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RESEARCH ARTICLE

DEPRESSION

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INTRODUCTION

Depression is a common mental disorder that affects 300 million worldwide and one of the leading cause of permanent disability (1). It is characterized by persistent sadness and a loss of interest in activities that you normally enjoy, it is accompanied by an inability to carry out daily activities, for at least two weeks. In addition, people with depression normally have several of the following key symptoms as indicated in the Diagnostic Criteria for Depression by the International Classification of Disease: persistent sadness, physical and mental energy drain, loss of interest or pleasure which occurs on most days in the span of two weeks. If any of the main symptoms are exhibited, associated symptoms such as: change in appetite; change in sleeping pattern (sleep more or less); anxiety, reduced concentration, indecisiveness, restlessness, feelings of worthlessness, guilt, or hopelessness; and thoughts of self-harm or suicide must be further evaluated. Depression can manifest itself in different types namely: major clinical depression, dysthymic depression/ persistent depressive disorder, bipolar disorder, seasonal affective disorder (SAD), postpartum depression and psychotic depression. Prolonged depression can lead to several alarming complications like alcohol abuse, chronic pains/aches, anxiety/phobia, trouble at work/school, relationship issues, social isolation, obesity, type 2 diabetes and suicide.

Prevalence: It has been estimated that 5.8% of men and 9.5% of women will have a depressive episode in any 12-month period. If current trends are maintained, depression will be the second most important cause of disability by the year 2020. In the 15–44 year age bracket, depression is already the second highest cause of morbidity, accounting for 8.3% of the global burden of disease in that age group (2). In the United States, it has been estimated that between 1.8% and 3.6% of workers suffer from depression (3). Studies also suggest that the average annual costs, including medical, pharmaceutical and disability costs, for employees with depression may be 4.2 times higher than those for an average employee who receives health benefits (4). Bipolar affective disorder is a disorder in which a depressive illness exists together with episodes of mania, characterized by elated mood, increased activity, and overconfidence and poor concentration. It is much less common than depression alone (the point prevalence is estimated at 0.4%) (2), but is associated with significant impairment of work performance and disability. The disease burden is 50% higher in females to males. According to Rahman et al. (5) low income level women are proven to suffer postpartum depression more which can affect the psychology of the next generation child. Studies also show that most affected age groups are individuals between 18-25 years. Fewer than 10% of the population seek medical help due to the stigma brought about by society and also the fear it brings about and of being revealed that can cause them to lose their employment (1). In the United States, the percentage of workers who describe themselves as "never having the

time to complete one's task" has increased from 40% in 1977 to 60% in 1997 (6) and the average working time lost due to stress has risen by 36% since 1995. Elkin and Rosch (7) estimated that in 1990, 54% of the 550 million working days lost annually, could be attributed to stress. According to Canadian Community Health Survey (CCHS) 5.4 percent of Canadian population aged from 15 years and over reported mood disorders, in which 4.7 percent are suffering from major depression and 1.5 percent from bipolar disorders. About 11 percent of males and 16 percent of females in Canada are suffering from major depression throughout their lives.

Diagnosis: The common method to diagnose depression is through history collection, mental status examination, physical or functional disabilities and the ICD 10 criteria. A collaboration of symptoms will determine the degree of depression.

Health Determinants of Depression: One important aspect of well-being is good mental health which is a state where an individual realizes his maximum potential, can adapt to stress of daily life but still being an effective and fruitful member of the community. Prenatal and the initial years of life are very crucial for the physical as well as the psychological development of a child because the external sources directly affect the development of the brain. The drug abuse during pregnancy can lead to premature birth and low-weight or undernourished child at the time of birth. Very-low birth weight (under 3 lbs.) is associated with an up to 4.5 times higher risk for psychiatric problems, while low birth weight (under 5 lbs.) increases the risk for psychiatric problems in adulthood by 2.5 times (8). Maternal health during pregnancy is also a contributing factor in a child's health. For example, studies show that mothers who had flu during pregnancy have three times more risk of developing schizophrenia in their children (9). Socioeconomic status specifically education level and the economic status (poverty and wealth) and environmental determinant which includes the feeling of security and the accessibility and availability of professional help and support system such as family, friends has a great effect on the mental health of an individual. Based on our study, we have noted that the indicators to effectively analyze health status are:

