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Impact of infertility on quality of life of women

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Abstract
Background: Infertility is a worldwide health issue, which affects several people of reproductive age. Infertility is a life crisis with a wide range of socio-cultural, emotional, physical, and financial problems. Infertility and its treatment can affect all aspects of people's lives, which can lead to various emotional or psychological consequences including frustration, depression, anxiety, turmoil, hopelessness, guilt, and feelings of hopelessness and worthlessness in life.
Aim and Objective: The present study aims to assess the effect of infertility on the quality of life among infertile women attending infertility clinics in Himachal Pradesh, India.
Material and Methods: Quantitative research approach was used in this study to explore Quality of Life (QoL) among infertile women. The research was conducted in the infertility clinic of Solan in Himachal Pradesh, India. The total sample size was 240 as per the Sample Size calculation. FertiQoL Questionnaire was the tool used for data collection. The association was compared using Crunchbase alpha, t-test, and ANOVA test with the selected demographic and clinical variables calculated by Chi-square test. The level of significance for the study chosen was ($p<0.5$ levels).
Results: The mean score of Total FertiQoL, Core FertiQoL and Treatment FertiQoL were 60.54 ± 16.64 and 59.67 ± 18.77, and 62.60 ± 15.74 respectively. Cronbach's α coefficients of all the FertiQoL scale and subscales were more than 0.9, indicating acceptable good internal consistency and hence all scales were included in the study. The lowest FERTIQOL score was found in the Emotional subscale. Women who had secondary infertility had poorer Mind / Body FertiQoL subscale scores. There was no statistically significant difference seen in the FertiQoL scores across all the age groups, levels of education and socio-economic status.
Conclusion: We can conclude based on this study that infertility does affect the quality of life especially mind / body or mental health of these women on the basis of the socio-demographics. Infertility affects the emotional quality of life of these women significantly, but this is independent of their age, education, socio-economic status or years of infertility.

Keywords: Infertility, quality of life, infertile women

Introduction

Infertility is a worldwide health issue, which affects several people of reproductive age. World Health Organization (i.e. WHO) states that infertility is a disease of the male or female reproductive system. WHO defines Infertility as 'the failure to achieve pregnancy after 12 months or more of regular unprotected sexual intercourse'. Available data suggest that fifteen percent of reproductive cohort couples and between 48 million couples and 186 million individuals have infertility globally [1]. Among the young population, as per the WHO, infertility is the fifth-highest global disability and as per Maternal Health Task Force 2010 (MHTF-2010) around fifty million couples are infertile at the world level [2]. In 2001, in India, approximately 16% of the ever-married women of the reproductive cohort were childless, which was 13% in 1981 [3].

It has been reported that one out of seven English couples suffer from infertility problems [4]. Hence, it is clear that there is a need to focus on this area so that appropriate treatment and planning can be done to deal with infertility and its upcoming consequences. The lack of up-to-date information about the prevalence of infertility is an inspiration to conduct a study in the context of infertility.

Infertility is a medical challenge, and it is a major psychological and financial stress on couples. Infertility is a life crisis with a wide range of socio-cultural, emotional, physical, and financial problems. Infertility and its treatment can affect all aspects of people's lives, which can lead to various emotional or psychological consequences including frustration,

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depression, anxiety, turmoil, hopelessness, guilt, and feelings of hopelessness and worthlessness in life [5].

The WHO defines Quality of life 'as an individual's perception of their position in life in the context of the culture and value systems in which they live and concerning their goals, expectations, standards, and concerns [6].' Hence, quality of life is a subjective rating of the excellence of one's life embedded in its cultural, emotional, social, and environmental context. In an unprecedented initiative, the two largest reproductive medical societies, namely, the European Society of Human Reproduction and Embryology (ESHRE) and the American Society of Reproductive Medicine (ASRM) joined forces with a leading-edge pharmaceutical company, Merck-Serono S.A., to create FertiQoL - the first internationally validated instrument to measure the quality of life in individuals experiencing fertility problems. FertiQoL assesses the influences of fertility problems in diverse life areas, for example, on family and social relationships, general health, emotions, work-life, self-perceptions, and future life plans. Additionally, the optional FertiQoL Treatment module assesses the environment and tolerability of fertility treatment. It is hoped that FertiQoL will become the gold standard in measuring the quality of life in people with fertility problems [7].

