



International Union for the Scientific Study of Population

International Population Conference 2021



5-10 December

An Exploration of Treatment Seeking Behaviour of Women Experiencing Infertility and Need for Services in Rural India

Presented by

Dr. Shraboni Patra & Prof. Sayeed Unisa

International Institute for Population Sciences (IIPS), Mumbai

Session 138

Fertility in India: Present and Prospect

December 9, Thursday at 4:00 - 5:30 GMT

An Exploration of Treatment Seeking Behaviour of Women Experiencing Infertility and Need for Services in Rural India

Introduction

Delayed childbearing has become increasingly socially acceptable, and a considerable amount of favourable media attention has been given to older mothers. Current advances in assisted reproductive techniques (ART) may have caused misconceptions about the possibility of manipulating female fertility at will. Yet none of these advances can fully compensate for the age-related decline in female fertility (Virtala et al., 2011). Fertility treatments available to couples are often complex. To make informed decisions on fertility treatment, couples need to understand the treatment options available to them. The large volume of research on fertility treatments, which is often of poor quality, makes it difficult to access reliable, relevant and readable information. This makes the emotional decision-making process even more of a challenge (WHC, 2009).

Further, depending on the type of treatment, diagnosis and medication available to treat fertility complications among women, expenses also vary to a large extent. To treat infertility, a wide range of treatment options are available from the traditional and biomedical service providers in India (Dyer et al., 2002a). Some factors influence the treatment-seeking behaviour of women, such as the willingness of infertile couples to seek treatment, social and emotional repercussions during on-going treatment, accessibility of infertility care and affordability for the expenses on infertility treatment (Hamilton & McManus, 2005).

Infertility is not high on the agenda of policymakers, as it is not life-threatening and in a densely populated country like India, the problem of infertility and childlessness is not much annoying when other health-related issues are taken care of. Hence the present research aims to document the coping strategies, particularly the treatment-seeking behaviour of women for their infertility problem in rural West Bengal.

Again, there are so many factors that influence the treatment-seeking behaviour of women and the type of treatment sought by them (Cross-Sudworth, 2006). Literature shows that the importance of modern allopathic in treating infertility is well accepted (Unisa, 2001) and the success rate of allopathic treatment is found significantly higher as compared to the other types of treatment (Unisa, 2001; Ombelet et al., 2008). Hence, the present research has tried to focus on the factors, particularly the socio-economic determinants affecting allopathic treatment-seeking of women. Further, the study also throws some light on the services needed for the couples experiencing infertility in the study areas.

Methods

Data and Sample Design

The study is based on primary data, collected in 2014-15 from the two high infertility prevalence districts i.e. Purab Medinipur (17%) and Dakshin Dinajpur (19.4%) of West Bengal (14.1%). To get the desirable sample, one block from each selected district has been selected. Care has also been taken in selecting blocks that are mainly rural. These two blocks contain a heterogeneous population. From these selected blocks, one village with a primary health centre (PHC), one village with at least one sub-centre (SC), and one village without any government health facility are selected purposively. Therefore, from the two selected blocks, a total of 6 villages (3 villages from each block) have been selected.

Selection of Sample

Complete mapping and listing have been carried out to identify the eligible respondents. Data has been collected through semi-structured and structured questionnaires. A total of 159 ever-married women (20-49 years) out of 172 identified women who ever have experienced infertility are interviewed. Hence, the calculated response rate is 92.4%. The inclusion criteria are: the respondents ever experienced infertility problems, both the husband and wife necessarily not using any contraception, not sterilized (women are not lactating and not pregnant) and received treatment/ advice for their problem of infertility. The informed consent of the participants is obtained before collecting the data.

Variables Used

The background variables, used to represent the socio-economic characteristics of the respondents and their categories are *respondents' current age* (<26, 26-30, 31-35, 36-40 and >40 years); *age at marriage* (<18 and =>18 years); *marital duration*(<6, 6-10, 11-15, 16-20, >20 years); *age gap between husband and wife* (1-3, 4-6, 7-9, >9 years); *level of education* (illiterate, 1-4 years/primary, 5-8 years/middle or upper primary and 9-10 years/secondary and higher secondary, >12 years/graduate and above); *religion* (Hindu and Muslim); *caste* (Scheduled caste/SC, Scheduled tribe/ST and Other Backward Caste/ OBC and General/open); *monthly income* (<=5000, 6000-10000, 11000-15000, >15000 rupees).

