

# Infertility among Indian women: Causes and consequences.

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## Abstract

**Introduction:** Infertility is a worldwide health problem affecting about 8% to 10% of couples. It is a social, economic, and cultural issue that can reach alarming proportions in countries with significant humanitarian challenges, such as Greece. Infertility is becoming increasingly common, and an increasing number of couples are opting for artificial insemination. The purpose of this study was to learn more about the causes of infertility in older women. **Materials and Procedures** Within two months, 110 barren women seek medical help in a private maternity ward. Data were collected using specially designed questionnaires. In addition to demographic information, the questionnaire included questions about the causes of infertility. The study sample contains 110 infertile women. In terms of marital status, 94.4% (106) of married couples were married, and 3.6% were single. **Conclusions:** Problems in the uterine and uterine tubes, menstrual disorders, sexual disorders, old age, and uterine failure are all causes of a woman's infertility. Female Infertility Women Infertility is a complex issue that needs to be carefully considered by governments and stakeholders in each country, especially those with demographic challenges, in order to develop effective interventions and solutions.

**Keywords:** Infertility, Age, Insemination, Fallopian tubes, Sexual disorders and ovaries failure.

## Introduction

The reproductive system is influenced by environmental influences such as culture, religion, politics, and socioeconomic status. Infertility analysis differs from one location to the next, from one community to the next, and even within the same population from one place to the next [1]. Involuntary infertility is often connected to situations that are, in theory, preventable, along with sexually transmitted diseases, infections, and parasitic diseases, health-care practices that bring about iatrogenic pathology, publicity to poisonous materials with inside the eating regimen or environment, and headaches skilled all through post-partum or post-abortion. Specifically in the example of an unsafely caused abortion [2].

Infertility has far-attaining demographic, social, and fitness consequences. The ease with which ladies is probably categorized infertile or combat the designation, childless ladies' experiences, and the manner of searching for infertility treatments all move past the organic reality of reproductive impairment. Infertile couples can also additionally enjoy emotions of failure, loss, and isolation due to the collision of personal, interpersonal, social, and non-secular expectations.

When children aren't there, spouses' relationships can become highly strained. One partner may try to cast blame on the other, accusing them of being flawed or uncooperative. Couples who have never had children are sometimes referred to as childless couples [3].

Childlessness affects a substantial percentage of couples at some point during their reproductive lives between 50 and 80 million couples worldwide (WHO, 1994). Furthermore, in pronate list societies such as India's and South Asia's in general; infertility can have disastrous effects for women. Infertility and childlessness are no longer private grievances. They are obvious and in your face. And, according to a new analysis from Mumbai's International Institute for Population Sciences (IIPS), it's already rising drastically in cities.

Women from the eastern and north-eastern regions, women with no education, women with a good standard of living, and women with a low standard of living have experienced the greatest relative reduction [3].

Women in metropolitan environments have an excessive occurrence of infertility. This can be because of an alternate in way of life or a later age on the time of the primary

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Received: 26-April-2022, Manuscript No. AABPS-22-61846; Editor assigned: 02-May-2022, PreQC No. AABPS-22-61846(PQ); Reviewed: 17-May-2022, QC No. AABPS-22-61846; Revised: 25-May-2022, Manuscript No. AABPS-22-61846(R); Published: 02-June-2022, DOI:10.35841/2249-622X.90.127

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**Citation:** Zade A, Gajbe U, Gawande U, et al. Infertility among Indian women: Causes and consequences. *Asian J Biomed Pharmaceut Sci*. 2022;12(90):127

marriage. When it involves religion, Muslims have the bottom occurrence of infertility. Scheduled tribes have an excessive price of infertility. The price of infertility rises in tandem with girls' instructional attainment. This can be associated with the truth that dreams for better instructional stages put off marriage, ensuing in an excessive infertility price amongst this subset of the population, that is showed via way of means of the aforementioned causative variables (better age at marriage, city dwelling style, etc.). The price of infertility is inversely proportional to one's widespread of dwelling. Working girls have a better danger of growing breast cancer.

