

A Comparative Study to Assess the Level of Quality of Life Among Fertile Vs Infertile Women at Selected Maternity Hospital & Infertility Clinics, Vadodara, Gujarat

Received: 25 October 2022, **Revised:** 23 November 2022, **Accepted:** 25 December 2022

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Key Words:

Quality of life, Infertile women, Infertility clinics

Abstract:

Moreover, infertility can be a traumatic emotional experience. Many psychological issues, such as stress, anxiety, depression, decreased sexual satisfaction, low self-esteem, and a lower standard of living, might be impacted by it. The goal of the current study is to evaluate the quality of life for fertile and infertile women at specific Vadodara maternity hospitals and infertility clinics. In this study, a comparative research design is used together with a quantitative research study approach. By distributing the WHOQoL-BREF Scale to 64 women (32 fertile women and 32 infertile women), non-probability convenient sampling was employed to acquire the data (world health organisation quality - of - life scale). Descriptive and inferential statistics, including the Standard Deviation, t-test, and Chi-square test, were used to analyse the data. In both groups, there were sizable variations. 64 women in total—32 fertile and 32 infertile—participated in the study. Infertile women score worse on the quality of life scale (mean: 90.19) than fertile women (mean: 97.81), and they also score lower on the physical, psychological, and social health scales (mean: 25.375, 20.156, and 9.062) than fertile women (mean: 27.375, 22.7813, and 10.906 respectively). Yet, there is no significant difference ($P = 0.867$) between the two groups when it comes to environmental health. The level of life quality and the chosen socio-demographic indicator show a strong correlation when the association is assessed. Infertility has a negative impact on women's quality of life. Other areas of quality of life, such as physical health, psychological health, and social health, were significantly different between fertile and infertile women in the current study, with the exception of the environmental area. The effects of

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infertility and related problems, including therapies, the desire to have children, and social pressure, are detrimental to a person's physical, psychological, and social health. Consequently, additional research is required to pinpoint the significant components in various societies.

1. Introduction

In all matters pertaining to the reproductive mechanism and its features and processes, reproductive health is a condition of whole physical, mental, and social well-being and not only the absence of disease or infirmity. The ability to have satisfying and secure sexual relations, the capacity to reproduce, and the flexibility to choose how often and when to do so are all indicators of healthy reproduction in humans. ¹

According to the WHO-ICMART glossary, infertility is "a disorder of the reproductive system" that is defined as the inability to conceive after 12 months or more of regular, unprotected sexual activity. Primary and secondary infertility are the two types: Primary infertility is the absence of pregnancy in the relationship. When a couple experiences secondary infertility, it has experienced pregnancy before and failed to conceive later. The majority of infertile couples experience primary infertility globally. According to information currently available, there are 186 million people and 48 million couples who are infertile worldwide. ⁶ An issue with the male or female reproductive system known as infertility is defined as the inability to conceive after 12 months or more of frequent, unprotected sexual activity. Primary infertility refers to the inability to conceive, whereas secondary infertility refers to the inability to conceive after achieving conception. ² The typical incidence of primary infertility in India is estimated by the World Health Organization to range from 3.9 to 16.8%. The prevalence of infertility varies throughout Indian states, with rates ranging from 3.7% in Uttar Pradesh, Himachal Pradesh, and Maharashtra to 5% in Andhra Pradesh and 15% in Kashmir. and incidence varies in equal places throughout tribes and caste. ⁷

Moreover, infertility can be a traumatic emotional experience. ³ Many psychological issues, such as stress, anxiety, depression, decreased sexual satisfaction, low self-esteem, and a lower standard of living, might be impacted by it. ⁴ The female gender is negatively impacted by the resulting psychosocial issues more than her spouse. ⁵

The health authorities are alarmed by the study of the quality of life among infertile women, which enables them to put up more effort to help the infertile couples in some way. There have already been some research on the quality of life of infertile women in Iran, but they are primarily descriptive and use a cross-sectional methodology without a comparison group to examine the effects of infertility on exceptional elements of life. Most of these studies have been conducted under the usage of SF-36, an excellent life evaluation questionnaire that evaluates the bodily elements of life quality. ⁸ This study essentially aimed to look at the effect of infertility on a woman's quality of life among the population of Vadodara, Gujarat.