In 2013 161 infertile women underwent a cross-sectional study at Dr. Rostami's Infertility Center of Shiraz, Southern Iran. Data were collected via socio-demographic, general health (GHQ28), and the QOL Questionnaire of Infertile Couples. Analysis was performed using descriptive and analytical statistics. More than 50% of the women with infertility had some disorder in their general health. These women were facing the risk of social dysfunction, anxiety, and depression. The QOL was affected mainly by educational status, monthly income, and rural/urban residency [8].

A study was conducted at three German Fertility Clinics; on 596 infertile women and men over two years. FertiQoL tool was used for psychometric analysis and correlation with socio-demographic variables was also conducted. The results of the study showed that there was less family and friends support on the social subscale of FertiQoL. Women scored lower than men on the Emotional and Mind/Body subscale of FertiQoL. In this study the individual FertiQoL score for women was significantly affected by the perceived cause of infertility and already mothering a child. They concluded that a significant connections exist between the physical, emotional and cognitive aspects of an individual's fertility specific quality of life [9].

FertiQoL is a widely used tool to assess quality of life in infertile women. A review article on use of FertiQoL tool in clinical setting was published which included studies with a total 16,315 participants across 41 published articles. The key findings were that women had poor fertility quality of life. Longer the duration of infertility and lower patient-centered care resulted in poor FertiQoL score. Psychological interventions improved some of the FertiQoL subscale scores [10].

Woods BM. *et al*. studied the FertiQoL tool being used in population with infertility. As per their search 153 articles had utilized the FertiQoL, 53 articles reported psychometric data and were included in the study. They found that the FertiQoL is a sound measurement tool with satisfactory reliability and validity. The core Emotional, Mind/Body, Social, and Relational scales and the two optional Tolerability and Environment fertility treatment subscales were also reliable. The Relational subscale showed little lower reliability over many studies but the internal measurement consistency was satisfactory. They concluded by saying that it is important to understand the impact of infertility on quality of life and that FertiQoL provides great insight into the areas like mental health and relationship stressors which can be prioritized during infertility-related care. This review shows that the FertiQoL is reliable and valid for cross-cultural use among individuals with various etiologies of infertility [11].

Quality of life (QOL) measurement is considered a benchmark to assess various aspects of medicine. A study done on the quality of life and general health of infertile women showed that greater than 50% of women with infertility showed a degree of disorder. There is a risk of social dysfunction, depression, and anxiety in these women. QOL is mainly influenced by factors like monthly income, educational status, and rural vs urban residency. The present study aims to assess the effect of infertility on the quality of life among infertile women attending infertility clinics in Himachal Pradesh, India.

Materials and Methods
Research Approach: Quantitative research approach was used in this study to explore Quality of Life (QoL) among infertile women.

Research Design: Descriptive design is selected to assess the Quality of Life (QoL) among infertile women attending infertility clinic in Himachal Pradesh, India.

Research setting: The research was conducted in the infertility clinic of Solan in Himachal Pradesh, India.

Study duration: The research was conducted from June 2021-June 2023.

Target population: Infertile women of reproductive age group.

Accessible population: Infertile women attending infertility clinic of district Solan, Himachal Pradesh.

Method of sampling: Non-Probability - Convenient Sampling was used to draw the sample for the study.

Sample size: The total sample size was 240 as per the Sample Size calculation for Cross-sectional or Descriptive Research Studies [12].

Sample size $(n) = (Z_{(1-\alpha/2)})^2 (p) (q) d^2$
n = Desired sample size
$Z1-\alpha/2$ = Critical value and a standard value for the corresponding level of confidence. (At 95% CI or 5% level of significance (type-I error) it is 1.96)
P = Expected prevalence or based on previous research =16.8% [5]
q = 1-p d = Margin of error or precision
n = $(1.96)^2$ (0.168) (1-0.168) = 215 + 10% Drop factor (i.e., 22) = 237.
$(0.005)^2$

Inclusion criteria: Infertile women of reproductive age group attending the infertility clinic

Exclusion criteria: Infertile women with known Mental illness

Tool Used: FertiQoL Questionnaire.

