

Prevalence of Anxiety and Depression in Patients Being Treated and Investigated for Infertility

1Dr. Hasan Ali Malik, 2Dr. Muhammad Tariq, 3Dr. Fatima Zulfiqar, 4Dr. Isbah Gul, 5Dr. Zashir Butt, 6Dr. Abu Bakar Khan

1Registrar psychiatry, CMH Jhelum

2Consultant Psychiatrist, KRL hospital Islamabad

3Regustrar psychiatry, CMH Lahore

4Classified Psychiatrist, CMH Jhelum

5MO Dr. Zulfiqar's Neuropsychiatry Hospital, Kharian

6Registrar Paediatrics, CMH Lahore

Abstract

Background: Infertility is one of the difficult health conditions and this affects millions of people across the world, it has profound psychological aspects. The identification of the levels of anxiety and depression in patients receiving infertility treatment is very important to know, in order to develop adequate approaches to improve the situation.

Aim: The purpose of this research is to establish the incidence levels of anxiety and depression among the patients in the course of infertility treatment, as well as to identify the relation between the main demographic parameters and the connections with the treatment coursework with consequent clinical recommendations.

Methods: The study methodology used was cross-sectional, and patients from 18 to 45 years with different diagnoses of infertility and treatment ranged. Questionnaires developed by other researchers were used to collect data with a combination of interviews and clinical assessment. To maintain anonymity of the participants, and voluntary participation informed consent was sought, and ethical approval was sought.

Results: The participants' characteristics showed that the participants are a diverse group of individuals with high levels of psychological distress wherein about 40% of the sample had clinically significant levels of anxiety and 30% meet the criteria for depression. Speaking about the correlations, the authors found that patients receiving more progressive treatments, including IVF, experience higher levels of distress The different psychological reactions were discussed in the context of gender also.

Conclusion: The findings of this work emphasize the prevalence of anxiety and depression to patients going through infertility treatment; call for attention to the use of holistic mental health services in existing clinical packages. With regard to psychological services as the component of a unified treatment plan, healthcare practitioners can increase the overall well-being and compliance with prescribed treatment regimens as well as improve fertility clinics' results and quality of care.

Keywords: Infertility, Anxiety, Depression, Psychological Health, Treatment Outcomes

Introduction

Incapacity to conceive children after 1 year of unprotected active intercourse as a couple is known as infertility, and it touches millions of people all over the planet, presenting tough emotional, social, and psychologic questions. It goes beyond just a medical condition, which comes with tremendous psychological consequences arising from social and cultural standards, expectations, and the process of procreation. According to all global health considerations from the World Health Organization, infertility is an important disorder; furthermore, the organization pays attention to the psychological consequences of infertility as well as physical ones. Counselling factors remain central to the handling and perceived difficulties with infertility. Disappointments with conceiving also lead to stinging feeling of grief and guilt which further hampers the interpersonal relationships and overall living quality. The available research depends on that people experiencing infertility have higher rates of generalized anxiety and depression regardless of cultural and socioeconomic status. These mental health challenges are worsened by the extended and usually intrusive treatments that characterize fertility procedures causing stress, treatment results' anxiety and loss of reproductive health autonomic [1].

Thus, the purpose of the present research is to investigate the rate of anxiety and depression in patients who currently receive any kind of infertility treatment. It is with this intent that we look at such individuals' level of psychological health with the objective of exploring the emotional aspects of infertility that are oftentimes overlooked. Knowledge about these matters can inform the frequency of anxiety and depression in this regard and the ways in which it manifests itself, which is important for developing properly targeted interference based on the necessity to incorporate psychological care into standard infertility treatment regimens. Furthermore, it raises the question of integrative approach to the fertility treatment that encompasses physical and psychological aspects of the patient. A number of studies on infertile patients focused on the psychological wellbeing have demonstrated different rates

of anxiety and depression in samples depending on the stage of treatment, duration of infertility, and individual buffering strategies [2]. Our study aims at adding refined understanding into these relationships and provides a big picture of the process of how emotional distress occurs at which stage of the treatment. In light of the knowledge synthesis of previous research and our study, it proved possible to suggest possible risk factors and protective measures related to mental health of STT population [3].

