Use of the Medicine Wheel in the Treatment of Depression

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Dedication

This research is dedicated to all my relations- those that came before me and those that are yet to come. To my children, who are the inspiration and motivation for all that I do. May you continue to appreciate, understand, and value your Indigenous roots. To the generations of my ancestors who were denied these opportunities, whose resilience and strength continue to lift me up. Their tiny voices and spirit continue through me in the work that I share here. It is their spirit and resilience that will continue to spark generations to come. May their legacy inspire us all to carry forward the wisdom and strength of our heritage. Their enduring spirit is a testament to the power and inherent wisdom in our culture. Their perseverance has paved the way for us to reclaim and celebrate our Indigenous identity.

Abstract

This capstone explores the potential application of the Medicine Wheel, an Indigenous framework, in the treatment of depression. Depression, recognized as a pervasive and multifaceted condition, often challenges existing treatment modalities, highlighting the need for a more culturally sensitive approach. The Medicine Wheel offers a holistic model by integrating spiritual, social, physical, and mental health practices, thereby addressing the complexity of depressive states in a comprehensive manner. The literature review examines the intricacies of depression and explores the possible applications of the Medicine Wheel. This capstone addresses the following research question: *How can the Medicine Wheel be used in the treatment of depression?*

Emphasizing cultural sensitivity, this capstone advocates for counsellors to engage with Indigenous traditions and knowledge. It demonstrates the Medicine Wheel's adaptability by highlighting its integration into existing treatment modalities, such as expressive therapies and positive psychology, showcasing its universal applications. This capstone explores how incorporating the Medicine Wheel into mainstream mental health practices can foster a more inclusive and respectful therapeutic environment. This research explores the implications for counselling practice and suggests next steps for research. The Integration of Indigenous knowledge into mental health care aligns with the Canadian Psychological Association's Code of Ethics for Psychologists (2017) and incorporates the Psychology's Response to the Truth and Reconciliation Commission of Canada's Report (2018), promoting culturally responsive therapeutic interventions.

Keywords: Medicine Wheel, holistic, Indigenous, depression

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The Use of the Indigenous Medicine Wheel in the Treatment of Depression

Depression is a pervasive and multifaceted condition affecting millions of individuals worldwide, manifesting in various forms from transient episodes of sadness to chronic, debilitating disorders (World Health Organization [WHO], 2023). The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision (DSM-5-TR, American Psychiatric Association, 2022) provides a comprehensive framework for understanding and diagnosing depression, distinguishing between Major Depressive Disorder (MDD) and other depressive states. Beyond the clinical criteria for MDD, the broader concept of depression encompasses a range of depressive states that do not necessarily meet the full criteria for MDD but still significantly impact an individual's life. Each of these conditions present unique challenges and underscore the complexity of depression as a mental health issue.

MDD not only affects mental health, but also impacts other aspects of life including employment, social interaction, and physical health and wellness (Knoll & MacLennan, 2017). Patten et al. (2016) reported that in Canada, depression persists as the second leading cause of disability-adjusted life year, a measure used to quantify the overall burden of a disease. These findings collectively reinforce the profound impact of MDD and depression on multiple facets of life, emphasizing the urgent need for a comprehensive approach to the prevention, treatment, and support of MDD. For the purpose of this capstone, all forms of unipolar depression will be included. This comprehensive approach will be reflected throughout the capstone encompassing the research gathered, the literature review, and the reflections and applications addressed. This inclusivity recognizes the expansive diversity of depressive conditions and acknowledges that depression manifests in various forms, each contributing uniquely to the overall burden of the disorder. By exploring the broad spectrum of depressive states, this capstone aims to provide a

comprehensive understanding of depression and its impacts which is essential for developing effective, individualized interventions and support systems. Additionally, this broad perspective aligns with the Medicine Wheel, which advocates for a holistic balanced approach whereby any element of depression is part of a greater more global consideration (Ford-Ellis, 2019; Wittenborn et al., 2017).