Statistical Analysis: The association was compared using Crunchbase alpha, t-test, and ANOVA test with the selected demographic and clinical variables calculated by Chi-square test. The level of significance for the study chosen was ($p<0.5$ levels).

Results
A total of 240 infertile women were studied. All these infertile women who visited the infertility clinic were asked to fill out the tool which comprised of a demographic questionnaire and FertiQoL questionnaire.

Table 1: FERTIQOL scores

Item-Total Statistics	Mean	Standard Deviation	Cronbach's Alpha
TOTAL FertiQoL	60.5423	16.64377	0.906
Core FertiQoL	59.6703	18.77466	0.905
Treatment FertiQoL	62.6042	15.74807	0.921
Emotional	56.0938	20.73313	0.908
Mind / Body	58.1597	25.94336	0.903
Relational	61.9444	20.59616	0.923
Social	58.5417	27.11771	0.907
Environment	64.2361	11.33370	0.953
Tolerability	59.8438	21.11811	0.914

The Total FertiQoL and its subscale scores are presented in Table 1. The mean score of Total FertiQoL, Core FertiQoL and Treatment FertiQoL were 60.54±16.64 and 59.67±18.77, and 62.60±15.74 respectively. Cronbach's α coefficients of all the FertiQoL scale and subscales were more than 0.9, indicating acceptable good internal consistency and hence all scales were included in the study. The lowest FERTIQOL score was found in the Emotional subscale.

Table 2: Statistical Analysis comparing FertiQoL scores in Primary and Secondary Infertility

Item (Mean + SD)	Primary Infertility (N= 159)	Secondary Infertility (N=81)	t-Test	p-value
Total FERTIQOL	61.6213±15.90888	58.4241±17.91277	1.410	0.177
Core FertiQoL	60.8556±17.88714	57.3436±20.31954	1.373	0.061
Treatment FertiQoL	63.4591±15.04686	60.9259±17.01307	1.179	0.130
Emotional	56.6300±19.86800	55.0412±22.42577	0.561	0.076
Mind / Body	59.8270±24.43671	54.8868±28.54843	1.398	0.034
Relational	60.9539±20.49061	63.8889±20.79162	-1.044	0.448
Environment	63.0765±10.85803	66.5123±11.95776	-2.239	0.392
Tolerability	60.8884±20.32195	57.7932±22.58947	1.074	0.194

The above table displays the FertiQoL scores in infertile women who were either diagnosed as having Primary infertility or Secondary infertility. It was noted that there was a statistically significant ($p<0.05$) difference in the Mind / Body Subscale score among the two groups. Women who had secondary infertility had poorer Mind / Body FertiQoL subscale scores.

Table 3 (a): FertiQoL scores compared with the education of the participants using ANOVA Test

Scores	Education of the participant	N	Mean	Standard Deviation	F- Value	p-Value
Total FERTIQOL	Professional or Honors	23	67.0077	14.29456	1.402	0.215
	Graduate	106	60.3982	17.38408		
	Intermediate or Diploma	25	54.4118	20.94405		
	High Scholl Certificate	41	61.1729	13.73172		
	Middle School Certificate	22	58.2888	12.05904		
	Primary School Certificate	13	59.8982	16.84668		
	Illiterate	10	65.7353	18.68927		
Core FertiQoL	Professional or Honors	23	67.1196	16.12467	1.540	0.166
	Graduate	106	59.4929	19.51552		
	Intermediate or Diploma	25	52.2500	22.84886		
	High Scholl Certificate	41	60.0620	16.46055		
	Middle School Certificate	22	57.2443	14.01042		
	Primary School Certificate	13	60.0962	19.26560		
	Illiterate	10	66.1458	19.37145		
Treatment FertiQoL	Professional or Honors	23	66.7391	15.28953	.608	0.724
	Graduate	106	62.5708	16.50201		
	Intermediate or Diploma	25	59.6000	18.28137		
	High Scholl Certificate	41	63.6585	14.18734		
	Middle School Certificate	22	60.7955	11.78645		
	Primary School Certificate	13	59.4231	14.40319		
	Illiterate	10	64.7500	18.68786		

The above Table depicts that there is no statistically significant difference between the Total, Core, and Treatment FertiQoL scores when compared with the level of education of the study participants / infertile women.