- Potential years of life lost (PYLL) (10)
- Avoidable mortality rate (10)

This article has analyzed a graph about the proportion of the New Brunswick population reporting positive mental health status in the CCHS remained below the national average across the period between 2003 and 2010, Canada experienced the fifth-highest proportion among the provinces and territories; only the Northwest Territories and Nunavut had poorer mental health status reported. Canada falls under the region with the highest proportion reporting positive general health status within Health Region 2, there was also found a relatively higher proportion reporting positive mental-health status. The factors influencing this health indicator graph include social and economic inequities, physical environments, personal health practices and coping skills, biology and genetics, gender, child development, cultural differences, growing urban-rural splits, health services, and social processes that affect the conditions of people's lives (10).

Health Equity in Relation to Depression: Mental health care disparities is the unfair differences in access to or quality of care according to race and ethnicity, are quite common in mental health more specifically with depression. The three main reasons contributing to mental health care disparity are: Racial discrimination/racial ethnic minority, socioeconomically disadvantaged groups, Sexual minority youths/ subgroups. Racial discrimination is one of the most evident cause of depression, high levels of stress and mental disparities in the individuals. According to Boyle et al. (8), mental health services for minorities in the US are less accessible than the whites. Racial and ethnic minorities are more likely to get poor quality treatment as compared to the white people.

Low socioeconomic status (SES) is generally associated with high psychological disorders, more disability, and less availability to health care. Among mental disorders, depression exhibits a more

argumentative association with SES. The researches indicated that low-SES individuals had higher risk of being depressed, but the risk of a new episode were lower than the odds of persisting depression. Socioeconomic inequality in depression is heterogeneous and varies according to the way psychiatric disorder is measured, to the definition and measurement of SES, and to contextual features such as region and time. Nonetheless, the authors found compelling evidence for socioeconomic inequality in depression. Strategies for tackling inequality in depression are needed, especially in relation to the course of the disorder (11). It is interesting to know that sexual orientation and gender identity play a huge role in contributing to depression. Adults who are LGBTs are more prone to depression than the non-LGBTs. One of the main reasons for the LGBT adult population to undergo high levels of stress was due to job-instability (12).

According to an article on scientific equity towards depression, these are certain strategies that can be implemented- to reduce mental health disparity:

- Increasing the number of prevention research participants from vulnerable subgroups
- Conducting more data synthesis analysis
- Implementation of science research
- Disseminating preventive interventions that are efficacious for vulnerable youth/middle aged individuals
- Increasing the diversity of the prevention science research workforce.
- Policies that address the social of health, for example improving education
- Reducing poverty
- Increasing and extending health insurance coverage to include mental health treatment, as well as improving community mental health systems.
- Other strategies involve improving environmental factors that influence mental health and that affect vulnerable subgroups disproportionately, such as poor housing quality, residential overcrowding, poor quality schools, and physical and social neighborhood risks. Improving access to, utilization of, and quality of mental health services for vulnerable youth are approaches to promoting mental health by decreasing health services disparities.

American Health in Comparison to Canada Health: Canada's health care system is a single-payer system that involves a mixture of comprehensive health insurance plans that provides preventive care and medical treatment. All Canadians have the right to use the medical insurance regardless of medical history, annual income or their standard of living. According to the Canadian Health Care Organization, the Canadian Health Care contributes close to 9.5% to GDP. On the other hand, the United States spends close to 14% of its GDP on health care and practices a limited and multi-payer system (13). Individually, Canadians spend about \$3300 per capita on health care, which can be a major attribute to the country's general wellbeing, political and economic status. In Canada, residents are assured with high-quality primary health care but despite those people with mental illness encounters difficulty in accessing services that would help them in their current condition which results to the irregular consultation with a primary care practitioner on regular basis (5). One reason is that the primary practitioners may be not willing to see such patients because of their mental health symptoms, physical disabilities, poverty, substance abuse, housing instability and criminal record (5, 9). There are some groups which cannot be managed by primary and secondary services and requires a higher level of treatment. At this point, tertiary health care comes into play. Tertiary mental health care is aimed to treat patients with more severe and refractory mental diseases. It includes programs like psychosocial rehabilitation, medication management and behavioral approaches. These services can be delivered through specialized teams, hospital-based services or community residential programs (14).

