

## Female Infertility Associated Depression and Anxiety: A Comprehensive Review

Omaima Anan Omer Hamid<sup>1</sup>, Naseem Durizi K Alrawaili<sup>2</sup>, Basmah Durizi K Alrawaili<sup>3</sup>,  
Wardah Salem S Alanazi<sup>4</sup>, Fai Suraysih T Alanazi<sup>2</sup>

<sup>1</sup>*MBBS, MD, MRCOG, Assistant professor, Department of Obstetrics and Gynecology,  
Faculty of Medicine, Northern Border University*

<sup>2</sup>*Medical intern, Northern Border University, Saudi Arabia*

<sup>3</sup>*Medical Student, Northern Border University, Saudi Arabia*

<sup>4</sup>*General practitioner, King Khalid Hospital, Hafar Al-Batin, Saudi Arabia*

**Abstract:** Infertility poses significant psychological challenges, particularly for women, leading to increased levels of anxiety and depression. This study systematically explores the multifaceted emotional toll of infertility, reviewing literature that underscores a staggering prevalence of depressive symptoms among infertile women, which can range from 25% to 60%. Societal expectations regarding motherhood compound these feelings of distress, contributing to a heightened psychological burden as compared to men. Emphasizing the complexity of this relationship, findings suggest that the psychological distress experienced by these women can parallel that of individuals confronting chronic illnesses. Coping mechanisms play a crucial role in influencing mental health outcomes; adaptive strategies such as problem-solving and seeking social support yield more favorable results, whereas maladaptive strategies—like self-blame and avoidance—exacerbate emotional turmoil. The study also highlights the biopsychosocial framework in contextualizing the experiences of infertile women, depicting how biological factors, psychological distress, and social stressors intertwine to affect mental health. Long-duration infertility correlates with an intensification of anxiety and depression, signaling the importance of timely assessment and intervention. Additionally, analysis of the impacts of various fertility treatment options, particularly assisted reproductive technologies (ART), reveals that the physical and emotional challenges associated with these treatments contribute significantly to psychological outcomes. Through this examination, the research calls for integrated mental health support as part of infertility treatment protocols, advocating for tailored interventions that address the unique coping styles of women facing infertility. By recognizing the extensive mental health implications of infertility, stakeholders can better prepare to address these psychological challenges, ultimately promoting improved quality of life and emotional well-being for affected individuals. This study serves as a critical resource for healthcare practitioners and policymakers, emphasizing the importance of psychological considerations in infertility management.

Keywords: Infertility, Depression, Anxiety, Stress, Mental Health

## **1. Introduction**

Infertility is a profound life challenge that significantly impacts the psychological well-being of women, often leading to heightened levels of anxiety and depression. The emotional toll of infertility is well-documented, with studies indicating that women facing infertility experience a range of psychological issues, including feelings of guilt, anxiety, and depression [1]. The psychological burden is particularly acute among women, who report higher rates of mental health disorders compared to their male counterparts. This disparity may be attributed to societal pressures and expectations surrounding motherhood, which can exacerbate feelings of inadequacy and distress in women struggling with infertility. The prevalence of depression among infertile women has been reported to range from 25% to as high as 60%, highlighting a significant public health concern that warrants comprehensive attention [2].

The relationship between infertility and mental health is complex and multifaceted. Research indicates that the psychological distress associated with infertility is comparable to that experienced by individuals facing chronic illnesses, such as cancer or heart disease. For instance, female cancer survivors undergoing fertility preservation treatments report significantly higher levels of depression and anxiety compared to non-cancer infertile women, suggesting that the intersection of infertility and chronic illness can amplify psychological distress. Furthermore, studies have shown that the emotional impact of infertility can persist long after treatment, affecting women's overall quality of life and mental health. This long-term psychological burden underscores the necessity for integrated mental health support within infertility treatment protocols [3].

Moreover, the COVID-19 pandemic has further complicated the psychological landscape for infertile women. Many faced interruptions in their fertility treatments, leading to increased anxiety and distress. The pandemic's broader societal impacts, including isolation and uncertainty, have exacerbated existing mental health issues among this population, highlighting the urgent need for targeted psychological interventions. The interplay between infertility and external stressors, such as a global health crisis, illustrates the importance of considering contextual factors when addressing the mental health needs of infertile women [4].