Aims and Objectives of the Study

The present study is aimed to assess the level of quality of life among fertile and infertile women at selected maternity hospital and infertility clinics of Vadodara.

2. Methodology

The samples chosen for data collection in this comparative study were those that met the requirements for sample selection and were accessible throughout the data collection period. A non-probability convenient sampling method was used to choose them. Fertile and infertile women between the ages of 19 and 45, those who were present while the data was collected, and those who were willing to participate in the study were the inclusion criteria. Fertile and infertile women who have other illnesses or who are related with the development of pregnancy are excluded, as are fertile women who have a minimum 4-month gap between their most recent delivery and the period they are being studied. First, The student researcher introduced herself and explained the purpose of the study and written consent obtained from volunteers who fulfilling the inclusion and exclusion criteria. The data collection is done by using a demographic information questionnaire and the World Health Organization Quality of Life (WHOOQoL- BREF) Scale which is standardized tool given by WHO. The data for the study was collected

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from 32 fertile women from Dhiraj hospital, Vadodara, Gujarat and 32 infertile women from the infertility clinic of Dhiraj hospital & Gayatri clinic, Vadodara.

WHOQOL-BREF and a demographic information questionnaire were used as data gathering instruments. Age, length of marriage, education, occupation, husband's educational status, occupation, residential property, having underlying sickness, consanguineous marriage, and kind of infertility were all covered by the demographic information questionnaire. 26 scale items make up the WHOQOL-BREF, which is divided into four domains: physical health (items 3, 4, 10, 15, 16, and 18), psychological health (items 5, 6, 7, and 11), social health (items 20, 21 and 22), and environmental health (items 8, 9, 12, 13, 14, 23, 24 & 25). Each question includes five possible answers, and each one has been carefully designed so that you can select the first one that comes to mind as being the best. Each response option received a score of "1," "2," "3," "4," or "5". The total quality of life score is obtained by summing the all scores of all dimensions.

In the area of physical health Scores between 1 and 12 indicate a bad degree of quality of life, 13 to 24

indicate an average level, and 25 to 35 indicate an excellent one. Scores of 1 to 10 indicate a poor level of psychological health, 11 to 20 indicate a medium level, and 21 to 30 indicate an excellent level. Scores of 1 to 5 indicate low social health, 6 to 10 indicate moderate social health, and 11 to 15 indicate good social health. Scores of 1 to 14 indicate a low degree of environmental health, 15 to 27 indicate an intermediate level, and 28 to 40 indicate a high level. Scores of 1 to 44 for overall quality of life indicate a bad level. 45 to 87 show average level and 89 to 130 show good level of quality of life.

data analysis was out utilising The socio-demographic information and level of quality of life were described using frequency and percentage distribution. The level of life quality was described using the mean, mean percentage, and standard deviation. To determine the relationship between the quality of life and particular demographic factors, chi-square was utilised. The level of quality of life among fertile and infertile women was compared using an unpaired t-test. The data were analysed using version 22 of SPSS statistical software. Before to data collection, the ethical committee SVIEC's clearance was acquired, as well as consent from the subjects.

3. Result

TABLE – 1: Frequency and Percentage Distribution of Fertile & Infertile Women Based on Their Demographic Variables

Sr. No. /variables	Variables	Fertile women		Infertile women	
		Frequency	Percentages	Frequency	Percentages
1. Age	<30	22	68.75%	18	56.25%
	=30	5	15.625%	4	12.5%
	>30	5	15.625%	10	31.25%
2. Duration of marriage	<10	23	71.875%	20	62.5%
	>10	9	28.125%	12	37.5%
3. Educational status	Non-formal education or Primary Education	10	31.25%	2	6.25%
	Higher secondary education	3	9.375%	15	46.875%

