

A Study on Economic and Non-Economic Burden of Infertility Treatment Among Working Women in Coimbatore City

Dr. G. Jayanthi¹, D.A. Sweet Twinklyn²

¹Assistant Professor in Economics, PSG College of Arts & Science

²MA Economics, PSG College of Arts & Science

Abstract- Infertility is the disease that occur in male or female reproductive system leading to a failure in achieving pregnancy after 12 months. The solution to overcome infertility is taking ART (Assisted Reproductive Technology) treatment. The successful pregnancy is found in type of Assisted Reproductive Technology that is IVF (In-Vitro Fertilization). Low- and Middle-Income countries find challenging to undertake the treatment as it is expensive. The research attempt to examine the impact of economic and non-economic burden faced by infertile women. Structured interview schedule was prepared to collect primary data compressed with the sample of 47 that focused the fertility clinic in Coimbatore city. The statistical tools implemented in the study are, percentage, Garret Ranking, Weighted Average, Chi-Square. The research examined there is strong relationship between the income and the expenditure done for the treatment. The finding shows infertile working women encounters psychological problems created by own family members. In order to overcome uncomfortable situation, women follow strategies like engaging themselves in doing work to be financially independent, spending lot of time with the family and friends etc. The study suggested that the child adoption would be the finest option to overcome the issues of Economic and Non-Economic burden.

Key Words: Infertility, Assisted Reproductive Technology, In-Vitro Fertilization, cost, psychological problem, Low- and Middle-Income Countries.

INTRODUCTION

The poorest sector of the population of the developing countries are probably those prone to infertility due to poverty, poor education, unsafe abortion. It is also known to cause significant psychological and social effort such as fear, guilt, depression, self-blame, marital stress, emotional abuse, intimate partner

violence, social isolation, economic deprivation, loss of social status, violence induced suicidal and loss of dignity in death. By accessing to diagnosis and treatment of infertility reduces social inequities and emotional difficulties. The solution to overcome infertility is Assisted Reproductive Technology treatment that supports many women in getting fertile. Assisted Reproductive Technology has delivered great results to many couples, who has opted to this technique as their last chance of having a baby that is biologically related to them. (Granberg et al, 1994)¹ Apart from being costly, Assisted Reproductive Technology is often time consuming, physically and emotionally strenuous, the success type of Assisted Reproductive Technology is In-Vitro Fertilization which has been followed worldwide as it shows the maximum possibilities of pregnancy. Generally, if there is a problem of infertility it means that they don't get pregnant after more of trying or having multiple miscarriage. Infertility in couples make them feel difficult in communicating with their family and friends as they perceive a comprehensive social environment to understand their situation. Frequently they feel alone, move to state of depression and anxiety.

Causes of Infertility

- Increase in female literacy rate.
- Workforce participation of women.
- Changing of attitude towards marriage.
- Late planning of marriage has decreased the child bearing period for women.
- Choosing career and financial independent over motherhood.
- Decision in proceeding with abortion.
- Moving to abroad for higher studies and jobs.

- Choosing modern lifestyle has led to the preference of many couples in having only one child.
- Decline in safety measure for women in the society (The Hindu, 2025)²

Cost Burden Faced by Infertile Women in Low- and Middle-Income Countries

At present in most of the countries especially in India the fertility treatment is largely funded out of pocket often result in devastating financial cost. People in the poorest country spend a greater proportion of their income on fertility care compared to people in wealthier countries. High-cost frequently prevent people from accessing infertility treatment or alternatively can catapult them into poverty as a consequence of seeking care. Millions of people face catastrophic health care cost after seeking treatment for infertility, making this a major issue, a medical poverty trap for those by the high-cost issue. The average In-Vitro Fertilization cost in India ranges from ₹ 1 Lakh to ₹ 3.5 lakh. It is the approximate range which may vary because of several factors such as the city in which the treatment has been taken, the type of infertility condition they are facing, the type of method used for In-Vitro Fertilization treatment, the reputation of the clinic. (Collins 2002)³ the In-Vitro Fertilization treatment cost varies between nations. The cost of In-Vitro Fertilization treatment in India is quite less when compared to other countries like US, Europe, Australia.

Different Factors Affecting IVF Cost in India

- Location of the Clinic

The In-Vitro Fertilization cost in India can vary depending on the location of the clinic. The clinic in metropolitan cities like Mumbai, Delhi, and Bangalore tend to be more expensive than smaller cities or towns.

- Medication

The cost of medication and fertility drugs required during In-Vitro Fertilization treatment can also affect the ovarian In-Vitro Fertilization cost in India. Thus, it can vary on the type of medication prescribed and the dosage required. The price of medication may vary from one individual to another depending on the prescription and the type of fertility condition.