Data Analyses

Bivariate and multivariate analyses are performed. The statistical analyses are performed using Stata V.13.0 (Stata Corp, College Station, Texas, USA).

Results

Treatment Received in Different Orders

In other words, to receive second or subsequent treatment, every respondent must have received the first treatment.

Table 1 Percentage of Women Received Treatment in Different Orders and Conceived

Treatment received	Women (N)*	Percentage	Able to conceive	
			Women	Percentage
No Treatment	3	1.9	-	-
One treatment only	63	39.6	36	57.1
Two treatments only	65	40.9	28	43.1
More than two treatments	28	17.6	3	10.7
Total	159	100.0	67	42.1

*Mutually exclusive

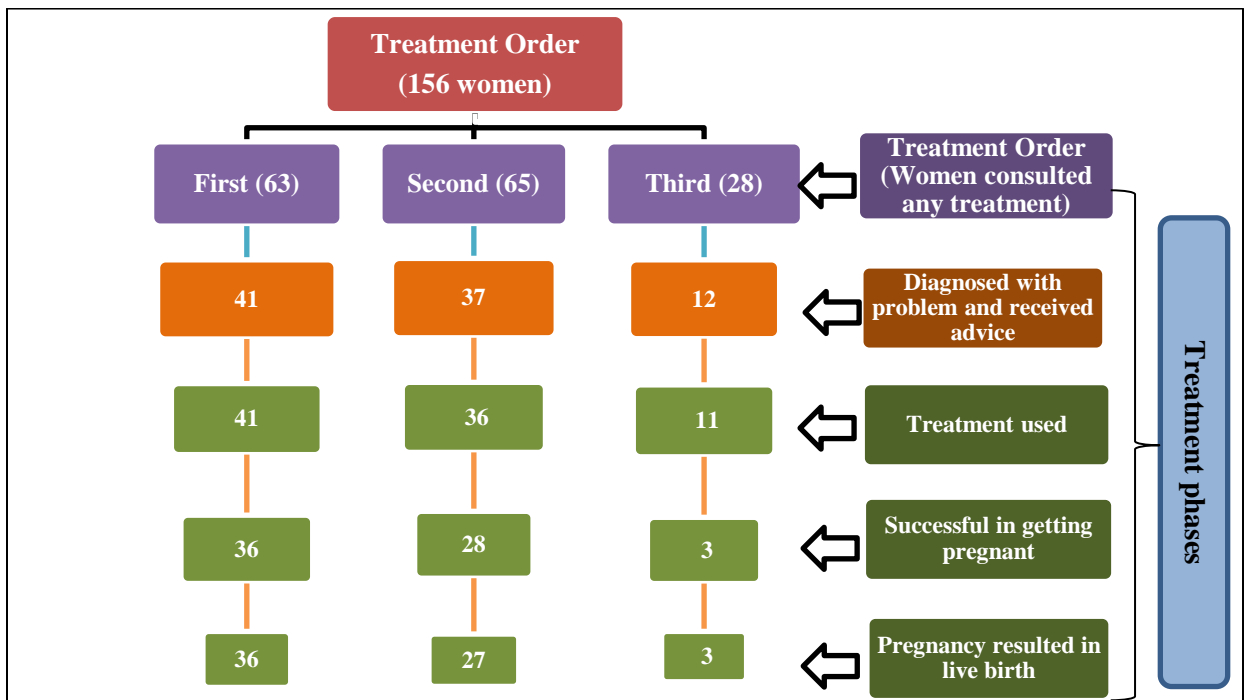
Among 159 interviewed women, only 3 did not seek any kind of treatment. Of the 156 women who have sought treatment, 63 women have sought treatment only one time. Of these 63 women, 36

women (57.1%) can conceive and 27 women have discontinued the treatment. Of the remaining 93 women (156-63), 65 have sought treatment twice (two times only) and 28 women sought treatment more than two times. After two treatments, from 65 women 28 have conceived (i.e. conception rate 43.1%), and 37 women have discontinued further treatment. The remaining 28 women have received three or more treatments, and only three have conceived after multiple treatments (Table 1).