Table 3 (b): FertiQoL subscale scores compared with the level of education of the participants

Subscale Scores	Education of the participant	N	Mean	Standard Deviation	F- Value	p-Value
Emotional	Professional or Honors	23	62.8623	19.17297	.930	0.474
	Graduate	106	55.2280	21.30856		
	Intermediate or Diploma	25	50.3333	24.20376		
	High Scholl Certificate	41	57.8252	19.18919		
	Middle School Certificate	22	54.9242	19.27233		
	Primary School Certificate	13	54.8077	20.61315		
	Illiterate	10	61.2500	17.89997		
Mind / Body	Professional or Honors	23	70.8333	24.09996	2.087	0.056
	Graduate	106	57.0362	26.93174		
	Intermediate or Diploma	25	47.1667	29.48045		
	High Scholl Certificate	41	60.2642	22.57506		
	Middle School Certificate	22	55.1136	20.36911		
	Primary School Certificate	13	57.0513	25.25246		
	Illiterate	10	67.9167	26.06157		
Relational	Professional or Honors	23	70.2899	19.75642	2.058	0.059
	Graduate	106	57.5472	20.64689		
	Intermediate or Diploma	25	62.0000	21.39250		
	High Scholl Certificate	41	67.4797	19.45926		
	Middle School Certificate	22	64.5833	22.77645		
	Primary School Certificate	13	62.5000	17.75932		
	Illiterate	10	60.0000	15.36591		
Social	Professional or Honors	23	72.2826	22.94622	2.052	0.060
	Graduate	106	56.6431	28.16464		
	Intermediate or Diploma	25	50.0000	31.57241		
	High Scholl Certificate	41	63.0081	24.01163		
	Middle School Certificate	22	51.3258	22.13723		
	Primary School Certificate	13	60.2564	28.44420		
	Illiterate	10	63.7500	23.73741		

Table 3 (c): FertiQoL treatment subscale scores compared with the level of education of the participants

Subscale	Education of the participant	N	Mean Score	Standard Deviation	F- Value	p-Value
Environment	Professional or Honors	23	61.9565	12.26447	.540	0.777
	Graduate	106	64.7013	10.60672		
	Intermediate or Diploma	25	65.5000	11.56954		
	High Scholl Certificate	41	63.3130	10.95364		
	Middle School Certificate	22	63.6364	14.61486		
	Primary School Certificate	13	67.6282	13.83537		
	Illiterate	10	62.0833	6.34952		
Tolerability	Professional or Honors	23	65.2174	20.54185	.634	0.703
	Graduate	106	58.7854	21.52619		
	Intermediate or Diploma	25	54.7500	26.34902		
	High Scholl Certificate	41	61.1280	17.70594		
	Middle School Certificate	22	62.2159	17.19518		
	Primary School Certificate	13	58.6538	20.81329		
	Illiterate	10	62.5000	26.51650		

Above two tables shows that when the education of the participants / infertile women was compared with the FertiQoL subscale scores there was no statistically significant difference. In this study, the FertiQoL scores (core, treatment, core, and subscales) of this study population were not affected by the participant's level of education.

