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Original Research Article

Individual and socio-cultural contexts of infertility: some experiences among women in Chandigarh, India

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ABSTRACT

Background: Infertility has emerged as one of the most challenging reproductive health issues of modern times affecting approximately 10–15% of couples globally. Infertility is a multidimensional issue requiring psychosocial interventions. To explore perceptions regarding individual, psychosocial and cultural influences on infertility among women of reproductive age in Chandigarh. To interrelate individual, psychosocial and cultural influences of infertility with demographic characteristics of women.
Methods: Cross-sectional study conducted during January 2025 to June 2025, using mixed-method approach included 256 women aged 18–49 years in Chandigarh selected by stratified two-stage random sampling technique. They were interviewed in depth for their opinions concerning individual and socio-cultural contexts of infertility. Quantitative analysis included descriptive statistics and Chi-square tests.
Results: Most participants were aged 26–35 years (42.6%), followed by 36–49 years (41.8%), Blaming women for infertility was reported by 83 (32.4%) respondents. Infertility was perceived influencing adversely women's self-esteem strongly agreed by 58 (22.7%) respondents, Societal attitudes included banning from social functions (22.3%), lack of respect from family (149.2%), extramarital affairs (16.4%). Cultural beliefs included emotional breakdown (33.6%) followed by old age support (8.8%). No significant associations between socio-cultural contexts and demographic characteristics were found, indicating that stigma and negative perceptions surrounding infertility cut across all socio-demographic groups.
Conclusions: Infertility was mostly attributed to women with significant emotional, social and cultural linkages such as guilt, reduced self-esteem, lack of family support and exclusion from social functions. Individual and socio-cultural contexts were found irrespective of demographic characteristics. Psycho-social interventions along with medical infertility management strategies should be adopted addressing stigma and cultural misconceptions.

Keywords: Infertility, Psychosocial impact, Reproductive health, Socio-cultural contexts, Stigma, Women's health

INTRODUCTION

Infertility has emerged as one of the most challenging reproductive health issues of modern times, with significant consequences for couples at biological, psychological, social and cultural levels. According to World Health Organization (WHO), infertility is defined as the inability to achieve a pregnancy after 12 months of regular, unprotected intercourse. Infertility is a global reproductive health issue affecting approximately 10–15% of couples globally.[1] Infertility is reported to have significant social and psychological consequences in developing countries and infertile couples seek medical or

psychological support.[2] In many cultures, motherhood is considered the cornerstone of a woman's identity and failure to bear children is often stigmatized. Infertility can lead to social exclusion, isolation and discrimination, particularly for women, who are more often blamed for the condition regardless of the medical cause. In an interesting article the diverse behaviors, cultural practices and health-seeking patterns associated with infertility has been examined. It emphasized stigma, misconceptions and psychological distress associated with infertility.[3] In a community-based cross-sectional survey of 500 married adults in Sagamu LGA (Ogun State) assessed beliefs about infertility and where people seek care.[4] In India, where fertility and motherhood are central to a woman's identity, infertility is not only perceived as a biomedical issue but also a profound social crisis.[5]

Studies in India reported infertility as heavily stigmatized, often disproportionately affecting women due to socio-cultural expectations linking womanhood with motherhood.[5,6] The individual experiences of infertile women frequently include feelings of guilt, shame, low self-esteem and psychological distress.[6] In our country motherhood is perceived as a societal obligation and women unable to conceive may face stigma, marital instability or exclusion from social and religious activities. Studies from India demonstrate that infertile women commonly face neglect or hostility from in-laws and community members, reinforcing the perception that their social worth is tied to reproductive ability.[6,7] Women are often disproportionately blamed for childlessness, irrespective of whether the cause lies with the male partner, both partners or remains unexplained.[8] These are further compounded by socio-cultural pressures such as stigmatization, marital instability and exclusion from social and religious functions.[9]

Infertility is not merely as a medical condition but as a multidimensional issue requiring psychosocial support and community sensitization. Existing literature focuses heavily on biomedical aspects, leaving gaps in understanding the lived experiences and perceptions of women in semi-urban India.[5] Societal and psychological implications of infertility are particularly profound in patriarchal cultures, where fertility is closely tied to a woman's identity, worth and social acceptance.[5,10] Emotional outcomes such as anxiety, depression and diminished self-esteem are common.[11]

Chandigarh represents a unique socio-cultural context having an urban center with advanced healthcare infrastructure but also deep-rooted traditional values.[12] National Family Health Survey-5 data reported high degree of awareness of reproductive technology and treatments options available for infertile couples among women in Chandigarh.[13] Chandigarh, the city beautiful of India, is a highly urbanized city. Here a greater awareness of reproductive technologies is expected among women with coexisting individual and socio-cultural factors like stigma and social exclusion. Comprehensive understanding of these factors is crucial for management of infertility.

