

# The Impact of Hormonal Functioning on Marital Adjustment Among Married Women Facing Infertility

Khushboo Vijaywargiya<sup>1</sup>, Prof. Mani Sachdeva<sup>2</sup>

<sup>1</sup>Amity Institute of Behavioural and Applied Science, Amity University Jaipur, Rajasthan, India.

---

## Abstract

Infertility is the inability to conceive even after having regular unprotected sex for at least 12 months. Infertility is rising to be a global problem as 1 in every 7 couple is faces problems with fertility. Age, lifestyle, hormone, genetics all play a part in fertility. All of these need to align to make a successful conception. This study focusses on how hormones can cause infertility and fluctuations of these hormones can cause disruptions on psychological aspects such as marital adjustment in an individual's life. Infertility has adverse effects on mental health causing problems such as depression, stress, anxiety, decreased Quality of life and decreased marital adjustment. This study was conducted on infertile women of Jaipur, India. There were 400 participants who were part of this study and their hormones Luteinizing hormone and follicle stimulating hormones levels were assessed. These women were given Marital Adjustment Questionnaire to understand the relationship between hormones and Marital adjustment in infertile married women. The results have shown that there is a significant relationship between these variables which means that if there is abnormality in the hormone levels, it can lead to disruptions in marital adjustment. It is important to assess this as it can help in psychoeducation of infertile women and provide effective management techniques to have better Marital adjustment.

**Keywords** Infertility, luteinizing hormone, Follicle stimulating hormone and Marital adjustment.

---

## INTRODUCTION

The initiate capacity to conceive and have children is known as fertility. In biological terms, fertility refers to regular functioning of male and female reproductive systems which can help them to achieve pregnancy. It can be caused by many reasons such as environmental problems, urbanisation, changes in diet, sedentary lifestyle, hormonal fluctuations, late marriage. All of these need to align to make a successful conception. Infertility is when an individual is unable to achieve pregnancy after trying for 12 months of regular unprotected intercourse. Fertility problems are prevalent worldwide. One out of six couples worldwide experience infertility sometime in their life according to the WHO. The Likelihood of Becoming pregnant each month is 25% for women under 35, and it drastically decreases after that age. Infertility in males is also influenced by environmental stress and declined level of testosterone and sperm quality with age.

### Prevalence of infertility in India.

Infertility is an emerging concern in India Which affects people both in urban and rural areas. It affects around 15 - 20 million couples in India annually, which is 25% of worldwide (LLW Journal, 2024). The prevalence of it in India ranges from 3.9% to 16.8% Depending on the geographic and social economic factors. Other factors that influence infertility are urbanisation, environmental factors, lifestyle changes etc. In urban areas main problem arises due to reasons such as late marriages, delay in childbearing, stress, obesity and exposure to pollution and toxins In environment in metro cities. There are two types of fertility- primary and secondary one being unable to achieve pregnancy even once secondary being unable to achieve pregnancy but had at least one successful pregnancy.

### Marital Adjustment

Infertility can have immense impact on mental health of an individual. It can often lead to psychological distress, mental health issues such as depression, stress, anxiety, body image issue, decreased Quality of Life and Marital adjustment. Marital Adjustment means accommodation of spouses with each other and achieving common goals together alongside maintaining individual needs of the partner. Marital adjustment constitutes of Marital satisfaction, Cohesion, agreement, affection, and conflict. According to family systems theory, rather than focusing exclusively on the individuals themselves, connections between people can be better understood by looking at the processes that take place. especially as infertility is a problem that both partners in a partnership encounter.

### Follicle stimulating hormone and Luteinising hormone

The reproductive health of an individual depends on two important hormones one the follicle stimulating hormone and luteinising hormones. Under the direction of hypothalamus, which is another part of brain

there is a very tiny gland called the anterior pituitary gland. Both these hormones are produced in anterior pituitary gland. Despite the size is small both these hormones have an impact on fertility in both men and women.