Factors that affect the access to the high-quality primary health care:

- Symptoms of the patient mental illness
- Social determinants of health
- Information, education, support
- Discrimination and stigma

The comparison of the Canadian and United States Healthcare system is often made by the government, public health and public policy analysts since its considerable contrast in the model that it follows. In the 1960s and 1970s Canada had changed its health care system but initially, both countries had similar health care system. It was on the basis of per-capita and as a percentage of GDP, the USA spends higher on healthcare as compared to Canada. As per the studies and medical peer-reviewed journals comparing health care system in the USA and Canada found that "health outcomes may be superior in patients cared for in Canada versus the United States, but differences are not consistent. "However, the life expectancy in Canada is more than America. In addition, Canada has low infant mortality rate than the US. Primary care practitioners are the frontline and important part of healthcare systems. Studies show that current screening rates are low. Primary health care practitioners fail to diagnose depression in 30-50% of patients to whom provides general health care. (15). According to the US Preventive Services Task Force (USPSTF), all adults should be screened for depression in primary health care but in reality, it is as low as 1-2%. In conclusion, the Canadian Government is engaged in helping Canadians in maintaining, improving and recovery for any mental condition. Their primary focus is on:

- Support research and promulgation
- Empower the primary health care, home care, and care sectors to deliver effective health care services (16).
- Raise awareness using social marketing medium and campaigns
- Monitor mental health trends in the community (16).

Culture, Environment, and Health In Relation to Depression:

Health and culture are two interconnected system. Culture having a very big effect on how health factors like illness, treatment and health care providers is perceived. Their openness to health education is also affected on how culturally acceptable the information given. Some societies may accept Western medicine into their practice but it will go together with superstitious beliefs that illness could be caused by supernatural phenomena and prayers or spiritual interventions may be done together with medical treatments (17). Every Healthcare system is tailored for the diversity of groups living in a particular country. It is created in that way so patients will feel comfortable seeking medical help while practicing their beliefs and faith. One example is gelatin based medication which is a pork derivative that is considered a taboo in the Muslim culture and alternatives to must be offered. Culture and environment plays a huge contribution to treating depression. According to Harvard Health Publishing (18), Psychologist Carol Kauffman, innovative techniques for combining principles of positive psychology into more traditional types of group/individual therapy. His innovation helped to counsel people with depression and extreme mood swings. Reverse the focus from positive to negative: this practice aims at shifting focus more to the positive aspects/gains of individual in a day to dwelling on the negatives.

1. Develop a language of strength: though therapists and patients sit together to take about the negatives in life, psychologist like Kauffman suggests strength coaching advice patients. Depression can be battled better when an individual opts to focus on her/his personal strengths and positive qualities.
2. Balance the positives and negatives: it is vital for people to know what are their positives to battle the negatives out of their life.
3. Build strategies that foster hope: to step over diversity and challenges in our daily routines one needs to hold their hopes high on themselves. What a person is from within is definitely due to their culture and environment.

Culture leaves a certain influence on our emotional narratives, including the way we feel and think of distress. There is a association between race, ethnicity and health beliefs, treatment preferences, healthcare decisions, and consumer's preferred features of healthcare providers. Holding the values and preferences of individuals can be useful in appealing racial minority patients in mental health services. Poor eye contact may be an evidence of emotional problems among children approaching from cultures that pressure individual autonomy, but a label of respect in cultures that stress deference. Symptoms of depression are probably more same than dissimilar across cultures, but culture affects which symptoms individuals select to accentuate, as well as the idioms they use to depict distress.

