

# Best Practice Highlights

## Female Patients

Prepared by Maureen Sayres Van Niel, MD

“More than 50 percent of the population is female. The biopsychosocial uniqueness of women creates a need for a different approach to psychiatric history, diagnosis, treatment, and research.”

### BIOLOGICAL ISSUES

Research shows there are significant biological differences between males and females with regard to anatomy, physiology, and metabolism. Women's brains are different from men's with regards to size of brain structures and in global and regional gray matter percentages. For example, MRI studies in humans have found that the hippocampus is larger in women than men when compared to the total volume of the brain. The implications of these brain differences in relationship to behavior are an intriguing topic of current research. In addition, female hormones such as estradiol and progesterone interact with various neurotransmitters in the brain, including dopamine and serotonin in ways that are not yet fully understood. Research is ongoing to determine how these biological differences may have behavioral, cognitive and clinical implications or affect treatment outcomes in women.

Women also have different pharmacokinetics from men, affecting the absorption, distribution, bioavailability, and metabolism of medications. This leads to differences in the way women metabolize psychotropic drugs in the liver and may increase the circulating levels and duration of action of medications, such as zolpidem, as recently cited by the Food and Drug Administration (FDA). Medications such as carbamazepine, oxcarbazepine, phenytoin, and topiramate increase the rate of breakdown of oral contraceptives in the liver, making the birth control pills less effective in preventing pregnancy in women taking these medications. The use of medications in the peripartum period also presents unique challenges to be considered for the mother and the baby. Finally, females have been found to experience more pain relief effects from opioid painkillers, which is hypothesized to result from the effects of estrogen. In 2013 the US Food and Drug Administration announced the first gender-specific guidelines for the use of certain medications. The study of these gender-based reactions to psychotropic medications is in its inchoate stages and is expected to grow over the next decade.

## ISSUES OF EVALUATION AND DIAGNOSIS

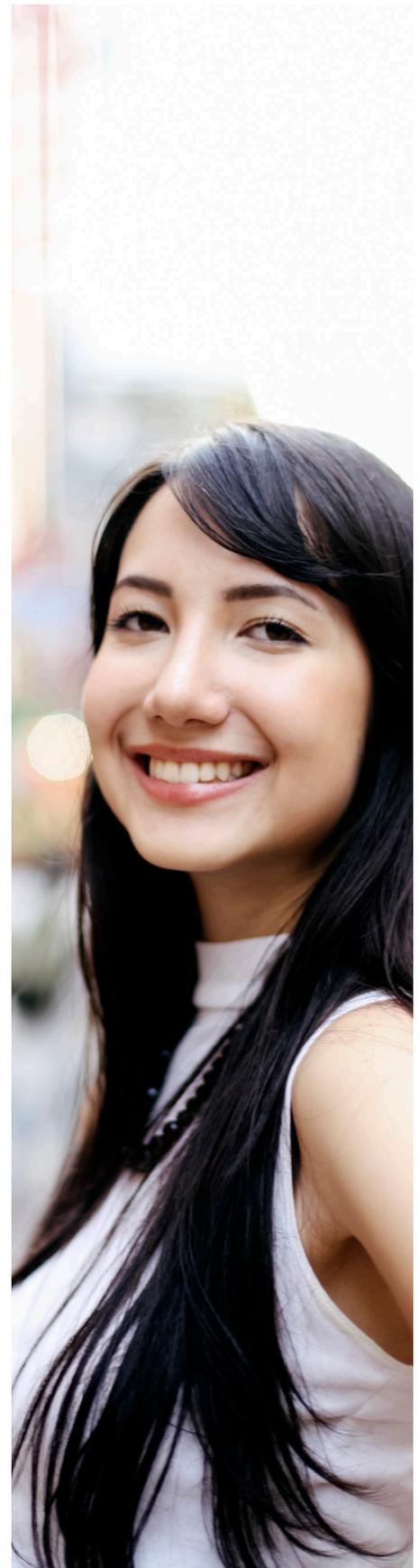
A woman's mental health is punctuated by specific events during her natural biological cycle. A thorough psychiatric history should include a female patient's symptoms in relation to the stages of the menstrual cycle, the perinatal period, the time following a miscarriage or abortion, the perimenopausal years, the possible history of sexual trauma or physical abuse, and gender identity and sexual history. All these events may have a distinct effect on a woman's mental health; hence it is important to ask whether, for example, a patient's depressive symptoms remit during certain portions of her menstrual cycle. Alternatively, in other situations, it may be necessary to order a measurement of reproductive hormone levels to see where exactly the patient is in the perimenopausal spectrum. These questions are often asked when taking a medical history but their importance is often forgotten in the psychiatric history.

Overall incidences of most psychiatric disorders are almost identical for males and females. But female patients are more likely to report psychiatric symptoms to their providers, possibly because of innate differences in the way female patients actually experience somatic and emotional events as well as differences in the way males and females are socialized to acknowledge emotions and seek help. Furthermore, there is a difference between male and female patients in the types of mental disorders they develop. The following disorders primarily affect women:

- **Eating Disorders:** occur 85-90% of the time in females
- **Major Depressive Disorders:** Women are twice as likely to be affected than males
- **Anxiety Disorders:** Women are twice as likely to be affected than males specifically by generalized anxiety disorder, panic disorder, specific phobias, and seasonal affective disorders.
- **PTSD:** Women are more likely to be affected than males. Childhood and adult sexual abuse is more likely in females than males. The lifetime prevalence rate of violence against females ranges from 16-50%. Up to 46% of women who are raped develop PTSD
- **Somatoform Disorders:** Women are significantly more likely to be affected than males.

