Treatment Seeking Behavior and Psycho Socioeconomic Impact of Infertility Affected Couples Residing in the Catchment Area of an Urban Health Training Centre, Ahmedabad City: Mixed Method Study

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Abstract:

Introduction: Infertility is a serious public health issue and addressing this, is in centre to not only to attain SDG 3 and SDG 5, but also to ensure human rights to everyone. **Objective:** To document the treatment seeking behavior and psycho social impact on infertility affected couple residing in the catchment area of urban health training centre, Ahmedabad city. **Method:** A community based, cross sectional, mixed method study was conducted in the areas under the Urban Health Training Canter (UHTC) of GMERS Medical College, Sola, Ahmedabad. Survey covered 689 married women of reproductive age group for infertility (based on WHO field based definition). A total 51 women from infertile couples were interviewed in-depth and were also assessed for anxiety and depression using GAD 7 and PHQ 9 respectively. **Results:** Out of 51 affected women, 36 (70.6%) took treatment; mostly (88.9%) from Gynaecologists who were invariably from private sector. Out of pocket expenditure (OOPE) for treatment varied highly, from INR 200 to INR 1200000. Out of 51 women, 8 (16%) had anxiety and 10 (19.6 %) had depression. A total 7 (13.7%) of them were blamed by husband or in-laws while 6 of them (11.8%) stated that issue of infertility has affected their sexual life as well. **Conclusion:** Couples affected with infertility had varied out of pocket expenses and were also prone to anxiety and depression. Due to the social and psychological implications and huge OOPE, management of infertility should be covered under various governmental health insurance schemes.

Keywords: Infertility, Mixed Method study, Out of pocket expenditure, Psycho social consequences, Treatment seeking behavior

Introduction:

Infertility has been recognized as a public health issue worldwide by the World Health Organization (WHO).[1] Infertility is not only a medical challenge but also takes a major psychological and financial toll on the couples.[2] Today the main causes of infertility are stress, male factor, medical disorders such as diabetes, hypertension, hypothyroidism and lifestyle diseases such as obesity and addictions in the young etc., and sometimes unexplained. Tobacco and alcohol are the most prevalent addictions significantly affecting semen quality.[3]

Women are either divorced or abandoned by husbands for second marriage if a woman is unable to give birth to a child. Estimates suggest that in the developing world, the overall burden of infertility is

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over three times higher than developed countries.[4] When allopathic treatment does not work, women seek other methods, or visit holy places and spiritual healers. Most couples seek treatment after they fail to conceive within 1 - 4 years.[5] Some factors influence the treatment-seeking behaviour of women are the willingness of couples, accessibility of infertility care, social and emotional repercussions during ongoing treatment,[6] and affordability of the expenses of treatment.[7-10]

No governmental program focuses on the management of infertility and it has become a neglected reproductive health issue. Infertility treatment is not covered under Ayushman Bharat and Pradhan Mantri Matrutva Vandana Yojana. Current programs at no stage records or addresses the problem of infertility. Such couples on their own go from one clinic to other for the treatment including faith healers, quacks and practitioners of alternative health systems.

Objectives:

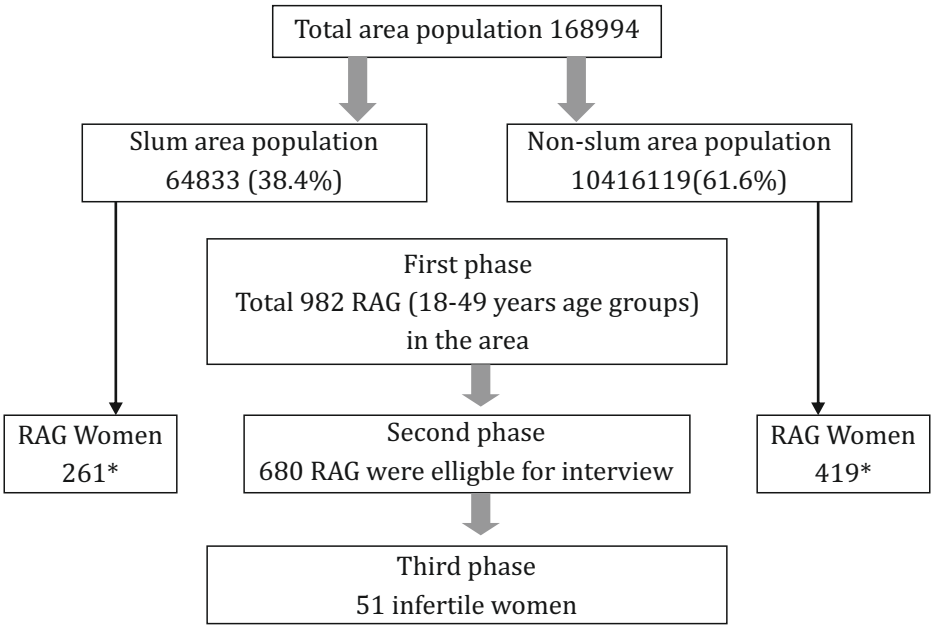
1. To document the profile, out of pocket expenditure (OOPE) and treatment seeking behavior of infertility affected couple residing in the catchment area of Urban Health Training Centre, Ahmedabad City.
2. To assess psycho social impact of infertility on the affected women.