Table 4 (a): FertiQoL scores comparison across the socio-economic class of the participants

	Socio-economic Class	N	Mean	Standard Deviation	F-Value	p-Value
Total FERTIQOL	I	5	59.4118	12.70804	0.494	0.74
	II	45	62.1242	17.18108		
	III	93	60.4839	16.46165		
	IV	87	60.6068	16.14793		
	V	10	53.9706	22.76696		
Core FertiQoL	I	5	57.0833	17.04327	0.419	0.795
	II	45	60.9259	19.79867		
	III	93	59.9579	18.53553		
	IV	87	59.6624	18.07063		

	Class	N	Mean	Standard Deviation	F-Value	p-Value
	V	10	52.7083	24.82675		
Treatment FertiQoL	I	5	65	3.53553	0.691	0.599
	II	45	65	16.56598		
	III	93	61.6667	15.83858		
	IV	87	62.8736	15.14239		
	V	10	57	20.16598		
Emotional	I	5	51.6667	29.25582	0.575	0.681
	II	45	56.9444	20.47032		
	III	93	56.8548	20.61155		
	IV	87	56.1303	20.14201		
	V	10	47.0833	25.61361		
Mind / Body	I	5	57.5	30.81644	0.374	0.827
	II	45	60.9259	28.16585		
	III	93	58.6918	24.85356		
	IV	87	57.0402	25.00251		
	V	10	50.8333	34.23548		

Table 4 (b): FertiQoL scores comparison across the socio-economic class of the participants

Items	Class	N	Mean	Standard Deviation	F-Value	p-Value
Relational	I	5	65.8333	30.53345	0.814	0.518
	II	45	65.463	19.20989		
	III	93	62.5896	20.84219		
	IV	87	59.0996	20.77053		
	V	10	62.9167	18.15677		
Social	I	5	58.3333	34.23266	0.37	0.83
	II	45	62.5	28.45451		
	III	93	58.2885	25.87898		
	IV	87	57.3755	26.68499		
	V	10	53.3333	35.72443		
Environment	I	5	66.6667	9.31695	0.566	0.687
	II	45	62.4074	9.54657		
	III	93	63.9337	12.73177		
	IV	87	65.3257	11.08777		
	V	10	64.5833	7.91788		
Tolerability	I	5	57.5	9.27025	0.892	0.469
	II	45	63.6111	23.12918		
	III	93	60.0134	20.79312		
	IV	87	58.908	20.07508		
	V	10	50.625	27.23515		

Key to the above two tables: Class I - Upper Class, Class II - Upper Middle Class, Class III - Lower Middle Class, Class IV - Upper Lower Class, Class V - Lower Class.

The above two tables enumerate the mean scores of FertiQoL and its subscales across the different socio-economic classes. There is no statistically significant effect on the FertiQoL scores across the different socio-economic classes.

Table 5 (a): FertiQoL scores comparison across the age groups of the participants

	Age group in years	N	Mean	Standard Deviation	F-value	p-value
Total FERTIQOL	<20	37	65.1033	14.09537	1.323	0.262
	21-25	90	61.4542	16.0172		
	26-30	61	58.7271	16.63644		
	31-35	39	57.3718	18.28417		
	36-40	13	59.276	21.31621		
Core FertiQoL	<20	37	64.6115	15.86332	1.229	0.299
	21-25	90	60.7407	17.86881		
	26-30	61	57.3941	19.3553		
	31-35	39	56.5716	20.51542		
	36-40	13	58.1731	23.40023		
Treatment FertiQoL	<20	37	66.2838	13.21065	1.051	0.382
	21-25	90	63.1667	16.75501		
	26-30	61	61.9262	14.1524		
	31-35	39	59.1026	17.0476		
	36-40	13	61.9231	18.0322		
Emotional	<20	37	59.1216	17.9709	0.437	0.782
	21-25	90	55.7407	18.6922		
	26-30	61	54.6448	22.08855		
	31-35	39	54.9145	24.08546		

	Age group in years	N	Mean	Standard Deviation	F-value	p-value
	36-40	13	60.2564	25.7197		
Mind / Body	<20	37	62.6126	20.91388	0.848	0.496
	21-25	90	60.2315	24.71088		
	26-30	61	54.4399	27.32127		
	31-35	39	56.1966	29.35204		
	36-40	13	54.4872	30.21248		

Table 5 (b): FertiQoL scores comparison across the age groups of the participants