Both men and women can experience infertility, or the inability to produce a live birth following appropriate sexual exposure without the use of contraception. Most infertile couples suffer from primary infertility, which means the woman has never conceived, according to the World Health Organization (WHO). Secondary infertility, on the other hand, can strike a woman at any point after her first pregnancy. When compared to fertility research, infertility has received little attention. According to the International Conference on Population and Development's Program of Action, roughly 1319 million couples in India are likely to be infertile at any given time [4].

Early pregnancy age, a history of no prenatal care during the previous pregnancy, undesired pregnancies and stillbirths, infections acquired during the previous delivery, and HIV and other STIs are all strongly linked to secondary infertility. It is self-evident that an infertility prevalence of more than 5% indicates preventable or curable reasons. As a result, prevention should always take precedence over cure. In developing nations, where the majority of instances are caused by improper deliveries, botched abortions, and STIs, prevention is extremely important [5].

According to the WHO-ICMART glossary, "a disorder of the reproductive system is described by the failure to obtain a clinical pregnancy after 12 months or more of regular unprotected sexual intercourse" (WHO-ICMART glossary\*) Primary and secondary infertility are the two types of infertility

The term "primary infertility" refers to a couple who have never been able to conceive. Secondary infertility occurs when a couple has previously had a pregnancy but then fails to conceive. Primary infertility affects the majority of infertile couples around the world.

Both male and female factors can contribute to infertility. Female infertility accounts for around a third of infertility issues, while male infertility accounts for the remaining third. In the other situations, infertility may be caused by difficulties in both partners or by an unknown cause [6].

### ***Pregnancy is the end consequence of a multi-step process***

- A woman's body must release an egg from one of her ovaries to become pregnant external symbol.
- Along the way, a man's sperm must unite with the egg (fertilize).

- The fertilized egg must pass through a fallopian external symbol on its way to the uterus (womb).
- The embryo must connect to the uterus's inside (implantation).

According to the World Health Organization, infertility can affect a woman in one of three ways: failure to become pregnant, inability to maintain a pregnancy, or inability to carry a pregnancy to term [6].

The following are some of the factors that affect both sexes' fertility:

- Factors in the environment and at work.
- Toxic consequences of cigarettes, marijuana, or other substances.
- Excessive activity
- A poor diet is linked to rapid weight loss or increase.
- A senior citizen

### ***Polycystic ovarian disease (PCOD)***

It is a type of ovarian cancer that affects women. PCOD (Polycystic Ovarian Disease), additionally called Polycystic Ovary Syndrome (PCOS), is a not un-usual place disorder that influences 5% to 10% of ladies among the long time of 12 and 45. It is a trouble resulting from hormonal imbalances in a woman. It can make it harder for women to get pregnant and cause problems by going through their monthly period. The most common symptoms include lack of ovulation, irregular periods, acne, and hirsutism. Left untreated, it can spread to insulin-resistant sugar, obesity, and high cholesterol, all of which can lead to heart disease [7]. PCOD (Polycystic Ovarian Disease) is caused by a number of factors.

The ovaries normally produce female sex hormones and a small quantity of male sex hormones (androgens). During each menstrual cycle, these aid in the correct growth of eggs in the ovaries.

Polycystic ovarian syndrome is connected to an imbalance in these sex hormones. In PCOS, they begin to create somewhat more androgens. As a result, patients cease ovulating, develop acne, and acquire extra facial and body hair. The ovaries contain egg-filled sacs called follicles. During each menstrual cycle, one or more eggs are normally released. Ovulation is the term for this process.

In polycystic ovarian syndrome, the eggs in these follicles do not mature and are not released from the ovaries. The growth of small cysts in the ovary causes polycystic ovaries. PCOS appears to run in families, so if other women in your family have it, or if you have irregular periods or diabetes, you're more likely to have it [8].

