

# Levels Of Anxiety And Depression In Infertile Women

Shehla Channa<sup>1</sup>, Anita Dileep<sup>2</sup>, Rubina Amjad<sup>3</sup>, Rukhsana<sup>4</sup>, Muneeba Sadaf<sup>5</sup>, Quratulain Qureshi<sup>6</sup>

1. Shehla Channa, Associate Professor Obs & Gynae, Liaquat University of Medical and Health Sciences Jamshoro Pakistan. email: [shehlaraza600@gmail.com](mailto:shehlaraza600@gmail.com) (Corresponding author)
2. Anita Dileep, Specialist Registrar Obs & Gynae, Women Health Unit, Primary Health Care Service Centre, Dubai Academic Health Corporation Dubai, UAE. email: [Anita.dileep.arrora@gmail.com](mailto:Anita.dileep.arrora@gmail.com)
3. Rubina Amjad, Assistant Professor Obs & Gynae, Mekran Medical College Turbat Kech, Pakistan. email: [drrubinabaloach@gmail.com](mailto:drrubinabaloach@gmail.com)
4. Rukhsana, Consultant Obs & Gynae, Sandeman Provincial Hospital (SPH) / BMCH, Quetta Pakistan. email: [rukhsana99@hotmail.com](mailto:rukhsana99@hotmail.com)
5. Muneeba Sadaf, Senior registrar Obs & Gynae, Dr Akbar Niazi Teaching Hospital Islamabad Pakistan. email: [drsadaf30@hotmail.com](mailto:drsadaf30@hotmail.com)
6. Quratulain Qureshi, Consultant Gynecologist, Sessi Landhi Hospital Karachi Pakistan. email: [kuratq1@yahoo.com](mailto:kuratq1@yahoo.com)

DOI: 10.47750/pnr.2023.14.S02.341

## Abstract

**Background:** Many couples share the desire to have children, however infertility is regarded as occurring after a year of consistent, unprotected sexual activity. Cultural and familial values have an impact on infertility prevalence, which differs widely. According to estimates, 10% of couples struggle with infertility for a variety of reasons, and the exact cause is frequently unclear. Infertility is typically described by doctors as the inability to get pregnant after a year of regularly having intercourse without the use of contraceptives.

**Objective:** The study sought to ascertain the incidence of these illnesses and associated factors among infertile women because depression and anxiety are among the primary causes of impairment in women.

**Study design:** A cross-sectional study

**Place and Duration:** This study was conducted at Liaquat University of Medical and Health Sciences Jamshoro from December 2021 to December 2022.

**Methodology:** This research includes a total of 150 females. All of the females were infertile and they did a visit to our hospital. A total of 3 types of questionnaires were used; The Beck Depression Inventory, Individual Characteristics, and the Beck Anxiety Inventory. Women with infertility were a part of this research. Moreover, all of the females had to be at least 18 years old or above. Software SPSS version 20 was used to analyze the data using both descriptive and inferential statistics.

**Results:** The average age of the women who were infertile was 39.1 years. The average age of marriage was 20.21 years. The majority of the females were housewives (n=123), representing 82 percent of the total sample. The majority of the women were having an education under a diploma (n=76), representing 50.7% of the participants. A total of 42 percent of the participants had severe depression while 54 percent of the participants had severe anxiety.

**Conclusion:** The results of this study show that infertile women have exceptionally high levels of stress, anxiety, and depression.

**Keywords:** Anxiety, depression, infertile women

## INTRODUCTION

Many couples share the desire to have children, however infertility is regarded as occurring after a year of consistent, unprotected sexual activity. Cultural and familial values have an impact on infertility prevalence, which differs widely. According to estimates, 10% of couples struggle with infertility for a variety of reasons, and the exact cause is frequently unclear [1]. According to studies, the prevalence of mental health difficulties among infertile couples ranges

from 30% to 80% [2]. The origin, duration, and number of treatments tried all affect how severely infertility affects a person's mental health. Feelings of inferiority, worry, and interpersonal pressure can all be brought on by infertility, and in various cases, anxiety and depression are common.