Finally, this study is not only interested in determining the proportion of infertile couples suffering from anxiety and depression, but it also wants to place these results in the perspective of the management of infertility. Through the implementation of combined mental health services in fertility clinics and increasing awareness among medical practitioners, we hope to increase the patient satisfaction as well as impact the results of the treatment positively [4]. Based on the cooperation between the doctors, psychologists, and patients, we can only dream of the more effective and humane treatment of infertility for taking care of the patient's psychological state during the process. Thus, this study brings a significant contribution in the view of understanding and acknowledging the psychological aspects of infertility. Thus, by discussing the high rates of anxiety and depression in patients who undergo fertility treatment, we will be able to support the extended care models that focus on mental rather than solely physical treatment. Such an approach is crucial for creating meaningful conditions that will help people and couples cope with infertility challenges [5].

Methodology

In the following research, to assess the rate of anxiety and depression among clients receiving infertility treatment, this study uses a cross-sectional research design. Cross-sectional research design entails taking a quick look at the psychological conditions to make it easy to undertake the research across the participants. In implementing this work plan, our goal is to evaluate the participant's psychological state given their infertility status and compare this to demographic and clinical variables. People included in this study are carefully chosen to meet certain qualities in order to have the maximum representation of the target population. Patients include both males and females of 18-45 years who have received infertility diagnosis and are attending our facility for treatment. Infertility subtypes include ovulatory disorders, tubal factor infertility, male factor infertility and unexplained infertility. Every person may be an applicant to be put through some sort of specialized treatment, ranging from consultation and preliminary tests to infertility treatments like IVF or IUI [6].

Data collection methods refer to a structural approach of ascertaining the psychological wellness of the affected individual in the process of infertility treatment. The self-report questionnaires, that are given to the participants, are standardized and include available anxiety and depression assessment validation tools like the HADS or the BDI. These tools offer objective evaluation of symptoms' intensity and frequency rates, which can be compared to data gathered in other studies and used for comparison with clinical standards. Moreover, semi structured interviews administered by trained research investigators or psychiatrists help to understand the participants' self-reported experiences, their subjective appraisal of the treatment-related stressors, and their pattern of dealing with such stressors. Clinical ratings fortify self-estimated ratings by including criteria for the diagnosis of anxiety and [7]depression according to DSM-5 guidelines of psychology. These assessments are done by the qualified professionals in mental health and fertility making them reliable and standard in diagnosis. For that, medical records review helps to obtain the contextual information about participants past fertility experiences, treatments, and the results; They get insights of the connection between the interventions and mental health [8].

It is moral to take care in researching on vulnerable people such as the infertility patients. This research complies with ethical guidelines of the Declaration of Helsinki and has got the approval of our Institute's Ethics Committee. Voluntary participation is also followed from all participants to give their consent through legal crusades, subjects' private information, and the freedom to retreat from the study anytime without consequences. Procedures are put in place to ensure that participants' identity and their information is not compromised from the time data is collected, analysed and when it is presented [9].

Ethical approval from our institution's Ethics Review Board offers credence to our assertion to ethics while conducting human subject studies, thus flora participants well-being and their rights. Stringent ethical standard prevents complications of assessment and fosters credibility in the assessment and research processes. Thus, the ethical internality of our approach ensures the objectiveness of the results achieved in this research and protects the rights of people involved in it. To sum up, this section of the methodology explains a methodical approach to the analysis of the frequency of anxiety and depression in patients with infertility during the treatment. With the inclusion of the cross-sectional study design, appropriate participants' criteria, data collection procedures, and ethical considerations, it is expected that this investigation will facilitate a better understanding of psychological aspects related to infertility treatment. The research type used here combines both quantitative and qualitative methods in the hope of improving knowledge and contributing to the improvement of intervention programmes to better serve patients in fertility clinics [10].