Therefore, present study was conducted with the objectives to explore perceptions regarding individual, psychosocial and cultural influences on infertility among women of reproductive age in Chandigarh. To interrelate individual, psychosocial and cultural influences of infertility with demographic characteristics of women.

METHODS

Study design and study area

A community-based, cross-sectional mixed-method study was conducted in urban, rural and slum areas of Chandigarh.

Study duration

The study was conducted during January 2025 to June 2025 conducting in depth interviews among women of reproductive ages.

Study population and sampling design

The study included women aged 18–49 years. A stratified two-stage random sampling design was used selecting four strata as first stage units and women in selected strata with proportional allocation.

Sample size calculation

Based on an anticipated infertility awareness of 50%, a 90% confidence level and 5% precision, the sample size was calculated as 256.

Data collection tool

A semi-structured questionnaire was administered through face-to-face interviews. Small group discussions were conducted to explore social constructs. The tool included sections on socio-demographic profile, knowledge and perceptions about infertility, psychosocial consequences, societal attitudes and barriers to treatment.

Statistical analysis

Qualitative outcomes are described by using frequency distribution with percentages. Chi-square test was used for testing significance of association between awareness of women regarding Infertility and socio-demographic factors. SPSS 26.0 Software was used for data analysis

Ethical considerations

Ethical Guidelines of ICMR (2017) on human participants were strictly followed. Respondents giving their consent for participation were included. Informed

consents from respondents for participation in the study were taken and confidentiality of responses was ensured.

RESULTS

A total of 256 respondents were included. Most participants were aged 26–35 years (109; 42.6%), followed by 36–49 years (107; 41.8%) and 18–25 years (40; 15.6%). Half of the respondents resided in urban areas (128; 50.0%), while 64 (25.0%) each were from rural and slum areas as presented in Table 1. Regarding family type, nuclear families (95; 37.1%) were most common, followed by joint families (85; 33.2%) and extended families (76; 29.7%). Educational status showed that the majority were graduates (67; 26.2%), intermediate (50; 19.5%) or postgraduates (40; 15.6%), with fewer being illiterate (13; 5.1%) or having only primary education (20; 7.8%). Concerning occupation, housewives formed 65 (25.4%), service holders 51 (19.9%), business 40 (15.6%), skilled workers 37 (14.5%), labourers 13 (5.1%), while others were 50 (19.5%).

Perceptions of respondents regarding infertility are presented in table 2. When asked who is responsible for infertility, 40 (15.6%) blamed males, 83 (32.4%) the female, 79 (30.9%) both and 54 (21.1%) no one. Reactions on infertility included sacred (43; 16.8%), discomfort (48; 18.8%), guilt (37; 14.5%), shyness (45; 17.6%), indifference (40; 15.6%) and others (43; 16.8%). Reported consequences were shock (34; 13.3%), denial (59; 23.0%), guilt/blame (39; 15.2%), mental pressure (41; 16.0%), social isolation (34; 13.3%) and other effects (49; 19.1%).

Regarding effects of infertility on women's self-esteem, 58 (22.7%) strongly agreed, 50 (19.5%) agreed, 58 (22.7%) were neutral, 44 (17.2%) disagreed and 46 (18.0%) strongly disagreed. Family attitude was indifferent in 60 (23.4%), cooperative in 54 (21.1%), non-cooperative in 27 (10.5%), sympathetic in 51 (19.9%) and other responses in 64 (25.0%). Societal attitudes included banning from social functions (57; 22.3%), lack of respect from family (126; 49.2%), bearing extramarital affairs (42; 16.4%), discouragement due to family discontinuity (77; 30.1%) and lack of support (116; 45.3%). Cultural beliefs were felt like emotional breakdown (86; 33.6%), dependence on children in old age (48; 18.8%), dishonor for not continuing family inheritance (41; 16.0%), social implications of childlessness (58; 22.7%) and stigma due to sexual problems (12; 4.7%), while inheritance desire unfulfilled in 11 (4.3%).