Method:

An operational research (OR) project was granted to us by State Health System & Resource Centre (SHSRC), Gujarat to document a complete picture of infertility in urban settings. In order to document the prevalence of infertility in urban areas, a community-based cross-sectional survey was done among 689 married women of child bearing age (18 – 49 years) in the catchment areas of an Urban Health Training Centre, Ahmadabad City. Study sample was determined by global estimated lifetime prevalence of 17.5% (15.0 – 20.3) (WHO).[11] This survey yielded 51 women from infertile couples who constitute the study sample for present research work. Therefore, present communication captures findings relevant to the objectives narrated above.

A flow diagram is presented as Figure 1 to describe the process of sample selection for the community survey.

Figure 1: Selection of sample using Stratified sampling method with Probability Proportionate to sample Size (PPS)*



Data collection tools:

Pre tested, semi structured questionnaires (along with checklist) were prepared after several meetings and validation by practicing gynecologists from both private and government sectors. For, assessing depression and anxiety, in consultation with consultant Psychiatry, PHQ 9 [12] and GAD 7 [13] scales, respectively were used. Women with infertility had in-depth interviews with open ended questions using thematic guidelines.

Data quality:

Operational Definitions for data collection were adopted as per WHO.[14] All study tools were field tested and modified based on the pilot testing. All investigators were trained for using study tool and in case of any missing information during first visit, a second visit/contact was made within 48 hours to complete the information.

Data analysis:

Data was entered in MS excel and appropriate statistical tests were applied and their qualitative data including perceptions and experiences were analyzed manually and were quoted as verbatim.

Ethical Issues:

Ethical clearance was obtained from local Institutional Ethics Committee (IEC) vide GMERSMCS/IEC/01/2022 dated 29/01/22. For the teams, while collecting information in the field, there was a provision of (1) one female social worker during household survey for RAG women and (2) 1 lady doctor in each team for interviewing couple with infertility. All interviews were conducted in full privacy and participants were informed about the freedom to withdraw from study at any point of time. Data Confidentiality and nondisclosure of identity were maintained; data identifiers were removed during analysis. Those who were found in need of counselling or treatment for infertility or mental health issues were referred to our hospital (tertiary level multi-specialty type) with a referral slip.

Results:

Based on operational definition of infertility, 51 women detected during the community survey were interviewed in-depth. Though this study primarily focuses on female partner but efforts were made to get the information about the male partners either from them directly or from their wives. As per the demographic profile, 25 (49.0%) female partner were between 25 and 35 years, only 2 (3.9%) male partner and 9 (17.6%) were very young (18-25 years) and 4 to 5 (9.8%) of the couple were in middle age. Mean age of male and female partner was 34.3 ± 7.4 and 31.6 ± 7.2 years, respectively. Median age for female and male partners were 26.6 and 28.2 years, respectively. In case of females, only 1 woman and in case of male 2 were married for the second time; for the rest it was first marriage. Only 3 females (6%) and 32 (62.7%) males were addicted to tobacco consumption. Out of 51, 8 women reported some genitourinary disease/ disorder and 2 of the male partners had undergone surgery for genital disorders at the time of study. Eight female and 3 of the male partners had episode(s) of RTI/ STI in last one year; all of them took treatment. (Table 1)