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	Graduation	14	43.75%	13	40.625%
	Post-graduation	5	15.625%	2	6.25%
4. Occupational status	Housewife	21	65.625%	22	68.75%
	Employee	11	34.375%	10	31.25%
5. Husband's educational status	Non-formal education or Primary Education	1	3.125%	0	0%
	Higher secondary education	10	31.25%	9	28.125%
	Graduation	16	50%	17	53.125%
	Post-graduation	5	15.625%	6	18.75%
6. Husband's occupation	Unemployed	1	3.125%	2	6.25%
	Employee	18	56.25%	21	65.625%
	Own business	13	40.625%	9	28.125%
7. residential property	Rented or living with parents	24	75%	26	81.25%
	Own	8	25%	6	18.75%
8. having underlying disease	Yes	1	3.125%	3	9.375%
	No	31	96.875%	29	90.625%
9. consanguineous marriage	Yes	5	15.625%	7	21.875%
	No	27	84.375%	25	78.125%
10. Type of Infertility	Primary infertility	-	-	27	84.375%
	Secondary infertility	-	-	5	15.625%

Table – 1 show that majority of fertile women 68.75% (n=22) and infertile women 56.25% (n=18) were belong to less than 30 years of age. Among the respondents, about 71.875% (n=23) fertile women and 62.5% (n=20) infertile women were having less than 10 years of duration of marriage. Among the participants, 43.75% (n=14) fertile women and 46.875% (n=15) infertile women have done graduation, 65.625% (n=21) fertile women and 68.75% (n=22) infertile women were housewives, Among the participants' husbands, 50% (n=16) fertile women's and 53.125% (n=17) infertile women's

have done graduation, 56.25% (n=18) fertile women's husbands and 65.625% (n=21) infertile women's husbands were employed, among participants 75% (n= 24) fertile women and 81.25% (n= 26) infertile women were living with parents or rented house, among participants 96.875% (n= 31) fertile women and 90.625% (n= 29) infertile women were not having any underlying disease, among participants 84.375% (n= 27) fertile and infertile women were not having consanguineous marriage, among participants 84.375% (n=27) having primary infertility.

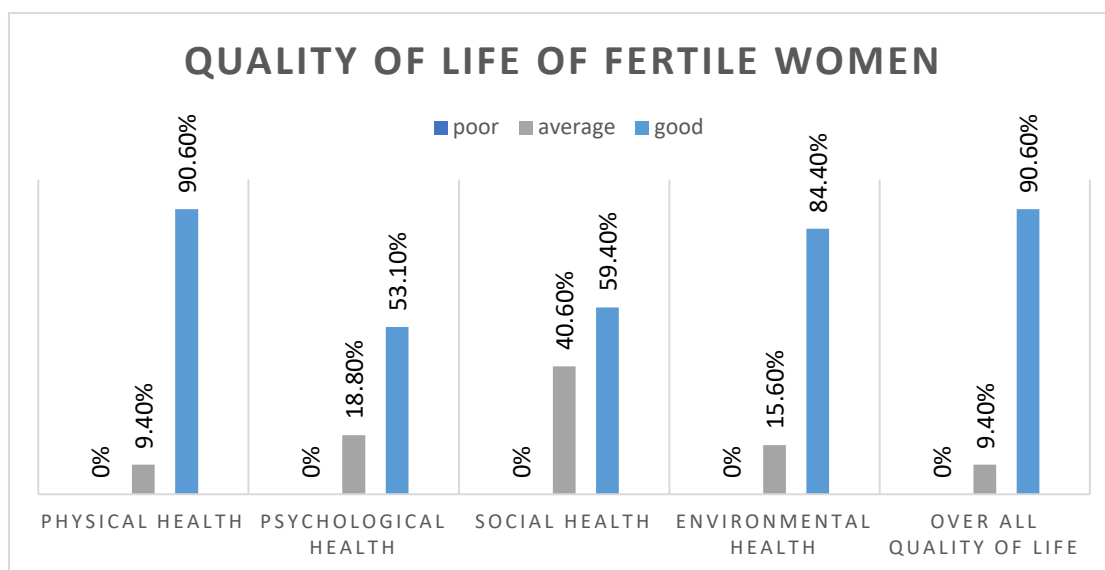


Figure 1- Percentage distribution of fertile women based on their level of quality of life