Obsessive compulsive disorders and social anxiety disorders occur with equal frequencies in males and females. Bipolar and schizophrenic disorders occur with equal frequency in males and females as well; however, there may be differences between the sexes in the comorbidities present, the age of onset, and the long-term course of these psychiatric illnesses. Geriatric patients are more likely to be female, leading to a prevalence dementia in women over men in this age group.

On the basis of their data, several recent studies have postulated a link



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between the high prevalence of depression and anxiety in women and the well-documented higher percentage of psychosocial stressors typically present in women's lives—especially women from minority groups—such as lower wages, disadvantaged social status and poverty, racial discrimination, and the unrelenting responsibility for the care of others. These women report increased stressors before many episodes of depression. Further research will reveal whether increased social support and societal changes could prevent some of these depressive and anxiety illnesses in women. In the meantime, psychiatrists should ask women patients about financial and social support, help address problems that are causing stress in their lives, and emphasize the utmost importance of self-care.

### HISTORY OF WOMENS MENTAL HEALTH

Despite these significant biological differences between women and men, until recently all research studies, clinical trials, and drug studies have used male subjects almost exclusively. Psychiatric illnesses are diagnosed and treated based on studies of males without amendment for female patients' differences. The National Institutes of Health Revitalization Act of 1993 began to require research studies and other clinical trials to enroll numbers of women and minority subjects representative of their numbers in society. This requirement heralded the era of government-sponsored, gender-based studies in modern biology and medicine. Though research shows that we are still far from reaching those government-mandated requirements, there has been notable progress. In the past decade, there has been increased interest in women's mental health as a specialty in psychiatric training, increased numbers of women's health centers and mental health centers arising throughout the country, and a trend toward collaboration of care planning between psychiatrists, primary care physicians and obstetrician/gynecologists. Most recently, the FDA announced in 2015 the efforts of their Office for Women's Health (OWH), which along with the Office of Research on Women's Health (ORWH) at the National Institutes of Health (NIH), monitors the progress of increasing the numbers of females in clinical trials and identifying the significant differences in gender response to medications.

We also have gained a better understanding and labeling over the last decade of the unique mental health diagnoses affecting women. Throughout history, a woman's experience of psychiatric symptomatology at the time of menstruation was not well understood and sometimes not seen as a legitimate illness. It was only in the appendices of the DSM-IV that diagnostic criteria were suggested for premenstrual dysphoric disorder, PMDD. Diagnostic criteria for PMDD were first included in DSM-5 in 2013 and the entity was classified as a depressive disorder with qualifiers. Other areas of progress include symptoms related to the perinatal period. Recognition of perinatal mood and anxiety disorders as a distinct clinical entity has become more generally recognized. However,



### Future Needs

These are a few ways in which female patients have unique needs—in their biology, in their life cycle, in their evaluation, in their proclivity to get certain psychiatric disorders, and we have touched on the ways the medical profession may have biases in viewing female patients. Research and education on gender biology, bias and health disparities deserve our utmost attention. The consequences of these biases may affect the very lives of the people we treat and love.

only half the women who have these disorders are diagnosed properly, and of those diagnosed, only half receive the appropriate treatment. While 10 to 20 percent of all perinatal women and 23 to 30 percent of low-income perinatal women from minority groups are affected, only one out of four of these female patients receives both appropriate diagnosis and adequate treatment—a result that would be considered unacceptable in other areas of medicine.

### BEST PRACTICES WHEN TREATING WOMEN

A few best practices to consider when treating women:

- Similar to all genders, taking a mental health history includes: the history of present illness, the past medical history, the past psychiatric history, a sexual trauma history, a physical abuse history, and a sexual/gender identity history. Additionally, it is also important to note changes in psychiatric symptoms in relation to a patient's perimenstrual period, perinatal period, and perimenopausal period.
- Clinicians should make efforts to learn and stay abreast of new research on differences in female anatomy and biochemistry and the ways those differences affect our understanding of women's mental health.
- A woman's pharmacokinetics can affect the absorption, distribution, bioavailability and metabolism of medications. While research in this area is expanding, it is still limited, so a close monitoring of medication doses, side effects, and drug interactions is recommended for women patients.
- When planning clinical trials, research protocols, and drug studies, clinicians and researchers should be proactive and enroll women subjects representative of their numbers in society.
- The presence of psychosocial stressors in many women's lives and its connection to depression and anxiety disorders warrants further research and evaluation for adequate social and financial supports. Follow up with proposed solutions when needed.
- Consider working with women in a collaborative care model, working together with a patient's obstetrician/gynecologist, primary care provider, and ancillary providers to deliver more holistic, comprehensive care.
- Be aware of biases that may come into play in the care of female patients, especially when there are symptoms with unique presentations.