- Infrastructure of the Clinic

The In-Vitro Fertilization treatment cost can be higher

for a clinic that is backed with modern infrastructure compared to clinic with basic facilities. You get access to the required service under one roof and rarely need to hop from one location to another to get treatment right.

- Consultation Fees

The average consultation fee for a fertility expert may range from ₹1000 to ₹2500. This is the approximate cost range which gets added to the final cost for each visit to the Doctor.

Managing Tips to Take Care of Infertility Treatment Cost

- Set Priority for Expense

Seek the priority on which the cost needs to be done and separate certain amount of money for the fertility treatment.

- Research Cost

It is known about the IVF fees, prescription cost and any additional changes which rises will give a complete financial picture. If the complete picture is known than the expense will be done according to it.

- Insurance

Ensure that the insurance (health insurance) is covered for the practical treatment. As fertility treatment will be too expensive, for the people to bear the expense, the health insurance serve as a supporting document for the people reducing the expense in fertility treatment.

- Reducing Unnecessary Spend on Essentials

Ensure that the money is not spent lavishly on non-essential items, instead save the money for fertility treatment. By spending less on non-essential items for time being and saving it will benefit at the time of treatment.

IVF Cost of Cities in India

- The average IVF cost in Delhi ranges between ₹1,75,000 to ₹2,10,000
- The average IVF cost in Mumbai ranges between ₹2,00,000 to ₹3,00,000
- The average IVF cost in Bangalore ranges between ₹1,80,000 to ₹2,15,000
- The average IVF cost in Chennai ranges between ₹1,75,000 to ₹2,20,000
- The average IVF cost in Hyderabad ranges between ₹1,00,000 to ₹2,50,000
- The average IVF cost in Pune ranges between ₹1,50,000 to ₹2,10,000

- The average IVF cost in Kolkata ranges between ₹1,75,000 to ₹2,25,000 (Mom News Daily, 2025)⁴

Statement of Problem

Infertility is often personal trauma in India, because of its social, cultural, and religious connotation. Moreover, infertility is one of the many important health problems that people face in these countries and it is well possible that more health is gained at lower cost by attacking other health problems than infertility. Even in developed countries, low-income couples have great difficulties of access due to the high cost charged by private clinics and the lack of services offered by the public sector. Infertility treatment is costly because of the need for highly trained personnel and expensive equipment, which is often the case with the new health technology. Unfortunately, the cost of infertility treatment is more than some infertile couples are able to pay and this tend to limit access to the treatment and it will also rise mental and physical issues of infertile couple. Hence, based on health economics the study focuses on both economic and non- economic burden from a social perspective.

OBJECTIVES OF THE STUDY

- To examine the socio-economic condition of women undergone infertility treatment.
- To find out the infertility treatment expenditure among the women workers.
- To identify economic and non-economic burden of infertility treatment among working women.

SCOPE OF THE STUDY

The study focuses on socio-economic condition, infertility treatment expenditure along with economic and non-economic problem faced by the infertility women. It shows the financial challenges faced by infertile women, both in direct and indirect way. The direct costs are medications, treatment. The indirect cost includes the travelling cost, expense done for the instrument, usage of bed. This study also shows the broader economic, social and psychological burden faced by infertile women which also include the long-term financial consequences for seeking Assisted Reproductive Technology. It aims to shows the cost insight affect the women in making proper decision making.

METHODOLOGY OF THE STUDY

- The study aim to know the economic and non-economic burdens of infertile women in all sector in Coimbatore city. Hence the study is both descriptive and analytical in nature.
- Sample size of the study will be 47 women who meet the definition of infertility from the year 1995 National Survey of Family Growth. This study used judgment sampling. According to 2023 NCBI (National Centre for Biotechnology Information) article, the prevalence of infertility in India crossed 18.7 per 1000 women who has been married for at least 5 years.
- The present study focused on primary data which has been collected from infertile women by following interview schedule method.
- Statistical tools included in this study are percentage, chi-square, weighted average and garret ranking technique to analyze the data.

Limitation of the Study

- The study is based on primary data, so any wrong information given by the respondents may mislead the findings.
- The sample is limited to 47 infertile women only.

REVIEW OF LITERATURE

Ombelet *et.al.*, (2025)⁵ The author in this study nearly 200 million people worldwide suffer from infertility. Low- and Middle-Income Countries specialized infertility centers are either scarce or non-existent, mostly in private settings, and accessible only to the fortunate few who can afford them. The success and sustainability of Assisted Reproductive Technology will depend on our ability to optimize these techniques in terms affordability and effectiveness. A low-cost, simplified In-Vitro Fertilization system has been developed and shown to be safe, cost- effective and it is widely applicable to low resource setting. This could truly become effective means of treating infertility and performing assisted reproduction at affordable prices, when the programs are sincerely supported by stakeholders.