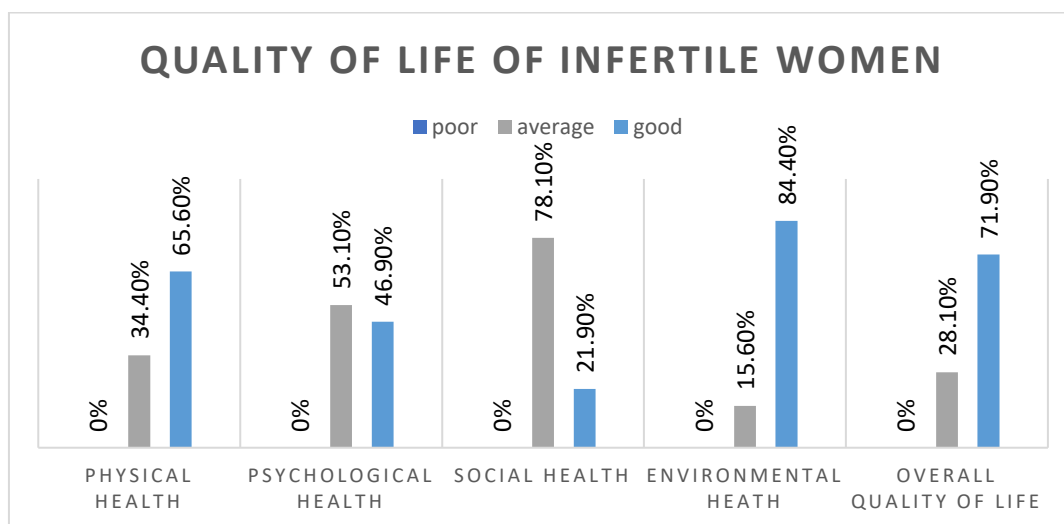


Figure 2- Percentage distribution of infertile women based on their level of quality of life

Figure 1 and 2 show that the level of physical health, psychological health, social health and environmental health of fertile and infertile women by their percentages. It revealed that there is low level of

physical, psychological and social health in infertile women than fertile group of women and environmental health is not affected by infertility.

TABLE – 2: Mean, Mean% & Sd Of Level Of Quality Of Life Among Fertile And Infertile Women

Sample	Mean	Mean%	SD	Mean difference	t value
1. PHYSICAL HEALTH					
Fertile	27.3750	52%	2.76790	2	2.979
Infertile	25.3750	48%	2.59963		

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2. PSYCHOLOGICAL HEALTH					
Fertile	22.7813	53.06%	3.15957	2.6250	3.856
Infertile	20.1563	46.94%	2.20131		
3. SOCIAL HEALTH					
Fertile	10.9063	54.62%	2.58231	1.84375	3.407
Infertile	9.0625	45.38%	1.64488		
4. ENVIRONMENTAL HEALTH					
Fertile	29.0626	50.68%	4.44999	0.78125	0.867
Infertile	28.2813	49.32%	2.49172		
5. OVERALL QUALITY OF LIFE					
Fertile	97.8125	52%	12.55038	7.625	3.030
Infertile	90.1875	48%	6.71751		

TABLE – 2 revealed that there is higher level of mean score of fertile women than infertile women.

TABLE – 3: Association Of Quality Of Life Among Fertile & Infertile Women With Thier Selected Demographic Variables

Variables	FERTILE WOMEN							INFERTILE WOMEN						
	Scores which fall below the median	Scores which fall above the median	Total	X ²	Df	Table value	Level of significance	Scores which fall below the median	Scores which fall above the median	Total	X ²	Df	Table value	Level of significance
1. AGE														
<30	7	15	22	9.709	2	5.99	S	6	12	18	6.50	2	5.99	S
=30	5	0	5					3	1	4				
>30	4	1	5					8	2	10				
Total	16	16	32					17	15	32				
2. DURATION OF MARRIAGE														
<10	8	15	23	7.575	1	3.85	S	7	13	20	7.03	1	3.84	S
>10	8	1	9					10	2	12				
Total	16	16	32					17	15	32				
3. EDUCATIONAL STATUS														
Non-formal education or Primary education	10	0	10	17.676	3	7.82	S	1	1	2	5.332	3	7.815	NS
Higher secondary	2	1	3					5	10	15				