Infertility is typically described by doctors as the inability to get pregnant after a year of regularly having intercourse without the use of contraceptives [3]. Around seventy-five million couples worldwide (including over 1.5M couples in developing countries) are plagued by infertility [4]. This statement is according to the World Health Organization. In various regions of the world, it affects one in six couples of reproductive age and has a prevalence of 10% to 15% [5]. About 40% of infertility issues are caused by male factors, another 40% by female ones, and the other 20% are caused by both male and female factors [6]. Stress from infertility can be severe and have a detrimental impact on many facets of life. It is regarded as one of the most difficult times in a person's life and, especially for women, can cause physical, social, psychological, and financial stress.

One of the difficulties that modern families have is infertility, which can result in the dissolution of marriages and the separation of partners [7, 8]. The lives of infertile couples are impacted in numerous ways by this medical condition. Researchers have discovered that infertility can lead to a variety of psychological problems, such as stress, worry, sadness, and impulsive conduct [9]. Those who are infertile, especially young people in particular, may feel useless and hopeless. Sadness, chronic tiredness, irregular eating and sleeping patterns, anxiety, and restlessness are all signs of depression. Infertile women may have negative emotions that make them unhappy with the past, present, and future of their existence.

Infertile couples should have psychological counselling as part of their treatment plan [10]. Regrettably, there are certain nations without specialized infertility clinics, thus couples are treated without any psychological assistance. The study sought to ascertain the incidence of these illnesses and associated factors among infertile women because depression and anxiety are among the primary causes of impairment in women.

The current study is planned to ascertain the incidence of these illnesses and associated factors among infertile women because depression and anxiety are among the primary causes of impairment in women.

## METHODOLOGY

This research is a cross-sectional research study. This research includes a total of 150 females. All of the females were infertile and they did a visit to a clinic at our hospital. The study was explained to every patient thoroughly and every patient's consent was taken.

**Inclusion criteria:** Women with infertility were a part of this research. Moreover, all of the females had to be at least 18 years old or above. Those women who gave their consent to get enrolled in this research were a part of this research. Furthermore, every female who completed the questionnaire and had no mental illness or physical illness in their history were also a part of this research.

The two types of infertility are primary and secondary. When a woman is unable to conceive within 1 year of marriage or engages in regular sexual activity which was unprotected, without a prior history of pregnancy or abortion, this condition is referred to as primary infertility. On the other hand, secondary infertility happens when a woman has at least one prior pregnancy but is now unable to get pregnant again.

Three distinct questionnaires were to be filled out by the study participants. The "Individual Characteristics Questionnaire," the first questionnaire, requested details about the participants' ages, the husband and wife's educational backgrounds, occupations, the length of their infertility, and the date of their marriage. The Beck Depression Inventory (BDI) and Beck Anxiety Inventory (BAI), respectively, were the second and third questionnaires. These surveys are well-known, trustworthy psychological tests that may be utilized in any type of social situation and are unaffected by cultural variances.

A two-part questionnaire was utilized to collect the data for the investigation. The first component was a questionnaire created by the researcher and approved through content validity testing. With a Cronbach's alpha coefficient of 90%, the researcher-made questionnaire had a tolerable level of dependability. The initial section of the questionnaire asked

questions about the respondents' personal demographic and other features, including their age, age of marriage, literacy level, occupations, type (primary or secondary) of infertility, and length of infertility. The participant's health status and history of conception were inquired about in the second section of the survey. Beck's questionnaire was used to gauge depression levels, while Beck's anxiety test was used to gauge anxiety levels.

The Beck Depression Inventory (BDI) was applied in this investigation. This questionnaire was created by Beck et al. in 1961, and it was chosen since it has been used in recent international studies and has a standard Persian translation. Mansour and Dadsetan standardized the BDI's 21 questions, which are scored from 0 to 3, for use in educational settings. The overall score on this questionnaire can be between 0 and 63, with values between 0 and 13 suggesting no or minimal depression, moderate depression was identified by a score of 20 to 28, mild depression was identified by a score of 14 to 19, and severe depression was identified by the score of 29 to 63, respectively.