Fenwick *et.al.*, (2023)⁶ The study states that Willingness To Pay for an infertility treatment is the maximum amount of money a patient is willing to pay per treatment, or to achieve a live birth pregnancy.

Such threshold is important to determine the cost effectiveness of a treatment. A systematic study was conducted to identify and explore the studies that attempt to ascertain Willingness to Pay for infertility and compare them with cost-effectiveness studies that claimed to use Willingness to Pay thresholds. Cost-effectiveness studies either used the incremental cost-effectiveness ratio to imply a Willingness to Pay threshold, or used thresholds that were previously accepted for a quality-adjusted life year outcome converted, inappropriately, to an infertility outcome. There is a need for further research by health economists to develop a consensus for the meaningful assessment of Willingness to Pay for Assisted Reproductive Technology.

Xin (2022)⁷ This study depicts that infertility Is a public health issue that affects about 10% of the world's population, causing economic burden and a severe socio psychological burden. With socio-economic development and changes in people's lifestyles, the leading causes of infertility have changed from infectious factors to increased pressure and women's delayed fertility. Infertility can be treated with medicine, surgery, Intrauterine Insemination, or Assisted Reproductive Technology. However, infertility treatment can be quite expensive, and many health insurance plans do not cover infertility diagnoses or treatments. The lack of affordable treatment options affects the quality of life of millions of people. Therefore, infertility insurance has many benefits for infertile couples.

Bourrion *et.al.*, (2022)⁸ The study states that the recent cost studies related to infertility treatment have focused on assisted reproductive technologies. None has examined lower intensity infertility treatment or analyzed the distribution of infertility treatment expenditure turns over time. It is mainly to estimate the economic burden of infertility treatment per 1000

women from a societal perspective. The increased use of infertility treatment will lead to increased expenditure. Prevention campaign against the preventable causes of infertility should be promoted to limit the use of infertility treatment and related cost.

Singh and Singh (2022)⁹ An attempt has been made to study the relationship between infertility and highly educated working women after controlling for certain socio-economic and demographic variables and efforts have been made to see this difference between urban and rural residing women. If women are unable to conceive a child, known as infertility, is a medical problem and carries serious demographic, social, as well as health consequences. Due to the increasing level of education, we observe age at marriage is also increasing particularly in the urban areas, also the intention to have a smaller number of children in the highly educated and higher socio-economic status groups is observed, and this creates another medical burden called infertility which is an emerging issues across the world. In fact, infertility is not only a medical burden but also affect the married life of women. Thus, there is a need to focus on this issues and make people aware of it through various programs.

ANALYSIS AND INTERPRETATION

Analysis and interpretation is the main focus of the research. The data that has been entered here lays the foundation of the entire study. The data shown in this analysis is the original data that proves the proposed study. This part shows the collection of data and drawing conclusion from it in order to see the financial, social and psychological burden faced by infertile women. According to Barr, "Analysis is a method which enrolls into research into one form or another from the commencement stage."

4.1 Socio economic condition of infertile women

The term "Socio-Demographic" refers to the group defined by Sociology and Demographic characteristics. Here the demographic characteristics can be listed as Age, Religion, Educational Qualification, Occupation, Income.

Table 4.1

Variable	Particulars	Frequency	Percentage
Age	25-30	17	36
	30-35	14	30
	35-40	9	19
	40-45	7	15

	Total	47	100
Religion	Christian	10	22
	Hindu	33	70
	Muslim	4	8
	Total	47	100
Educational Qualification	Below SSLC	2	4
	SSLC	1	2
	Higher Secondary	3	6
	Degree	20	43
	PG and above	21	45
	Total	47	100
Occupation	IT	20	43
	Banking	8	17
	Teaching	10	21
	Medical Field	2	4
	Others	7	15
	Total	47	100
Income (Rs)	₹20,000-₹30,000	24	51
	₹30,000-₹40,000	10	21
	₹40,000-₹50,000	5	11
	Above ₹50,000	8	17
	Total	47	100

Source: Field Survey

Socio Economic Condition of Infertile Women

In this study, the age of the respondent has been classified into four groups they are as follows, 20 to 30 years, 30 to 35 years, 35 to 40 years, 40 to 45 years. The data of Age shows that the majority of respondents belong to the age group between 25 to 30 years (36%), 30 to 35 years (30%), 35 to 40 years (19%), and 40 to 45 years (15%). Religion is the personal faith that is encountered with God by each and every individual. The major religion followed in India are Hinduism, Islam, Christianity, Hindu, and Muslim. The majority of population comprises to infertile women are from Hindu religion (70%), Moved with second option as Christian (22%) and Muslims (8%). Education plays a vital role in each and every individual as it provide knowledge to the world around us and make changes. The population that has been educated with PG and above degree (45%), which has been less with the next option by degree (43%), Higher Secondary (6%), Below SSLC (4%), SSLC (2%). Occupation depicts that majority of infertile women population are in teaching sector (43%), IT (21%), Banking (17%), others fall In this category (Mason, Housemaid) (15%), and Medical Field (4%). Income shows the inflow of cash for the

respondent. The majority of population has earned the income between ₹20,000 to ₹30,000 (51%), followed by 30,000 to ₹40,000 (21%), ₹40,000 to ₹50,000 (11%), and above ₹50,000 (17%).