Current research presented by Giosan (2020) recognized that the most widely used treatment approaches for depression include cognitive behavioral therapy (CBT), as well as third wave CBT approaches including mindfulness-based cognitive therapy (MBCT), behavioral activation (BA), and interpersonal psychotherapy (IPT). Additionally, research presented by Cuijpurs et al. (2020) indicated that a combination of both psychotherapy and pharmacotherapy was a more effective treatment for adult depression than either approach alone. While these approaches are listed as the most effective, literature presented by Ormel et al. (2022) acknowledged that the current rate of relapse for depression is concerning. Their research highlighted strong evidence indicating that the published literature tends to overestimate both short- and long-term treatment efficacy. Moreover, treatments are considerably less effective when implemented in real-world settings and the impact of treatment varies substantially between chronic recurrent cases and non-recurring cases (Ormel et al., 2022). While traditional treatments such as pharmacotherapy and psychotherapy have been the cornerstone of managing depression, Chokka (2013) advocated for a holistic approach that integrated complementary therapies. Chokka (2013) reported preliminary benefits to a multidimensional approach that incorporated modalities such as yoga, meditation, exercise, diet, and social support groups. This capstone aims to explore an alternative approach to the treatment of depression.

When exploring viable holistic frameworks, the Medicine Wheel, rooted in Indigenous traditions, offered a culturally relevant approach to mental health treatment by integrating spiritual and traditional teachings (Mashford-Pringle & Shawanda, 2023). Mashford-Pringle and Shawanda (2023) explained that the Medicine Wheel is a foundational concept in Indigenous teachings that symbolizes balance, interconnectedness, and wholeness, emphasizing the importance of achieving balance across all aspects of life. Beaulieu and Reeves (2022) observed that a fundamental aspect of Indigenous healing values is the concept of holism and balance in which each individual is viewed as comprising four sacred elements; physical, spiritual, emotional, and psychological aspects, and equilibrium among the elements defines well-being.

In consideration of the benefits of a multifaceted approach in the treatment of depression, this capstone will explore the Medicine Wheel as a holistic framework for the treatment of depression. The self-positioning statement will reflect on the author's personal bias and lived experience as an Indigenous person, noting a connection to Indigenous ways of knowing. The literature review will begin by exploring the presentation of depression and the effectiveness of current treatment modalities and then explore the Medicine Wheel as a holistic alternative for treatment. Implications for counselling will explore how the Medicine Wheel can be universally applied for the optimal health of clients with depression. This capstone is premised on the question: *How can the Medicine Wheel be used in the treatment of depression?*

Definition of Terms

The following definitions of key terms are crucial for addressing the research question and will be referenced throughout this capstone.

Major Depressive Disorder (MDD)

According to the Diagnostic and Statistical Manual 5-TR (DSM-5-TR), major depressive disorder is a specific clinical diagnosis, characterized by a collection of symptoms including persistent low mood, loss of interest or pleasure, significant weight changes, sleep disturbances fatigue, feelings of worthlessness or guilt, impaired concentration, and recurrent thoughts of death or suicide. These symptoms must persist for at least two weeks and cause significant impairment in social occupational, or other important areas of functioning for the diagnosis to be applied (American Psychiatric Association, 2022).

Depression

Depression encompasses a range of depressive states that do not necessarily meet the full criteria for MDD but still significantly impact an individual's life. These include subthreshold depressive symptoms, Persistent Depressive Disorder (Dysthymia), Adjustment Disorder with Depressed Mood, and situational depression (American Psychiatric Association, 2022).

Cognitive Behavioural Therapy

Cognitive Behavioural Therapy (CBT) is a psychotherapy approach that focuses on identifying and changing negative thought patterns and behaviours to improve emotional well-being. It involves understanding how thoughts, feelings, and behaviours are interconnected and uses structured techniques to challenge and modify unhelpful cognitive distortions (Beck, 1991).

