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## Influence of Stress on Infertility

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### **Abstract:**

This paper tries to study the relationship between infertility and stress. Evolution in technology and change in our eating habits has transformed the lifestyle of human beings. This transformation is complimented by the emergence of an increase in social life status among the people of our world. Both male and female are dealing with stress related challenges around them which is considered as a major ingredient for infertility. Our research tries to examine the kinds of stress that leads to anxiety and depression which eventually leads to infertility. We try to explore the impact of stress on infertility and derive out the residual for its effective treatment. It serves as a recommendation point to young people and give provide references to medical practitioners for their research in this field.

**Key words:** Infertility, Stress, technology, anxiety, depression, couples, eating habits.

### **Introduction:**

On scientific terms infertility is known as inability to get pregnant or conceive after having 12+ months of unprotected coitus. However, this can also be caused by males having low count of sperm due to injuries, accidents, eating habits, lifestyles, and stress among couples. In many societies discussing about this problem is considered as a taboo which results in an emergence of psychological problems like downfall of self-esteem, loss of hopes, frustration, physical violence and sometimes suicides among human beings. It creates so much social distress and harm that people who gets infected by this problem are more than heart and cancer patients in the world. With evolution of healthcare sectors, we found treatment to this problem in the way of couple counselling services, IVF, Sperm donation (Galst, 2017) etc. However, we still have cases increasing at an increasing rate for infertile patients. Few papers consider psychology as the major cause of this problem (Dusza, 2018). This paper studies the behavioural aspects of couples who undergo constant and silent struggle of mind and body while undergoing reproductive treatment that may lead to psychiatric disbalance among people.

Getting pregnant is often considered as a big challenge. According to WHO, 1 in every 8 couples have problems with respect to conceiving on time. On the other hand, patients that undergo treatment like assisted reproductive treatment, are having more chances of

having psychological disorders. Stress have primarily 5 phases and forms namely, time limited

stress, naturalistic stress, event-based stress, chronic stress and distant stress. The source of these stress can be inherited from the external environment in the form of job, relationships, marriage life. However, the internal sources can be in the form of lack in nutritional level, fitness level, emotional well being etc.

Physical Stress cannot be quantified on mathematical figures and often measured in terms of fatigue and exhaustion. While Psychological stress can be measured as a direct response to the change in homeostasis of the human body. Both of these stresses have a direct and an indirect effect on nervous, immune, and endocrine system of human body. The time period of this stress can be short term or long-term depending upon the severity of the stress.

Often in women, we see change menstrual disturbances because of the inheritance of negative energy by their endocrine system. On the other hand, men face low esteem, negativity and poor social well being symptoms when they caught up with this problem. Stress often suppresses mating behaviour in couples by interfering the hypothalamic pulse generator. This suppresses oocyte maturation and ovulation at the level of gonads.

We often see the introduction and extended use of IVF (In Vitro Fertilization) in urban areas which often gives more stress to couples in addition to their stress of not being able to conceive on time. This stress give birth to anxiety and gets negatively correlated with pregnancy outcomes among couples. After the study of healthy pregnancy, importance was felt for the need of physical well being among individuals. This bought a new concept of stress management sessions for the couples who are undergoing IVF treatment.

In the pregnant woman, a significant number of studies have show that relaxation strategies not only influence the maternal autonomic nervous system positively but also reduce symptoms of maternal anxiety and depression. The most commonly used mental- based relaxation forms are listening music, a guided imagery without body-based instructions and minimal relaxation such as resting and sitting quietly during pregnancy.

Further studies and research is clearly needed to specify methods of relaxation during pregnancy for which follow up study is necessary along with complete investigations on its long term effects on both father and mother.

### **Cause and Relationship between Stress-Lifestyle-Infertility**

Stress, lifestyle, and Infertility are positively correlated to one another. We often see career ambitions can sometimes leads to change in eating habits and lifestyle which can cause stress and eventually makes a person infertile. The research report on Infertility by WHO highlighted some basic factors which causes stress among couples.