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Education															
Graduation	2	12	14					10	3	13					
Post-graduation	2	3	5					1	1	2					
Total	16	16	32					17	15	32					
4. OCCUPATIONAL STATUS															
Housewife	13	8	21	3.463	1	3.84	NS	12	10	22	0.05	1	3.84	NS	
Employed	3	8	11					5	5	10	7		1		
Total	16	16	32					17	15	32					
5. HUSBAND'S EDUCATIONAL STATUS															
Non-formal education or Primary education	1	0	1	17.45	3	7.82	S	0	0	0	0.93	2	5.99	NS	
Higher secondary education	10	0	10	0				6	3	9			1		
Graduation	3	13	16					8	9	17					
Post-graduation	2	3	5					3	3	6					
Total	16	16	32					17	15	32					
6. HUSBAND'S OCCUPATIONAL STATUS															
Unemployed	1	0	1	1.915	2	5.99	NS	2	0	2	2.04	2	5.99	NS	
Employed	10	8	18					10	11	21	2		1		
Own business	5	8	13					5	4	9					
Total	16	16	32					17	15	32					
7. RESIDENTIAL PROPERTY OWNERSHIP STATUS															
Rented or living with parents	11	13	24	0.667	1	3.84	NS	14	12	26	0.02	1	3.84	NS	
Own	5	3	8					3	3	6					
Total	16	16	32					17	15	32					
8. HAVING ANY UNDERLYING DESEASE															
Yes	1	0	1	1.032	1	3.84	NS	1	2	3	0.52	1	3.84	NS	
No	15	16	31					16	13	29	1		1		
Total	16	16	32					17	15	32					
9. CONSANGENEOUS MARRIAGE															
Yes	4	1	5	2.133	1	3.84	NS	3	4	7	0.37	1	3.84	NS	
No	12	15	27					14	11	25	9		1		
Total	16	16	32					17	15	32					
10. TYPE OF INFERTILITY															
Primary infertility	-	-	-	-	-	-	-	14	13	27	0.11	1	3.84	NS	
Secondary infertility	-	-	-					3	2	5	2		1		
Total	-	-	-					17	15	32					

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TABLE – 3 Shows that the significant association found between selected demographic variables and with level of quality of life. Hence, the research hypothesis H₂ stated that there is statistically significant association between level of quality of life and selected socio demographic variables is accepted.

4. Discussion

According to this study, 90.6% of samples of fertile women have good physical health, 9.5% of samples have average physical health, and 0% of samples have poor physical health. The percentage of samples with poor psychological health is zero, the average psychological health is 18.8%, and the percentage of samples with good psychological health is 81.3%. A total of 0% of the samples have low social health, 40% of the samples have average social health, and 59.4% of the samples have good social health. Zero percent of the samples have poor environmental health, fifteen percent have average environmental health, and eighty-four percent have good environmental health. 90% of samples had an excellent quality of life, with 0% of samples having a poor quality of life, 9.4% of samples having an average quality of life, and 90.6% are having a good quality of life.

Among samples of infertile women, 0% had poor physical health, 34.4% had average physical health, and 65.6% had good physical health. 0% of samples have poor psychological health, compared to 53.1% who have average and 46.9% who have good psychological health. A total of 0% of the samples have low social health, 78.1% of the samples have average social health, and 21.9% of the samples have good social health. Zero percent of the samples have poor environmental health, fifteen percent have average environmental health, and eighty-four percent have good environmental health. A good quality of life is experienced by 71.9% of samples, an average quality of life is experienced by 28.1% of samples, and a low quality of life is experienced by 0% of samples.

In this present study, it show that level of quality of life in fertile women's mean percentage of physical health is 52%, psychological health is 53.06%, social health is 54.62%, environmental health is 50.68% and overall quality of life is 52%.level of quality of life in infertile women's mean percentage of

physical health is 48%, psychological health is 46.94%, social health is 46.38%, environmental health is 49.32% and overall quality of life is 48%.So, it relives that level of quality of life among fertile women is more than infertile women. Hence, research hypothesis H₁ is accepted.