Received Infertility Treatment in Different Phases and Different Orders

Figure 1 represents the total number of respondents in different phases of treatment and different treatment orders.

Figure 1 Number of Women Received Treatment in Different Phases and Order



It is found that there are 63, 65 and 28 women (mutually exclusive) who have received first, second and third-order treatment respectively. The present research also shows that the number of women decreases in the succeeding phases of infertility treatment (like consult a treatment, diagnosed with the problem and

receiving advice, using the treatment, successful in conceiving and successful outcome of pregnancy or live birth). Hence, the flowchart depicts that only a few respondents who were started with consulting a treatment have ended up with a successful treatment outcome or have experienced a live birth (36, 27 and 3 in first, second and third-order treatment respectively). The number of women who have delivered a live birth is almost equal to the number of women who got pregnant at the end of first and third-order treatment (except second-order treatment).

Types of Treatment Received in Orders

Table 2 shows the percentage of women (mutually exclusive) who have received one, two and more than two treatments according to their types. The percentage of women who received traditional, home remedies and religious treatment is higher (37%) among those who have received two treatments, whereas a higher percentage of women (39%) have received AYUSH treatment among those who have received more than two treatments. Overall, it appears that the majority of women need advanced medical treatment and seems to have lower awareness about the reproductive process, particularly knowing of the fertile period, time of ovulation etc.

Table 2 Percentage of Women Received Different Types of Treatments in Orders

Treatment type	Only one treatment	%	Two treatments	%	More than two treatments	%	Total (N)
Allopathic	27	42.9	30	46.2	9	32.1	66
AYUSH	20	31.7	11	16.9	11	39.3	42
Traditional/ home remedies/religious	16	25.4	24	36.9	8	28.6	48
Total	63	100	65	100	28	100	156

Received Allopathic Treatment according to the Socioeconomic Characteristics

Table 3 represents the percentage of women who received modern allopathic treatment according to their socio-economic characteristics.

Table 3 Percentage of Women Received Modern Allopathic Treatment for Infertility Problem

Background Characteristics	Women (%)	Odds Ratio (Exp β)	95% CIs for Exp (β)	
			Lower	Upper
Age (years)				
Below 30 [®]	65.7	1		
30 to 35	61.4	0.883	0.343	2.274
Above 35	35.6	0.310*	0.113	0.854
Education				
Illiterate/uneducated [®]	18.9	1		
Educated	67.2	3.712**	1.260	10.929
Media Exposure				
Not exposed [®]	25.5	1		
Exposed	68.8	2.217*	0.526	9.350
Work status				
Never worked [®]	62.8	1		
Ever worked	46.2	0.615	0.282	1.341
Caste				
SC/ST/OBC [®]	44.4	1		
General/Open	61.9	2.398	0.932	6.171
Religion				
Hindu [®]	57.2	1		
Muslims	47.6	1.592	0.456	5.559
Wealth Index				
Poor [®]	30.2	1		
Middle	54.7	1.284*	0.315	5.243
Rich	83.0	3.427	0.742	15.829
Total	56.0			

Note: Significance level: ** p<0.01,* p<0.05, ® Reference category.

Results show that women of the older age group (above 35 years) is significantly less (OR=0.310, p<0.05) as compared to women of younger age (below 30 years) to receive allopathic treatment. The use of allopathic treatment is also found significantly three times higher among women who are educated (OR=3.712, p<0.01) and two times higher among those who are exposed (OR=2.217, p<0.5) to media as

compared to their counterparts. The percentage of women who received allopathic treatment is also found higher among women from general caste (62%), Hindu religion (57%) and middle (55%) and rich (83%) economic status.

Reasons behind Not Consulting Allopathic Treatment

Women who have not consulted allopathic treatment are asked to mention the reasons why they do not take the treatment (Table 4).

Table 4 Reasons behind not Consulting Allopathic Treatment among those who Did Not Consult Allopathic Treatment (n=70)

Reasons for not consulting allopathic treatment*	Percentage	Number
Expensive could not afford	30.0	21
Too far/ no transportation	44.3	31
Timing/other inconvenience like no one at home	10.0	7
Family members did not allow	18.6	13
Did not know where to go	70.0	49
Waiting for a natural pregnancy	48.6	34
Did not feel treatment necessary	54.3	38
Others	4.3	3

*Multiple answers received

About 70% of women have said they do not know where to go, about 49% have said they want to wait for natural pregnancy and about 54% have responded that they don't feel that treatment is necessary. Further, for those who have felt treatment is necessary, about 30%, 44%, 10% and 19% have mentioned that due to unaffordability, inaccessibility, inconvenience like no time or no one at home and family do not allow, they don't consult allopathic treatment.