In this investigation, the BAI, a self-reported questionnaire with excellent validity, was used to gauge the degree of anxiety. The test-retest reliability method was used to assess the validity of this questionnaire, which has an internal consistency coefficient of .92 and a correlation of 0.75 after one week. The 21 items on the questionnaire gauge the severity of the symptoms of anxiety. For each item, participants had to select from one of four possibilities that ranged in score from 0 to 3. Each item explains a typical anxiety symptom, such as a mental or physical ailment or a panic attack. The questionnaire's overall score can be anything between 0 and 63, with scores of 0 to 7 denoting no or very little anxiety, 8 to 15 denoting mild anxiety, 16 to 25 denoting moderate anxiety, and 26 to 63 denoting severe anxiety. Software SPSS version 20 was used to analyze the data using both descriptive and inferential statistics. Calculations of frequency, percentage, central indicators, and dispersion were made using descriptive statistics. In order to evaluate the link between quantitative and qualitative variables under typical circumstances, analytical statistics were used, including independent t-tests and the non-parametric Mann-Whitney test. Multivariate quantitative and qualitative variables were compared using the analysis of the variance test and the non-parametric Kruskal-Wallis test under decreasing conditions. Chi-square and Fisher's tests were employed to ascertain the relationship between qualitative variables. At 0.05, the statistical significance level was chosen.

## RESULTS

The average age of the women who were infertile was 39.1 years. The average age of marriage was 20.21 years. The majority of the females were housewives (n=123), representing 82 percent of the total sample. The majority of the women were having an education under a diploma (n=76), representing 50.7% of the participants. 42 percent of the participants had severe depression while 54 percent of the participants had severe anxiety. A total of 36 patients had no depression while 6 patients had no anxiety. Table number 1 shows the characteristics of the participants.

Table number 2 shows the frequency of variables with respect to different levels of anxiety. There was a significant association seen between infertility and severe depression (p-value<0.05).

Table number 3 shows the frequency of variables with respect to different levels of depression. A significant association was seen between depression and infertile women

**Table No. 1:** characteristics of the participants

Characteristics	N	%
<b>Education (female)</b>		
• <b>Top diploma</b>	74	49.3
• <b>Under diploma</b>	76	50.7
<b>Occupation</b>		
• <b>Employed</b>	27	18

• Housewife	123	82
<b>Husband's education</b>		
• Top diploma	80	53.3
• Under diploma	70	46.7
<b>Level of depression</b>		
• Moderate	30	20
• Mild	21	14
• Severe	63	42
• No Depression	36	24
<b>Level of anxiety</b>		
• Moderate	48	32
• Mild	16	10.6
• Severe	81	54
• No anxiety	6	3.4

**Table No. 2: frequency of variables with respect to different levels of anxiety**

Variables	Moderate	Mild	Severe	None
<b>Infertility type</b>				
• Primary	18	2	72	1
• Secondary	30	14	9	5
<b>Occupation</b>				
• Employed	10	4	47	2
• Housewife	38	12	34	4
<b>Education (women)</b>				
• Top diploma	29	10	30	5
• Under diploma	19	6	51	1
<b>Husband's education</b>				

• Top diploma	39	8	31	6
• Under diploma	9	8	50	0
Average age of marriage (years)	23.5	22.8	23.3	20.5
Average time period of infertility (years)	8.3	10.3	12.7	6.5

**Table No. 3:** frequency of variables with respect to different levels of depression

Variables	Moderate	Mild	Severe	None
<b>Infertility type</b>				
• Primary	22	5	60	4
• Secondary	8	16	3	32
<b>Occupation</b>				
• Employed	22	17	8	29
• Housewife	8	4	55	7
<b>Education (women)</b>				
• Top diploma	19	10	28	21
• Under diploma	11	11	35	15
<b>Husband's education</b>				
• Top diploma	20	10	26	21
• Under diploma	10	11	37	15
Average age of marriage (years)	22.4	23.7	23.3	23.5
Average time period of infertility (years)	10.6	9.4	8.7	8.7