- Inadequate sleeping habits that be due to anything like excessive binge-watching shows on (Order-triggers-two) OTT platforms, overthinking on situations, over expectations on certain occasions between partners etc.
- Unhealthy eating habits in the form of consumption of alcohol, eating junk foods, drug use, excessive eating of canned foods, dependency on frozen food items and having unhygienic eating habits can result in stress and infertility.
- Having uneven lifestyle with little to no room for exercise or consumption of excessive protein supplements without having proper workout schedule.

- Consuming alcoholic substances for an extended period of time along with fried foods and consuming lot of caffeine substances especially in the moment of sleep deprivation.
- Lose of interest in partner and unwillingness to have unprotected physical relationship among couples.

### **Method of determining correlation between Stress and Infertility:**

A quantitative analysis has been performed among patients who undergo stress with their response and willingness to sensuality at the time of their stress often brought us a result that couples who have lust for the first time are often more nervous on their physical appearances while exploring their partners for the first time. Study report of 352 women sample population by WHO seeking treatment for infertility shows 80% women are showing signs of anxiety and depression. This accounts for the low level of estrogen and luteinizing hormones.

A 2010 study conducted by Oxford University in collaboration with WHO reveals the fact that out of the entire population of women in U.S.A, 25% have higher level of alpha- amylase, which is secreted by saliva and is positively correlated to Stress. On comparing men and women, Women who have symptoms of stress have 75% less chance of conceiving as compared to men that have stress. However, stress do not always lead to Infertility and the same is studied by understanding the report of nutritional statistics among couples.

### **Results:**

University of psychology at waterloo performed a hypothesis testing for a sample of 122 women having infertility issues. When discussed about some psychological questions, it has been found out that 40% of women suffers from anxiety issues (Rooney). On comparing the stress level scenarios of the world, it has been found out that U.S.A has the greatest number of cases registered for infertility. This problem is also common in urban areas as compared to rural population within the country. As urban lifestyle has

more competitive lifestyle, residents on these cities often face stressful situations while maintaining their work-life balances.

It is also concluded that people who have stress often face problem of anxiety and depression. In recent study of 135 IVF couples, we see constant hair-fall among both genders who reports problem of stress and anxiety. Thus, Psychological symptoms also have a major role in reducing the fertility among both partners.

A recent report published by American College of Gynecologist (ACG) revealed the fact that 10-25% of women who have problems relating to fertility will end up in miscarriage during their pregnancies. This is primarily because of post traumatic stress.

Women who possess higher concentration of alpha amylase enzyme takes 29% more time to get pregnant as compared to women who have less concentration. Out of these females, nearly half of the population have met with an accident (Mental or physical) during their conceiving phase that resulted in their miscarriage and eventually leads to infertility among the couples. Improper exchange of sperms during IVF also caused low level of reproduction among couples.

**Solutions to the challenge:**

With rapid expansion of healthcare sector and development in the field of pharmacy, we now have proper medications that can relieve an individual from stress and can also improve fertility. Following are the solutions recommended in the article:

- Use of medications like gonadotropins, clomiphene, and leuprolide should be used as low as possible as they many leads to anxiety, distress, and panic.
- Do not stress too much on medications and overthink about the outcomes for any medicines can often improves the chances of conceiving among females.
- Exercise should be made a constant part of life. Even simply walking for 30 mins can help increase the fertility in both.
- Eating balanced diet with adequate consumption of water improves fertility.
- Wearing loose comfortable clothes and taking natural vitamins also acts as a major source of increasing the fertility among both individuals.

**Conclusion:**

The fact of understanding Infertility itself is a big taboo among patients. Lack of improper knowledge and absence of required intercourse education often worsens the problem of infertility. When Lifestyle and eating habits gets compromised for career and ambitions, we often see a rise in the case of infertility.

The psychological pain of infertility is often more challenging as compared to the physical pain. When a mother gets diagnosed with the problem of infertility, they should seek proper counselling from healthcare experts. Psychological well being especially among females on their ovulation cycle is very important for the couples to get pregnant.

On the other hand, nutritious diet should always be part of every meal for couples supplemented with disciplined exercise. Whenever a couple is seeking medical advice, then through research have to be made with respect to the authenticity of the medical practitioner with whom they are seeking medical attention. Use of medications should be limited to worst case scenario and couples should not be heavily dependent on the same.

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