Medicine Wheel

The Medicine Wheel is a symbol of wholeness and balance utilized in numerous First Nations communities. The Medicine Wheel can be visualized as a circle divided into four equal quadrants that encompass mental, emotional, physical, and spiritual dimensions of healings. (Mashford-Pringle & Shawanda, 2023). The Medicine Wheel is not a linear process, but rather a

holistic approach that considers the interconnectedness of all areas of a person's being (Ford-Ellis, 2019).

Self-Positioning Statement

I begin this research journey by situating myself as an Indigenous woman of Metis and Ojibwe descent. My biological father and stepfather are both Metis, originating from the Red River Settlement in Manitoba, and my mother is First Nations Ojibwe from the Pinaymootang Nation on Treaty 2 land. As I delve into my family history, I recognize the trauma of colonization and the lasting impact that it has had on my family. It is a personal bias that forms the basis of my quest for alignment between my personal heritage and my professional practice, recognizing and openly stating my biases as guided by the Canadian Code of Ethics for Psychologists.

I recognize that for most of my life, my Indigenous roots have been neglected. Part of my life journey has been to reclaim and be inquisitive about the teachings of my ancestors and align them with Western culture. I grew up unaware of the beauty of ceremony or the healing powers of nature, but I also felt an innate draw to spirituality and an understanding of the greater power in the universe. I had an Indigenous colleague once share that I "grew up guided by personal Indigenous understandings without the benefit of being raised that way". The teachings that I share in this capstone are guiding principles that I understood at a core level, far before my academic journey began.

I acknowledge that I grew up in a very colonial Western view that denounced Indigenous principles. I embraced a Western worldview that did not foster a connection to my Indigenous heritage. As someone who grew up in an Indigenous family but was immersed in a Western world, I recognize the benefits of applying a two-eyed approach, understanding the

transferability of both perspectives and the potential for a comprehensive integrative approach that benefits everyone.

As the child of a residential school survivor, I am intimately aware of the devastating impact of colonization on Indigenous communities. For me, this loss is not just a historical sidenote, but a personal journey to reclaim and honor my Indigenous roots as a stand against Western tyranny. In my research, I am driven by a deep desire to reclaim my heritage and celebrate the value of Indigenous teachings. This capstone is an opportunity to share the richness and resilience of Indigenous cultures, honor the wisdom passed down through generations, and contribute to healing and reconciliation. By embracing and centering Indigenous perspectives in my research, my bias is a desire to reclaim what was lost, empower Indigenous peoples, and foster an appreciation for the contributions to the greater community.

I am also an educator, having dedicated 25 years to the field. In that time, I developed an understanding of the benefits of a holistic approach. My area of expertise is early childhood education, which espouses the benefits of a holistic approach where children are immersed in multifaceted and experiential experiences. My bias towards a holistic approach is one that has been reinforced through my lived experiences, my education, and my career.

My lived experiences highlight the need for a holistic and inclusive approach to mental health. I firmly believe that depression is something that impacts every part of who we are, and to effectively treat the disorder, we need to view it in its full complexity. My personal bias is that Indigenous psychology, specifically the application of the Medicine Wheel, is relevant for all clients from different cultural backgrounds. As part of this self-positioning statement, I will address the ethical considerations when integrating traditional Indigenous practices like the Medicine Wheel into therapeutic approaches.

Ethical Considerations

As a counsellor, it is crucial to align my practice with the Canadian Code of Ethics for Psychologists (CPA, 2017). Respect for the Dignity of Persons and Peoples is a fundamental principle, requiring me to respect Indigenous communities' diverse perspectives, experiences, and worldviews. This acknowledgment involves recognizing over 630 First Nations groups across Canada (Government of Canada; Crown-Indigenous Relations and Northern Affairs Canada; 2024). Therefore, I must remain mindful of the diversity within the Indigenous population and avoid a pan-Indigenous approach while advocating for the universal applications of an Indigenous approach to healing. Further, I must ensure that the dignity of non-Indigenous people is also respected, acknowledging the unique perspectives and experiences while fostering an inclusive environment that values cultural diversity. My lived experiences of oppression inform my counseling objective, which is not to assert my own perspective, but to celebrate and align individuals with their own truths. I remain diligent in recognizing the beauty of each individual’s experience and honoring the lived experience of the clients I work with.