	Age group in years	N	Mean	Standard Deviation	F-value	p-value
Relational	<20	37	57.9955	18.95155	1.258	0.287
	21-25	90	62.2685	20.18525		
	26-30	61	60.2459	20.42055		
	31-35	39	64.5299	22.89915		
	36-40	13	71.1538	20.6563		
Social	<20	37	59.6847	21.36033	0.735	0.569
	21-25	90	61.5278	25.84443		
	26-30	61	54.0301	28.9972		
	31-35	39	57.265	29.78232		
	36-40	13	59.6154	33.6093		
Environment	<20	37	63.5135	10.08286	0.391	0.815
	21-25	90	63.3333	11.22909		
	26-30	61	64.959	12.91839		
	31-35	39	65.4915	11.66622		
	36-40	13	65.3846	5.98624		
Tolerability	<20	37	64.6959	17.62949	1.409	0.232
	21-25	90	61.5278	21.48603		
	26-30	61	58.1967	20.4615		
	31-35	39	54.3269	22.17389		
	36-40	13	58.6538	25.83734		

The above two tables enumerate the FertiQoL scores of the infertile women of this study across the different age groups. On statistical analysis, there was no statistically significant difference seen in the FertiQoL scores across all the age groups.

Table 6 (a): FertiQoL scores comparison across years of infertility of the participants

	Years of Infertility	N	Mean	Standard Deviation	F-value	p-value
Total FERTIQOL	1-3	130	61.3914	16.76335	0.403	0.806
	4-6	78	58.833	17.59306		
	7-9	10	63.8971	5.13479		
	10-12	14	59.5063	17.75388		
	13-15	8	61.0294	13.82331		
Core FertiQoL	1-3	130	60.6891	19.18879	0.535	0.71
	4-6	78	57.3851	19.52406		
	7-9	10	63.2292	5.28987		
	10-12	14	58.6339	19.16396		
	13-15	8	62.7604	15.15411		
Treatment FertiQoL	1-3	130	63.0769	15.72393	0.414	0.798
	4-6	78	62.3077	15.8102		
	7-9	10	65.5	10.65885		
	10-12	14	61.0714	17.80542		
	13-15	8	56.875	19.16796		
Emotional	1-3	130	57.2436	20.69108	0.97	0.425
	4-6	78	52.938	21.10867		
	7-9	10	64.1667	17.69948		
	10-12	14	58.0357	23.0236		
	13-15	8	54.6875	16.12782		
Mind / Body	1-3	130	59.8718	26.12735	0.781	0.539
	4-6	78	54.3803	27.09392		
	7-9	10	64.5833	6.28846		
	10-12	14	56.25	27.18791		
	13-15	8	62.5	24.49895		

Table 6 (b): FertiQoL scores comparison across years of infertility of the participants

	Years of Infertility	N	Mean	Standard Deviation	F-value	p-value
Relational	1-3	130	62.3077	19.53556	3.415	**0.01**
	4-6	78	58.4936	21.70204		
	7-9	10	82.9167	6.93054		
	10-12	14	60.119	23.55403		
	13-15	8	66.6667	19.5434		
Social	1-3	130	59.8397	26.87822	1.024	0.396
	4-6	78	55.0214	28.98723		
	7-9	10	71.25	12.64576		
	10-12	14	55.3571	26.72612		
	13-15	8	61.4583	24.2701		
Environment	1-3	130	64.2949	11.05369	0.328	0.859
	4-6	78	64.4231	11.85554		
	7-9	10	64.1667	15.49094		
	10-12	14	61.3095	10.39145		
	13-15	8	66.6667	7.38671		
Tolerability	1-3	130	60.8654	21.01981	0.595	0.667
	4-6	78	57.8526	21.84741		
	7-9	10	66.25	11.48671		
	10-12	14	59.8214	22.69603		
	13-15	8	54.6875	23.56365		

The above two tables show the comparison of the FertiQoL scores with years of infertility. Except for the Relational subscale of FertiQoL, there was no statistically significant difference in the FertiQoL scores compared to the years of infertility of the study population.