Table 1: Profile of couple with Infertility (N=51)

Profile	Female partner n(%)	Male partner n(%)
Age (years)		
18 - 25	9 (17.6)	2 (3.9)
25 - 35	25 (49)	26 (51.0)
35 - 45	13 (25.5)	18 (35.3)
45 -50	4 (7.8)	5 (9.8)
Mean ± SD	31.6 ± 7.4	34.3 ± 7.4 years
Median (years)	26.6	28.2
Marriage order		
1st	50 (98)	49 (96.1)
2nd	1 (2)	2 (3.9)
H/O Addiction	3 (5.9)	32 (62.7)
Diseases/surgery of genitourinary tract	8 (15.7)	2 (3.9)
H/O of RTI/ STI in the past 1Year	8 (15.7)	3 (5.9)
Semen analysis report (abnormality detected) (N=31)	NA	12 (38.7)

Table 2: Out of pocket expenditure (OOPE) of affected couple with Infertility* (N=36)

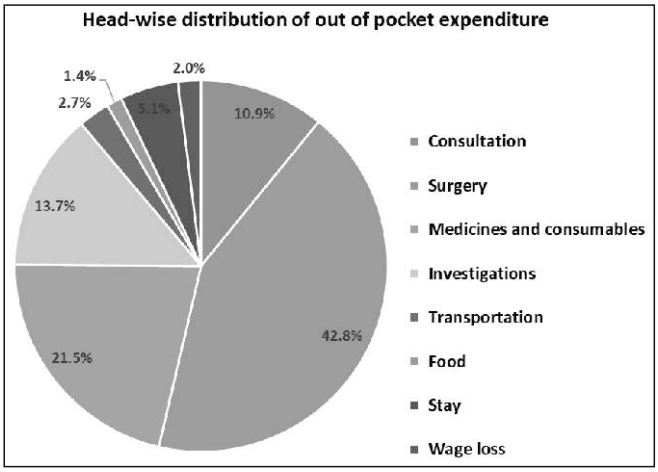
Cost of treatment (INR)	n (%)
< 10000	6 (16.7)
10000-25000	8 (22.2)
25000-50000	6 (16.7)
50000-100000	3 (8.3)
100000-500000	11 (33.3)
> 500000	2 (6.0)
Mean ± SD (Range)	1,37,894 ± 2,68,943 (200-1200000)
Median (IQR)	32500 (12550 – 150000)

Table 3: Treatment seeking behaviour of women having Infertility (N=51)

Treatment seeking behavior	n (%)
Treatment sought	36 (70.6)
Treatment Provider * (N= 36)	
MBBS / Registered Medical Practitioner	2 (5.5)
AYUSH (1 Ayurveda & 1 Homeopathy)	2 (5.5)
Gynecologist	32 (89)
Type of treatment modality (N = 36)	
Medical alone	19 (52.8)
Medical with surgical	17 (47.2)
Mean duration after marriage couples starts seeking treatment = 3.05 ± 1.84 years	
Mean duration of treatment 3.4 ± 3.1 years	
Reasons for not seeking treatment by infertile women (N = 15)	
Myths	7 (46.7)
Financial Issues	2 (13.3)
Social stigma	1 (6.7)
No reason	5 (33.3)

It was decided to know the economic burden in terms of OOPE. As per the 36 responses received variations was observed in OOPE from mere INR 200 to INR 1200000. Median (IQR) expenditure was INR 32500 (12550 – 150000) with mean expenditure as 1,37,895 ± 2,68,944. (Table 2) Thereafter only 30 of them could elaborate details of expenses and it was mainly on surgical treatment followed by medications and investigations by 21.5% and 13.7% respectively. (Figure 2)

Figure 2: Details of out-of-pocket expenditure by affected couples (N=30)*



*6 were non-respondents

Table 4: Psychosocial consequences of infertility in studied women (N=51)

