

## FEAR OF INFERTILITY AMONG ADULTS IN PAKISTAN: A CROSS-SECTIONAL SURVEY ON EMOTIONAL, SOCIAL, AND INFORMATIONAL ASPECTS

Ahmed Malick<sup>1</sup>, Dipak Chaulagain<sup>2, 3</sup>, Warisha Tariq<sup>1</sup>

<sup>1</sup>Medical Student, Faculty of Medicine, Jalalabad State University, Jalal-Abad, Kyrgyzstan

<sup>2</sup>Associate Professor, Jalal-Abad International University, Manas, Kyrgyzstan

<sup>3</sup>Associate Professor, Uzhhorod National University, Uzhhorod, Ukraine

### Abstract

Infertility is increasingly recognized as a multifaceted issue encompassing biomedical, psychological, and sociocultural dimensions. This cross-sectional study examines the prevalence and intensity of fear of infertility among adults in Pakistan, exploring associated emotional responses, societal pressures, and access to fertility-related information. An online structured questionnaire was distributed via social media and email in April–May 2025, yielding 270 valid responses from participants aged  $\geq 18$  years residing in Pakistan. Fear of infertility was self-rated on a 0–10 scale, with emotional reactions, societal pressure, and informational access also assessed. Results revealed that 68.8% of participants reported moderate to extreme fear (scores 5–10), with marked variations by gender, marital status, and residence. Anxiety was the predominant emotional response (45.6%), followed by sadness (30.1%). Societal pressure was rated moderate to extreme by 18.8%, and 12.7% reported poor access to information. Notable gender differences emerged, with males reporting higher rates of extreme fear. These findings underscore the need for comprehensive public education, culturally sensitive psychological support, and improved equitable access to fertility services and information.

**Keywords:** Infertility, fear of infertility, anxiety, societal pressure, fertility awareness, gender differences, mental health

## СТРАХ БЕСПЛОДИЯ СРЕДИ ВЗРОСЛЫХ В ПАКИСТАНЕ: ПОПЕРЕЧНОЕ ИССЛЕДОВАНИЕ ЭМОЦИОНАЛЬНЫХ, СОЦИАЛЬНЫХ И ИНФОРМАЦИОННЫХ АСПЕКТОВ

Ахмед Малик<sup>1</sup>, Дипак Чаулагаин<sup>2, 3</sup>, Вариша Тарик<sup>1</sup>

<sup>1</sup>Студент медицинского факультета, Джалалабадский государственный университет, Джалалабад, Кыргызстан

<sup>2</sup>Доцент, Джалалабадский международный университет, Манас, Кыргызстан

<sup>3</sup>Доцент, Ужгородский национальный университет, Ужгород, Украина

### Аннотация

Бесплодие все чаще признается многогранной проблемой, охватывающей биомедицинские, психологические и социокультурные аспекты. В этом поперечном исследовании изучается распространенность и интенсивность страха бесплодия среди взрослых в Пакистане, исследуются связанные с ним эмоциональные реакции, социальное давление и доступ к информации, связанной с фертильностью. В апреле–мае 2025 года через социальные сети и электронную почту был распространен структурированный онлайн-опросник, в результате которого было получено 270 достоверных ответов от участников в возрасте  $\geq 18$  лет, проживающих в Пакистане. Страх перед бесплодием оценивался самими участниками по шкале от 0 до 10, также оценивались эмоциональные реакции, социальное давление и доступ к информации.

Результаты показали, что 68,8% участников сообщили об умеренном или сильном страхе (оценки от 5 до 10), с заметными различиями в зависимости от пола, семейного положения и места жительства. Преобладающей эмоциональной реакцией была тревога (45,6%), за которой следовала печаль (30,1%). Социальное давление было оценено как умеренное или сильное 18,8%, а 12,7% сообщили о плохом доступе к информации. Выявились заметные гендерные различия: мужчины сообщали о более высоких показателях сильного страха. Эти результаты подчеркивают необходимость всестороннего просвещения населения, психологической поддержки с учетом культурных особенностей и улучшения равного доступа к услугам и информации в области репродуктивной медицины.

