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INFERTILITY AND ITS PSYCHOSOCIAL AND SEXUAL CONSEQUENCES: AN EXPLORATORY STUDY AMONG WOMEN OF REPRODUCTIVE AGE IN CHANDIGARH, INDIA

[1]Navya, [2]*Dr. Dinesh Kumar, [3]Dr. Manoj Kumar

[1]MPH Student, Centre of Public Health, Panjab University, Chandigarh.
[2]Professor, Department of Community Medicine, Government Medical College and Hospital, Chandigarh, India.
[3]Chairperson, Centre of Public Health, Panjab University, Chandigarh.

***Corresponding Author: Dr. Dinesh Kumar**

Professor, Department of Community Medicine, Government Medical College and Hospital, Chandigarh, India.

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ABSTRACT

Background: Infertility remains a major reproductive health concern. Beyond its biological or medical causes, infertility has significant psychosocial and cultural impacts. Broad spectrum of psychological, social, cultural and sexual consequences of infertile women in India poses a major public health challenge requiring attention of researchers. **Objectives:** 1) To identify women's perceptions regarding causes and beliefs associated with infertility.2) To explore their opinions about causation, psychosocial and sexual consequences of infertility**. Methods:** Cross-sectional mixed-method study among women of reproductive in Chandigarh selected by stratified two-stage random sampling technique. They were interviewed in depth for their perceptions regarding infertility. Data were collected through in depth interviews using interview schedules designed for this purpose. Data analysis was done using descriptive statistics and Chi-square test. **Results:** Among 256 women surveyed, the most commonly perceived causes of infertility were hormonal imbalance (18.4%)**,** lifestyle factors (18.0%**)**, and stress (12.9%)**.** Nearly half the respondents reported lack of emotional and financial support (45.3%)**,** with frequent experiences of anxiety and depression (34.4%)**,** emotional breakdown (33.6%)**,** and feelings of guilt (22.7%)**.** In terms of social impact**,** 49.2% of women faced loss of respect within the family**,** 30.1% experienced discouragement from the community**,** and 22.3% were excluded from social gatherings**.** Sexual consequences included indifferent behavior of the partner (25.0%)**,** reduced interest in spouse (19.9%)**,** and extramarital affairs of husband (16.4%). The association between education and social consequence**s** was not significant ($\chi^2 = 4.06$, $p = 0.131$), indicating that stigma and social effects cut across educational levels. However, psychological distress was significantly associated with income level ($\chi^2 = 10.15$, $p = 0.017$), being higher in lower socioeconomic groups. **Conclusions and Suggestions:** Findings of present study highlight that infertility is not only a medical condition **b**ut also a psychosocial and cultural issue deeply affecting women's emotional well-being and social status according to women of reproductive age across all socio-demographic groups in Chandigarh. The study underscores the need for a multidimensional approach to infertility management emphasizing an integrated approach to deal with this problem. Public health programs should aim not only at medical management but also destigmatization through community-based education and reproductive counseling.

KEYWORDS: Infertility, women's perceptions, awareness, reproductive health, social stigma.

INTRODUCTION

Infertility, defined as the inability of a couple to conceive after 12 months of regular, unprotected sexual intercourse, is a significant global reproductive health concern affecting 10–15% of couples of reproductive age. It can be classified as primary (never conceived) or secondary (difficulty after a previous pregnancy) and may result from male, female, combined, or unexplained

factors.[1] Causes are multifactorial, including ovulatory disorders, tubal problems, semen abnormalities, hormonal or genetic factors, and sometimes remain unexplained. Within the Indian sociocultural context, a woman's role as a mother is often seen as essential to her identity and family honor, making childbearing closely tied to social recognition.[2] The individual experiences of infertile women frequently include feelings of guilt, shame, low self-esteem, and psychological distress.[3]

Beyond its biological or medical causes, infertility has significant psychosocial and cultural impacts. Women, especially in developing countries such as India, often experience emotional distress, anxiety, and depression due to involuntary childlessness, while men also face psychological challenges, although these are less frequently studied. In developing countries, the social suffering associated with infertility is amplified by cultural expectations for childbearing, gendered blame, and stigma, sometimes leading to marital disruption, social isolation, or domestic violence.[4-13] In India, infertile women report feelings of inadequacy, societal pressure, and barriers to accessing fertility care, reflecting broader patterns observed in other low- and middle-income countries.[4,7] Overall, infertility is not only a medical condition but also a psychosocial and public health issue with multifaceted implications. Understanding the experiences, perceptions, and challenges faced by infertile women is essential for designing culturally sensitive interventions, improving access to care, and addressing the emotional and social burden associated with infertility.