A study on the "Impact of Infertility on the Quality of Life, A Cross- Sectional Study" conducted by Ashraf Direkvand-Moghadam, Ali Delpisheh, and Azadeh Direkvand (2014) was deemed statistically significant with an alpha error of 0.05. For fertile and infertile women, there was a significant difference in mean age ($p=0.003$). Infertile women scored lower on average across all Mental aspects of quality of life than fertile women did. This difference (58.3519.43 vs 56.5613.18, respectively) was statistically significant ($p=0.000$). Infertile and fertile women exhibit similar mean scores across all physical dimensions (79.77 23.19 vs. 74.96 23.45, respectively) ($p=0.441$).⁹

A similar study was undertaken in 2018 on "Comparison of the Quality of Life in Fertile and Infertile Women Admitted to Shiraz's Healthcare Centers During 2017-2018" by Fatemeh Bagheri, Azar Nematollahi, and coauthors. A demographic information questionnaire and the World Health Organization Quality of Life questionnaire were used to collect data. Findings indicated that, although not significantly different, the WHOQOL-BREF score for life quality was higher in the fertile group (72.21 12.74) than in the infertile group (69.86 12.58). However, the fertile group (17.55 3.62) had a physical region of life quality that was considerably greater than the infertile group (16.57 3.55) ($P = 0.04$) ($P = 0.04$). For other quality of life domains, there was no statistically significant difference between the groups ($P > 0.05$).¹¹

Similar research was carried out by Fatemeh Bagheri, Azar Nematollahi, and others. According to the current study, the mean score for infertile women is 25.3750 for physical health, with a standard deviation of 2.59963, 20.1563 for psychological health, with a standard deviation of 2.20131, 9.0625 for social health, with a standard deviation of 1.64488, 28.2813 for environmental health, with a standard deviation of 2.49172, and 90.1875 for overall quality of life, with a standard deviation of 6.71751. Infertile women have a mean difference in

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physical health of 2, psychological health of 2.6250, social health of 1.84375, environmental health of 0.78125, and total quality of life of 7.625 which is poorer than fertile women in all aspects of quality of life and overall quality of life.

A similar study entitled "Impact of Infertility on the Quality of Life, A Cross-Sectional Study" was undertaken in 2014 by Ashraf Direkvand-Moghadam, Ali Delpisheh, and Azadeh Direkvand. Using demographic and SF-36 questionnaires, data was gathered by research midwives with training in this area. For fertile and infertile women, there was a significant difference in mean age ($p=0.003$). Infertile women scored lower on average across all Mental aspects of quality of life than fertile women did. This difference (58.3519.43 vs 56.5613.18, respectively) was statistically significant ($p=0.000$). Infertile and fertile women exhibit similar mean scores across all physical dimensions (79.77 23.19 vs. 74.96 23.45, respectively) ($p=0.441$). 12

In the current research Using the Chi-square formula, the correlation between scores and particular demographic data was calculated. In a sample of demographic variables, age, length of marriage, educational attainment, and husband's educational attainment are significant for fertile women while age and length of marriage are important for infertile women.

A similar study on "Quality of life in women of reproductive age: a comparative study of infertile and fertile women in a Nigerian tertiary centre" was carried out by Olusola Peter Aduloju, Oluwale Dominic Olaogun, and Tolulope Aduloju in 2017. In the physical domain (QoL), infertile women scored significantly higher than fertile women did, whereas in the social domain (QoL), infertile women scored significantly lower ($p.05$). The total QoL scores of the infertile women with secondary infertility were considerably higher ($p .05$). Infertility and unemployment in women were connected to significantly poorer QoL scores in the psychological and social categories, according to a study using logistic regression ($p .05$). When compared to pregnant women, infertile women have much inferior life quality, and this should be borne in mind when attending to these women.¹⁰

5. Conclusion

The study's next finding was that women who were fertile had greater levels of life quality across all areas than women who were infertile. Because of this, the unpaired "t" value for overall quality of life was 3.030, indicating that infertility has an impact on women's quality of life.

Infertile women's age, length of marriage, educational status, and husband's educational status were found to be statistically significant at the 0.05 level of significance when the chi-square test was used to determine the relationship between level of quality of life and selected demographic variables.

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