## DISCUSSION

When a couple is unable to conceive after a year of frequent, unprotected sexual activity, it is said that they are infertile. Infertility comes in two flavours: primary and secondary. When a woman hasn't been able to get pregnant in the first year of marriage or unprotected intercourse, without a history of pregnancy or abortion, this is referred to as primary infertility. On the other hand, secondary infertility is the inability to conceive after at least one pregnancy for a woman [11]. Couples who have infertility may experience tremendous stress for a variety of reasons, which makes it a common problem [12]. Pregnancy can be a symbol of self-actualization and identity, therefore women frequently feel

the urge for it on a psychological as well as a physical level. Pregnancy is also highly prized in many cultures and groups and is frequently considered the main objective of marriage.

Many studies have shown that infertile females are more prone than fertile females to develop psychological problems. According to one study, 76.5% of individuals had depression to some extent, with 61.5% having clinical depression [12]. In addition, 96.5% of the subjects reported having anxiety, of whom 85.5% had clinical anxiety. These results are in line with those of research by Haririan et al., which found that 21% of infertile women had clinical depression and 58% of depressed women suffered depression [13]. Similar to this, Kalkhoran et al. discovered that the rates of anxiety and depression were higher in infertile females than in fertile females [14]. Shahordy et al. also came to the conclusion that infertile women were more likely than fertile women to suffer serious psychological problems [15]. Pour et al. also found that compared to fertile women, infertile women were substantially more likely to endure psychological, physical, and economic violence [16]. These problems might be brought on by ineffective therapies, which would squander time and money.

Although housewives had a higher prevalence of sadness and anxiety than employed women, this difference was not statistically significant, according to the study. Nonetheless, earlier research suggested that housewives might be more prone to psychological issues [17]. Participating in social activities, having financial freedom, a clear sense of who they are in their jobs, and having social support may help infertile women feel less depressed and anxious [18]. In addition, the study found that women and their husbands' greater education levels were related to decreased anxiety but not necessarily depression levels [19]. This supports the findings of Haririan et al., who hypothesized that a woman's husband's higher education level may serve as a buffer against psychological issues. The study also showed a substantial correlation between the degree of sadness and anxiety and the length of infertility, with women suffering longer periods of infertility being more likely to experience mental health issues. This finding is at odds with those of George et al. but agrees with a related study done on infertile women in Boston [20].

It is crucial to address these mental health issues in the treatment of infertile women because it is well-documented that they experience high rates of anxiety and sadness. The use of Beck's questionnaires to diagnose depression and anxiety rather than conducting clinical interviews is one disadvantage of this study. Clinical interviews should be used in future research to more precisely diagnose these mental health issues. Given that some patients may seek treatment at private clinics, the fact that the study was carried out in our hospital, may restrict the generalizability of the results to all infertile women.

## CONCLUSION

The results of this study show that infertile women have exceptionally high levels of stress, anxiety, and sadness. In order to validate these findings, additional longitudinal studies should be carried out to compare the psychological stress levels of infertile women with those of people with other chronic conditions and to look into additional potential causes of stress symptoms.

## Conflict of interest

None

## Funding source

None

## REFERENCES

1. Rahmati S, Delpisheh A, Moghadam AD, Sayehmiri K, Mohamadian F. Survey frequency of the depression and anxiety levels of infertile women in western Iran. *Medical Journal of Indonesia*. 2019 May 8; 28(1):35-9.
2. YousefiSharami SR, Nasiri S, Aghaamoo S, Ziari A. Evaluation of depression and anxiety in couples with infertility and related factors. *Tehran University Medical Journal TUMS Publications*. 2020 Nov 10; 78(8):522-7.