Follicle stimulating hormone plays a role in both male and female reproduction system. It induces the ovaries to generate tiny sacs called follicles this holds an egg. The body gets ready for potential conception when these follicles develop and start to release oestrogen. The menstrual cycle of a female would be disturbed and release of an egg which is called the ovulation Failed to occur in the absence of follicle stimulating hormone. Similarly in males, it plays a vital role it stimulates the sertoli cells located within the testes, which are necessary for spermatogenesis which is the process of sperm production. If there is disruption in the levels of follicle stimulating hormone the quality and quantity of sperm would drastically decline and make the conception difficult.

Luteinizing hormone also works with follicle stimulating hormone but has slightly different function than it. In women the spike of the levels of luteinizing hormone triggers ovulation during which a mature egg is released in the follicle. Once the ovulation process has been completed it helps in generating a structure called corpus luteum what induces progesterone. Progesterone is the hormone that promotes early pregnancy.

Disruption in luteinising hormone and follicle stimulating hormone secretion either too much or too little can impair this regulated hormonal communication leading to infertility. When these hormones level drop or gets produced in lower than required quantity, the reproductive system shuts down. In women it could lead to amenorrhea which is absence of menstruation, anovulation and infertility. In men low level of both could lead to low sperm production call ma reduced libido. This condition is called as hypogonadotropic hypogonadism which can also result in pituitary disorders, eating disorder (Yang et al., 2025). The high levels of these hormones in women can result in feedback failure, menopause and polycystic ovary syndrome. The Luteinizing hormone often seems to be disproportionately high when compared to follicle stimulating hormone. Both luteinizing hormone and Follicle stimulating hormone thus are important when treating infertility especially during Invitro fertilization and assisted reproductive technology.

While both luteinising hormone and follicle stimulating hormone play a reproductive role but they have ability to significantly impact mental health. This can impair their moods emotional stability and cognitive functioning. These hormones closely interact with neuroactive hormones that can influence functioning of the brain that in turn influences neurotransmitters such as serotonin dopamine and GABA. When the levels of LH and FSH are elevated, the sex hormones such as oestrogen decline which can be during menopause ovarian insufficiency or gonads failure. This leads to neurochemical alterations. As the oestrogen is a mood stabiliser it also has neuroprotective qualities, the absence of it can be triggered by elevated levels of LH and FSH. It can lead to depression irritability disturbances in sleep decline in the cognitive abilities.

Gonzalez- Rodrig et al. (2020) Conducted a systematic review of psychological impact of hormonal treatment for these infertile women have found high levels of gonadotropins including LH and FSH were linked to high levels of mood disorders such as anxiety and depression. When both hormones decline which is quite prevalent in disorders including anorexia nervosa, stress induced amenorrhea, hypogonadism can result in low amounts of oestrogen or testosterone which can cause mental health disorders among these some could be low motivation, social withdrawal, and anxiety. In 2024 a study conducted by Jain, young women who had low LH and FSH for more likely to be anxious irritable and emotionally unstable. Was more likely relevant to hormonal imbalance brought by weight changes and excessive exercise.

## **METHODOLOGY**

### **Rationale of the study**

Infertility usually gets be seen as a medical or a biological problem not understanding that infertility has multiple dimensions to it. To understand infertility all these dimensions carefully need to be studied as it has the ability to completely influence individual's life. As it is understood that hormone fluctuations can cause infertility and infertility can cause disruptions in multiple aspects of an individual's life. This study focuses on how Luteinizing hormone and Follicle stimulating hormone has a relationship with Marital adjustment of infertile women. This study can be helpful to carefully plan a specialised intervention to cater to infertility or designing a patient centred care for infertility patients.

**Aim** To understand and examine the relationship of Luteinizing Hormone and Follicle stimulating hormone on Marital adjustment in married infertile women.

**Hypothesis**

H1: There will be a significant relationship between the relationships between Luteinizing Hormone and Marital Adjustment

H2: There will be significant relationship between Follicle stimulating Hormone and Marital adjustment.

**Variables**

- Luteinizing hormone (LH)
- Follicle stimulating Hormone (FSH)
- Marital Adjustment

**METHOD AND RESEARCH DESIGN**

This study employs a quantitative, cross-sectional correlational design. It investigates how hormonal functioning impacts key psychological outcomes.

