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Serrano, Gerardo, "Depression" (2022). *Nursing Student Class Projects (Formerly MSN)*. 511.
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Depression: Pathophysiology, Signs and Symptoms

Gerardo Serrano, RN

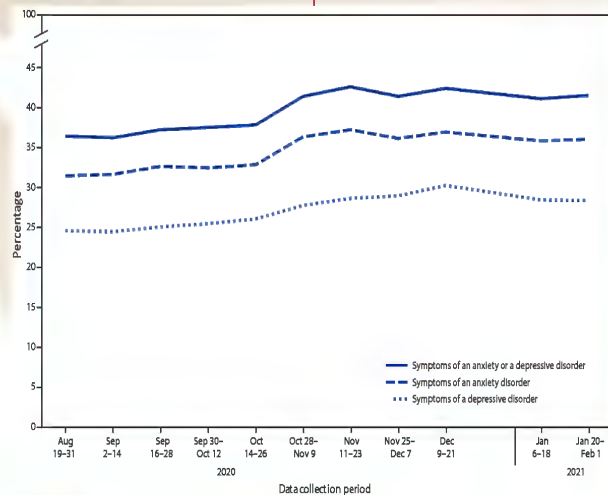
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Depression

Depression is a common illness worldwide, with an estimated 3.8% of the population affected, including 5.0% among adults and 5.7% among adults older than 60 years (Schomerus et al., 2019). Approximately 280 million people in the world have depression (Schomerus et al., 2019). Depression is different from usual mood fluctuations and short-lived emotional responses to challenges in everyday life. Especially when recurrent and with moderate or severe intensity, depression may become a serious health condition. It can cause the affected person to suffer greatly and function poorly at work, at school and in the family. At its worst, depression can lead to suicide. Over 700 000 people die due to suicide every year (Schomerus et al., 2019). Suicide is the fourth leading cause of death in 15-29-year-olds (Schomerus et al., 2019). Although there are known, effective treatments for mental disorders, more than 75% of people in low- and middle-income countries receive no treatment (Celentano & Szkló, 2019). Barriers to effective care include a lack of resources, lack of trained health-care providers and social stigma associated with mental disorders. In countries of all income levels, people who experience depression are often not correctly diagnosed, and others who do not have the disorder are too often misdiagnosed and prescribed antidepressants. Depression among adults in the United States tripled in the early 2020 months of the global coronavirus pandemic—jumping from 8.5 percent before the pandemic to a staggering 27.8 percent (Schomerus et al., 2019). Research studies found that the most significant predictors for if a person experienced depressive symptoms during the pandemic were low household income, not being married, and experiencing multiple pandemic-related stressors (Schomerus et al., 2019). The findings underscore the inextricable link between the pandemic and the short- and long-term impact it will have on mental

health in the US and beyond (Celentano & Szkló, 2019). The sustained high prevalence of depression does not follow the same patterns we noticed after previous traumatic events, such as Hurricane Ike and the Ebola outbreak. Typically, we would expect depression to peak following the traumatic event and then lower over time. Instead, it was found that 12 months into the pandemic, levels of depression remained high (Celentano & Szkló, 2019). These and other mental conditions are becoming amplified during the recent pandemic, while COVID-19 patients and their families are also at high risk to develop depression and anxiety (Celentano & Szkló, 2019). Overall, the stigma that accompanies this disease needs to be subdued to prevent individuals from seeking the help they need.

(Schomerus et al., 2019).



