=44) %	Secondary (n=78) %	University (n=17) %		
Psychology:							
• Low.	20	16.7	6.8	15.4	70.6	38.8	0.001**
• Moderate.	60	33.3	59.1	64.1	11.8		
• High.	20	50.0	34.1	20.5	17.6		
Social:							
• Low.	0	16.7	13.6	20.5	17.6	23.1	0.003**
• Moderate	20	33.3	68.2	53.8	17.6		
• High	80	50.0	18.2	25.6	64.7		
Physical							
• Low	60	33.3	11.4	47.4	29.4	43.4	0.001**
• Moderate.	20	16.7	75.0	19.2	58.8		
• High.	20	50.0	13.6	33.3	11.8		
Effect of treatment:							
• Low.	20	16.7	6.8	24.4	23.5	39.2	0.001**
• Moderate.	60	33.3	13.6	51.3	52.9		
• High.	20	50.0	79.5	24.4	23.5		
Medical service:							
• Low.	0	16.7	4.5	24.4	11.8	42.1	0.001**
• Moderate.	40	33.3	9.1	28.2	76.5		
• High.	60	66.7	86.4	47.4	11.8		

*p-value <0.05 S; **p-value <0.001 HS

Table (10): Relation between Infertile Couple's Residence, Income, Cost of treatment and Quality of Life Index.

Items	Quality of life						X ²	P value
	Low		Moderate		High			
	No	%	No	%	No	%		
Residence:								
• Rural.	2	2.3	73	83	13	14.8	8.22	0.01*
• Urban.	0	0	195	92	17	8		
Cost of treatment:								
• Free.	0	0	62	92.5	5	7.5	6.66	0.118
• Health insurance.	0	0	33	100	0	0		
• Private.	2	1	173	86.5	25	12.5		
Income:								
• Enough.	0	0	44	91.7	4	8.3	0.575	0.864
• Not enough.	2	0.8	224	88.9	26	10.3		

*p-value <0.05 S; **p-value <0.001 HS

Table (11): Relation between total QOL of infertile couple and their type of infertility (n=150).

Type of infertility	Low QoL		Moderate QoL		High QoL		Chi-square test	p-value
	No.	%	No.	%	No.	%		
• Primary (n=55).	7	14.6%	28	46.7%	20	47.6%	14.833	0.006*
• Secondary (n=95).	41	85.4%	32	53.3%	22	52.4%		
• Total.	48	100.0%	60	100.0%	42	100.0%		

*p-value <0.05 S

Table (12): Relation between Low, moderate, and high regarding level of quality of life and their treatment outcome (n=150).

Treatment outcome	Low QoL		Moderate QoL		High QoL		Chi-square test	p-value
	No.	%	No.	%	No.	%		
• Pregnant (n=45).	6	12.5%	8	13.3%	31	73.8%	53.322	<0.001**
• Failed Trial (n=105).	42	87.5%	52	86.7%	11	26.2%		
• Total.	48	100.0%	60	100.0%	42	100.0%		

p-value <0.001 HS

Discussion

Infertility is not only a gynecological problem, but also a bio-psycho-social health problem including a lower QOL. Infertility affects many couples so that some studies have reported its prevalence as one couple out of 10.

Infertility with its stressful and emotionally threatening nature and high costs are a crisis in life both for men and for women. Infertility is considered a crisis with economic, ethical, biological, and cultural psychological consequences (Onat G, Kizilkaya Beji N. 2012).

QOL is a complex concept that is related to physical health, psychological

status, level of independence, social relations, personal beliefs, and environmental factors. Also, it is affected by age, culture, sex, educational level, social status, disease, and social environment

Therefore, the aim of this study was to assess the QOL among infertility couples.

In relation to socio demographic characteristic, the results of the present study showed that more than half of the age of infertile wife was found between 25-40 years old were the mean was (30.64±7.46) and from urban place.

According to *Manna et al. (2014)* it was found in a study of West Bengal that, maximum number of infertile wife (56.54%) were in the age group of 25-34 years.