**Sample**

For the present study a sample of 400 (age 21-50) women were undertaken on the basis of purposive sampling. The domain of the study was Jaipur city, Rajasthan.

**Procedure** Purposive sampling was used to choose women with infertility problems from zones of Jaipur who are between the ages of 21 and 50. The gynaecologist diagnosed these women, and all hormone investigation data will be documented. Once the person has given their informed consent, the information was gathered. They received MAQ. The collected data was subjected to pertinent statistical methods, and the findings was measured.

**Statistical Analysis**

Relevant analysis for determining the stated objectives was done. Apart from descriptive statistics (mean, SD), Inferential statistics such as correlation was used.

**Table 1: Hormonal profile of infertile married women**

Range	Frequency	Percentage
Luteinizing Hormone		
Above	7	9.8%
Below	2	2.8%
Within	62	87.3%
Total	71	17.75%
Follicle Stimulating Hormone		
Above	6	10.3%
Below	4	6.9%
Within	48	82.75%
Total	58	14.5%

**Table 2: Level of Marital Adjustment of infertile married women**

Category	Frequency	Percentage
Very Good	95	23.75%
Good	112	28%
Average	189	47.25%
Poor	1	0.25%

Very poor	3	0.75%
-----------	---	-------

Note. n = 400

**Table 3: Relationship between LH and Marital Adjustment.**

	LH	Marital Adjustment
LH (N=71)	1	.245
Sig.2tailed		.040

\*. Correlation is significant at the 0.05 level (2-tailed).

**Table 4: Relationship between FSH and Marital Adjustment.**

	FSH	Marital Adjustment
FSH (N=58)	1	.382**
Sig.2tailed		.003

\*\* . Correlation is significant at the 0.01 level (2-tailed).

## RESULTS AND DISCUSSION

This study was conducted in Jaipur city of India. 400 women who were infertile were part of this study from both urban and rural parts of Jaipur. The study was conducted to understand the hormones which can cause infertility and its impact on psychological aspects of an individual. These women were analysed by gynaecologist and their hormone levels were assessed. Amongst which some women were given the Luteinizing hormone and Follicle stimulating hormones for testing and all the 400 women were then their marital adjustment levels were assessed. Table 1 shows the hormonal profile of the women who are infertile. Amongst these 400 women, 71 i.e. 17.75% of them were administered Luteinizing hormone blood test. The hormones level show that 7 had elevated levels of luteinizing hormone which is 9.8% of them. 62 infertile women had within the normal range which contributed to 87.3% of the subjects who have been administered LH test. Only 2 subjects scored lower than normal levels in LH test which is 2.8%. Infertile women who had been administrated Follicle stimulating hormone were in total of 58 which is 14.5% of the total population. Amongst these 400 infertile women, 48 which is 82.75% of women had their hormones level within the normal range. 6 women had levels above than the normal range which is 10.3% and just 4 subjects had FSH levels below the normal range which is 6.9%. These results show that generally the women who are infertile had normal levels of both hormones, showing that other hormones or other factors can have an effect on infertility. It shows that majority of these women had their hormone levels within the normal range.

Table 2 shows the levels of marital adjustment in infertile married women. All the women who were part of the study had their marital adjustment assessed. 95 (23.75%) scored very good as a level of marital adjustment. 112 (28%) subjects results show that they have good marital adjustment. The majority of women i.e. 189, had average results in marital adjustment. The percentage of average scores were 47.25%. The marital adjustment was seen to be poor and very poor was 1 and 3 infertile women which is 0.25% and 0.75% simultaneously. After checking the marital adjustment levels, it was found that majority of these women had average marital adjustment. This shows that marital adjustment could not be solely affected by hormonal fluctuations and infertility. Increased awareness in the society shows that couples try to deal with infertility. A review study was conducted after reviewing 794 articles and it was found that between infertile couples, male infertility had no negative marital impact and the reason for it can be that their infertility was diagnosed newly or that they got married recently and marital strain. Infertile women on the other hand have marital relationship which is less stable when fertile women were compared with them. The factors that are associated with quality of marital relationship are sexual satisfaction, age of the couple, education level, congruency of couple's perception of infertility (Tao et al., 2012).