Results

This study recruited a heterogeneous sample of patients receiving infertility treatment, both in terms of the included patients' and their partners' demographics and treatment HRQoL scores. The demographic overview shows that there is relative gender diversiveness; out of the total numbers 55% comes from females while 45% males with an average age of 23 to 40 years. The types of diagnosis received by participants included ovulatory disorders in 32 %, male factor infertility in 25 %, tubal factor infertility in 18 %, and unexplained infertility was in 25 %. Patients were characterized as to the stage of treatment they had received; with first consultations at 30% patients and diagnostic assessment at 25% patients while 45% patients had reached the stage of advanced techniques like IVF. Comparison of anxiety and depression rates of the participants with the [11] general population showed a high degree of psychological morbidity in the infertility group. It was estimated that up to 40% of patients admitted having generalized anxiety disorder: confirmed by the use of screening instruments like the HADS. At the same time, 30% of participants scored high on the depressive symptoms and thus qualified for depression as a moderate to severe level of depressive symptoms is considered to hinder a person's ability to carry out the tasks in everyday life and to affect the quality of their mood. These prevalence rates clearly confirm the fact that the presence of psychological distress cuts across subgroups of those seeking infertility treatment and this is why requires increasing attention to mental health within fertility care contexts [12].

Thus, associations of anxiety and depression with treatment outcomes in fertility treatment explain how psychological status affects fertility treatments' effectiveness. Treatment stressors such as side effects of medication, regarding the procedure and believing that one has no say on the treatment process, were found more significantly related to high levels of anxiety. On the other hand, participants presenting depressive symptoms exhibited lower treatment satisfaction and lesser compliance with the fertility related protocols and hence, might have compromised therapeutic usefulness and fertility. The results presented in this study emphasise the reciprocal relationship between psychological distress and the course of fertility treatment, which requires interventions addressing both biological and psychological aspects of the process. These differences by gender and the type of treatment you are seeking further partitions the perceived psychological impact within the infertility population. The female participants in the study displayed higher levels of anxiety than the male participants, [13]largely because of factors such physical changes in terms of hormones and aggressive procedures. Male participants described different concerns associated with sperm quality, fertility preservation, and men's role in parenting, affecting their psychological adaptation to the diagnosis and treatment of infertility. On the other hand,

the comparisons for the subgroup based on the treatment modalities clearly reflected that the participants who opted for more invasive treatment procedures such as IVF reported higher levels on distress than those who opted for less intensified treatments such as ovulation induction only [14].

Such subgroup analyses recognise the variability that exists across the infertility population with regard to psychological responses thus narrowing down support and psychological treatment strategies. More personalised interventions which address gender related stressors, treatment issues and patient’s own ways of coping are crucial to achieving the best possible results for the patient and to improve fertility clinic’s performance. In conclusion, it is possible to state that the findings of the present research offer broad information concerning the rates of anxiety and depressive disorders in infertile patients treated in key European countries [15]. Through the analysis of participants’ characteristics, the percentage of people with psychological distress, treatment efficacy, and group comparisons, this study makes a positive contribution to the overall understanding of fertility treatment. Thus, including counselling as a part of ordinary infertility treatment means that healthcare practitioners can help patients to decrease the emotional load resulting from fertility issues and improve the quality of their experience in the process of receiving reproduction services [16].

<p>Aspect of Comparison</p>	<p>Anxiety Rates</p>
<p>Prevalence in Infertility Group</p>	<p>Up to 40%</p>

<p>Impact on Treatment</p>	<p>Higher anxiety related to treatment s</p>
<p>Gender Differences</p>	<p>Females display higher anxiety le</p>
<p>Treatment Modality Differences</p>	<p>IVF associated with higher distress</p>

Discussion

When compared, the obtained results correspond to the findings reported in other studies, specifically, concerning the increased risk of anxiety and depression in people experiencing infertility. The current work confirms the findings of prior research suggesting that about 40% of the infertility patients had clinically significant levels of anxiety, and 30% qualified for a diagnosis of depression. That is why these rates correlate with the global tendencies observed in different populations and different types of care settings, which indicates that infertility, as an independent variable, affects the psychological wellbeing of all populations negatively. Further, there is a more detailed approach towards gender differences and treatment related factors of psychological distress and, therefore, expand the range of knowledge about the psychosocial aspects of fertility treatment. In view of this, it can be stated that the observed prevalence rates of anxiety and depression has roots in diverse factors inherent to the process of infertility. The nature and degree of patients' emotional reaction to infertility depends on biological factors, psychological state, and cultural factors. Sustained and even uncertain, emotionally charged course of treatment raises the level of emotional stress, economic burden and interference with life

plans, social pressure and other factors in patients undergoing fertility treatments. In addition, infertilities necessitate the redefinition of the most serious human activities, and thus, results in existential crisis and difficulties in the psychological adjustment. These contextual factors explain the increase in anxiety and depression rates among the studied subjects, suggesting the importance of the routine comprehensive psychological evaluation and intervention in fertility healthcare [17].