In addition to the direct psychological impacts, infertility can also lead to significant relational strains. Women often report feelings of isolation and a lack of support from their partners and social networks, which can further exacerbate feelings of depression and anxiety. The emotional burden of infertility can lead to marital discord, as couples navigate the challenges of treatment and the stress of unmet expectations regarding parenthood. This relational aspect is critical, as supportive partnerships can mitigate some of the psychological distress associated with infertility. Therefore, addressing the psychosocial dimensions of infertility is essential for improving mental health outcomes for women [5].

The need for comprehensive mental health support in infertility care is increasingly recognized. Psychotherapy and counseling have been shown to be beneficial in alleviating the psychological burden of infertility, with studies advocating for mental health assessments to be integrated into fertility treatment protocols. Early psychological intervention can not only improve emotional well-being but may also enhance the success rates of fertility treatments by reducing the stress that can negatively impact reproductive outcomes [6].

In conclusion, the psychological ramifications of infertility are profound and multifaceted, particularly for women. The interplay of societal pressures, relational dynamics, and external stressors such as the COVID-19 pandemic contributes to a significant burden of anxiety and depression among infertile women. As such, there is a critical need for integrated mental health support within infertility treatment frameworks to address these challenges effectively [7].

### Objectives:

The main objectives of this review are to:

1. Assess the prevalence of depression and anxiety among women experiencing infertility to determine the extent of emotional distress in this population.
2. Identify and categorize the key risk factors that contribute to the development of depression and anxiety in women facing infertility.
3. Review the coping strategies employed by women with infertility and evaluate their effectiveness in managing depression and anxiety.
4. Investigate the psychological impact of infertility on women's quality of life, including social, emotional, and relational aspects.
5. Analyze available psychological interventions and treatment options for managing depression and anxiety in women with infertility, including therapy, medication, and support groups.

### Psychological Impact of Infertility:

The psychological impact of infertility on women is profound and multifaceted, encompassing a range of emotional disturbances such as anxiety, depression, and stress. Research consistently demonstrates that women experiencing infertility report significantly higher levels of psychological distress compared to their fertile counterparts. For instance, a study highlights that infertile women exhibit a greater prevalence of stress, anxiety, and depression, corroborating findings from previous studies that indicate a similar trend across different populations. This elevated psychological burden is often exacerbated by societal pressures and personal expectations surrounding motherhood, which can lead to feelings of inadequacy and despair among women facing infertility [8].

The duration of infertility plays a critical role in the psychological well-being of affected women. Longer durations of infertility correlate with increased rates of anxiety and depressive disorders, suggesting that the prolonged struggle with infertility can intensify emotional distress. This is supported by findings that infertile women experience significantly higher levels of psychological distress compared to those who are fertile, reinforcing the notion that the emotional toll of infertility is cumulative and can worsen over time. Furthermore, the psychological impact is not uniform; factors such as age, economic conditions, and social support significantly influence the mental health outcomes of infertile women [9].

The interplay between infertility and mental health is complex, with studies indicating that psychological distress can adversely affect fertility treatment outcomes. For instance, research explored the relationship between anxiety, depression, and clinical pregnancy rates in women undergoing in vitro fertilization (IVF), revealing that while psychological symptoms did not directly affect pregnancy rates, they are nonetheless critical to the overall treatment experience. This aligns with findings that emphasize the importance of addressing mental health issues in the context of assisted reproductive technologies, as anxiety and depression are prevalent among women undergoing such treatments [10].

Moreover, the social context of infertility cannot be overlooked. Women often face stigma and isolation, which can exacerbate feelings of loneliness and despair. A qualitative study illustrates how infertility is perceived as a socially constructed problem, leading women to internalize their struggles and experience heightened psychological distress. This social dimension is crucial, as it highlights the need for supportive networks and interventions that can mitigate the emotional burden of infertility [11].

In addition to individual factors, the role of partners in the psychological experience of infertility is significant. A comparative study indicates that while both men and women experience anxiety and depression related to infertility, women tend to report more severe symptoms. This suggests that the emotional landscape of infertility is not only shaped by

personal experiences but also by relational dynamics, where the support or lack thereof from partners can influence mental health outcomes [12].

Furthermore, the impact of infertility-related distress extends beyond immediate emotional responses; it can lead to long-term psychological issues, including chronic anxiety and depression. A systematic review underscores that the prevalence of depressive symptoms among infertile women can range significantly, indicating a widespread issue that necessitates attention. The need for psychological support and interventions is paramount, as untreated mental health issues can hinder both the emotional well-being of women and the success of fertility treatments [13].

