

# Comparison of Depression in Women with Primary and Secondary Infertility in Patients at OB/GYN OPD at Sharif Medical City, Lahore, Pakistan

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## ABSTRACT

**Objective:** To compare the prevalence of depression in women with primary and secondary infertility presenting at Gynecology Outpatient Department at Sharif Medical City, Lahore, Pakistan.

**Methodology:** This is a questionnaire based cross sectional study with a sample size of 138 male and female patients. This study was conducted in (OB/GYN OPD) in a tertiary care setting of Sharif Medical City, Lahore. Duration of the study was 1 month i.e. July 2021.

**Results:** 74% of the patients suffered from infertility due to primary causes, while 26% had secondary infertility. Female infertility accounted for about 93% of infertility cases seen at the clinic while male factor infertility was only 7%. Symptoms of depression were more likely to be seen in women with primary infertility than those with secondary infertility.

**Conclusions:** Despite infertility affecting both men and women, infertility in men is more likely to be under reported. In our study, women with primary infertility often experienced signs and symptoms of depression as compared to women with secondary infertility. In general, infertile women are more likely to be target of abuse, societal pressures, and expectations. Having a good support system can help alleviate most of these symptoms. More research needs to be done to establish a causal relationship between infertility and depression.

## INTRODUCTION

Infertility is a substantial social problem and worldwide health issue with approximately 48.5 million couples affected in 2015.(1) Within the last two decades regardless of populational growth, and despite technical and medical improvements in diagnostic and surgical techniques there has been a significant increase in the rates of infertility worldwide.(1) In communities worldwide, infertility is important since it is an instinctive biologic behaviour to want an offspring, and part of a community as a family.(2)

It has an immense psycho-social impact on couples, especially in countries where a high premium is placed on childbearing.(3) In developed countries infertility in women has minimal association with depressive symptoms considering they have no prior mental health problem. This was evident in a study by Brasile and colleagues where they reported that only minority of infertile women showed mild depressive symptoms as measured by Beck depression inventory (BDI)(22). Similarly, Paulson also suggested based on psychometric test that infertile women showed no signs of emotional maladjustment when compared with normal fertile women.(23) On the other hand in developing countries like Pakistan, infertility can predispose both men and women to major psychological and mental stress(24). Many problems such as loss of self-esteem, depression, anxiety, sexual distress, and marital problems have been reported. Depression and anxiety are most commonly reported because of financial strains, family pressure and undefined treatment duration(25).

Higher rates of depression have been reported in women suffering from primary infertility. This is because women suffering from infertility are likely to be despised, neglected, or abused by their husbands and extended family. It also has many negative psychological implications such as depression, sexual dysfunction, and the negative effects on partner relationship with varying severities and rates.(5,6)

This study aims to compare frequency of depression in women with primary infertility vs those with secondary infertility.

## METHODOLOGY

**Study Design:** This is a descriptive questionnaire based cross-sectional study carried out among couples attending the outpatient department of obstetrics and gynecology at Sharif Medical City

Hospital, a tertiary care hospital located in Lahore. The study duration compromised of one month i.e. July 2021. The data was collected through convenient quota sampling technique. A total of 138 participants were included in this study. The questionnaire comprised of questions regarding demography, socio-economic status, type of infertility, family dynamics and years of marriage. Symptoms of depression such as pessimism, suicidality, self-criticality, and loss of libido were evaluated using the Beck's Depression Inventory Index (BDI) using a preformed questionnaire. Informed consent was taken prior to collecting information.

### Inclusion Criteria

- All infertile couples of reproductive ages

### Exclusion Criteria

- All fertile couples

### Operational definitions:

- **Primary infertility:** inability to conceive after 1 year of regular unprotected intercourse.(7)
- **Secondary infertility:** the inability to conceive a child or carry a pregnancy to term after previously giving birth.(8)

**Statistical Analysis:** Data was entered and analyzed using SPSS (Statistical Package for Social Science) version 23.0. Frequencies and percentages were calculated for baseline sample characteristics such as gender and educational status. Bar and Pie charts were used to for graphical representation of BDI.

## RESULTS

138 participants participated in the study. Out of these 16 (11.6%) were male and 122 (88.4%) were female patients. 54.3% of our study participants belonged to lower middle-income class. 90% of the study participants were Punjabi with nearly 50% having attained at least secondary school. Table 1 demonstrates other demographic variables.

Out of 138 respondents, 74% of the participants suffered from primary infertility while 26% had infertility due to secondary causes. Figure 1 illustrates the various causes of infertility in our participants. In our study, infertility was more common in women than in men, with only 7% of the men being diagnosed with male factor infertility. Polycystic ovarian syndrome (PCOS) and uterine adhesions were the most common causes of infertility in women, 25% each respectively.

Table 3 shows the comparison of BDI scores in those with primary and secondary infertility. Those with primary infertility were more likely to experience symptoms such as sadness, feeling punished, have suicidal thoughts than those with secondary infertility. They were also more likely to be disappointed with themselves and experience a loss in libido than those with secondary infertility.