Psychological consequences Anxiety (N=50)*	n(%)
None	42 (84.0)
Mild	5 (10.0)
Moderate to Severe (include 1 severe)	3 (6.0)
Depression (N=50)*	
None	40 (80.0)
Mild	5 (10.0)
Moderate	5 (10.0)
Distressing activities (N=51)	
Yes	12 (23.5)
No	39 (76.5)
Type of activity (N = 12) **	
Yoga/ Meditation/ Pranayama	12 (100)
Exercise	7 (58.3)
Emotional support from husband (N=51)	**51 (100)**
Social Consequences (N=51)	
Episodes of blaming by husband	7 (13.7)
or in-laws	
Sexual life affected	6 (11.8)
Pressure for remarriage of spouse	1 (1.9)
Problem physical relation with spouse	3(5.9)
Social isolation	3 (5.9)
No social Consequences	31 (60.8)

* 1 case was non-responsive; ** Multiple responses

Out of 51 affected women, 36 (70.6%) took some treatment and mostly 32 (88.9%) from Gynecologists who all were from private sectors usually by referral from MBBS doctors. Amongst those 15 (29.4%), who did not seek any treatment, most common reason was prevailing myths 7(46.7%), followed by financial issues 2(13.3%) and social stigma in 1 case. Five of them (33.3%) did not provide any reason for not seeking treatment. (Table 3) Prevailing myths preventing the couples to access the treatment were "there is no treatment of infertility" or "Bhuva (exorcist) forbade them for the treatment" or "She will conceive only when there are blessings from the goddess"

As per the depression screening tool (PHQ 9), 10 of the affected women (20%) had depression (5 each with mild & moderate type). Similarly, as per screening tool GAD 7 for anxiety, 8 (16%) had anxiety (including 5 as mild, 2 as moderate & only 1 as severe). When asked by all (51) how do they destress themselves, only 12 were doing activities like Physical exercise/ Yoga/ Meditation/ Pranayama. All these women were asked that whether they get adequate support from their husbands and family members to cope with related stress. All of them agreed to have full support from their husbands. But at different occasions, 7 of them (13.7%) told that they were blamed by husband or in-laws. Also, 6 (11.8%) stated that issue of infertility has affected their sexual life too (including 3 who specifically mentioned about facing problem in physical relation with spouse). Only 1 woman was facing pressure for re marriage of husband by relatives. However, none of them has any experience of domestic violence. Three women experience social isolation whenever they attended any social function. Psychological consequences of infertility among study participants is shown in table 4.

Perception about Infertility, treatment seeking behaviour and experiences and challanges by the affected couple:

"We do not want any treatment. When Goddess will bless, we will go for treatment at local corporate hospital." (39 years old female, residing in slum area, having active married life of 15 years had primary infertility)

There was a female aged 33 years with symptoms of Poly cystic Ovarian Syndrome (PCOS) (hirsutism, irregular menses, & lower abdominal pain) with depression and she was taking naturopathy treatment.

Discussion:

To identify couple suffering from infertility (primary & secondary) at community level, survey was done in 3 phases and Standard operation definition given by WHO[14] was adopted. Study population was representative of potential population of prime reproductive age group as half of them were between 25 to 35 years. In a study conducted by Deshpande et.al the mean age of the females and males were 28.35 and 32.9 years respectively.[3] Community-based study to assess infertility has its own limitation which was tried to overcome through reviewing their case papers by investigators. In present study couples sought treatment after a mean duration of 3.05 ± 1.84 years and the mean duration of treatment was 3.4 ± 3.1 years. These findings compare well with other studies.[3] OOPE varied from mere INR 200 to INR 1200000.

Objectives of family planning include; prevent unwanted pregnancies and bring about the wanted pregnancies. However, the objective of bringing about wanted pregnancy is never addressed. Barring a few and isolated attempts in certain states to provide financial assistance enabling women to take treatment of infertility in private sector, no program focusses on the management of infertility and it has become a neglected reproductive health issue. Infertility treatment is not covered under Ayushman Bharat and Pradhan Mantri Matrutva Vandana Yojana. Goa is one state which provides free IVF treatment to everyone, IVF treatment is too costly and result may not be expected in first cycle. Even one cycle treatment of IVF costs about 1.5 lac and for the