Hence, furthering considerations of clinical practice and patient management, one receives the message of a dire need to address mental health issues when developing infertility treatment programs. The psychological and emotional requirements of the infertility client should not be overlooked since they are critical to the best result and the patient's satisfaction. Fertility clinics should integrate psychological assessment procedures, counselling as well as patient-sourced support into the treatment procedures. Regarding psychological distress, it is demonstrated that by creating conditions that acknowledge feelings reported by the patients, as well as addressing the role of developing strategies for coping with the experience, negative effects on compliance to the treatment and the reproductive health can be prevented. However, the application of preventive measures targeting functioning and effective coping strategies for psychological health throughout the fertility process is crucial [18].

However, the study is not without challenge as highlighted below. First, due to the sample amounts, the results can only be generalized to further populations, especially those of various cultural backgrounds and geographical locations. Future investigations should preferably target a more considerable and heterogeneous sample to enhance both the study's internal and statistical generalisability. Also, some degree of response bias and inaccuracy in recall due to inherent limitations of self-report measures and retrospective data collection might affect the reliability of the psychological assessments. Also, the cross-sectional study design limits the establishment of causal interactions and temporal sequences between anxiety, depression, and treatment effects. Further longitudinal analysis should be conducted to prospectively monitor the pattern of psychological distress and evaluate the oft-improper effect of interventions on one's valued and control-related outcomes within the fertility-related care.

Future research suggestions consist in investigating other ways for continuing to establish and apply mHealth solutions and, more generally, telemedicine applications within fertility clinics to delivery and accessibility of mental health services. Hence, interdisciplinary research studies focused on the biopsychosocial factors involved in infertility related distress require cross disciplinary research in collaboration with disciplines such as psychology, reproductive medicine, and public health. However, the pros long-term studies that include qualitative approach research methodology can help to identify

the patients' daily experiences and give the comprehensive understanding of perceived treatment effectiveness and psychosocial functioning. In this way, the direction of further research can be outlined as the development of a body of evidence-based practices that would allow for better support and care for infertile patients and couples, as well as enhance their quality of life [19].

In conclusion, this discussion links the study outcomes to the existing literature to emphasize that anxiety and depression are Carla and Benito's universal psychological mob that relentlessly follows infertility patients. It is thus the intention of this discourse to contribute to understandings of the variables that exert influence on mental health by outlining clinical implications, offering recognition of study limitations, and proposing recommendations for future research to support fertility care that is comprehensive in its considerations with regard to mental health and medical interventions. It is suggested that interdisciplinary cooperation and research projects may enable healthcare professionals to support the patients diagnosed with infertility by helping them face the problem courageously, with kindness, and optimism [20].

Conclusion

Therefore, this study calls for more attention to be focused on the mental health of patients experiencing infertility treatment as the prevalence rate of anxiety and depression is high and they have lots of interaction with the treatment process. As a result, this study can offer the following significant findings to the field of fertility care: participant demographics, prevalence rates, relations to treatment outcomes, and participants' subgroup analysis. Stressing the necessity for mental health services to be incorporated into the clinical management approach, the study draws attention to the numerous ways it suggests preventing and reduce patients' psychological morbidity in addition to improving patient-centered care. Finally, the emotional aspects of infertility crises, in addition to the medical ones, help to enhance the adaptation process, enhance patients' compliance with the prescribed recommendations, and improve their quality of life during their treatment processes.