The following are some of the most common PCOD/PCOS symptoms:

- Acne
- Gaining weight and not being able to lose it.

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- Hair growth on the torso and on the face. Women's facial hair is thicker and darker, and they have more hair on their chests, tummies, and backs.
- On the scalp, hair is thinning.
- Periods that is erratic. Women with PCOS often have fewer than nine menstrual cycles per year. Some women don't have periods, while others have a lot of blood in their system.
- Fertility issues. PCOS makes it difficult for many women to conceive (infertility)
- Depression
- Blood sugar levels are measured, thyroid hormone tests are performed, and an ultrasound of the belly and pelvis is performed. Estimations of serum androgens, luteinizing hormone, and other hormones are sometimes requested.

### **Treatment**

PCOD/PCOS medical treatment focuses on addressing your specific concerns, such as infertility, hirsutism, acne, or obesity.

- Glucose levels in the blood are reduced.
- Fertility restoration
- Acne or hirsutism treatment
- Regular menstruation is restored, and endometrial hyperplasia and endometrial cancer are avoided [6].

Diabetes, high blood pressure, and high cholesterol have all been linked to weight loss (which might be difficult). Even a 5% weight loss of total body weight has been demonstrated to aid with hormone imbalances and infertility.

The following medications are used to treat polycystic ovarian syndrome's irregular hormones and menstrual cycles:

- Menstrual periods can be made more regular with birth control or progesterone tablets.
- Metformin, an insulin-sensitizing drug, can help with PCOS symptoms and can even bring menstrual periods back to normal. It may also aid weight loss for certain ladies.
- Analogs of the LH-releasing hormone (LHRH)
- The egg matures and is released after treatment with clomiphene citrate. This or other reproductive medicines may be required by certain women in order to conceive.

### **Complications of PCOD**

- Endometrial cancer risk is higher.
- Infertility is a common issue for many couples (early treatment of polycystic ovary disease can help prevent infertility or increase the chance of having a healthy pregnancy).

- High blood pressure, heart disease, and diabetes are all obesity-related diseases (BMI greater than 30 and waist circumference greater than 35).
- Breast cancer risk may be raised [8].

### **Causes of infertility**

Sexually transmitted infections (STIs) are the greatest preventable cause of infertility, accounting for 70% of tubal damage due to pelvic inflammatory disorders. Low fertility is becoming more widespread around the world, especially in urban areas where women are planning their first children later in life [9]. Infertility impacts as much as 15% of couples global throughout their reproductive years. According to the World Health Organization, the general occurrence of number one infertility in India is predicted to be among 3. Nine and 16.8%. Infertility costs range via way of means of country in India, starting from 3.7 percentages in Uttar Pradesh, Himachal Pradesh, and Maharashtra to 5% in Andhra Pradesh and 15% in Kashmir, with costs converting throughout tribes and castes in the identical region [10].

Inability to have kids influences couples, inflicting emotional and mental misery in each guys and women. Infertility prevention and remedy are robotically overlooked or placed low on the concern list, regardless of the diverse social, mental, economic, and clinical ramifications, especially in low-profits international locations which are already below populace pressure. However, in current years, a more consciousness of the need of along with infertility prevention, care, and remedy into habitual health-care offerings has emerged [11].

Damage to the fallopian tubes (the tubes that delivery eggs from the ovaries to the uterus) can save you the egg from getting access to the sperm. Pelvic inflammatory disorders (PID) resulting from numerous infections, endometriosis, or pelvic surgical procedure can reason harm to the fallopian tubes. Sexually transmitted ailments are the maximum not unusual place reason of PIDs (STIs).

Disruptions in ovarian characteristic or hormonal reasons During the menstrual cycle, synchronized hormonal adjustments occur, ensuing with inside the launch of an egg from the ovary (ovulation) and thickening of the endometrium (uterine internal lining) in instruction for the fertilized egg (embryo) to implant with inside the uterus. Infertility can be caused by abnormal uterine anatomy, including the development of polyps and fibroids.