Table 3 presents responsibility of infertility with personal characteristics of respondents. As reported by women aged 18–25 years, only 6 (15.0%) blamed male, 16 (40.0%) female, 10 (25.0%) both and 8 (20.0%) no one. In the 26–35 years group, 18 (16.5%) male, 33 (30.3%) female, 33 (30.3%) both, 25 (22.9%) no one. For 36–49 years, 16 (15.0%) male, 34 (31.8%) female, 36 (33.6%) both, 21 (19.6%) were of the opinion that no one was responsible. No significant association was found between opinion of respondents and age of respondents. (χ^2=2.01, p=0.980). Among housewives, 12 (18.5%) male, 21 (32.3%) female, 20 (30.8%) both, 12 (18.5%) no one; while in others, 28 (14.7%) male, 62 (32.5%) female, 59 (30.9%) both, 42 (22.0%) no one were reported. This association was also found to be non-significant (χ^2=0.74, p=0.870). By age, indifference was reported by 4 (10.0%) in 18–25 years, 16 (14.7%) in 26–35 years and 20 (18.7%) in 36–49 years. By occupation, 11 (16.9%) housewives and 29 (15.2%) others perceived indifference.

No significant association was observed between familial attitude for infertility and personal characteristics of women (χ^2=1.80, p=0.407 for age; χ^2=0.111, p=0.740 for occupation) as shown in Table 4. Societal attitude towards attending social functions in relation with personal characteristics of women is presented in Table 5.

Among women aged 18–25 years, 6 (15.0%) reported banned on attending social functions while 34 (85.0%) were not. For 26–35 years, 29 (26.6%) banned and 80 (73.4%) not banned. In 36–49 years, 22 (20.6%) banned and 85 (79.4%) not banned. By occupation, 16 (24.6%) housewives and 41 (21.5%) others were banned. No significant association was found (χ^2=4.49, p=0.106 for age; χ^2=0.29, p=0.590 for occupation).

Table 1: Socio-demographic characteristics of participants.

Socio-demographic characteristic	Number	%
Age (in years)		
18–25	40	15.6
26–35	109	42.6
36–49	107	41.8
Total	256	100.0
Residence		
Urban	128	50.0
Rural	64	25.0
Slum	64	25.0
Family type		

Continued.

Socio-demographic characteristic	Number	%
Joint	85	33.2
Nuclear	95	37.1
Extended	76	29.7
Education level		
Illiterate	13	5.1
Primary	20	7.8
Middle	19	7.4
High school	26	10.2
Intermediate	50	19.5
Graduate	67	26.2
Post graduate	40	15.6
Professional	21	8.2
Occupation		
Housewife	65	25.4
Service	51	19.9
Business	40	15.6
Laborer	13	5.1
Skilled worker	37	14.5
Others	50	19.5
Total	256	100.0

Table 2: Perceptions of respondents regarding individual and socio-cultural factors concerning infertility.

Perceptions	Number	%
Individual factors		
Who is responsible for infertility		
Male	40	15.6
Female	83	32.4
Both	79	30.9
No one	54	21.1
Reaction on infertility		
Sacred	43	16.8
Discomfort	48	18.8
Felt Guilty	37	14.5
Shyness	45	17.6
Indifferent	40	15.6
Others	43	16.8
Opinion regarding consequences of infertility		
Feeling of Shock	34	13.3
Denial	59	23.0
Guilt/blame	39	15.2
Mental pressure	41	16.0
Social isolation	34	13.3
Any other	49	19.1
Effects of infertility on woman's self esteem		
Strongly agree	58	22.7
Agree	50	19.5
Neutral	58	22.7
Disagree	44	17.2
Strongly disagree	46	18.0
Family attitude		
Indifferent	60	23.4
Cooperative	54	21.1
Non-cooperative	27	10.5

Continued.

Perceptions	Number	%
Sympathetic	51	19.9
Others	64	25.0
Total	256	100.0
Societal attitude		
Banned from attending social functions	57	22.3
No respect or regard given by family members	126	49.2
Have to bear extramarital affairs of the husband	42	16.4
Discouraged by community due to loss of family continuity/contribution to society	77	30.1
Lack of emotional and financial support	116	45.3
Cultural beliefs		
Emotionally Broken	86	33.6
Desire of inheritance remained unfulfilled	11	4.3
Dependence on children/Old age support	48	18.8
Dishonor for not continuing family inheritance	41	16.0
Social implications as not able to reproduce	58	22.7
Stigma due to sexual problems	12	4.7
Total	256	100.0

Table 3: Perceptions of respondents regarding responsibility of infertility and personal characteristics.