Services Needed for Couples Experiencing Infertility in the Study Areas

As a part of reproductive health services, infertility care is highly needed, particularly in the village health centres. Among the respondents, about 40% have mentioned that couples experiencing infertility need

affordable treatment facilities, about 57% have mentioned the facilities of diagnosis and tests at an affordable cost. About three-fourth of respondents have stated their need for infertility care and advice within the village, 22% have enquired about the presence of a lady doctor at the village health centre and about 55% have asked to provide proper information related to infertility and treatment.

Table 5 Percentage of Women Mentioned Services Needed for Couples with Infertility Problem

Services needed for women with infertility problems*	Percentage	Women
Affordable treatment	40.3	64
Facilities of diagnosis and tests at affordable cost	56.6	90
Infertility care and advice within the village	75.5	120
Presence of lady doctor at the village health centre	22.0	35
Provide proper information related to infertility and treatment	55.3	88
Others	43.4	69

*Multiple answers received

About 43% of respondents have mentioned other services needed in rural areas which include counselling of infertile couples, good transport network, male reproductive health specialist, low-priced/discounted medicines, support and care from health workers, financial support to continue the treatment etc. (table 5).

Discussions

Infertility is particularly distressing for women who are childless and have strong fertility desires (Schwerdtfeger & Shreffler 2009). Due to a physical inability to get pregnant, and financial constraints to seek medical help, infertile couples get frustrated soon. Yet the majority of women who experience infertility do not remain childless (Schwerdtfeger & Shreffler, 2009). Timely diagnosis and appropriate treatment play important role in infertility management.

In the present study, it is seen that a considerable percentage of the respondent took a long duration of time in realising the necessity of fertility treatment and spent a long time in seeking treatment. Again, few respondents have not consulted any kind of treatment due to various reasons. If the causes of infertility problems are diagnosed early, treatment becomes easier.

Further, the present study shows that women who are more educated and are exposed to media, tend to consult allopathic treatment. The percentage of women who received allopathic treatment is also found higher among those who belong to rich economic status, among Hindus and general and open castes. Similarly, time and money spent on care vary significantly and independently by type of treatment and socioeconomic factors.

The problem of infertility in India has to be interpreted in a context of poverty, class and gender inequality and unequal access to healthcare resources (Widge, 2002). Management of infertility is not a priority for the public health sector. While India has become popular as a destination for medical tourism and inexpensive assisted reproductive techniques to foreigners, but its people, particularly in rural areas, the situation is different (Macaluso et al., 2010). The present research shows a contrasting picture of fertility care in the study villages. Less proportion of women is ended with successful treatment and satisfaction with the process. A considerable proportion of women have discontinued their fertility treatment due to various reasons among which unaffordability and inaccessibility of the infertility treatment facility are the foremost. A higher proportion of the respondents want their treatment free of cost (Unisa, 2010).

Hence, in the rural health centres, a separate department, equipped with advanced diagnostic facilities and trained and specialised male and female health professionals, is needed to treat sexual and reproductive health problems which will provide inexpensive and quality fertility treatment to the couples. Less waiting time in the CHCs, personalized services and provision of medical counselling can also reduce couples' suffering in the quest for conception.

In India, till today no medical insurance cover the medical expenditure on infertility treatment incurred by couples. The cost of infertility treatment largely varies from urban to rural areas, depending upon the type and the phase of treatment consulted. Here, it is found that in rural West Bengal, couples cannot opt for expensive allopathic treatment and consult less expensive alternative treatment. Hence, the

arguments for mandatory insurance coverage may let the state government enact regulations that require varying forms of insurance coverage for infertility treatment.