Broad spectrum of psychological, social, cultural and sexual consequences of infertile women poses a major public health challenge requiring attention of researchers. Chandigarh represents an urban setting where modern medical services coexist with traditional norms, strongly influencing women's perceptions of infertility. While prior research in India has emphasized clinical or demographic aspects, women's subjective experiences remain underexplored. This study aims to examine women's perceptions regarding infertility, encompassing their knowledge, beliefs about causation and views on its psychosocial and sexual consequences.

OBJECTIVES

1) To identify women's perceptions regarding causes and beliefs associated with infertility.
2) To explore their opinions about causation, psychosocial and sexual consequences of infertility.

MATERIAL AND METHODS

Study Design

A community-based, cross-sectional exploratory study was conducted among 256 women of reproductive age (18–49 years) in Chandigarh, India. Chandigarh, being a planned urban city with both modern infrastructure and traditional social norms, provided a suitable setting to explore variations in perceptions regarding infertility.

Study Population

The study population consisted of women aged 18–49 years residing in selected urban, rural, and slum areas of Chandigarh.

Sampling Technique and Sample Size

A stratified two-stage sampling design was employed. Four strata were selected to represent different socio-economic and cultural segments. The sample size was calculated using the formula for large populations, assuming 50% awareness of infertility, a 90% confidence level, and 5% absolute precision. The estimated sample size was 256 women.

Data Collection Tool and Procedure

Data were collected using a semi-structured questionnaire, face-to-face interviews was conducted in local language. Small group discussions were also conducted to supplement quantitative findings with qualitative insights.

Data Analysis

Data were entered and analyzed using SPSS version26.0. Descriptive statistics such as frequency and percentage were used to summarize categorical variables. Inferential analysis was performed using the Chi-square test to determine associations between socio-demographic variables and perceptions regarding infertility. A *p*-value <0.05 was considered statistically significant.

Ethical Considerations

The study was conducted in accordance with the ethical guidelines of the Indian Council of Medical Research (ICMR, 2017) for research involving human participants. Informed consent was obtained from all respondents prior to participation, and confidentiality of responses was strictly maintained.

RESULTS

A total of 256 participants were included in the study. The majority were aged 109 (42.6%) in the 26–35 years' group, followed by 107 (41.8%) in the 36–49 years' group, while 40 (15.6%) were between 18–25 years of age. Half of the participants resided in urban areas 128 (50.0%), whereas 64 (25.0%) each were from rural and slum areas. Regarding family structure, 95 (37.1%) participants belonged to nuclear families, 85 (33.2%) to joint families, and 76 (29.7%) to extended families. In terms of education, 67 (26.2%) were graduates, 50 (19.5%) had completed intermediate, and 40 (15.6%) were postgraduates. Others had studied up to high school 26 (10.2%), primary 20 (7.8%), or middle school 19 (7.4%) levels. A few were illiterate 13 (5.1%), while 21 (8.2%) had professional qualifications. With respect to occupation, 65 (25.4%) were housewives, 51 (19.9%) were in service, 50 (19.5%) were engaged in other occupations, and 40 (15.6%) were in business. Smaller proportions were skilled workers 37 (14.5%) and laborers 13 (5.1%). Perceptions Regarding Causes of Infertility are shown in Table- 1. Among 256 women, the

most commonly perceived causes of infertility were hormonal imbalance 47 (18.4%) and lifestyle factors 46 (18.0%). Other frequently cited causes included stress 33 (12.9%), late marriage and age-related factors 32 (12.5%), and bad eating habits 29 (11.3%). Fewer participants attributed infertility to polycystic ovarian disease 25 (9.8%), lack of physical exercise 17 (6.6%), and side effects of medicines 11 (4.3%). A small number associated infertility with mobile phone radiation 7 (2.7%), environmental factors 7 (2.7%), or God's will and karma 2 (0.8%).