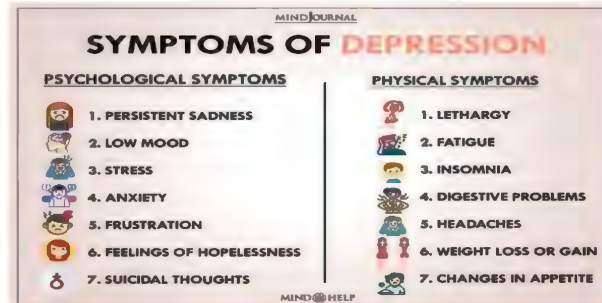
Symptoms of Depression

- Persistent sad, anxious, or empty mood
- Feelings of hopelessness, or pessimism
- Feelings of irritability, frustration, or restlessness
- Feelings of guilt, worthlessness, or helplessness
- Loss of interest or pleasure in hobbies and activities
- Decreased energy, fatigue, or feeling slowed down
- Difficulty concentrating, remembering, or making decisions
- Difficulty sleeping, early morning awakening, or oversleeping
- Changes in appetite or unplanned weight changes
- Thoughts of death or suicide, or suicide attempts
- Aches or pains, headaches, cramps, or digestive problems without a clear physical cause that do not ease even with treatment
- Suicide attempts or thoughts of death or suicide (Celentano & Szkló, 2019).

Underlying Pathophysiology

- Monoamine Hypothesis of Depression: a deficit in the concentration of brain norepinephrine, dopamine and serotonin is believed to cause this illness (Celentano & Szkló, 2019).
- Stress and Hypothalamic-Pituitary-Adrenal System Dysregulation plays a role in the individual's ability to cope with stress. Persistent dysregulation of the HPA system is related to depression. Inflammation is another risk factor that triggers the onset of depression (Celentano & Szkló, 2019).
- Elevated levels of C- Reactive protein a commonly used marker of inflammatory disease is associated with depression (Hypothalamic-Pituitary-Thyroid System Dysregulation people with hyperthyroidism often manifest symptoms of dysphoria, anxiety, irritability, emotional lability, and cognitive impairments (Celentano & Szkló, 2019).
- Neuroanatomic and Functional Abnormalities. Decreased in serotonin 5-HT receptor subtype binding in the frontal, temporal and limbic cortex as well as serotonin transporter binding in the cerebral cortex and hippocampus (Park & Sea, 2020)
- Alterations in the raphe-serotonin system leads to mood instabilities as well.
- Hippocampal volume reduction in major depression is a widely reported finding in people with depression (Park & Sea, 2020).
- Glutamate System elevated cortical levels of glutamate, the major excitatory neurotransmitter in the central nervous system, may be involved in the pathophysiology of major depression (Singh and Mastana, 2015).

(Park & Sea, 2020).



Significance

A large percentage of society has difficulty believing that depression is a medical illness. The symptoms of this disease is both physical and mental, and often prevent the individual from completing daily tasks and interacting with others.

Due to the nature of these symptoms, depression is often dismissed as laziness. There are large differences between people that are lazy, and people that have depression.

Due to the fact that society often doubts of the existence of this mental illness, many people are afraid to come forward to their families about their inner emotions, thoughts and feelings (Coley et al., 2018). This will result in their depression worsening, as they will not be properly treated. This increases the risk of suicide and self harm, which will be ultimately be the worse result.

Although many individuals consider the cause of depression to be beyond their control, they consider the problem of depression as their inability to deal with themselves and their life situation. Personal responsibility for the maintenance of depression in an integral part of the stigma surrounding it.

When considering how to tailor therapies to the individual patient, or implementing programs for depression, the role of stigma needs to be taken into account.

Understanding the degree of stigma that a person is experiencing and their response to it may assist the practitioner to know when to guide an individual towards drawing on their own resources.

Many people living with depression who struggle with this assumption of personal responsibility for their depression will not seek advice from a health professional until they are in despair about their own strength to cope with it. Such individuals may need to relinquish responsibility in order to move away from ideas and coping strategies that are underproducing to build more dispersed notions of accountability for their depression and approaches to its management (Coley et al., 2018).

Implications of Nursing Care

Nursing care for patients with depression includes determining the degree of impairment, assessing the client's coping abilities, assisting the client to deal with the current situation, providing for meeting psychological needs and promote health and wellness.

Each person is affected by depression differently and expresses depressive symptoms in a unique manner.

Treating depressive illness depend on the clinical manifestations of the illness and the assessment skills of the nurse.

Conclusion

Depression is a common mental disorder that affects people irrespective of age, race, ethnicity and gender, resulting in adverse effects on physical health, human relationships and cognitive function (Coley et al., 2018). Depression possesses huge public health problems affecting millions of people worldwide, it demands a large economic burden on the individual and in our health care system (Coley et al., 2018).