To effectively cure depression in new patients, doctors needs to first identify and address cultural barriers. Health professionals should understand the differences in a patient's cultural values, religion, beliefs and practices to provide the best health services for depression and psychological illnesses. Canada has included cultural competency in their healthcare system that can help/analyses infant care practices, licensing of traditional/alternative practices and medication, parental issues, adolescence issues, nutrition and diet of a person by closing communication gap with the use of interpreters to exchange information with non-English speaking members of the population.

Worldwide Policies to Aid Afflicted Population

The Tokyo Declaration: The Tokyo Declaration (1998) was adopted as a consensus statement by occupational health experts from Europe, Japan and the USA at a conference sponsored by Tokyo (19). Medical University and attended by 29 experts. The Declaration acknowledged the economic and technological changes in the workplace that are contributing to stress among employees.

Standard Rules on the Equalization of Opportunities for Persons with Disabilities (United Nations, 1993): The resolution identified a number of issues that need to be addressed to attain equal opportunities for disabled people, including: awareness-raising; medical care; rehabilitation; support services; employment; income maintenance and social security; family life and personal integrity; culture; recreation and sports; and religion (20).

WHO's Mental Health Policy and Service Guidance Package: Provides guidance to governments, policy-makers, mental health professionals, advocacy organizations and other stakeholders on improving the mental health of populations, using existing resources to achieve the greatest benefits, providing effective services to those in need, and assisting the reintegration of those with mental health problems into all aspects of community life, including employment. In Canada, several policies are in place to protect the affected population and assist them in living a productive life. The National Managers Council in Canada has developed a number of tools to assist federal public service managers. One of these tools – My millennium: my well-being: managers' guide – provides guidance on promoting wellness among employees. This guide encourages the creation of wellness committees to promote and support strategies related to the physical and social environment, help practices and personal resources that lead to improved physical, social, emotional, mental and spiritual well-being of employees, both in the workplace and in their private lives (16). The Federal Government also has Health Canada that is designed to help Canadians in maintaining and promoting their wellness with services that are high-quality and accessible. They have recommended that flexible working hours; exploring alternative working arrangements, e.g. working from home or job-sharing; reassessing employee workloads to reduce job demands; and building social support in the workplace be in place at the workplace to maintain a healthy work environment thus promoting mental health. Another is the "My millennium: my well-being" is a project organized by a National Human Resources working group in Canada with the goal of providing employees with tools and opportunities to improve their individual well-being in five aspects: physical, emotional, spiritual, intellectual and social.

However, there are notable obstacles in introducing the policies

- Concern that mental health policies will reduce profit
- Social stigmas
- Insufficient resources
- Integrative treatments are not a part of public insurances
- Less public awareness of existing treatments
- Insufficient data
- Differential diagnosis being misleading
- Lack of health education

Depression is a serious problem affecting 300 million people around the globe. Certain factors like health equity, socioeconomic status, gender, cultural background etc. directly affect the physical as well as mental health of an individual. Also, certain communities, individual and groups of people are more vulnerable than the other. However, the Canadian Government as well as the Global Community and specialized agencies recognizes this as a global epidemic and has initiated many campaigns, programs and policies to tackle this problem. It has directed the healthcare services to focus on the diagnosis of the depression in the primary healthcare centers so that necessary intervention and prevention strategies can be structured and implemented accordingly.