#### Understanding Depression in Infertile Women:

Understanding depression in infertile women is critical for addressing the psychological challenges they face during their journey toward conception. Infertility can lead to significant emotional distress, with studies indicating that the prevalence of depression among infertile women is alarmingly high. For instance, a study reported a depression prevalence rate of 62% among infertile women in Ghana, highlighting the severe psychological challenges associated with childlessness. This finding is consistent with research that found that infertile women in Hungary also reported elevated levels of anxiety and depression, further emphasizing the widespread nature of this issue. The emotional toll of infertility is compounded by societal expectations and personal desires for motherhood, which can lead to feelings of inadequacy and hopelessness [14].

The duration of infertility is a significant factor influencing the severity of depressive symptoms. Research indicates that as the duration of infertility increases, so does the severity of anxiety and depression experienced by women. This trend is echoed in the findings of other studies, which identified prolonged infertility as a risk factor for both anxiety and depression. The psychological distress associated with infertility is not merely a transient response; it can evolve into chronic mental health issues that require intervention. For example, it has been found that coping strategies significantly influence the levels of anxiety and depression in infertile couples, suggesting that maladaptive coping mechanisms can exacerbate psychological distress [15].

Moreover, the relationship between infertility and sexual health is noteworthy. Research found that sexual problems are prevalent among infertile women, which are closely linked to increased levels of depressive symptoms. This connection underscores the multifaceted nature of infertility-related distress, where emotional, physical, and relational aspects intertwine to create a complex psychological landscape. The interplay of these factors can lead to a vicious cycle where depression further complicates the experience of infertility, potentially impacting treatment outcomes [16].

Social support plays a crucial role in mitigating the psychological impact of infertility. A study highlights that a lack of supportive relationships can lead to increased distress among infertile women. Conversely, strong social support networks can provide emotional relief and help women cope better with the challenges of infertility. This is particularly important given that many women report feelings of isolation and stigma associated with their infertility, which can further exacerbate depressive symptoms. The need for effective coping strategies and social support systems is paramount in addressing the mental health needs of infertile women [17].

Furthermore, the psychological impact of infertility extends beyond individual experiences; it can affect relationships and family dynamics. A comparative study indicates that while both men and women experience anxiety and depression related to infertility, women tend to report more severe symptoms. This disparity suggests that interventions should not only focus on individual mental health but also consider the relational aspects of infertility, as couples navigate the emotional challenges together. The importance of dyadic coping strategies has been emphasized in the literature, indicating that couples who engage in supportive communication and shared coping efforts may experience better emotional outcomes [18].

### Anxiety Disorders and Infertility:

Anxiety disorders are prevalent among women experiencing infertility, significantly impacting their emotional well-being and overall quality of life. Research indicates that the psychological stress associated with infertility can lead to heightened anxiety levels, which may manifest in various forms, including generalized anxiety disorder and panic disorder. For instance, a study found that women undergoing in vitro fertilization (IVF) reported significantly higher anxiety levels, particularly when infertility was attributed to female factors, which often led to feelings of guilt and self-blame. This aligns with findings from a systematic review and meta-analysis revealing that anxiety symptoms are prevalent among infertile women, with various factors such as age, duration of infertility, and social support influencing these symptoms [19].

The relationship between anxiety and infertility is complex and multifaceted. It has been highlighted that attachment styles play a crucial role in how women cope with infertility-related stress, with those exhibiting attachment avoidance experiencing greater anxiety and emotional distress. This suggests that psychological factors, including interpersonal relationships and coping mechanisms, significantly contribute to the anxiety experienced by infertile women. Furthermore, the emotional burden of infertility can lead to a cycle of anxiety and depression, as women grapple with the societal pressures of motherhood and the stigma associated with childlessness [20].

The duration of infertility is a critical factor influencing anxiety levels. Research demonstrated a significant correlation between the length of time a woman has been infertile and her anxiety levels, indicating that prolonged infertility can exacerbate feelings of hopelessness and despair. Similarly, a study found that infertile couples reported elevated anxiety levels, particularly in relation to their treatment experiences. This highlights the importance of addressing mental health concerns in the context of infertility treatment, as untreated anxiety can hinder treatment success and overall patient satisfaction [21].