In addition to the public services, the private sector and the traditional healer are both important alternative sources of first help. It has been demonstrated repeatedly that traditional healers attract people to come to them for infertility treatment (Sundby et al., 1998; Barden-O’Fallon, 2005; Folkvord et al., 2005; Stekelenburg et al., 2005). Care is often sought from both the formal sector and traditional, as is also the case in our population (Dyer et al., 2002b). These findings indicate the need to involve healthcare staff from both the formal and informal sectors when investing in the education of infertile couples and the community about infertility.

Funding: The author(s) received no financial support for the research and/or authorship of this article.

Conflict of Interests: The author(s) declared no potential conflicts of interest concerning the research, authorship, and/or publication of this article.

Ethical approval: The study is a part of PhD research and is approved by the Institutional Ethics Committee (i.e. Student Research Ethics Committee or SREC).

References

- Barden-O’Fallon, J. (2005). Associates of self-reported fertility status and infertility treatment-seeking in a rural district of Malawi. *Human Reproduction*, 20, 2229 – 2236.
- Cross-Sudworth, R. (2006). Infertility issues for South Asian women. *Diversity in Health and Social Care*, 3(4), 281–287.
- Dyer, S. J., Abrahams, N., Hoffman, M., & van der Spuy, Z. M. (2002a). Infertility in South Africa: women’s reproductive health knowledge and treatment-seeking behaviour for involuntary childlessness. *Human Reproduction (Oxford, England)*, 17(6), 1657–1662. <https://doi.org/10.1093/humrep/17.6.1657>

- Dyer, S. J., Abrahams, N., Hoffman, M., & van der Spuy, Z. M. (2002b). _Men leave me as I cannot have children: women's experiences with involuntary childlessness. *Human Reproduction*, *17*, 1663-1668.
- Folkvord, S., Odegaard, O. A., & Sundby, J. (2005). Male infertility in Zimbabwe. *Patient Education and Counselling*, *59*, 239– 243.
- Hamilton, B., & McManus, B. (2005). Infertility treatment markets: The effects of competition and policy. *Washington University Manuscript*, (October), 1–43. Retrieved from <http://apps.olin.wustl.edu/faculty/hamiltonb/wpapers/Infertility Treatment Markets.pdf>
- Macaluso, M., Wright-Schnapp, T. J., Chandra, A., Johnson, R., Satterwhite, C. L., Pulver, A., Berman, et al. (2010). A public health focus on infertility prevention, detection, and management. *Fertility & Sterility*, *93*, 16.e1–16.e10.
- Ombelet, W., Cooke, I., Dyer, S., Serour, G., & Devroey, P. (2008). Infertility and the provision of infertility medical services in developing countries. *Human Reproduction Update*, *14*(6), 605-621.
- Schwerdtfeger, K. L., & Shreffler., K. M. (2009). Trauma of Pregnancy Loss and Infertility for Mothers and Involuntarily Childless Women in the Contemporary United States. *Journal of Loss and Trauma*, *14*(3), 211–227. <http://dx.doi.org/10.1080/15325020802537468>
- Stekelenburg, J., Jager, B. E., Kolk, P. R., Westen, E. H., van der Kwaak, A., & Wolffers, I. N. (2005). Health care seeking behaviour and utilisation of traditional healers in Kalabo, Zambia. *Health policy*, *71*(1), 67-81.
- Sundby, J., Mboge, R., & Sonko, S. (1998). Infertility in the Gambia: frequency and health care seeking. *Social Science & Medicine*, *46*(7), 891 – 899.
- The Woman's Health Council (WHC). (2009). Infertility Treatments for Women - A Review of the Bio-medical Evidence Full Report, 1–120. Retrieved from <http://www.rte.ie/news/2009/0923/infertility.pdf>
- Unisa, S. (2001). Sequence of fertility treatments among childless couples in Ranga Reddy district, Andhra Pradesh, India. *Asia-Pacific Population Journal*, *16*(2), 161–176.
- Unisa, S. (2010). *Follow Up Survey of Childless Women in Andhra Pradesh*.
- Virtala, A., Vilska, S., Huttunen, T., & Kunttu, K. (2011). Childbearing, the desire to have children, and awareness about the impact of age on female fertility among Finnish university students. *The European Journal of Contraception & Reproductive Health Care*, *16*(2), 108 – 115.
- Widge, A. (2002). Sociocultural attitudes towards infertility and assisted reproduction in India. *Current practices and controversies in assisted reproduction*, 60-74.