REFERENCES

1. World Health Organization. Depression and Other Common Mental Disorders Global Health Estimates [Internet]. 2017. Available from: <https://apps.who.int/iris/bitstream/handle/10665/254610/WHO-MSD-MER-2017.2-eng.pdf>
2. World Health Organization. Depression [Internet]. World Health Organization. 2023. Available from: <https://www.who.int/news-room/fact-sheets/detail/depression>
3. Perrino T, Beardslee W, Bernal G, Brincks A, Cruden G, Howe G, et al. Toward Scientific Equity for the Prevention of Depression and Depressive Symptoms in Vulnerable Youth. *Prevention Science*. 2014 Oct 28;16(5):642–51.
4. Kessler RC, Bromet EJ. The Epidemiology of Depression Across Cultures. *Annual Review of Public Health* [Internet]. 2013 Mar 18;34(1):119–38. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4100461/>
5. Rahman A, Patel V, Maselko J, Kirkwood B. The neglected “m” in MCH programmes - why mental health of mothers is important for child nutrition. *Tropical Medicine & International Health*. 2008 Mar 3;13(4):579–83.
6. Fenta H, Hyman I, Noh S. Determinants of Depression Among Ethiopian Immigrants and Refugees in Toronto. *The Journal of Nervous and Mental Disease*. 2004 May;192(5):363–72.
7. Dunlop DD, Lyons JS, Manheim LM, Song J, Chang RW. Arthritis and Heart Disease as Risk Factors for Major Depression. *Medical Care*. 2004 Jun;42(6):502–11.
8. Boyle MH, Miskovic V, Van Lieshout R, Duncan L, Schmidt LA, Houlst L, et al. Psychopathology in young adults born at extremely low birth weight. *Psychological Medicine*. 2010 Dec 7;41(8):1763–74.
9. Kirsten W. The beginnings of mental illness. <https://www.wapaorg> [Internet]. 2012; Available from: <https://www.apa.org/monitor/2012/02/mental-illness>
10. Canadian Institute for Health Information / Institut canadien d'information sur la santé. Health Indicators 2012 [Internet]. 2012. Available from: https://secure.cihi.ca/free_products/health_indicators_2012_en.pdf
11. Lorant V, Deliège D, Eaton W, Robert A, Philippot P, Ansseau M. Socioeconomic Inequalities in Depression: A Meta-Analysis. *American Journal of Epidemiology*. 2003 Jan 15;157(2):98–112.
12. American Psychological Association. The Impact of Discrimination. <https://www.wapaorg> [Internet]. 2015; Available from: <https://www.apa.org/news/press/releases/stress/2015/impact>
13. UKEssay. Comparing US-Canadian Healthcare Systems [Internet]. www.ukessays.com. 2015 [cited 2023 Apr 7]. Available from: <https://www.ukessays.com/essays/health-and-social-care/comparing-us-canadian-healthcare-systems-health-and-social-care-essay.php>
14. Wasylenki D, Goering P, Cochrane J, Durbin J, Rogers J, Prendergast P. Tertiary mental health services: I. Key concepts. *Canadian Journal of Psychiatry Revue Canadienne De Psychiatrie* [Internet]. 2000 Mar 1;45(2):179–84. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/10742878>
15. Seligman MEP, Rashid T, Parks AC. Positive psychotherapy. *American Psychologist*. 2006 Nov;61(8):774–88.
16. Health Canada. Mental Health - Depression - Canada.ca [Internet]. Canada.ca. 2009. Available from: <https://www.canada.ca/en/health-canada/services/healthy-living/your-health/diseases/mental-health-depression.html>
17. EuroMed Info. How culture influences health beliefs [Internet]. [Euromedinfo.eu](http://euromedinfo.eu). 2019. Available from: <https://www.euromedinfo.eu/how-culture-influences-health-beliefs.html/>
18. Harvard Health Publishing. Positive psychology in practice [Internet]. 2018. Available from: <http://www.mas.org.uk/uploads/artlib/positive-psychology-in-practice.pdf>
19. Declaration T. Work-related stress and health in three post-industrial settings-the European Union, Japan and the United States of America. Tokyo: Tokyo Medical University. 1998.
20. United Nations. Standard Rules on the Equalization of Opportunities for Persons with Disabilities [Internet]. OHCHR. 2022 [cited 2023 Apr 7]. Available from: <https://www.ohchr.org/en/instruments-mechanisms/instruments/standard-rules-equalization-opportunities-persons-disabilities#:~:text=For%20persons%20with%20disabilities%20o>