Integrity in relationships is essential, especially within Indigenous communities where relationships are fundamental. I recognize the necessity of engaging with Indigenous knowledge keepers, community leaders, and elders to uphold this principle, which entails not relying solely on Western narratives but actively involving Indigenous perspectives. I must ensure that my work is appropriately attributed to Indigenous sources, respectfully acknowledging shared knowledge (CPA, 2017). Integrity in Relationships also involves being transparent about my personal biases and how they might influence my professional practice. This transparency fosters trust and allows for open dialogue with clients and colleagues. It is crucial to continuously reflect

on and navigate my biases respectfully and responsibly to maintain the integrity of the therapeutic relationship.

Responsible Caring drives me to integrate a holistic approach in my counselling practice, recognizing the interconnectedness of mental, physical, social, and spiritual well-being emphasized in Indigenous teachings. The two-eyed seeing approach, which values the strengths of both Indigenous and Western perspectives, aligns with my fundamental belief that effective care must consider the whole person. By blending Indigenous holistic methods with evidence-based Western practices, I can serve the best interests of my clients while addressing their cultural context in treatment.

It is also paramount to me that I acknowledge my responsibility to society, which compels me to advocate for recognizing and integrating Indigenous healing practices into mainstream mental health. This involves promoting awareness and appreciation of Indigenous culture and the impact of colonization on mental health within the broader community and professional circles. My ethical commitment prompts me to apply a two-eyed seeing approach that integrates the strength of both Indigenous and Western perspectives, for the benefit of my clients. This ethical framework ensures that my practice is respectful, responsible, transparent, socially conscious and competent.

Literature Review

This literature review is organized into three different sections, navigating the complexities of depression to ascertain the potential benefit of a holistic approach to the treatment of depression based on the Indigenous Medicine Wheel. The first section focuses on understanding depression by exploring its presentation, prevalence and correlates and treatment complexities, including the intersectionality of social determinants and the impact on the

neuroendocrine factors. It is imperative to develop a global understanding of the comprehensive impact of depression on the overall person, so that all aspects can be considered in treatment. The second section of the literature review will explore the effectiveness and limitations of CBT as a treatment modality with consideration of how depression manifests in clients, the impact on quality of life, the treatment paradox, and the psychosocial considerations in treatment. The final section of the literature review will delve into the Indigenous Medicine Wheel as a framework for holistic health, exploring how the different aspects have been applied in research. The treatment of mental health and the use of the Medicine Wheel will be woven together to fully explore the question: *How can the Medicine Wheel be used in the treatment of depression?*

Depression

Before exploring alternative approaches for the treatment of depression, it is imperative to have a comprehensive understanding of the clinical manifestation of depression and how diverse demographics are affected. The WHO (2023) recognized that depression results from a complex interaction of social, psychological, and biological factors. This intricate interplay not only contributes to the onset of depression, but can also exacerbate an individual's life circumstances, leading to increased stress and dysfunction. The components that impact depression, as noted by the WHO, lend credence to the possible application of the Medicine Wheel as a treatment option.

MDD, as explained by the DSM-5-TR, involves a collection of symptoms including persistent low mood, loss of interest or pleasure, significant weight changes, sleep disturbances fatigue, feelings of worthlessness or guilt, impaired concentration, and recurrent thoughts of death or suicide, that persist for at least two weeks and cause significant impairment in daily functioning (American Psychiatric Association, 2022). It is important to note that the DSM-5-TR

is an update to the previous version, DSM-5, however the change involved only minor updates in the diagnostic criteria for MDD, specifically refining the language in Criterion D to emphasize the episodic pattern in diagnosis (Bradley et al., 2022). This revision aims to enhance clarity of the diagnosis without changing the diagnostic framework. Throughout this literature review, some of the research is based on the DSM-5, but for the purpose of this capstone, the changes from DSM-5-TR will not be considered significant enough to alter the overall clinical understanding and application of MDD, therefore research based on both the DSM-5 and the DSM-5-TR will be utilized.