Moreover, the impact of anxiety on treatment outcomes cannot be overlooked. Research explored the physiological effects of anxiety, noting that dysregulation of cortisol levels in anxious infertile women could adversely affect IVF treatment outcomes. This underscores the need for psychological interventions aimed at reducing anxiety, which may improve not only mental health but also the likelihood of successful conception. Psychological support, including counseling and stress management techniques, has been shown to be beneficial for women undergoing fertility treatments [22].

The COVID-19 pandemic has further exacerbated anxiety levels among infertile couples. A study indicated that the pandemic led to increased psychological distress, with higher scores on anxiety and depression scales correlating with perceived stress related to infertility. This situation highlights the need for healthcare providers to consider the mental health implications of infertility, especially during challenging times, and to provide appropriate support and resources [23].

In addition to individual factors, social support plays a vital role in moderating anxiety levels among infertile women. Research emphasizes that women with strong social networks tend to experience lower levels of anxiety and depression. Conversely, those who feel isolated or lack support may experience heightened anxiety, further complicating their infertility journey. This suggests that fostering supportive environments and relationships can be crucial in alleviating anxiety and promoting emotional well-being among women facing infertility [24].

### Biopsychosocial Factors Influencing Mental Health:

The biopsychosocial model provides a comprehensive framework for understanding the multifaceted nature of mental health, particularly in the context of female infertility, where psychological distress is prevalent. This model emphasizes the interplay between biological, psychological, and social factors, which collectively influence mental health outcomes. In the realm of infertility, it is well-documented that women often experience a disproportionate

burden of distress, with estimates suggesting that 30%-40% of women undergoing fertility treatments report significant psychological distress, including anxiety and depression. The biological aspects include hormonal changes and the physiological stress associated with infertility treatments, which can exacerbate mental health issues [25].

Psychologically, the experience of infertility can lead to feelings of inadequacy, loss, and grief, which are compounded by societal pressures and expectations surrounding motherhood. The emotional turmoil associated with infertility is often linked to a woman's identity and self-worth, leading to a heightened risk of mental health disorders. Furthermore, psychological processes such as rumination and self-blame can mediate the impact of biological and social stressors on mental health, indicating that addressing these cognitive patterns through therapeutic interventions is crucial [26].

Socially, the stigma surrounding infertility can lead to isolation and a lack of support, further aggravating mental health issues. The communication dynamics between patients and healthcare providers also play a significant role in shaping the experience of infertility. Effective patient-provider communication can mitigate feelings of helplessness and enhance the continuity of care, thereby improving mental health outcomes. Conversely, poor communication can lead to misunderstandings and increased distress, highlighting the need for a patient-centered approach in infertility treatment [27].

Moreover, the biopsychosocial model underscores the importance of considering cultural and societal contexts when addressing mental health in women facing infertility. Cultural beliefs about fertility and motherhood can significantly influence a woman's emotional response to infertility and her willingness to seek help. For instance, in some cultures, infertility may carry a heavy stigma, leading to social exclusion and increased psychological distress. Therefore, culturally sensitive interventions that acknowledge these social dimensions are essential for effective mental health support [28].

In addition to these factors, socioeconomic status (SES) can also impact mental health outcomes in women experiencing infertility. Lower SES is often associated with increased stressors, including financial strain and limited access to healthcare resources, which can exacerbate feelings of anxiety and depression. Addressing these socioeconomic disparities is vital for improving mental health outcomes among women undergoing fertility treatments [29].

Furthermore, the integration of mental health services into fertility treatment programs is crucial for addressing the psychological needs of women. Research indicates that psychological interventions can significantly reduce distress and improve overall well-being during fertility treatments; however, the quality of existing studies on psychological interventions for infertility is often low, indicating a need for more rigorous research in this area [30].

#### Coping Mechanisms and Strategies:

Coping mechanisms and strategies play a crucial role in managing the psychological distress associated with infertility, particularly among women. The experience of infertility is often accompanied by significant emotional turmoil, including anxiety and depression, which can be exacerbated by societal pressures and personal expectations regarding motherhood. Understanding the various coping strategies employed by women facing infertility can provide insights into how to mitigate these psychological challenges and improve overall mental health outcomes [31].