Cervical causes: A small percentage of ladies might also additionally have a cervical difficulty that forestalls sperm from passing thru the cervical canal because of atypical mucus manufacturing or beyond cervical surgical treatment. Unexplained "infertility". The actual causes of infertility problems are never determined in roughly 20% of infertility cases [12].

### **Who is at risk of infertility in women?**

Infertility in women can be caused by a number of factors. Infertility in women can be caused by a number of things, including overall health, genetic (inherited) characteristics,

lifestyle choices, and age. Some instances of specific factors are as follows:

- Age
- Ovulation is prevented due to a hormonal problem.
- Menstrual cycle that isn't normal.
- Obesity
- Being overweight is a problem.
- Extreme exercise results in a low body fat percentage.
- Endometriosis
- Problems with the structure (problems with the fallopian tubes, uterus or ovaries).
- Fibroids in the uterus.
- Cysts
- Tumors
- Lupus, rheumatoid arthritis, Hashimoto's disease, and thyroid gland diseases are examples of autoimmune disorders.
- Infections that are spread by sexual contact (STIs).
- Ovary Insufficiency (Primary) (POI).
- Substance abuse that is out of control (heavy drinking).
- Smoking
- DES syndrome (DES is a medicine given to women to avoid pregnancy issues such as early birth or miscarriage.) However, some of the offspring of women who took DES have had infertility as a result of the medicine).
- An ectopic (tubal) pregnancy in the past [13].

### **Diagnostic analysis and tests**

During an appointment to diagnose lady infertility, what questions will my medical doctor ask? Your medical doctor will need to listen approximately your menstrual cycles, preceding pregnancies, miscarriages, pelvic pain, and unusual vaginal bleeding or discharge. You also can be puzzled if you've got ever had any preceding pelvic infections or sexually transmitted infections (STIs). The following are a few examples of viable questions:

- Have you had any past miscarriages or pregnancies?
- Is your menstrual cycle painless and erratic, or is it typical and consistent?
- Do you experience a lot of bleeding or strange discharge?
- Do you experience any pain in your pelvis?
- Have you had any previous abdominal surgeries? [14].

### **Treatment**

Hormone and ovulation-supporting medicines are commonly used in fertility treatments, which are occasionally combined

with minor surgical operations. A range of treatments known as assisted reproductive technology (ART) can help you conceive a child. Procedures that make it easier for sperm to fertilize an egg and facilitate egg implantation in the uterine lining are examples of ART. When you're ovulating, healthy sperm is retrieved and placed straight into your uterus, which is known as intrauterine insemination (IUI) [15].

IVF entails extracting eggs from your ovaries and fertilizing them in a lab with sperm, in which they change into embryos. A physician will subsequently place the embryos into your uterus. Cryopreservation (retaining your eggs, sperm, or embryos), egg or embryo donation, and gestational surrogates are all examples of ART (generally called surrogacy).

Donor sperm, donor eggs, and surrogates are often utilized by same-intercourse couples and unmarried those who need to begin a family. If you're not able to conceive because of a problem together along with your very own sperm cells or eggs, you could use sperm and/or eggs from a donor [16].

Consult a specialist who specializes in pregnancy and/or infertility to determine which treatments are right for you. A fertility expert can be referred to you by your family doctor or gynecologist. Your local Planned Parenthood health clinic may also be able to assist you in discovering a fertility specialist in your area or provide fertility treatments [17].

### **Prevention**

Simple lifestyle modifications can help you live a healthier life and lower your chances of infertility.

Weight loss is crucial in stopping and treating infertility, as are different ways of life changes. Women who are obese or underweight ovulate much less regularly than ladies who're of a healthful weight. Males who're obese also are greater vulnerable to end up infertile. As a result, eat well and exercise consistently to maintain a healthy weight. Consume a well-balanced diet rich in whole grains, legumes, fresh fruits and vegetables, and low-fat dairy. Sugar, alcohol, and caffeine consumption should be limited, and smoking (even passive smoking) should be avoided.