**Ключевые слова:** бесплодие, страх бесплодия, тревога, социальное давление, осведомленность о фертильности, гендерные различия, психическое здоровье

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## Introduction

Infertility affects approximately one in six individuals of reproductive age worldwide.[1] Beyond its medical implications, infertility exerts profound psychological effects, including anxiety, depression, anger, and feelings of hopelessness.[2] While extensive research has focused on the experiences of couples diagnosed with infertility, less attention has been paid to anticipatory fear of infertility in the general population—particularly among those not actively trying to conceive.

In many sociocultural contexts, fertility is closely tied to personal identity, marital stability, and social status. Cultural expectations and gender norms can amplify fear of infertility, even in the absence of diagnosed reproductive issues. In Pakistan, where pronatalist values remain strong, such fears may be heightened by stigma, misinformation, and unequal access to healthcare. Gender roles further shape these experiences, with women often bearing greater societal blame for childlessness, though emerging evidence suggests men also experience significant distress.[3]

This study aimed to quantify the prevalence and intensity of fear of infertility in a diverse Pakistani adult population and to examine its associations with emotional responses, perceived societal pressure, and access to fertility-related information and treatment. By highlighting these underexplored dimensions, the study seeks to inform targeted interventions that address both psychological and structural barriers.

## Methodology

### *Study Design and Participants*

This cross-sectional survey was conducted online in Pakistan between April and May 2025. Inclusion criteria were age  $\geq 18$  years, current residence in Pakistan, and provision of informed consent. The questionnaire was disseminated through social media platforms and email. A total of 270 complete responses were analyzed; incomplete submissions were excluded.

### *Survey Instrument*

The structured questionnaire comprised:

- Demographic items: age, gender, residence (urban, suburban, rural), relationship status, and parenthood status.
- Fear of infertility: single item rated on an 11-point scale (0 = no fear, 10 = extreme fear).
- Emotional responses to the prospect of infertility: multiple-choice selection (anxiety, sadness, anger, indifference, hopefulness; multiple selections allowed).
- Perceived societal pressure: rated as minimal, moderate, or extreme.
- Access to infertility information and treatment: self-rated as very accessible, somewhat accessible, or poorly accessible.

### *Data Analysis*

Descriptive statistics were used to summarize demographics and primary outcomes. Categorical comparisons (e.g., fear intensity by gender, residence, and marital status) were performed using chi-square tests where appropriate. Statistical significance was set at  $p < 0.05$ . Analyses were conducted using SPSS version 26.

## **Results**

### *Participant Characteristics*

The sample ( $N = 270$ ) was predominantly female (60.7%) and urban-dwelling (61.5%), with 11.9% suburban and 26.1% rural. Age distribution: 20–29 years (44.7%), 30–39 years (25.3%), 40–49 years (12.6%), <20 years (11.9%), and  $\geq 50$  years (5.1%). Relationship status: married (50%), single (39%), in a relationship (10.3%), divorced/separated (0.7%). Parenthood status: no children and not trying (49.3%),  $\geq 2$  children (34.6%), actively trying to conceive (8.8%), one child (7.4%).

### *Fear of Infertility and Associated Factors*

On the 0–10 fear scale, 31.3% reported minimal fear (scores 1–2), 43.8% moderate fear (scores 5–6), and 25.0% extreme fear (scores 9–10), yielding 68.8% with moderate-to-extreme fear overall.

Emotional responses included anxiety (45.6%), sadness (30.1%), hopefulness (14.0%), indifference (8.1%), and anger (2.2%). Societal pressure was rated moderate-to-extreme by 18.8%. Access to information/treatment was rated very/somewhat accessible by 87.3% and poorly accessible by 12.7%.

### *Comparative Analyses*

Gender differences were significant: males reported extreme fear more frequently than females (proportionately higher within-group rates), and anxiety predominated among males while sadness was more common among females. Married participants reported greater societal pressure than single participants ( $p < 0.05$ ). Rural residents reported significantly poorer access to information than urban/suburban residents ( $p < 0.01$ ).

## **Discussion**

This study provides the first quantitative insight into anticipatory fear of infertility in a general Pakistani adult population, revealing that nearly 70% experience moderate-to-extreme concern. This high prevalence extends beyond individuals actively pursuing conception or

diagnosed with infertility, indicating that fear of infertility functions as a broader sociocultural and psychological phenomenon.