Table -2 presents Psychosocial and Sexual Consequences of Infertility of surveyed women of reproductive age. A substantial proportion of participants reported various psychological and emotional impacts of infertility. Feelings of guilt for not being able to reproduce 58 (22.7%), conflicting communications 57 (22.3%), and lack of emotional and financial support 116 (45.3%) were predominant. Additionally, anxiety and depression 88 (34.4%), emotional breakdown 86 (33.6%), and denial 59 (23.0%) were frequently observed. Other emotional effects included addictive behavior of partner 65 (25.4%), mental pressure 41 (16.0%), shyness 45 (17.6%), and self-blaming 39 (15.2%).

Regarding social consequences, almost half of the respondents experienced lack of respect by family members 126 (49.2%), followed by discouragement by the community 77 (30.1%), and banning from attending social functions 57 (22.3%). Some also reported dishonor for not continuing family inheritance 41 (16.0%), domestic violence 43 (16.8%), and economic impact due to lack of support in old age 48 (18.8%).

Concerning sexual consequences, indifferent behavior of partner 64 (25.0%), lack of interest in partner 51 (19.9%), and extramarital affairs of the husband 42 (16.4%) were the major issues faced. A smaller proportion reported extramarital affairs 31 (12.1%), sexual problems 12 (4.7%), and stigma due to unfulfilled reproductive desires 12 (4.7%).

Association between educational status and social consequences is presented in Table- 3. The majority of women across all educational levels reported that infertility had some social consequences. Among illiterate or just literate women, 27 (81.8%) perceived social impact compared to 76 (80.0%) of those below graduate level and 99 (77.3%) among graduates and above. Only 54 (21.1%) reported no effect overall. The association between education and social consequences was not statistically significant ($\chi^2 = 4.06$, $p = 0.131$.

Table 1: Perceptions of women regarding causes of infertility.

Perceptions regarding causes of infertility	Number	Percent
Hormonal imbalance	47	18.4
Due to Stress	33	12.9
Due to PCOD	25	9.8
Mobile phone radiations	7	2.7
God's Will and Karma	2	0.8
Medicine Side effects	11	4.3
Lack of physical exercise	17	6.6
Lifestyle factors	46	18.0
Late Marriage and Age related factors	32	12.5
Bad eating habits	29	11.3
Environmental factors	7	2.7
Total	**256**	**100.0**

Association between educational status and social consequences is presented in Table- 3. The majority of women across all educational levels reported that infertility had some social consequences. Among illiterate or just literate women, 27 (81.8%) perceived social impact compared to 76 (80.0%) of those below graduate level and 99 (77.3%) among graduates and above. Only 54 (21.1%) reported no effect overall. The association between education and social consequences was not statistically significant ($\chi^2 = 4.06$, $p = 0.131$).

Table 2: Opinion of women regarding psychosocial and sexual consequences of infertility.

Opinion regarding consequences of infertility	No	Percent
Suppress feelings	47	18.4
Feeling Sad/ Grieved	39	15.2
Powerlessness	48	18.8
Guilt as not able to reproduce	58	22.7
Conflicting communications	57	22.3
Lack of emotional and financial support	116	45.3
Anxiety and depression	88	34.4
Addictive behavior of partner	65	25.4

