

PREVALENCE OF DIFFERENT FACTORS RESPONSIBLE FOR FEMALE INFERTILITY IN COIMBATORE

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Abstract

World Health Organisation (1991) defines infertility as failure to conceive despite one year of cohabitation and exposure to pregnancy. If the couple has never conceives despite cohabitation and exposure to pregnancy (i.e. sexually active, non- contracepting, and non- lactating) for a period of one year, it is called primary infertility (Saoji, A. V., 2014). It is estimated that million couples suffer from infertility every year of which probably between 15-20 millions (25%) are in India alone. (Sharath KC et. al 2013, Chander PP et. al 2000).As per study published at the end of 2012 by WHO, one in every four couples in developing countries had been found to be affected by Infertility (Mascarenhas MN, et. al 2012). There are many reasons for infertility both in male and female where this study examines the causes of female infertility such reasons that may cause infertility condition in female are genetic abnormalities, infectious or environmental agents and behavior. Age is also one of the most important factor that determines infertility among females. Thus, infertility is mainly classified into two types; Primary Infertility is the term used to describe a couple that has never been able to conceive a pregnancy, after a minimum of one year of attempting to do so through unprotected intercourse. Secondary Infertility is the term used to describe couples who have previously been pregnant at least once, but had not been able to achieve another pregnancy. (Patel Mital., et. al 2012).

Keywords: *World Health Organisation, infertility, pregnancy, genetic abnormalities, In Vitro Fertilization , Intra Cytoplasmic Sperm Injection*

Introduction

Infertility affects men and women equally. Most infertility cases (85-90%) were treated with medication or surgery. Improvements in fertility treatment had made it possible for many women to become pregnant. These new and advanced technologies include Intra Uterine Insemination (IUI), In Vitro Fertilization (IVF) and Intra Cytoplasmic Sperm Injection (ICSI). Differences in individual and life style characteristics have been suggested to have a role in the cause of infertility (Howe G., et.al 1985,Auggod C., et. al 1998) and in the success of treatment (Rosevear S.K., et. al 1992,Dew J.E., et. al 1998). Although much work still must be completed to fully determine the involvement of various factors responsible for infertility, much of the research work is required to determine interactions of genetics, environment and ethnic background on fertility. Using this knowledge, clinicians will be better able to treat infertile patients and make knowledgeable decisions about the use of Assisted Reproductive Techniques (ART). (Patel Mital., et. al 2012).

Material and Methods

A survey was conducted by the researcher in Coimbatore, between September 2014 to January 2015. The study includes 100 infertile females who visited the fertility centers for treatments and interviewed before any treatment. The interview questions mainly included pregnancy planning, previous fertility problems /pregnancies, gynecological disease / surgery, individual lifestyle factors including age, weight, height, tobacco consumption, smoking, alcohol consumption, coffee and tea intake, recreational drug use, known fertility/health problems and surgery. Additionally couple's residential address, occupations and income were also asked which can be used as an indicator of the living standard. The information thus gathered was anonymous and confidentiality was preserved.

Table 1 Infertility Etiology (n=100)

S. No.	Infertility Etiology	Frequency	Percent
1	Unexplained	27	27.0
2	Female Factor	59	59.0
3	Multiple Factor	14	14.0

Results and Discussion

Out of the case history of 100 patients, in 27 cases the causes of infertility were unexplained, 59 cases of infertility were because of female factors while in 14 cases the cause remains multiple (table1). Table 3, Figure 2 (Appendix) shows the distribution of different female factors viz. ovulation factor, tubal factor, endometriosis and uterine problems in decreasing order. The metabolic disorder associated with poly cystic ovary (PCO) syndrome has highlighted the link between overeating, insulin resistance and endocrine changes that reduce fertility in woman with poly cystic ovary syndrome. Obesity is associated with ovulatory and menstrual dysfunction, infertility, increased risk of miscarriage and decreased effectiveness of ART in woman.

The age effect on fertility is certainly clinically relevant. As shown in figure1, the effect of woman's age on fertility is well recognized. Indeed woman's age is one of the most important factors influencing the probability of conceiving without medical intervention in cases of unexplained sub fertility; the other is the duration of trying for pregnancy. Furthermore, studies of donor insemination, donor oocytes and in vitro fertilization program have demonstrated the important role that woman's age has in the success of the treatment. The proportion of infertile women in the 21-30 years age group seems to be more than others, indicating the increasing trend of infertility in Coimbatore city. Overall, a higher proportion of younger rather than older women experienced infertility (Table 2).