Research indicates that women with infertility frequently utilize a range of coping mechanisms, which can be broadly categorized into adaptive and maladaptive strategies. Adaptive coping strategies, such as problem-solving and seeking social support, have been associated with better mental health outcomes. In contrast, maladaptive strategies, including avoidance and self-blame, can lead to increased psychological distress. For instance, a study found that women with primary infertility exhibited higher levels of self-blame and avoidance coping compared to those with secondary infertility, indicating that the type of infertility may

influence coping styles. This highlights the importance of tailoring interventions to address the specific coping needs of women based on their infertility experiences [32].

Religious coping is another significant strategy employed by many women facing infertility. This form of coping often involves seeking comfort and strength through faith, prayer, and spiritual practices. Research has shown that religious coping can serve as an emotion-focused strategy that helps women manage feelings of despair and anxiety associated with infertility. In cultures where motherhood is highly valued, religious coping may provide a sense of hope and community support, which can be beneficial for mental health. However, it is essential to recognize that reliance on religious coping can vary significantly among individuals, and not all women may find solace in this approach [33].

The psychological empowerment of women undergoing infertility treatments is also crucial in developing effective coping strategies. Empowerment can enhance a woman's ability to cope with the stressors of infertility by fostering resilience and promoting adaptive coping mechanisms. Interventions that focus on building psychological resilience, such as cognitive-behavioral therapy (CBT), have been shown to improve coping skills and reduce anxiety and depression in infertile women. These interventions can help women reframe their experiences, develop problem-solving skills, and enhance their emotional regulation, ultimately leading to better mental health outcomes [34].

Moreover, social support plays a vital role in shaping coping strategies among women dealing with infertility. Support from partners, family, and friends can provide emotional comfort and practical assistance, which can alleviate feelings of isolation and despair. Studies have indicated that women who perceive higher levels of social support are more likely to engage in adaptive coping strategies, such as seeking help and sharing their experiences with others. Conversely, a lack of social support can lead to increased reliance on maladaptive coping mechanisms, such as withdrawal and self-isolation, which can exacerbate psychological distress [35].

It is also important to consider the impact of information-seeking behaviors on coping strategies. Many women turn to online resources and support groups to gather information about infertility and treatment options. While access to information can empower women and enhance their coping abilities, it can also lead to information overload, which may increase anxiety and confusion. Therefore, providing clear, accurate, and supportive information is essential in helping women navigate their infertility journey and develop effective coping strategies [36].

#### Impact of Treatment Options on Mental Health:

The impact of treatment options on the mental health of women experiencing infertility is a critical area of research, as the psychological burden associated with infertility can significantly affect treatment outcomes. Various treatment modalities, including assisted reproductive technology (ART), have been shown to influence mental health, with both positive and negative implications. Understanding these impacts can help healthcare providers offer better support and interventions to improve the psychological well-being of women undergoing infertility treatments [12].

Assisted reproductive technologies, such as in vitro fertilization (IVF), are often associated with high levels of emotional distress. The process can be physically taxing and emotionally draining, leading to increased anxiety and depression among women. A study highlighted that women undergoing IVF experience heightened anxiety levels, which can be exacerbated by the uncertainty of treatment outcomes and the societal pressures surrounding motherhood. This emotional turmoil can lead to maladaptive coping strategies, such as avoidance and self-blame, which further complicate mental health outcomes [15].

However, not all coping mechanisms are detrimental. Positive coping strategies, such as seeking social support and engaging in problem-solving, have been associated with better mental health outcomes during infertility treatments. For example, research indicates that women who actively engage in adaptive coping strategies report lower levels of psychological

distress. Additionally, interventions that promote positive coping, such as cognitive-behavioral therapy (CBT) and mindfulness-based stress reduction, have been shown to alleviate anxiety and improve overall mental health during ART cycles. These findings underscore the importance of integrating psychological support into infertility treatment protocols [37].

Moreover, the role of spirituality and religious coping cannot be overlooked. Spirituality serves as a shared coping resource for couples undergoing ART, promoting their quality of life and reducing infertility-related stress. In cultures where motherhood is highly valued, spiritual practices can provide emotional comfort and a sense of community, which may buffer against the psychological distress associated with infertility. However, the effectiveness of religious coping varies among individuals, and not all women may find solace in spiritual practices [38].