Table 3 shows the relationship between Luteinizing hormone and marital adjustment in infertile married women. The results show that among 400 infertile women, only 71 were asked to take LH test. It is correlated with marital adjustment (.245) and was .040 at 0.05 level. Table 4 shows the relationship between follicle stimulating hormone and marital adjustment in infertile married women. The results show that among 400 infertile women, only 58 were asked to take FSH test. It is correlated with marital adjustment (.382) and was .003 at 0.01 level. The relationship of Luteinizing hormone was assessed with Marital adjustment to find out if there is any relationship between the two variables. It was found that there is a significantly positive relationship between LH and marital adjustment which indicates that the higher the hormone level, higher will be the marital adjustment scores. The other table shows the results showing that FSH and Marital adjustment has positive correlation. This indicates that if there is rise in FSH score, Marital adjustment scores will also improve.

Both of these tables signify that these reproductive hormones have a relationship with psychosocial variables. Both LH and FSH can be understood to be important reproductive hormone as it is indicative of how women perceive and experiences their marital relationship. The improvement in hormonal functioning helps in enhancing the mood, emotional equilibrium is maintained, sexual functioning is also proper which can show that LH and FSH have a positive relationship. Extreme levels either high or low of these hormones can disrupt the mood, could trigger or increase psychological distress or strain, marital communication, adjustment and satisfaction which can then disrupt the Quality of life of the individual. Since the correlation is at the moderate level it can also indicate that other factors that have an impact on mental health such as depression, stress, anxiety also play a role in assessing the levels of Marital adjustment. There are many studies that show the relationship between hormonal levels and infertile and how it influences each other. On the other hand, there are again many studies that show infertility can disrupt psychological attributes of an individual. There are very few studies conducted on how hormones can influence on psychological aspects of infertile individuals. Many have even shown contradicting results which means there is need more research to be conducted in these aspects to understand infertility, hormones and psychological attributes better. Psychoeducation, creating awareness, therapy and support is required to anyone dealing with infertility.

## CONCLUSION

Infertility is a rising global problem which needs attention. It can be caused by many reasons one of which is hormone fluctuation. Luteinizing hormone and follicle stimulating hormone fluctuation can lead to infertility. Infertility disrupts many psychological aspects such as marital adjustment. The study concludes that LH and FSH have a relationship with Marital adjustment. Although hormones slightly affects the marital adjustment of the infertile women, it was found necessary to get these hormones checked before trying to get pregnant as well as the extensive need for intervention and counselling. Psychoeducation, group counselling, relaxation therapy, Cognitive Behavioural Therapy, Rational Emotive Behavioural Therapy can help in the infertility treatment.

## REFERENCES

1. González-Rodríguez, A., Cobo, J., Soria, V., Usall, J., Garcia-Rizo, C., Bioque, M., ... & Labad, J. (2020). Women undergoing hormonal treatments for infertility: a systematic review on psychopathology and newly diagnosed mood and psychotic disorders. *Frontiers in psychiatry*, 11, 479.
2. Jain, N. (2024). Effect of hormonal Imbalance on mental health among young women.
3. Tao, P., Coates, R., & Maycock, B. (2012). Investigating marital relationship in infertility: a systematic review of quantitative studies. *Journal of reproduction & infertility*, 13(2), 71.
4. Wiczorek, K., Targonskaya, A., & Maslowski, K. (2023). Reproductive hormones and female mental wellbeing. *Women*, 3(3), 432-444.
5. Yang, S. J., Nguyen, T. T. M., Jin, X., Zheng, Q., Park, S. J., Yi, G. S., & Yi, T. H. (2025). A PRISMA Systematic Review of Sexual Dysfunction and Probiotics with Pathophysiological Mechanisms. *Biology*, 14(3), 286.