Meanwhile, *Adamson et al. (2011)* reported that findings indicated that the mean age of primary infertile wife was 25.9±3.12 years in study conducted at Mysore.

Syamala (2012) at Bangalore agreed with the present study, who mentioned that the primary infertile women were found in the 21-25 years of age group.

As regard to housewife, more than 52% had secondary education and most of them are housewife. Similarly, in a cross-sectional study of West Bengal, about 75.39% women were housewives among the infertile wife (*Parihar, 2003*). In another study, it was reported that majority i.e. 81.4% infertile women were housewives (*Adamson et al., 2011*).

Regarding to a study of Egypt result about educational level, reported that 70.8% secondary and 64.8% primary infertile wife were illiterate among the study population (*Hassan, 2013*).

Another study reported that 19.5% were illiterate, 30.1% had primary, 45.1% had secondary and 11.5% had a post-

secondary education level among the primary infertile wife (*Hassan, 2013*).

Findings of table (2) showed the distribution of infertile wives regarding to their obstetric history (pregnancy & labor). It was found that 70%h of the studied infertile women after the intervention never been pregnant with no statistical significant difference between studied infertile women related to their pregnancy, and this supported by (*Lykeridou, et al., 2011*) studied "Occupational social class, coping responses and infertility-related stress of women undergoing infertility treatment" in which they found (90%) of their studied group never been pregnant before.

Regarding to type of infertility showed distribution of the studied infertile women according to their infertility history. It was observed that the majority (63.3%) of the studied infertile women were secondary infertile while (36.6%) was primary infertile and this was disagreed with (*Ried & Alfred, 2013*) noticed that (77%) of their studied infertile women were primary infertile, while 16% was secondary infertile. This difference may be related to the place of the study sample.

On contrary, (*Hassan K, 2013*) who studied "Prevalence of infertility and its impact on marital fertility a study of Egypt" reported 70.8% secondary and 64.8% primary infertile women were illiterate among the study population.

On the other hand *Adamson PC, et al., (2011)* studied the "Prevalence & correlates of primary infertility among young women in Mysore, India" reported that 19.5% were illiterate, 30.1% had primary, 45.1% had secondary and 11.5% had a post-secondary education level among the primary infertile women.

The result of table (3), (4) & (5): showed distribution of the studied infertile couples according to their physical,

psychological, and social health QOL. In the present study cleared that the more than one-third (36.3%) of the study sample did not affected infertility problems with their partner relation, also less than one-third (31.3%) of them infertility were not a bother of them, in addition to slightly less than one quarter not fell uncomfortable because of infertility.

This findings is differ with (**Van, Balen et al., 2007**) who studied "Quality of infertility care in poor-resource areas and the introduction of new reproductive technologies" and stated that the majority of participants were in full harmony of the quality of life in three domain; physical, psychological and social and there is no effect of the infertility on the QOL, this difference in two results may be able to differentiate of culture and places of study.

Also for psychological domain the slightly less than half of the study sample reported that infertility problem effect their psychological quality of life, for social domain the slightly less than one quarter of the study sample reported that infertility problem effect their social QOL.

From the researcher point of view, this may be explained by the fact that those infertile women did not receive enough information about scientific meaning of infertility and how to deal with the emotional feeling toward infertility problem from health care providers or health professionals. That is reduced after the interventional guidelines to 28% with not statistically significance differences.

This is consistent with, (**Gurunath, et al., 2011**) studied "Defining infertility-a systematic review of prevalence" found no significant different between studied infertile women regarding knowledge about the meaning of infertility. In the same line with (**Aflakseir & Zarei, 2014**) Studied "Association between coping strategies and Infertility stress among a Group of women with Fertility problem in Shiraz. Iran" found

no statistically significant difference between the studied groups in relation to their knowledge about infertility after the rehabilitation program.