Personal characteristics of respondents	Responsibility of infertility				
	Male (%)	Female (%)	Both (%)	No one (%)	Total (%)
Age					
18–25	6 (15.0)	16 (40.0)	10 (25.0)	8 (20.0)	40 (100.0)
26–35	18 (16.5)	33 (30.3)	33 (30.3)	25 (22.9)	109 (100.0)
36–49	16 (15.0)	34 (31.8)	36 (33.6)	21 (19.6)	107 (100.0)
Total	40 (15.6)	83 (32.4)	79 (30.9)	54 (21.1)	256 (100.0)
				χ^2=2.01	P=0.980
Occupation					
Housewife	12 (18.5)	21 (32.3)	20 (30.8)	12 (18.5)	65 (100.0)
Others	28 (14.7)	62 (32.5)	59 (30.9)	42 (22.0)	191 (100.0)
Total	40 (15.6)	83 (32.4)	79 (30.9)	54 (21.1)	256 (100.0)
				χ^2=0.74	P=0.870

Table 4: Perceptions of respondents regarding indifferent familial attitude for infertility and personal characteristics.

Personal characteristics of respondents	Indifferent familial attitude for infertility		Total (%)
	Indifferent (%)	Not indifferent (%)	
Age (in years)			
18–25	4 (10.0)	36 (90.0)	40 (100.0)
26–35	16 (14.7)	93 (85.3)	109 (100.0)
36–49	20 (18.7)	87 (81.3)	107 (100.0)
Total	40 (15.6)	216 (84.4)	256 (100.0)
		χ^2 = 1.80	P=0.407
Occupation			
Housewife	11(16.9)	54 (83.1)	65 (100.0)
Others	29 (15.2)	162 (84.8)	191 (100.0)
Total	40 (15.6)	216 (84.4)	256 (100.0)
		χ^2=0.111	P=0.740

Table 5: Perceptions regarding societal attitude for attending social functions regarding infertility and personal characteristics.

Personal characteristics of respondents	Societal attitude to attend social functions		Total (%)
	Not banned (%)	Banned (%)	
Age (in years)			
18–25	34 (85.0)	6 (15.0)	40 (100.0)
26–35	80 (73.4)	29 (26.6)	109 (100.0)
36–49	85 (79.4)	22 (20.6)	107 (100.0)
Total	199 (77.7)	57 (22.3)	256 (100.0)
		χ^2=4.49	P=0.106
Occupation			
Housewife	49 (75.4)	16 (24.6)	65 (100.0)
Others	150 (78.5)	41 (21.5)	191 (100.0)
Total	199 (77.7)	57 (22.3)	256 (100.0)
		χ^2=0.29	P=0.590

DISCUSSION

The present study explored the perceptions and psychosocial consequences of infertility among 256 women of reproductive age in Chandigarh, highlighting the intersection between individual experiences and socio-cultural contexts of infertility. The study highlights that infertility is perceived largely as a woman's responsibility, with one-third of respondents attributing childlessness to females alone. Despite differences in age, education and occupation, no significant associations were found, indicating that stigma and negative perceptions surrounding infertility cut across all socio-demographic groups.

The findings highlight substantial psychosocial distress, with the majority of participants reporting negative mental health impacts and facing exclusion, indifference or neglect. Psychological consequences such as guilt, shyness and social isolation were common and many women reported diminished self-esteem. Familial responses were often indifferent while societal attitudes restricted women from social functions. Loss of respect of childless women without going into exact causes of infertility was also reported within family and community. Cultural beliefs further reinforced stigma, linking infertility with dishonor, dependence and emotional breakdown blaming merely women for infertility.