The psychological impact of treatment options is also influenced by the couple's dynamics and the quality of their relationship. Studies have shown that dyadic coping, where both partners work together to manage stress, can enhance marital adjustment and reduce individual psychological distress during infertility treatments. Conversely, negative relationship dynamics can exacerbate stress and anxiety, leading to poorer mental health outcomes. Therefore, fostering open communication and mutual support between partners is essential for improving mental health during infertility treatment.

Additionally, the stigma surrounding infertility can significantly affect mental health outcomes. Women who perceive high levels of stigma may engage in avoidance coping strategies, which can further diminish their quality of life. Addressing stigma through education and awareness can help create a more supportive environment for women undergoing infertility treatments, thereby improving their mental health outcomes [39].

## 2. Conclusion:

In conclusion, the psychological impact of infertility on women is profound, resulting in elevated levels of anxiety, depression, and emotional distress. This study highlights the intricate relationship between infertility and mental health, emphasizing that women experiencing infertility are particularly vulnerable due to societal pressures and personal expectations regarding motherhood. The findings underscore the need for integrated mental health support within fertility treatment frameworks, as the emotional toll often persists even after interventions. Recognizing the significance of coping mechanisms, healthcare providers can develop targeted strategies that encourage adaptive approaches while addressing maladaptive behaviors that exacerbate psychological distress. Furthermore, understanding the biopsychosocial aspects of infertility is crucial for creating comprehensive care models that address the complex emotional challenges faced by these women. Ultimately, a multi-faceted approach that incorporates psychological support into infertility treatments may improve both mental health outcomes and the overall experience of women navigating the difficulties of infertility.

## References

1. Gdańska, P., Drozdowicz-Jastrzębska, E., Grzechocińska, B., Radziwoń-Zaleska, M., Węgrzyn, P., & Wielgoś, M. (2017). Anxiety and depression in women undergoing infertility treatment. *Ginekologia Polska*, 88(2), 109-112. <https://doi.org/10.5603/gp.a2017.0019>
2. Kamboj, N., Saraswathy, K., Prasad, S., Babu, N., Puri, M., Sharma, A., ... & Mahajan, C. (2023). Women infertility and common mental disorders: a cross-sectional study from north india. *Plos One*, 18(1), e0280054. <https://doi.org/10.1371/journal.pone.0280054>
3. Khalesi, Z. (2024). Anxiety, depression, and stress: a comparative study between couples with male and female infertility. *BMC Women S Health*, 24(1). <https://doi.org/10.1186/s12905-024-03072-5>