Unresolved grief	36	14.1
Emotionally Broken	86	33.6
Increased stress and anxiety	43	16.8
Depression	46	18.0
Feeling of isolation	45	17.6
Denial	59	23.0
Feeling of Sacred	43	16.8
Feeling of Discomfort	48	18.8
Feeling of Guilty	37	14.5
Self-blaming	39	15.2
Shyness	45	17.6
Mental pressure	41	16.0
Feeling of Shock	34	13.3
Indifferent	40	15.6
Others	49	19.1
No effect	54	21.1
Social consequences		
Social isolation	34	13.3
Desire of children/grandchildren remain unfulfilled	11	4.3
Economically affects as children take care of Parents in old age	48	18.8
Dishonor for not continuing family inheritance	41	16.0
Sufferings due to domestic Violence	43	16.8
Banned from attending social functions	57	22.3
Lack of respect by family members	126	49.2
aged by community due to loss of contribution to society	77	30.1
Sexual		
Extramarital affair	31	12.1
Sexual Problems	12	4.7
Lack of interest in partner	51	19.9
Indifferent behavior of partner	64	25.0
Stigma due to non-fulfilling reproductive desires	12	4.7
Have to bear extramarital affairs of the husband	42	16.4
Others	68	26.6
Total	**256**	**100.0**

Table 3: Women social consequences of Infertility with educational status of women.

Educational level	No effect N (%)	Has some effect N (%)	Total N (%)
Illiterate/Just Literate	6 (18.2)	27 (81.8)	33 (100.0)
Below Graduate	19 (20.0)	76 (80.0)	95 (100.0)
Graduate and above	29 (22.7)	99 (77.3)	128 (100.0)
Total	**54 (21.1)**	**202 (78.9)**	**256 (100.0)**
		χ^2=4.06	**P=0.131**

Table-4 presents perceived violence against infertile women and socioeconomic characteristics. Overall, 43 (16.8%) of the women reported experiencing violence related to infertility. Violence was slightly more common among those engaged in occupations other than housewives 34 (17.8%) compared to housewives 9 (13.8%), but this difference was not statistically significant (χ^2 = 0.54, p = 0.461). Similarly, when stratified by income level, violence was reported by 11 (13.3%) from the lower, 15 (18.3%) from lower-middle, 8 (18.2%) from middle, and 9 (19.1%) from high-income groups. The differences were not statistically significant (χ^2 = 1.12, p = 0.770).

Perceived psychological consequences and socioeconomic characteristics are presented in Table-5. Psychological consequences of infertility were widely reported, with 202 (78.9%) women acknowledging some form of psychological distress. Among housewives, 49 (75.4%) experienced psychological consequences, compared to 153 (80.1%) among other occupational groups (χ^2 = 0.65, p = 0.420). Across income levels, the prevalence of psychological consequences increased with socioeconomic status—from 70 (84.3%) in the lower, 70 (85.4%) in the lower-middle, and 31 (70.5%) in the middle group to 31 (66.0%) in the high-income group. The association between income and psychological

consequences was statistically significant (χ^2 = 10.15, p = 0.017).

Table 4: Perceived Violence against infertile Women with their socioeconomic characteristics.

Socioeconomic characteristics	Violence against infertile women		
	No violence N (%)	Violence N (%)	Total N (%)
Occupation			
Housewife	56(86.2)	9(13.8)	65(100.0)
Others	57(82.2)	34(17.8)	191(100.0)
Total	213(83.2)	43(16.8)	256(100.0)
		χ^2=0.54	P=0.461
Income levels			
Lower	72(86.7)	11(13.3)	83(100.0)
Lower Middle	67(81.7)	15(18.3)	82(100.0)
Middle	36(81.8)	8(18.2)	44(100.0)
High	38(80.9)	9(19.1)	47(100.0)
Total	213(83.2)	43(16.8)	256(100.0)
		χ^2=1.12	P=0.770

Table 5: Perceived psychological consequences of infertile Women with their socioeconomic characteristics.