As regarding to the relation between infertile husbands' age and QOL domains, the results of current study stated that there was a highly statistically significant relationship between husbands' age and social and physical domains of QOL. These results were agreement with (Mohammad, 2017) who stated that the QOL score of infertile women showed significant relationships with place of residence, education, age, husband's occupation.

Findings of the present study also displayed that there were a highly statistical significant relationship between Infertile Wives' Age and QOL Domains, these result was agreement with (**Mohammad, 2017**) who stated that the quality of life score of infertile women showed significant relationships with between wives' age.

The current study findings revealed that there were a highly statistical significant relationship between infertile wives level of education and all subdomains of QOL, as the same line (**Mohammad, 2017**) reported that a highly statistical significant relationship between education level, and occupation of infertile women. Higher education can provide greater access to resources and publications and help women to expand and improve their knowledge. This can be useful in managing the problem and dealing with it rationally.

On contrary, a study of Egypt (**Hassan KES.,2013**) studied "Prevalence of infertility and its impact on marital fertility" reported 70.8% secondary and 64.8% primary infertile women were illiterate among the study population. Ans also reported that 19.5% were illiterate, 30.1% had primary, 45.1% had secondary and 11.5% had a post-secondary education level among the primary infertile women.

In another study, (Shahin A, 2007) studied "The problem of IVF cost in developing countries the mean age of primary and secondary infertile women was found 28.9 ± 7.9 and 37.5 ± 8.6 years, respectively.

Finally, the present study findings showed that there is statistically significant relation between infertile couples' residence and quality of life. Also, our findings showed that general health of more than half of the infertile women indicated a degree of disorder, which face the risks of anxiety, social dysfunction, and depression. Educational status, monthly income, and rural/urban residency are the major factors affecting QOL. These results agreed with (Keramat et al., 2014) who studied that "*Quality of Life and Its Related Factors in Infertile couple*" and mentioned that the QOL is associated with the residence of place.

In the same line (Hossein m, 2011) who studied that "Evaluation of the general health of the infertile couples, had significant effect on health situation of infertile couples, specially infertile women, which are at risk of somatic symptoms, anxiety, insomnia, social dysfunction, and severe depression.

On the other hand (Zahra Royani, 2019), studied the predictors of QOL in Infertile Couples. The study showed existence of higher QOL was higher in people with higher education. On the other hand, people with a higher education level use problem-solving skill better. It seems that they learn how to deal with daily stressors.

Moreover, infertile women have lower QOL than that of infertile men. In order to improve the QOLO among these individuals, and increase the mental health and health of infertile patients, especially infertile women, psychological counseling, especially psychological supportive therapy, can be effective in reducing the psychological

problems of this group of patients and improving their QOL by emphasizing the skills used for resilience.

Furthermore, (Entisar M. 2018) studied Lifestyle factors between fertile and infertile women at Assiut Women's Health Hospital "A highly statistically significant difference was found between fertile and infertile women in terms of physical activity and BMI.

Moreover, Saedian, M. et al., (2017) studied "The quality of life and some effective factors on infertile couples" As the results show, it seems that infertile women in physical and mental health dimensions have a lower QOL rather men. Thus, to improve their QOL, they are recommended to find medical programs which will take less hours in the medical centers. They also must follow their medical programs with each other.

The findings of (Allan H., 2013) the current study "The anxiety of infertility: the role of the nurses in the fertility clinic." showed the support from the family, acquaintances and society as the other important need, expressed by the infertile couples. Evidence has shown that positive social interactions and socio-emotional support have a salutary effect on infertile couple's psychosomatic health, ultimately leading to a decrease in the negative impacts of stress (20).

From my opinion point of view, the unhealthy lifestyle status of the infertile women must be modified through effective measures. Modifiable lifestyle factors should be considered in all women who are seeking infertility treatment to help them make positive changes in their lives and improve their chances of conceiving, that is, getting a healthy pregnancy and a live baby. Moreover, developing guidelines for healthy lifestyles would be a prudent step toward helping healthcare providers especially nurses to implement this aspect of preconceptionally care. New ways need to be

developed for better taking into account the processual nature of the infertility experience. Efforts need to be made to include under-studied portions of the infertile population. Finally, more effort needs to be made to better integrate the empirical study of the experience of infertility with important social policy questions.