4. Kiani, Z., Simbar, M., Hajian, S., & Zayeri, F. (2021). The prevalence of depression symptoms among infertile women: a systematic review and meta-analysis. *Fertility Research and Practice*, 7(1). <https://doi.org/10.1186/s40738-021-00098-3>
5. Lawal, O., Akinyemi, J., Yusuff, J., & Okunlola, M. (2020). Perceived stress, psychological distress and serum anti-müllerian hormone levels among infertile and fertile women in north-central nigeria. *Middle East Fertility Society Journal*, 25(1). <https://doi.org/10.1186/s43043-020-00029-0>
6. Maroufizadeh, S., Navid, B., Omani-Samani, R., & Amini, P. (2019). The effects of depression, anxiety and stress symptoms on the clinical pregnancy rate in women undergoing ivf treatment. *BMC Research Notes*, 12(1). <https://doi.org/10.1186/s13104-019-4294-0>
7. Sefogah, P. (2023). Exploring the psychological experiences of women with infertility in urban ghana: a qualitative study. *Postgraduate Medical Journal of Ghana*, 12(2), 69-73. <https://doi.org/10.60014/pmjpg.v12i2.336>
8. Alhassan, A., Ziblim, A., & Muntaka, S. (2014). A survey on depression among infertile women in ghana. *BMC Women S Health*, 14(1). <https://doi.org/10.1186/1472-6874-14-42>
9. Anh, V., Huy, T., Huong, T., Quyen, L., & Dung, T. (2023). Anxiety, depression and some related factors in infertile couples being treated at a provincial reproductive health care center, in the south of vietnam. *Bangladesh Journal of Medical Science*, 22(2), 360-367. <https://doi.org/10.3329/bjms.v22i2.64996>
10. Chaves, C., Canavarro, M., & Moura--Ramos, M. (2018). The role of dyadic coping on the marital and emotional adjustment of couples with infertility. *Family Process*, 58(2), 509-523. <https://doi.org/10.1111/famp.12364>
11. Cui, Y., Li, D., Zhou, B., Lin, Y., & Zeng, Y. (2020). Mediating role of social support between sleep quality, anxiety and depressive symptoms in chinese women undergoing in vitro fertilization treatment. *Sage Open Medicine*, 8. <https://doi.org/10.1177/2050312120930163>
12. Faramarzi, M., Pasha, H., Esmaelzadeh, S., Jorsarai, G., Mir, M., & Abedi, S. (2013). Is coping strategies predictor of anxiety and depression in couple infertile?. *Health*, 05(03), 643-649. <https://doi.org/10.4236/health.2013.53a085>
13. Gdańska, P., Drozdowicz-Jastrzębska, E., Grzechocińska, B., Radziwoń-Zaleska, M., Węgrzyn, P., & Wielgoś, M. (2017). Anxiety and depression in women undergoing infertility treatment. *Ginekologia Polska*, 88(2), 109-112. <https://doi.org/10.5603/gp.a2017.0019>
14. Kamboj, N., Saraswathy, K., Prasad, S., Babu, N., Puri, M., Sharma, A., ... & Mahajan, C. (2023). Women infertility and common mental disorders: a cross-sectional study from north india. *Plos One*, 18(1), e0280054. <https://doi.org/10.1371/journal.pone.0280054>
15. Momayyezi, M., Fallahzadeh, H., Nogyni, Z., Anooosheh, V., & Farzaneh, F. (2019). Waiting anxiety in infertile women referring to yazd infertility center. *Zahedan Journal of Research in Medical Sciences*, 21(3). <https://doi.org/10.5812/zjrms.90877>
16. Mustapha, A. (2015). Psychosocial morbidity in women attending an infertility clinic in northwestern nigeria: 'its the worst misfortune of a woman'. *Journal of Gynecology and Obstetrics*, 3(1), 6. <https://doi.org/10.11648/j.jgo.20150301.12>
17. Qadir, F., Khalid, A., & Medhin, G. (2015). Social support, marital adjustment, and psychological distress among women with primary infertility in pakistan. *Women & Health*, 55(4), 432-446. <https://doi.org/10.1080/03630242.2015.1022687>
18. Sefogah, P. (2023). Exploring the psychological experiences of women with infertility in urban ghana: a qualitative study. *Postgraduate Medical Journal of Ghana*, 12(2), 69-73. <https://doi.org/10.60014/pmjpg.v12i2.336>