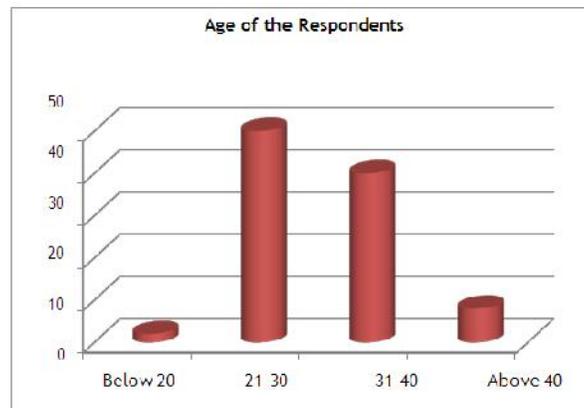
Table 2: Proportion of Women in Coimbatore City who are infertile according to Age (n=100)

Age of the Respondents	Frequency	Percentage
Below 20	2	2.0
21-30	50	50.0
31-40	40	40.0
Above 40	8	8.0

The table clearly explains the Infertility rates according to the age group of the respondents

Figure: 1

Age group based division of infertile female patients and 04 indicates age distribution among the female infertile cases respectively



In order to check and confirm other social and environmental factors responsible for decrease in fertility the people who employed and not employed were also included in the study. It is clear from the data that women who are not going for job seems to be affected more from Infertility, out of 100 respondents only 17 women were engaged in different sort of jobs. (See Appendix Table 4)

As indicated in the studies of Zenzes M.T., et. al (2000) and Dorfman S.F., et. al (2008) alcohol consumption and use of tobacco in any form, particularly smoking, has significant effect on decreasing fertility, But by revelation of the present study female who are not involved in smoking and consumption of alcohol have also been affected by infertility.

Conclusion

Reproduction is one of the most important biological functions for all life forms. For most of the couples, having children is a somewhat primal need and inability to reproduce can be devastating to individuals and couples. Infertility is a major reproductive health concern that affects an estimated 50 to 80 million couples globally. The determinants of infertility with respect to various socio-economic, biological and life style related factors indicate that the socio-economic factors such as place of residence, education, wealth index, caste and religion do not have any significant role in determining the levels of infertility. However, biological factors such as age at marriage, life-style related factors like exposure to drinking alcohol, smoking and chewing tobacco and the BMI levels seem to affect infertility levels significantly. Infertility levels are higher among those who married late, had the worst health habits and were overweight or obese.

Infertility is a very common problem for couples today. The management of infertility is one of the most important tasks. The age effect on fertility is certainly clinically relevant. Infertility problems increase with age in females. Anatomical factors are responsible for infertility but there are many other factors which are responsible for infertility like pollution, urban/rural life style of people. Use of contraceptive for delaying child birth is more common among the professionals and other higher income groups, making this group more vulnerable to the cumulative effect of the cause of infertility, including ageing. Stress also is an important factor prevalent in professionals, responsible for infertility. Assisted conception technique's success rates are not 100% because of complexity, expensive, lack of awareness, fear and rituals of the people. Thus, the problem of infertility can be managed to some extent by avoiding late marriage, baby at right time, healthy life, good and healthy food, junk food avoidance, medication, stress free life, regular exercise. (Patel Mital., et. al 2012)

The impact of infertility on women's life seems to be substantial. Higher rates of marital disruption in terms of divorce and separation were observed among infertile women. Infertile women had lower autonomy in terms of their involvement in household decision-making, freedom of movement and access to resources than women with children. They also had greater exposure to emotional and physical violence. Therefore, infertility cannot be treated as an individual problem; it has a wide range of social and health repercussions. Therefore, infertility can definitely be considered an important public health issue with wider social implications. (Syamala, T. S., 2012) In many pronatalistic cultures, the consequences of infertility can be devastating, especially for women. Considering the magnitude and the social consequences of infertility, it is time that population and health programs in India include cost-effective interventions for prevention and appropriate management of infertility (UNPFA, New Delhi, 2003).

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Appendix

Table 3
Female Factors
Causes of infertility in females (n=59)

Female causes	Frequency	Percent
Ovulation Problem	21	35.6
Tubal Pregnancies	13	22.0
Endometriosis	10	16.9
Uterine Problems	2	3.4
Unexplained and Other Reasons	13	22.0
Total	59	100.0

Figure 2
Female Factors
Causes of infertility in females (n=59)

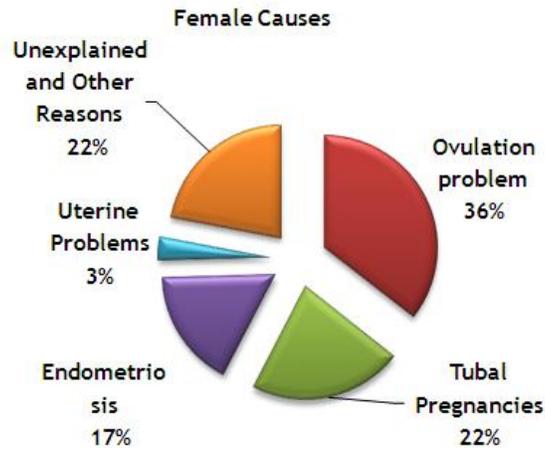


Table 4
Infertile Women's Employability

Currently Employed	Frequency	Percentage
Employed	17	17.0
Not Employed	83	83.0
Total	100	100.0

Figure 3
Infertile Women's Employability