couple from middle /lower social class, it is very difficult to manage. Many of the couples leave the treatment after 1 or 2 cycles of IUI/IVF because of expensive treatment.[15] OOPE was mainly on surgical treatment and mostly (88.9%) from Gynaecologist. It was envisaged initially to study the male partners as well; however, their cooperation or participation was not there. While reviewing the case papers of these 51 women, 38.7% of male partners had abnormality detected in semen which is higher than observed by Deshpande et. Al (20%)[3] As per the systematic review 17 studies (N = 6410 women), proportion of couples seeking medical care was, on average, 56.1% (42-76.3%) in more developed countries and 51.2% (range 27-74.1%) in less developed countries.[1] which is more or less similar to current study. In a study by Patra et al,[16] among 159 interviewed women, only 3 did not seek any kind of treatment. About 70% of women mentioned they did not know where to go, about 49% said they wanted to wait for natural pregnancy and about 54% responded that they didn't feel that treatment was necessary. Further, among those who felt the treatment was necessary, about 30, 44, 10, and 19% mentioned that due to unaffordability, inaccessibility, or inconveniences like no time or no one at home etc. they didn't consult allopathic treatment. This study further concludes that educated and media savvy women tend to consult allopathic treatment. Time/ money spent on care vary by type of treatment and socioeconomic factors. They finally emphasised a need for mandatory insurance for infertility treatment from state government.

There are multiple reasons for poor mental health and so also multiple manifestations. Mental health and infertility are bidirectional. Several studies have demonstrated that the anxiety had a negative effect on fertility and vice versa. The women with long-standing infertility suffer more from nervousness, panic attacks, agitation, and intolerance. Infertility affects psychological well-being of women[17-19] but in current study it was not that much higher, this may be due to low sensitivity of diagnostic tool, inadequate time given to evaluate, presence of other members and less privacy. Infertility is a medical as well as social problem, the couple and the families suffer at the same time silently but hesitate to discuss this topic. In most cultures "being childless" is undesired socially. [2] Infertility places women at risk of social and familial displacement, and women clearly bear the greatest burden of infertility.[20] Infertility has damaging psycho-socio-economic consequences on the affected couples and more so on the female partners in Indian settings. It is common knowledge that a woman is divorced or abandoned by husband for second marriage if she is unable to give birth to a child. Infertile women experience negative social consequences, including marital instability, stigmatization, and abuse. It could have a serious effect on both psychological well-being and social status of woman.[18 - 21] In present study, initially all women said they had emotional support from their husband but later 7 women (13.7%) told that they were blamed by husband or in-laws, 6 (11.8%) stated that this issue has affected their sexual life too (including 3 who specifically mentioned about facing problem in physical relation with spouse) and 1 woman was facing pressure for re marriage of husband by relatives. A study by Singh and Prasad [22] observed that in 65% cases husbands were supportive with protective attitude towards their wife, 35% were involved in psychological or physical violence, approx. 66% infertile women are subjected to domestic violence (55.7% psychological & 10.7% physical violence) by their family, 37.14% infertile women are threatened for divorce & second marriage by their in-laws. Same study [22] observed that 58.57% in-laws were involved in violence and threatening to infertile women. It further observed that in 13.5% cases even parents of infertile women were non-supportive to their daughters.

Limitation of the study:

In few cases of infertility, women were not present at home because of her job schedule/ out of

station, so physical interview couldn't be possible. In such cases telephonic interviews were taken but those were less reliable and physical parameters could not be obtained for them. It was envisaged in the beginning to include male partners as well but their participation could not be obtained. Estimation of fertility and its type primary or secondary was based on questionnaire based interview method.

Conclusions and Recommendations:

Infertile couples in the study were aware about need of treatment as 70% of them approached to health facility mostly (88.9%) those with gynaecologist. Infertility and mental health have a bidirectional association but, in this study, only 16% and 20% had anxiety and depression, respectively. Anxiety and depression manifestations of mental ill-health, as assessed by the tools were prevalent among these women but the prevalence was not very high. However other indicators of psycho-social health such as social isolation, ill treatment from in laws, deterioration of family/ sexual life was present in few of them and a further under reporting cannot be ruled out due to the stigma associated with the victims of infertility. Couples who opted for treatment had huge OOPE up to INR 1200000. Hence infertility treatment needs to be provided at government facilities for the couples seeking the treatment and must be covered under some governmental schemes like PMJAY. Counselling of such couples (including male partners) should be made available at higher health facilities.

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Declaration:

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Conflict of Interest: Nil

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