While moderate exercise can assist improve menstrual regularity and overall health, excessive activity can sometimes disrupt the menstrual cycle, as shown in competitive athletes who train hard. Making time for enjoyment and relaxation can help you reduce stress and improve your physical and mental health. Illegal drugs, such as marijuana and cocaine, should be avoided because they might create fertility issues. Engage in sexual activity in a responsible manner [18].

### **Conclusion**

Problems in the uterine and uterine tubes, menstrual disorders, sexual disorders, old age, and uterine failure are all causes of a woman's infertility. Female Infertility Women Infertility is a complex issue that needs to be carefully considered by governments and stakeholders in each country, especially those with demographic challenges, in order to develop effective interventions and solutions.

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## References

1. Geelhoed DW, Nayembil D, Asare K, et al. Infertility in rural Ghana. *Int J Gynecol Obstetrics*. 2002;79(2):137-42.
2. Cates W, Farley TM, Rowe PJ. Worldwide patterns of infertility: is Africa different? *The Lancet*. 1985;326(8455):596-8.
3. Cain M. The consequences of reproductive failure: dependence, mobility, and mortality among the elderly of rural South Asia. *Population Stud*. 1986;40(3):375-88.
4. Chandra A, Stephen EH. Impaired fecundity in the United States: 1982-1995. *Family Planning Perspectives*. 1998;30(1):34-42.
5. MA A. Health seeking practices of infertile women. *Open Reprod Sci J*. 2012;4(1).
6. Collins A, Freeman EW, Boxer AS, et al. Perceptions of infertility and treatment stress in females as compared with males entering in vitro fertilization treatment. *Fertility Sterility*. 1992;57(2):350-6.
7. Cook EP. Characteristics of the biopsychosocial crisis of infertility. *J Counseling and Development*. 1987;65(9):465-70.
8. Davis-Floyd R, Dumit J. *Cyborg babies: From techno-sex to techno-tots*. Routledge; 2013.
9. Culley LA, Hudson N, Rapport FL, et al. British South Asian communities and infertility services. *Human Fertility*. 2006;9(1):37-45.
10. Parikh FR, Nadkarni SG, Kamat SA, et al. Genital tuberculosis—a major pelvic factor causing infertility in Indian women. *Fertility and sterility*. 1997;67(3):497-500.
11. Philippov OS, Radionchenko AA, Bolotova VP, et al. Estimation of the prevalence and causes of infertility in western Siberia. *Bulletin of the World Health Organization*. 1998;76(2):183.
12. Ganguly S, Unisa S. Trends of infertility and childlessness in India: Findings from NFHS data. *Facts, views & vision in ObGyn*. 2010;2(2):131.
13. Ram U. Childlessness and its consequences in India: Levels, patterns and differentials. *Final Rep. Int Inst Population Sci*. 2006.
14. Dhaliwal LK, Khera KR, Dhall GI. Evaluation and two-year follow-up of 455 infertile couples--pregnancy rate and outcome. *Intern j fertility*. 1991;36(4):222-6.
15. Shivaraya M, Halemani B. Infertility: psycho-social consequence of infertility on women in India. *Ind J Soci Develop*. 2007;7(2):309-16.
16. Sundby J. Sad not to have children, happy to be childless: A personal and professional experience of infertility. *Reprod Health Matters*. 1999;7(13):13-9.
17. Desai P, Shrinivasan V, Hazra M. Understanding the emotions of infertile couples. *J Obstetrics and Gynaecol Ind*. 1992;42:498-503.
18. Dyer SJ, Abrahams N, Mokoena NE, et al. 'You are a man because you have children': experiences, reproductive health knowledge and treatment-seeking behaviour among men suffering from couple infertility in South Africa. *Human Reprod*. 2004;19(4):960-7.