The observed gender differences challenge traditional assumptions that fertility-related distress disproportionately affects women.[3] Although women have historically been subjected to greater stigma and blame, [4,5] our finding that males reported higher rates of extreme fear suggests that men also internalize significant anxiety—possibly related to perceptions of virility, familial legacy, or unspoken expectations in patriarchal contexts. Anxiety emerged as the dominant emotional response overall, aligning with prior evidence that infertility-related stress commonly manifests as generalized worry and anticipatory distress [2,8]. The higher prevalence of sadness among women may reflect gendered emotional socialization or differential exposure to societal judgment.[3]

Societal pressure, though rated moderate-to-extreme by only 18.8% of participants, was concentrated among married individuals, consistent with literature documenting intensified pronatalist expectations after marriage [4,5]. In Pakistan, where childlessness can threaten marital stability and social standing, such pressure likely amplifies underlying fears. The relatively low overall reporting of extreme pressure may indicate under-reporting due to social desirability bias or reflect genuine variability across subgroups.

Access to fertility information and services was perceived as adequate by most respondents, yet rural participants faced significant disparities. This urban–rural divide mirrors broader healthcare inequities in Pakistan and elsewhere,[7] where geographic barriers, lower health literacy, and limited specialist availability restrict knowledge and options. Improved access could mitigate fear by empowering individuals with accurate information about reproductive health, preventable causes of infertility, and effective treatments.

These findings have several implications. First, public health campaigns should normalize discussions of fertility concerns for both genders, countering stigma and misinformation. Second, integrating brief psychological screening for fertility-related anxiety into primary care—especially for married and rural populations—could facilitate early support. Third, digital and community-based education initiatives offer scalable means to bridge informational gaps, particularly in underserved areas.

## Limitations

The study's online distribution likely introduced selection bias toward younger, urban, and more educated respondents, potentially underestimating fear and access barriers in rural and older populations. Self-reported data are susceptible to recall and social desirability biases. The cross-sectional design precludes causal inferences, and the absence of validated multi-item scales for fear and pressure limits measurement precision. Future research should employ probability sampling, longitudinal designs, and standardized instruments to validate and extend these findings.

## Conclusion

Fear of infertility is a prevalent and multifaceted concern among Pakistani adults, affecting emotional well-being across demographic groups. With nearly 70% reporting moderate-to-extreme fear, accompanied by significant anxiety and gendered emotional patterns, there is an urgent need for inclusive public education, destigmatization efforts, and equitable

access to reproductive health resources. Addressing these issues through culturally tailored interventions can alleviate psychological burden and promote reproductive autonomy.

## References

1. World Health Organization. Infertility. Geneva: WHO; 2023. Available from: <https://www.who.int/news-room/fact-sheets/detail/infertility>
2. Cousineau TM, Domar AD. Psychological impact of infertility. *Best Pract Res Clin Obstet Gynaecol*. 2007 Apr;21(2):293-308. doi: 10.1016/j.bpobgyn.2006.12.003. Epub 2007 Jan 22.
3. Ying LY, Wu LH, Loke AY. Gender differences in experiences with and adjustments to infertility: A literature review. *Int J Nurs Stud*. 2015 Oct;52(10):1640-52. doi: 10.1016/j.ijnurstu.2015.05.004. Epub 2015 May 16.
4. Slade P, O'Neill C, Simpson AJ, Lashen H. The relationship between perceived stigma, disclosure patterns, support and distress in new attendees at an infertility clinic. *Hum Reprod*. 2007 Aug;22(8):2309-17. doi: 10.1093/humrep/dem115. Epub 2007 Jun 19.
5. Hasanpoor-Azghdy SB, Simbar M, Vedadhir A. The social consequences of infertility among Iranian women: A qualitative study. *Int J Fertil Steril*. 2015 Jan-Mar;8(4):409-20. doi: 10.22074/ijfs.2015.4181. Epub 2015 Feb 7.
6. Greil AL, McQuillan J, Slauson-Blevins K. The social construction of infertility. *Sociol Compass*. 2011;5(8):736-746. doi:10.1111/j.1751-9020.2011.00397.x
7. Nachtigall RD. International disparities in access to infertility services. *Fertil Steril*. 2006 Apr;85(4):871-5. doi: 10.1016/j.fertnstert.2005.08.066.
8. Peterson BD, Gold L, Feingold T. The experience and influence of infertility: Considerations for couple counselors. *Fam J*. 2007;15(3):251-257. doi:10.1177/1066480707301365

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