3. Khan A, Ilyas M, Ahmad H, Marwat M, Khan G. FREQUENCY AND DETERMINANTS OF DEPRESSIVE ILLNESS AMONG INFERTILE WOMEN. *Gomal Journal of Medical Sciences*. 2018 Jul 1; 16(3).
4. Razzaque MA, Ali A, Ahmed W, Hussain S, Wahid A, Razzaque A. Assessment of the Level of Depression, Anxiety, Stress among Infertile Women (20-45 Years Age) in Tertiary Care Hospital. *Journal of Liaquat University of Medical & Health Sciences*. 2021; 20(5):358-62.
5. Gürbüz T, OKÇU NT, Gökmen O, Orhon E. The level of anxiety and depression in patients admitted to an infertility clinic. *Journal of Health Sciences and Medicine*. 2020; 3(3):240-4.
6. Yusuf L. Depression, anxiety and stress among female patients of infertility; A case control study. *Pakistan journal of medical sciences*. 2016 Nov; 32(6):1340.
7. Peyvandi SE, Hosseini SH, Daneshpour MM, Mohammadpour RA, Qolami N. The prevalence of depression, anxiety and marital satisfaction and related factors in infertile women referred to infertility clinics of Sari city in 2008. *Journal of Mazandaran University of medical sciences*. 2011 Jan 10; 20(80):26-32.
8. Noruzinejad GH, Mohammadi SD, Seyedtabaee R, Sharifi AH. An investigation of the prevalence rate and severity of symptoms of depression and its relationship with duration of infertility among infertile men referred to Infertility Center JahadDaneshgahi Qom in 2013, Iran. *Qom University of Medical Sciences Journal*. 2016 May 10; 10(2):81-7.
9. Khalili M, Farokhzad P, Babakhani N. Investigating Depression and Its Relationship with Social Health Components and Healthy Lifestyle in Infertile Women. *Journal of Clinical Research in Paramedical Sciences*. 2022 Dec 31; 11(2).
10. Kahaki F, Nazari M, Khosravi M. A survey of the relationship between anxiety, stress, depression and life satisfaction in fertile and infertile women. *Journal of Jahrom University of Medical Sciences*. 2014 Jan 15; 11.
11. Sham F. Anxiety and depression among infertile couple in Malaysia. *Health Scope*. 2020; 3(1):78-81.
12. Vo TM, Tran QT, Le CV, Do TT, Le TM. Depression and associated factors among infertile women at Tu Du hospital, Vietnam: a cross-sectional study. *International journal of women's health*. 2019 May 28:343-51.
13. Haririan H MpY, Aghajanlo A. Prevalence of depression in infertile women referred to the clinic Urmia Kosar infertility. *Archive of SID*. 2010; 13(2):45-9.
14. Kalkhoran LF, Bahrami H, Farrokhi NA, Zeraati H, Tarahomi M. Comparing anxiety, depression and sexual life satisfaction in two groups of fertile and infertile women in Tehran. *J ReprodInfertil*. 2011; 12(2):157-62.
15. Shahordy J AM, Sadegi KH, Bakhteari M, Rezaei M, Vaisi F, KHAMUSHI F. Comparison of Mental Health, happiness, feelings of inferiority, sexual satisfaction and conflicts Marital fertile and infertile women Kermanshah. *Journal of Clinical Research and Medical Science*. 2015; 4(3):277-85.
16. Pour RE, Banihasheiman K. Comparison of sex disorders and couple abuse among fertile and infertile women. *J Birjand Univ Med Sci*. 2010; 18(1):10-7.
17. Abbasi-Shavazi MJ, Inhorn MC, Razeghi-Nasrabad HB, Toloo G. The "Iranian ART Revolution" infertility, assisted reproductive technology, and third-party donation in the Islamic Republic of Iran. *J Middle E Womens ST*. 2008; 4(2):1-28.
18. Joelsson LS, Berglund A, Wanggren K, Tyden T. Symptoms of anxiety and depression among infertile women, women pregnant after infertility treatment and spontaneously pregnant women. *FertilSteril*. 2016; 106(3):e335.
19. Nilforooshan P, Ahmadi SA, Abedi MR, Ahmadi SM. Attitude towards infertility and its relation to depression and anxiety in infertile couples. *J ReprodInfertil*. 2006;6(5):546-52
20. George C, Herman KC, Ostrander R. The family environment and developmental psychopathology: the unique and interactive effects of depression, attention, and conduct problems. *Child Psychiatry Hum Dev*. 2006; 37(2):163-77.