4.2 Expenditure done for the Infertility Treatment

Expenses lead to benefit for each and every individual from the economic point of view. The expense done for the treatment give the same result, the money paid for the treatment by the respondents and the benefit has been received for them from the result of the treatment. The chi- square method has been introduced by Karl Pearson in 1990 developed a non-parametric test for testing the significance of the discrepancy between the observed value and expected value.

Table 4.2

Factors	Test Statistics Value	df	P-value
EOT & Income	28.772	9	0.001

Source: Field Survey

Expenditure done for the Infertility Treatment

The Chi-square test depicts that there is significant relationship between income and expenditure done for the treatment.

4.3 Problems Faced by Infertile Women in the Society

In order to find out the influencing factors, Garrett's ranking method has been adopted. As per this method,

the respondent are asked to Rank the factors from 1 to 6 based on following the below formula in order to see the majority problems faced by women.

Table 4.3

Particulars	Garret Ranking	Rank
Do you think society treats infertile women differently	64	1
Do you freely attend social function's/ceremonies	51	5
Hearing gossips, judgments and mocks	59	3
Do you feel society considers infertile women inauspicious	61	2
Is the participant forced by family members to take the treatment	54	4

Source: Field Survey

Problem Faced by Infertile Women in the Society

The table above use garret ranking to highlights the key problem faced by infertile women in the society. Among the above five situation, the first situation that has been ranked is society treating infertile women differently, followed by second considering them inauspicious. Third, making them feel emptiness while attending function, followed by fourth is forced by the

family to take the treatment, and the fifth position hold the situation of not allowing them to freely attend the functions.

4.4 Psychological Problem Faced by Infertile Women

The weighted average method has been used to find the Psychological problem faced by infertile women and what are the coping strategy that has been followed by infertile women to overcome the problem.

Table 4.4

Issues	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Weighted Average
I couldn't seem to experience any positive feeling at all	10	12	16	8	1	3
I tend to face intense depression	2	8	14	19	4	3
Get the Feeling of stress and anxiety attack	7	10	13	16	1	3
I tend to over- react to situation	4	11	15	16	1	3
Haunted with suicidal thoughts	3	12	10	16	6	3
feeling of Hopelessness	4	11	15	14	3	3
I have been criticizing myself	6	7	15	17	2	3
I am unable to become enthusiastic about anything	5	12	15	14	1	3

Source: Field Survey

Psychological Problem Faced by Infertile Women

The table above depict that the psychological problem faced by infertile women by using Weighted Average Method. The entire population are facing neutral situation when it comes to the psychological problem that they have been facing in the society. The concerning problem with the score of 3 is not experiencing any positive feeling, difficulty in initiating things, over- react to situation, facing intense depression, stress, anxiety, failing in being enthusiastic. Overall data gives the view that the women having problem in conceiving, face the neutral situation.

SUGGESTIONS

- There is asymmetric information related to the scheme introduced by the government to cover the treatment cost.
- Counseling should be given for the working women undergoing the infertile treatment.
- Reduction in the price fixation done by private clinics.
- Adoptions can reduce the cost and psychological problems faced by infertile women.

CONCLUSION

This study concluded that the majority of women population facing with the infertile problem feel

challenging to face the society. The satisfaction level that has been attained by the working women from the treatment differ based on age, age of marriage and the kind of treatment. Type of treatment that has been approached by the respondent is IVF whereas there are 4 other types of treatment like Intra Fallopian Transfer, Frozen Embryo Transfer, Intra Cytoplasmic Sperm Injection, and Third Party Assisted Reproductive Technology that are unaware by the women in order to achieve successful pregnancy related to the treatment. It leads to many complications like moving them to the situation of facing psychological problems like stress, depression, and suicidal thoughts. It is clearly known that the sharing of this emotional scenario can end up the women in feeling embarrassed and worry about how they will be treated in the society.

The population has faced the cost as their burden for undertaking their treatment. In order to avoid the complication, the government has introduced the scheme like Ayushman Yojna scheme for low earners and Mutrutya Yojana Scheme for the tribal population that are free of cost allows the women to access it without facing cost burden. Thus, the convention of economic such as cost reduction and resource optimization shall be integrated with the disciplines of science such as psychology and medical science to minimize the constraints faced in the medical stage.

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