The largest proportion aged 26–35 years (109; 42.6%) followed by 36–49 years (107; 41.8%). The largest proportion of participants fell in the 26–35 years age group, a period of heightened fertility expectations and social pressure.[6,11] This finding is also consistent with research showing that women in their peak reproductive years are most affected by the social burden of infertility, since societal expectations of motherhood are highest in this age group.[7] Half of the participants were from urban areas (50.0%), though rural and slum populations together accounted for 50%. Evidence suggests that infertility-related stigma in India transcends geographic settings, though rural women often face harsher social sanctions than urban women.[5] Emotional reactions were prominent, with discomfort, shyness and guilt being common, indicating internalized stigma and self-blam.[5,10] While many participants identified biomedical causes such as hormonal imbalance and lifestyle factors, a small subset still attributed infertility to supernatural causes, reflecting persistent cultural beliefs alongside modern awareness.[1] Infertility was still more often attributed to women (32.4%) than to men (15.6%). This reflects deep-rooted gendered stereotypes, wherein infertility continues to be culturally constructed as a "woman's issue" despite biomedical evidence that male factors contribute equally.[2] Similar results have been reported in qualitative studies from India and other low- and middle-income countries, where women bear disproportionate blame and social consequences of childlessness.[6,8] This finding supports long-standing patriarchal attitudes that hold women accountable for childlessness despite medical evidence of male infertility.[6,11] The emotional and psychological responses identified in our study were guilt (14.5%), shyness (17.6%), discomfort (18.8%) and social isolation (13.3%) with nearly one in four reporting exclusion from social events.

Despite relatively high levels of education, gendered blame persisted, reflecting deeply rooted socio-cultural norms. Societal attitudes in terms of stigma: 22.3% of respondents reported being banned from attending social functions, while 16.4% had to endure their husband's extramarital relationships. These findings are supported by a study in South India, which noted that infertile women were often excluded from rituals associated with fertility and faced threats to marital stability. Such exclusion has been linked to psychological distress and erosion of social identity in infertile women.[7]

Beyond its medical implications, infertility significantly affects women's identity and psychosocial health influencing social relationships adversely. Nearly half of

the women in this study also reported a lack of respect within families (49.2%) and insufficient emotional or financial support (45.3%). Patel et al similarly observed that infertile women in Gujarat frequently reported neglect, strained marital relationships and hostile attitudes from in-laws.[8] Infertility stigma leads to shame, reduced self-esteem and reliance on defensive coping strategies such as social withdrawal.[9] Psychosocial impacts like lack of family support, remain consistent with prior studies in India.[5,7,13]

These findings highlight the need for integrated reproductive healthcare that addresses not only the biomedical aspects but also the psychosocial burdens, community stigma and cultural misconceptions surrounding infertility.[1] No significant differences were observed across age groups or occupational categories in terms of responsibility attribution or familial indifference suggesting that psychological consequences are widespread across age groups and infertility-related stigma transcends socio-demographic boundaries regardless of education, residence or employment. Similar pattern, where both educated and less educated women reported parallel experiences of blame and social rejection.[7]

Cultural beliefs were also significant: one-third (33.6%) reported emotional breakdown, 22.7% cited social implications of childlessness and 18.8% noted dependence on children for old age security. Such beliefs align with research highlighting how infertility undermines women's social identity and contributes to long-term insecurity in patriarchal societies.[5,6] Overall, the findings underscore that infertility in India remains not only a biomedical concern but also a profound social issue, demanding interventions that combine medical care with psychosocial support, awareness and community-level sensitization to challenge entrenched gendered perceptions.

The study has several strengths from a public health perspective. The present study focused not only on infertile women but on all women of reproductive age. This is because the attitudes, perceptions and behaviours of other women can significantly influence the experiences and psychological well-being of those facing infertility. Representation of women from urban, rural and slum strata reflected diverse cultural norms influencing infertility in the study population with advanced healthcare services.

In spite of several strengths, the study suffers some limitations. It lacks generalizability for population diversified social and cultural beliefs regarding infertility as it was restricted study population of Chandigarh only. The study focused exclusively on women, even though infertility affects both partners. Experiences of men could have provided a more balanced and complete understanding of the issue.

CONCLUSION

Infertility among women of reproductive age in Chandigarh remains a deeply social and cultural issue shaped by limited awareness, gender biases and cultural stigma irrespective of demographic characteristics. The study concluded that infertility was most often attributed to women, with significant emotional, social and cultural consequences such as guilt, reduced self-esteem, lack of family support and exclusion from social functions. Individual and socio-cultural contexts were found irrespective of demographic characteristics. The study suggests the need for adopting psycho-social interventions along with medical infertility management strategies combining medical treatment with psychosocial support, addressing stigma and cultural misconceptions. Infertility management strategies should include community-based awareness programs, counselling services and family-inclusive approaches to reduce gendered blame, provide psychosocial support and normalize shared responsibility between men and women and cultural change that promote an environment of shared responsibility.

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