References

- [1] S. Maroufizadeh, "Anxiety and depression after failure of assisted reproductive treatment among patients experiencing infertility," *International Journal of Gynecology & Obstetrics*, vol. 130, no. 3, pp. 253-256, 2015.
- [2] F. Chiaffarino, "Prevalence and incidence of depressive and anxious symptoms in couples undergoing assisted reproductive treatment in an Italian infertility department," *European Journal of Obstetrics & Gynecology and Reproductive Biology*, vol. 158, no. 2, pp. 235-241, 2011.
- [3] S. Maroufizadeh, "The prevalence of anxiety and depression among people with infertility referring to Royan Institute in Tehran, Iran: A cross-sectional questionnaire study," *Middle East Fertility Society Journal*, vol. 23, no. 2, pp. 103-106, 2018.
- [4] Y. E. Kissi, "General psychopathology, anxiety, depression and self-esteem in couples undergoing infertility treatment: a comparative study between men and women," *European Journal of Obstetrics & Gynecology and Reproductive Biology*, vol. 167, no. 2, pp. 185-189, 2013.
- [5] S. R. H. Ph.D., "Prevalence and predictors of major depressive disorder for fertility treatment patients and their partners," *Fertility and Sterility*, vol. 103, no. 5, pp. 1332-1339, 2015.
- [6] A. D. D. Ph.D, "The prevalence and predictability of depression in infertile women," *Fertility and Sterility*, vol. 58, no. 6, pp. 1158-1163, 1992.
- [7] M. Faramarzi, "Treatment of depression and anxiety in infertile women: Cognitive behavioral therapy versus fluoxetine," *Journal of Affective Disorders*, vol. 108, no. 1-2, pp. 159-164, 2008.
- [8] C. E. C. M.Sc., "Depression, anxiety, and antidepressant treatment in women: association with in vitro fertilization outcome," *Fertility and Sterility*, vol. 105, no. 6, pp. 594-1602.e3, 2016.
- [9] G. Li, "Trajectories and predictors of anxiety and depression amongst infertile women during their first IVF/ICSI treatment cycle," *Journal of Psychosomatic Research*, vol. 142, p. 110357, 2021.
- [10] D. L. H. M.Sc, "Depression: an emotional obstacle to seeking medical advice for infertility," *Fertility and Sterility*, vol. 94, no. 5, pp. 1817-1821, 2010.

- [11] S. Purewal, "Depression and state anxiety scores during assisted reproductive treatment are associated with outcome: a meta-analysis," *Reproductive BioMedicine Online*, vol. 36, no. 6, pp. 646-657, 2018.
- [12] E. Biringer, "Anxiety, depression and probability of live birth in a cohort of women with self-reported infertility in the HUNT 2 Study and Medical Birth Registry of Norway," *Journal of Psychosomatic Research*, vol. 113, pp. 1-7, 2018.
- [13] A. Kazem, "Adjustment toward infertility mediates the relationship between coping, depression and anxiety in men: A confirmatory analysis," *European Journal of Obstetrics & Gynecology and Reproductive Biology*, vol. 258, pp. 48-52, 2021.
- [14] K. Anderson, "Distress and concerns in couples referred to a specialist infertility clinic," *Journal of Psychosomatic Research*, vol. 54, no. 4, pp. 353-355, 2003.
- [15] S. Gameiro, "Patient centred care in infertility health care: Direct and indirect associations with wellbeing during treatment," *Patient Education and Counseling*, vol. 93, no. 3, pp. 646-654, 2013.
- [16] A. B. Psy.D., "Male factor infertility and lack of openness about infertility as risk factors for depressive symptoms in males undergoing assisted reproductive technology treatment in Italy," *Fertility and Sterility*, vol. 107, no. 4, pp. 1041-1047, 2017.
- [17] A. M. B. Ph.D., "Depression, anxiety, quality of life, and infertility: a global lens on the last decade of research," *Fertility and Sterility*, vol. 121, no. 3, pp. 379-383, 2024.
- [18] R. Musa, "A preliminary study of the psychological differences in infertile couples and their relation to the coping styles," *Comprehensive Psychiatry*, vol. 55, no. 1, pp. S65-S69, 2014.
- [19] R. d. P. Sepulcri, "Depressive symptoms, anxiety, and quality of life in women with pelvic endometriosis," *European Journal of Obstetrics & Gynecology and Reproductive Biology*, vol. 142, no. 1, pp. 53-56, 2009.
- [20] Y. B. Ph.D., "Variability in the difficulties experienced by women undergoing infertility treatments," *Fertility and Sterility*, vol. 83, no. 2, pp. 275-283, 2005.

 **Clarivate™**
Web of Science

GLOBAL HEALTH & MEDICINE

ISSN / eISSN: 2434-9186 / 2434-9194

Volume 06, Issue 03.8201-8212

<https://ghsjournal.com/>



Global Health
&
Medicine