Neuroinflammation which is characterized by activation of glial cells and elevated production of pro inflammatory mediators is a key process in the pathology of depression (Coley et al., 2018).

Lower level of brain derived neurotrophic factor contributes to the development of depression. Depression incidence is two times higher in patients with diabetes and concurring occurrence of the disease impair quality, decreases life expectancy, and also increases the risk of diabetic complications (Coley et al., 2018).

The major challenge with understanding the pathophysiological mechanisms which underlie depression is that there is no single hypothesis which explains all aspects of the signs and symptoms of depression. With depression there is no one size fits all, and with this illness it involves multiple, interlinked disease mechanism which manifest as the constellation of signs and symptoms which depict depression (Celentano & Szkló, 2019).

References

- Celentano, D., & Szkló, M. (2019). *Gordis epidemiology* (6th edition). Philadelphia, PA: Elsevier.
- Olson M, Blanco C, Marcus SC. Treatment of Adult Depression in the United States. *JAMA Intern Med*. 2016;176(10):1482-1491. doi:10.1001/jamainternmed.2016.5057
- Park, G., & Seo, B. K. (2020). Revisiting the relationship among housing tenure, affordability and mental health: Do dwelling conditions matter? *Health & Social Care in the Community*, 28(6), 2225-2232. <https://doi.org/10.1111/hsc.13035>
- Tran, L. D., Rice, T. H., Ong, P. M., Banerjee, S., Liou, J., & Ponce, N. A. (2020). Impact of gentrification on adult mental health. *Health Services Research*, 55(3), 432-444. <https://doi.org/10.1111/1475-6773.13264>
- Mervish, E. H., Shesler, M., Hawthorne, D. J., & Goldbach, J. T. (2019). Sexual orientation disparities in mental health and substance use among Black American young people in the USA: effects of cyber and bias-based victimization. *Culture, Health & Sexuality*, 21(9), 985-998. <https://doi.org/10.1080/13691058.2018.1523113>
- Pharr, J. R., Kachen, A., & Cross, C. (2019). Health Disparities Among Sexual Gender Minority Women in the United States: A Population-Based Study. *Journal of Community Health*, 44(4), 721-728. <https://doi.org/10.1007/s10990-019-00631-z>
- Coley, R. L., Sims, J., Dearing, E., & Spielvogel, B. (2018). Locating Economic Risks for Adolescent Mental and Behavioral Health: Poverty and Affluence in Families, Neighborhoods, and Schools. *Child Development*, 89(2), 360-369. <https://doi.org/10.1111/cdev.12777>
- Schomerus, G., Stolzenburg, S., Freitag, S., Speerforck, S., Lawowitz, D., Evans-Lacko, S., Muehlen, H., & Schmidt, S. (2019). *Stigma as a barrier to recognizing personal mental illness and seeking help: a prospective study among untreated persons with mental illness*. *European Archives of Psychiatry & Clinical Neuroscience*, 269(4), 469-479. <https://doi.org/10.1007/s00406-018-0896-0>
- Singh, P., & Mastana, S. (2015). *Depression: A Silent Culprit in Health and Disease*. Bentham Science Publishers.
- Sundeen, E., Powell, W., & Deuell, R. (2020). *Leveraging the Annual Wellness Visit to Improve Rural Depression Management*. *Online Journal of Rural Nursing & Health Care*, 20(1), 6-31. <https://doi.org/10.14574/oajrnhc.v20i1.602>
- Takahashi, L. K. (2019). *Chapter 19 Neurobiology of Schizophrenia, Mood Disorders, Anxiety Disorders, and Obsessive-Compulsive Disorder*. In K. L. McCance, S. E. Huether, V. L. Brashers, & N. S. Rote (Authors), *Pathophysiology: The biologic basis for disease in adults and children* (pp. 605-606). St. Louis, MO: Elsevier.
- World Health Organization. (2020, June 04). *Depression*. <https://www.who.int/news-room/factsheets/detail/depression>



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