Table 1: Demographic characteristics of the studied sample size (n=138)

Characteristic		n	%
Age Group	20 -29	30	28.9
	30-39	65	47.1
	40 and above	34	24.6
Ethnicity	Punjabi	125	90.1
	Pathan	2	1.4
	Saraiki	6	4.3
	Other	5	3.6
Education	Primary School	11	8.0
	Secondary School	75	54.3
	University	52	37.6
Socioeconomic status	Lower class	38	27.5
	Lower middle class	75	54.3
	Middle class	20	14.4
	Upper middle class	5	3.6

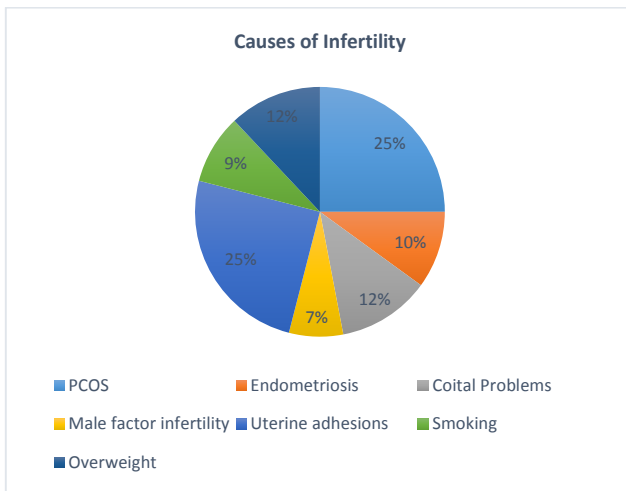


Figure 1: Causes of Infertility

Table 3: BDI scores in those with primary and secondary infertility

BDI items	Primary Infertility (n=102)	Secondary Infertility (n=36)
Sadness	15	5
Discouraged about future	8	2
Feeling a failure	6	2
Feeling guilty	5	3
Dissatisfaction	1	2
Feeling punished	10	0
Disappointed in self	8	6
Critical of self	5	3
Suicidal thoughts	10	3
Crying	5	4
Irritability	2	1
Loss of interest in people	6	0
Difficulty with decisions	2	0
Look unattractive	1	0
Work inhibition	5	0
Disturbed sleep	2	1
Feelings of tiredness/fatigue	3	2
Loss of appetite	0	0
Weight loss	0	0
Loss of libido	8	2
Worried about health	0	0

**DISCUSSION**

Majority of our study participants were females, with only 11.6% being males. This resulted in female infertility being a dominant factor in our sample size. Male factor infertility was reported to be only 7%. Male factor infertility is often under-reported especially in countries like Pakistan where cultural mindsets and patriarchal views prevent accurate statistics to be collected.(9) In countries such as the Middle East and Africa, women are solely blamed for infertility, this results in men not undergoing evaluation and treatment. This is also a major reason for underreporting of male factor infertility.(10)

Perceptions surrounding infertility in a developing country like Pakistan are largely dependent on the education status of the individual. In our sample, 54% had had secondary education with only 34% having obtained a university degree. Low levels of education do lead to limited accurate knowledge about infertility, its causes, and its treatments.(11) In one study it was found that people with low levels of education and those who belonged to a low socioeconomic class tend to believe more in supernatural powers and evil eye as a cause of infertility.(12) They also end up resorting to traditional remedies to cure infertility.(13) Women are more likely than men to bear the societal pressures in such situations. In Latin America, women tend to blame themselves for infertility(14), while in African countries like Mozambique infertile women aren't allowed to participate in social and community activities.(15) On the other hand, in India, women end up being victims of physical violence at the cost of being infertile.(16) Women with infertility are more likely to experience abuse, deprive of inheritance, divorced, ostracized by the society and household which places them at increasing rates of depression.(17,18)

In our sample, although both women with primary and secondary infertility experienced a degree of depression, but it was women with primary infertility who scored higher on the BDI index. They were also more likely to feel sad, feel punished, have suicidal thoughts, and experience a loss in libido as compared to their counterparts. Our findings were different from previous studies comparing the same, they found a weak correlation between depression and type of infertility.(19) A major reason for this difference in results could be linked back to the sample size and technique. Similarly, women were more likely to be depressed than their male counterparts.(19) This could be because of a cultural expectation of women to bear children which ultimately results in pressure from family contributing towards depression.(20) Whereas infertile women with a positive support system tend to have fewer symptoms of depression.(21)

**Limitations of our study:** This study aims to compare the prevalence of depression in women with primary and secondary infertility. The study used Convenience sampling therefore the ideas gathered in this study may not represent the views of general population. Secondly, the hospital where this study was conducted uses fairly low resources therefore our findings may not be applicable to hospitals with moderate amount of resources

**CONCLUSION**

Despite infertility affecting both men and women, infertility in men is more likely to be under reported. In our study, women with primary infertility often experienced signs and symptoms of depression as compared to women with secondary infertility. In general, infertile women are more likely to be target of abuse, societal pressures, and expectations. Having a good support system can help alleviate most of these symptoms. More research needs to be done to establish a causal relationship between infertility and depression.

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