Socioeconomic characteristics	Psychological consequences		Total N (%)
	No consequences N (%)	Have some consequences N (%)	
Occupation			
Housewife	16(24.6)	49(75.4)	65(100.0)
Others	38(19.9)	153(80.1)	191(100.0)
Total	54(21.1)	202(78.9)	256(100.0)
		χ^2=0.65	P=0.420
Income levels			
Lower	13 (15.7)	70(84.3)	83 (100.0)
Lower Middle	12 (14.6)	70 (85.4)	82 (100.0)
Middle	13 (29.5)	31 (70.5)	44 (100.0)
High	16 (34.0)	31 (66.0)	47 (100.0)
Total	**54 (21.1)**	**202(78.9)**	**256(100.0)**
		χ^2=10.15	**P=0.017**

DISCUSSION

The present study explored the perceptions and socio-cultural contexts of infertility among women of reproductive age in Chandigarh, revealing that infertility remains a highly gendered and stigmatized phenomenon. In the present study conducted among 256 women surveyed, commonly perceived causes included hormonal imbalance (18.4%), lifestyle factors (18%), and stress (12.9%). Other perceptions included late marriage and age-related issues (12.5%), poor diet (11.3%), polycystic ovarian disease (9.8%), and lack of exercise (6.6%). Regarding psychological and emotional effects, nearly half the respondents reported lack of emotional and financial support (45.3%), with frequent experiences of anxiety and depression (34.4%), emotional breakdown (33.6%), and feelings of guilt (22.7%). In terms of social impact, 49.2% of women faced loss of respect within the family, 30.1% experienced discouragement from the community, and 22.3% were excluded from social gatherings. Sexual consequences included indifferent behavior of the partner (25.0%), reduced interest in spouse (19.9%), and extramarital affairs of husband (16.4%).

The association between education and social consequences was not significant. However, psychological distress was significantly associated with income level being higher in lower socioeconomic groups.

This study highlights that infertility remains not only a medical condition but also a psychosocial and cultural issue deeply affecting women's emotional well-being and social status. Similar to previous research in India and other developing countries, women commonly attributed infertility to hormonal imbalance, stress, and lifestyle factors, reflecting increasing awareness of biomedical and modifiable determinants.[1,4] However, the persistence of beliefs in fate, karma, and supernatural causes, albeit in small numbers, suggests ongoing cultural influence in reproductive perceptions.[5]

The psychological burden observed — including anxiety, depression, guilt, and self-blame — aligns with findings which reported higher rates of depressive symptoms among infertile women compared to fertile counterparts.[6 ,7] The prevalence of emotional distress in nearly 79% of participants underscores the need for integrating psychological counseling and peer-support mechanisms within infertility management programs.[8,9]

Social consequences such as loss of respect, stigmatization, and exclusion from community events were also widespread, consistent with findings of earlier studies describing infertility as a major source of social ostracism for women, particularly in patriarchal societies.[10,11] These findings reaffirm that infertility often challenges traditional gender expectations, where motherhood defines feminine identity.

Interestingly, education level did not mitigate social consequences, suggesting that stigma transcends literacy and awareness barriers. This finding mirrors results from a study in Nigeria where educated women still faced similar social exclusion due to infertility.[12] Conversely, psychological distress was significantly linked to income, reflecting that women from lower-income groups may have fewer coping resources or access to treatment.[7]

The occurrence of domestic violence (16.8%) in this study aligns with prior reports from South Asia showing that infertility can trigger emotional, verbal, and physical abuse.[14] Cultural emphasis on fertility as a marital expectation places women at risk for such violence, emphasizing the importance of social protection frameworks and gender-sensitive interventions in infertility care.[15] Negative societal attitudes were also evident, with 22.3% of respondents reporting exclusion from social functions and 49.2% experiencing a lack of respect from family members. In similar studies from Gujarat and South India, infertile women described social isolation and being treated as inauspicious during religious or family events.[16,17]

CONCLUSION

Findings of present study highlight that infertility is not only a medical condition but also a psychosocial and cultural issue deeply affecting women's emotional well-being and social status according to women of reproductive age across all socio-demographic groups in Chandigarh. Infertility was accompanied by emotional distress, guilt, and reduced self-esteem, and were further compounded by negative familial and societal attitudes. The study underscores the need for a multidimensional approach to infertility management emphasizing an integrated approach to deal with this problem. Clinical interventions must be complemented by psychological and social interventions. Psycho-social counselling, gender-sensitive health communication, and community education must be prioritized alongside medical treatment. Public health programs should aim not only at medical management but also destigmatization through community-based education and reproductive counseling.

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