Conclusion:

Based on the study findings:

- Infertility has a negative effect on multiple dimensions of health and QOL (which are represented in the physical and social aspects, as well as the effect of treatment) on infertile couples as clear evidence shown by the results of the study.
- There is a highly statistically significant relationship between the QOL and the type of infertility among infertile couples.

Recommendation:

In the light of the findings of the current study the following recommendations are:

- Preparing and implementing awareness programs for female nurses working in fertility centers with regard to infertility, to provide infertile husbands with information and to improve the QOL, as well as to provide advice, especially on strategies for dealing with infertility and the problems it causes.
- Conducting more research to identify the reasons that hinder the treatment journey for infertile couples.
- Preparing and implementing special programs through various media outlets to educate infertile husbands to enhance their knowledge aspect and improve their QOL.

References:

Adamson, P.C., Krupp, K., Freeman, A.H., Klausner, J.D., Reingold, A.L. and Madhivanan, P. (2011): Prevalence &

correlates of primary infertility among young women in Mysore, India. *Indian J Med Res.* 134:440-6.

Cheng, Y., Stevenson, L., Yang, T., and Liou, R. (2018): Stress and quality of life for taiwanese women who underwent infertility treatment. *Journal of Obstetric, Gynecologic & Neonatal Nursing*, 47(4), 498-508.

Dumuid, D., Olds, T., Lewis, K., Martin-Fernandez, A., Katzmarzyk, T., Barreira, T. and Kuriyan, R. (2017): Health-related quality of life and lifestyle behavior clusters in school-aged children from 12 countries. *The Journal of pediatrics*, 183, 178-183.

Hassan, K.E.S. (2013): Prevalence of infertility and its impact on marital fertility, Egypt.1993 [cited 2013 Dec 25]; Available at: <http://www.zohry.com/dwb/khassan/pub/infertility.pdf>. Accessed 9 Jan 2016.

Keramat, A., Masoomi, S. Z., Mousavi, S. A., Poorolajal, J., Shobeiri, F., and Hazavhei, S. M. M. (2013): Quality of life and its related factors in infertile couples. *Journal of research in health sciences*, 14(1), 57-64.

Manna, N., Pandit, D., Bhattacharya, R., Biswas, S. (2014): A community-based study on Infertility and associated socio-demographic factors in West Bengal, India. *IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)*. 13(2):13-7.

Onat G, Kizilkaya Beji N. Effects of infertility on gender differences in marital relationship and quality of life: a case-control study of Turkish couples. *Eur J Obstet Gynecol Reprod Biol.* 2012;165(2):2438.doi:10.1016/j.ejogrb.2012.07.033. [PubMed: 22939240].

Ozcan Dag, Z. and Dilbaz, B. (2015): Impact of obesity on infertility in women. *Journal of the Turkish German Gynecological Association*, 16(2): 111–117.

- Poomalar, K., & Arounassalame, B. (2013):** The quality of life during and after menopause among rural women. *Journal of clinical and diagnostic research: JCDR*, 7(1), 135.
- Syamala, T.S. (2012):** Infertility in India: levels, trends, determinants and consequences. Institute for Social and Economic Change.
- Uysal, M., Sirgy, J., Woo, E., and Kim, L. (2016):** Quality of life (QOL) and well-being research in tourism. *Tourism Management*, 53, 244-261.
- Zegers-Hochschild, F., Adamson, G., Dyer, S., Racowsky, C., de Mouzon, J., Sokol, R. & Simpson, L. (2017):** The international glossary on infertility and fertility care, 2017. *Human reproduction*, 32(9), 17861801.
- Zegers-Hochschild, F., et al.,** The International Glossary on Infertility and Fertility Care, 2017. *Fertil Steril*, 2017. 108(3): p. 393-406.