

# Mind Over Hormones: The Mental Toll of Imbalances in Women

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## Key points:

- Role of hormones in body and mood swings
- Hormonal imbalance
- Management and treatment of hormonal imbalance
- Mental health differences in women with and without PCOS
- Relation of Menarche and Menopause with mental health

## Abstract

Hormonal imbalances are known to have a profound impact on both the physical and mental well-being of women, particularly during key stages of life. For young women, ages 18 to 25, fluctuations in hormones like estrogen and progesterone can significantly influence mental health. These hormonal shifts are often linked to conditions such as anxiety, depression, insomnia, mood swings, panic attacks, and overthinking. This article explores how hormonal changes related to the menstrual cycle, the use of hormonal contraceptives, and conditions like polycystic ovary syndrome (PCOS) affect the mental health of women in this age group. It will also delve into the neurobiological mechanisms that connect hormonal fluctuations with emotional well-being, while considering the role of external factors like stress, lifestyle, and environmental influences.

## Introduction

The mental health of young women has become a growing concern, especially at the intersection of hormonal and reproductive health. Research suggests that hormonal fluctuations and disorders, such as Polycystic Ovary Syndrome (PCOS), irregular menstruation, and the use of hormonal contraceptives, can have a significant impact on mental well-being. However, there is a limited amount of in-depth

research specifically focused on understanding how these hormonal changes and associated conditions affect the mental health of young women. This highlights the need for more targeted studies to explore the complex relationship between hormonal imbalances and emotional health in this population.

## Role of hormones in body

Hormones play a quiet but important role in shaping behavior and personality. They have a chemical impact on many daily activities, from appetite to attraction. Although the human hormone system is very complex and the same hormone can affect people differently, years of research in biology and psychology have shown that certain hormones are linked to specific emotions and behaviors. Hormones affect people in different ways throughout their lives, and during times of physical or emotional changes, hormone levels can rise quickly. For example, teenagers entering middle school or new athletes joining sports teams often experience a surge in hormones.

## Hormonal Imbalance

An excess or deficiency of a specific hormone in the blood is referred to as an imbalance in hormones. Hormone imbalances can lead to various issues that greatly affect quality of life. Increasingly recognized as a major health concern, hormone imbalance is often

called a "silent killer." Modern societal changes, such as privatization, globalization, and rapid development, have made people more prone to stress, mood swings, and irritability. These issues are worsened by factors like overpopulation, unemployment, and agricultural advancements. As people age, hormone imbalances become more noticeable and harder to manage. Research in both animals and humans shows that environmental pollution worsens health, including hormone disruption and various diseases. Women are generally more vulnerable to these imbalances than men

### Management and Treatment of hormonal imbalance

Anyone who suspects a hormonal imbalance should consult a doctor to assess their hormone levels and eliminate other possible causes of their symptoms. Treatment for confirmed hormonal imbalances may involve hormone replacement therapy or hormone-blocking medications (such as anti-androgens). Additionally, lifestyle changes like a balanced diet or weight loss can help improve the body's hormone regulation. <sup>1</sup>

### Relation of menopause with mental health

Throughout a woman's life, she goes through various stages, from childhood to adulthood. As she ages, her body undergoes changes in terms of morphology, physiology, and hormones. Similar to puberty, menopause is another natural phase in life, marking the point when the ovaries stop producing eggs.

The term "menopause" comes from the Latin words "men" meaning "month" and "pause" meaning "to stop." In different languages, menopause is known by various names, such as "alssnn yas" in Arabic and "Haiz ka band hona" in Urdu.

Menopause is a normal part of female aging, signifying the transition from reproductive years to a time when a woman can no longer conceive. It is not a disease,

illness, or pathological condition, nor does it affect a woman's sexual orientation. The symptoms associated with menopause are caused by hormonal changes in the female endocrine system, particularly a decrease in estrogen levels.

This phase is known as the Climacterium or middle adulthood and is characterized by a decline in biological and physiological functions, potentially causing psychosocial disruptions in relationships. Menopause typically occurs between the ages of 47 and 53, but it can begin anytime during a woman's 40s or early 50s. <sup>2</sup>

### Mental Disorders in women with and without PCOS

Sub scale	Mean / S.D.	Without PCOS (N=147)	With PCOS (N=177)
Anxious / Depressed	Mean	10.66	14.62
	S.D.	7.32	7.24
Withdrawn	Mean	4.52	6.84
	S.D.	3.17	3.73
Somatic Complaints	Mean	4.63	8.76
	S.D.	3.98	5.50
Thought Problems	Mean	4.41	6.83
	S.D.	4.23	4.26
Attention Problems	Mean	12.03	18.07
	S.D.	8.97	9.38
Aggressive Behavior	Mean	7.56	11.43
	S.D.	5.51	5.98
Rule Breaking Behavior	Mean	4.41	8.88
	S.D.	3.53	5.69
Intrusive Behavior	Mean	2.89	4.44
	S.D.	2.36	2.66
DSM Sub Scales			
Depressive Problems	Mean	7.27	10.46
	S.D.	4.98	5.57
Anxiety Problems	Mean	4.68	6.20
	S.D.	3.39	3.38
Somatic Problems	Mean	3.46	6.60
	S.D.	3.26	4.24
Avoidant Personality Problems	Mean	3.76	5.33
	S.D.	2.77	2.88
Attention Deficit / Hyperactive Problems	Mean	6.94	10.01
	S.D.	5.19	5.56
Antisocial Personality Problems	Mean	7.18	13.49
	S.D.	5.30	7.85

**Figure 1.** PCOS and Emotional & Behavioral Problems <sup>1</sup>

### Conclusion

Hormone imbalances in young women can have a significant impact on mental health, as hormones like

estrogen, progesterone, and cortisol are crucial for mood regulation and emotional stability. Imbalances can lead to anxiety, depression, mood swings, and cognitive issues. Conditions like PCOS and thyroid dysfunction can further contribute to psychological distress. Estrogen fluctuations can affect mood by altering serotonin levels, while low progesterone can increase anxiety and irritability.

**References:**

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