Discussion
In this present study FertiQoL questionnaire was used to assess the effect of infertility on the quality of life among infertile women attending infertility clinics in Himachal Pradesh, India. The mean score of Total FertiQoL, Core FertiQoL and Treatment FertiQoL were 60.54±16.64 and 59.67±18.77, and 62.60±15.74 respectively.
Bakhtiyar K. et al. [13] in their study compared the quality of life of 180 infertile women and 540 fertile women. They used the WHOQOL-BREF general quality of life index to compare the quality of life among the two groups. Their results showed reduced quality of life among infertile women as compared to fertile women. Their study also showed that the mental health dimension was significantly affected in the infertile women. In the current study there was no direct comparison between infertile and fertile women and FERTIQOL tool was used to assess the Quality of Life among the infertile women. It was noted that the quality of life of the infertile women was not significantly affected by age and socio-economic class. There was a significant difference in the mind and body subscale of FERTIQOL among the primary versus secondary infertile women. We can conclude from this that infertility does affect the quality of life especially mind / body or mental health of these women on the basis of of the socio-demographics.
Desai HJ et al. [14] in their study assessed the quality of life of 200 infertile women in a cross sectional study performed in India. The mean Total FERTIQOL score in their study was 66.1 (SD 13) while that in the current study was 60.5 (SD 16.6). In their study the lowest FERTIQOL score was found to be in the Emotional subscale (57.3) which was also the finding in the current study (56.09). Thus it can be said that infertility affects the emotional quality of life of these women significantly.
Zurlo MC et al. [15] in their study assessed the association between stressful life events and perceived quality of life

among women attending infertility treatments. The mean age of women in their study was 34.2 while in the current study it was 31.04. In their study 78.4% of the women in the study population had history of infertility of < 3 years while in the current study 54.2% women had history of infertility of < 3 years. Though in both studies majority of the women attended infertility clinics within 3 years of having infertility the difference between both the studies could be because of difference in socio-economic and education status of the population.
A study by Aysun et al. [16] assessed the quality of life (QoL) of women with both primary and secondary infertility and identified factors related with both excellent and bad QoL, using data from 273 patients attending an infertility clinic. Based on the study's results, an extended period of infertility was linked to lower overall QoL score, mind/body, social, and tolerability domain scores (p < 0.05). The results of multiple regression analysis indicated that while long-term infertility and a requirement for psychological assistance had a negative effect on overall QoL scores, the status of education and secondary infertility had a beneficial impact. QoL scores were negatively impacted by a lengthy infertility period and a desire for psychological support, but they were better in patients with secondary infertility and higher educational status. Whereas in present study QoL was found to be better in primary infertility patient except relational and environmental domain. The other reason might be because of unequal distribution of study participants as in the current study 159 participants were with primary infertility whereas only 81 participants were with secondary infertility.
Abbasi et al. conducted a cross-sectional study on one hundred married women who were at least eighteen years old from May to October 2015 at the Baqai Medical University's Department of Baqai Institute of Reproductive Sciences (BIRDS). The FertiQoL Mean (SD) for Core FertiQoL and treatment FertiQoL were 52.17 (13.13) and 54.25 (11.23), respectively, according to the study's findings. The lowest mean scores for Emotional, Mind/Body, Relational, and Social subscales on the Core FertiQoL were 53.30 (15.23), 50.67 (19.28), 47.34 (12.62), and 57.38 (11.23). For the therapy FertiQoL, the mean (SD) was 54.25 (11.23), while the mean (SD) for the environment

and tolerance were 49.13 (9.64) and 59.37 (16.87), in that order. The research findings indicate that FertiQol is a disease-specific quality of life evaluation tool. In the current study the mean score of Total FertiQoL, Core FertiQoL and Treatment FertiQoL were 60.54±16.64 and 59.67±18.77, and 62.60±15.74 respectively. On comparing the two studies it can be said that treatment FertiQoL scores in both the studies were better than the Core FertiQoL scores. The tolerability score in the current study is 59.84 (21.11) which is comparable to the score seen in the study by Abbasi *et al*. [17].

Conclusion

We can conclude based on this study that infertility does affect the quality of life especially mind / body or mental health of these women on the basis of the socio-demographics. Infertility affects the emotional quality of life of these women significantly, but this is independent of their age, education, socio-economic status or years of infertility.

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