19. Singh, K., Kumari, S., Rajshee, K., Sinha, S., & Bharti, G. (2020). Assessment of depression, anxiety and stress among indian infertile couples in a tertiary health care centre in bihar. *International Journal of Reproduction Contraception Obstetrics and Gynecology*, 9(2), 659. <https://doi.org/10.18203/2320-1770.ijrcog20200354>
20. Takaki, J. and Hibino, Y. (2014). Family-related opinions and stressful situations associated with psychological distress in women undergoing infertility treatment. *International Journal of Environmental Research and Public Health*, 11(9), 9068-9081. <https://doi.org/10.3390/ijerph110909068>
21. Ogawa M, Takamatsu K, Horiguchi F. Evaluation of factors associated with the anxiety and depression of female infertility patients. *Bio Psycho Soc Med*. 2011;5(1):15. doi: 10.1186/1751-0759-5-15. [DOI] [PMC free article] [PubMed] [Google Scholar]
22. Luk BH, Loke AY. The impact of infertility on the psychological well-being, marital relationships, sexual relationships, and quality of life of couples: A systematic review. *J Sex Marital Therapy*. 2015;41(6):610–625. doi: 10.1080/0092623X.2014.958789. [DOI] [PubMed] [Google Scholar]
23. Dooley M, Dineen T, Sarma K, Nolan A. The psychological impact of infertility and fertility treatment on the male partner. *Human Fertil*. 2014;17(3):203–209. doi: 10.3109/14647273.2014.942390. [DOI] [PubMed] [Google Scholar]
24. Quality of life and general health of infertile women. Namdar A, Naghizadeh MM, Zamani M, Yaghmaei F, Sameni MH. *Health Qual Life Outcomes*. 2017;15:139. doi: 10.1186/s12955-017-0712-y. [DOI] [PMC free article] [PubMed] [Google Scholar]
25. The relationship between stress and infertility. Rooney KL, Domar AD. *Dialogues Clin Neurosci*. 2018;20:41–47. doi: 10.31887/DCNS.2018.20.1/krooney. [DOI] [PMC free article] [PubMed] [Google Scholar]
26. Development of a scale for determining violence against infertile women: a scale development study. Onat G. *Reprod Health*. 2014;11:18. doi: 10.1186/1742-4755-11-18. [DOI] [PMC free article] [PubMed] [Google Scholar]
27. Anxiety and depression in women undergoing infertility treatment. Gdańska P, Drozdowicz-Jastrzębska E, Grzechocińska B, Radziwon-Zaleska M, Węgrzyn P, Wielgoś M. *Ginekol Pol*. 2017;88:109–112. doi: 10.5603/GP.a2017.0019. [DOI] [PubMed] [Google Scholar]
28. Robinson GE, Stewart DE. The psychological impact of infertility and new reproductive technologies. *Harvard Rev Psychiatry*. 1996;4(3):168–172. doi: 10.3109/10673229609030541. [DOI] [PubMed] [Google Scholar]
29. Ramezanzadeh F, Aghssa MM, Abedinia N, Zayeri F, Khanafshar N, Shariat M, et al. A survey of relationship between anxiety, depression and duration of infertility. *BMC Women's Health*. 2004;4(1):9. doi: 10.1186/1472-6874-4-9. [DOI] [PMC free article] [PubMed] [Google Scholar]
30. Kucur Suna K, İlay G, Aysenur A, Kerem Han G, Eda Ulku U, Pasa U, et al. Effects of infertility etiology and depression on female sexual function. *J Sex Marital Therapy*. 2015:1–9. doi: 10.1080/0092623X.2015.1010673. [DOI] [PubMed] [Google Scholar]
31. Al-Homaidan HT. Depression among women with primary infertility attending an infertility clinic in Riyadh, Kingdom of Saudi Arabia: rate, severity, and contributing factors. *Int J Health Sci*. 2011;5(2):108–115. [PMC free article] [PubMed] [Google Scholar]
32. Diallo, A. (2024). Exploring the psycho-social burden of infertility: perspectives of infertile couples in cape coast, ghana. *Plos One*, 19(1), e0297428. <https://doi.org/10.1371/journal.pone.0297428>
33. Dube, L., Nkosi-Mafutha, N., Balsom, A., & Gordon, J. (2021). Infertility-related distress and clinical targets for psychotherapy: a qualitative study. *BMJ Open*, 11(11), e050373. <https://doi.org/10.1136/bmjopen-2021-050373>

34. Duberstein, Z., Brunner, J., Panisch, L., Bandyopadhyay, S., Irvine, C., Macri, J., ... & O'Connor, T. (2021). The biopsychosocial model and perinatal health care: determinants of perinatal care in a community sample. *Frontiers in Psychiatry*, 12. <https://doi.org/10.3389/fpsy.2021.746803>
35. Dwihestie, L. (2021). The correlation between coping mechanisms and stress levels in childbearing women with infertility. *PJMHS*, 15(5), 1326-1329. <https://doi.org/10.53350/pjmhs211551326>
36. Garay, S., Sumption, L., Pearson, R., & Roshan, J. (2021). Risk factors for excessive gestational weight gain in a uk population: a biopsychosocial model approach. *BMC Pregnancy and Childbirth*, 21(1). <https://doi.org/10.1186/s12884-020-03519-1>
37. Hassan, S., Zahra, A., Parveen, N., Iqbal, N., Mumtaz, S., & Batool, A. (2022). Quality of infertility care services and emotional health of south asian women. *Psychology Research and Behavior Management*, Volume 15, 1131-1146. <https://doi.org/10.2147/prbm.s357301>
38. Iordăchescu, D., Paica, C., Boca, A., Gică, C., Panaitescu, A., Peltecu, G., ... & Gică, N. (2021). Anxiety, difficulties, and coping of infertile women. *Healthcare*, 9(4), 466. <https://doi.org/10.3390/healthcare9040466>
39. Kiani, Z., Simbar, M., Hajian, S., & Zayeri, F. (2021). The prevalence of depression symptoms among infertile women: a systematic review and meta-analysis. *Fertility Research and Practice*, 7(1). <https://doi.org/10.1186/s40738-021-00098-3>