Researchers have reported similar findings on the debilitating impact of depression. Chand et al. (2018) reported that major depressive disorder has a devastating impact on individuals and society overall because of its high prevalence, its recurrence, its frequent comorbidity with other disorders, and the functional impairment associated with the disorder. With such comprehensive impacts noted, the need to explore the risk factors for depression is imperative. The research below highlights studies done to examine the factors that contribute to depression, noting the variance in the population and demographics that are at higher risk for depression.

Prevalence and Correlates of Depression in Canada

Research by Knoll and MacLennan (2017) sought to identify the prevalence and correlates of depression in Canada. The researchers utilized information from a representative sample of Canadians gathered from the Canadian Community Health Survey - Mental Health (CHS-MH) to investigate the base rates of MDD. The study employed the World Health Organization Composite International Diagnostic Interview 3.0 (WHO-CIDI) for depression assessment and standardized measures, like the Social Provision Scale, to evaluate social

support. Their findings underscored the critical role of social support in mental health, particularly in adolescents. Lack of social support emerged as a significant factor contributing to suicidal ideation and attempts in this population. Additionally, negative childhood experiences, particularly instances of maltreatment such as sexual abuse, were identified as strong predictors of depression in adulthood. This finding emphasizes the long-lasting impact of early-life adversity on mental health outcomes. Knoll and MacLennan (2017) noted that addressing and preventing childhood trauma through interventions and support systems may therefore be crucial in reducing the prevalence of depression later in life.

The study by Knoll and MacLennan (2017) utilized the Mental Health Continuum- Short Form (MHC- SF) to evaluate positive mental health by assessing emotional, psychological, and social well-being. The high internal consistency reliability of the MHC-SF indicated that it is a reliable measure for assessing positive mental health in the study. From their research, Knoll and MacLennan (2017) reported that lower levels of positive mental health and life satisfaction were found to be correlated with MDD. The study highlighted the alarming association between suicidal ideation and MDD, indicating the severity of mental health issues related to depression.

The study faced significant limitations, including the absence of detailed demographic characteristics and participant selection criteria, which impacted the sample representativeness. Additionally, the use of archival data, like the CCHS-MH, limited the variables available for analysis and could lead to errors due to missing crucial variables, limiting the potential to establish causal relationships between variables. While the study's key findings underscore the complex interplay between depression and factors like social support, positive mental health, and life satisfaction, further exploration of at-risk demographics is warranted.

Risk Factors for Depression

The following section explores various risk factors for depression, emphasizing the multifaceted nature of the condition. The research highlights how education and ethnicity, age, gender, and early adverse stressors impact depression, followed by an exploration of the intersectionality of depression and the effect of neuroendocrine factors in depression. By examining these varied influences, the research will provide a comprehensive understanding of how depression affects different populations, providing fundamental queries into the current treatment of depression.

The Impact of Education and Ethnicity. Bailey et al. (2019) investigated disparities in the prevalence, chronicity, and treatment outcomes of MDD between African Americans and non-Hispanic Caucasians in the United States. The researchers employed a systematic review approach to analyze the study integrating quantitative and qualitative data from multiple studies to provide a comprehensive overview of the topic. The synthesis of previous research identified significant disparities influenced by socioeconomic status, cultural beliefs, communication barriers, and biological differences. There were 5,899 participants in the studies, including African Americans, Hispanics, and healthcare providers involved in the treatment of depression, representing a diverse range of demographics such as age, gender, and socioeconomic status. The diversity of participants contributed to a more nuanced understanding of disparities in treatment of depression among minority populations.

The study found that minority populations, while experiencing fewer acute MDD episodes than Caucasians, were found to be at higher risk of prolonged, chronic, and severely debilitating depression, significantly impacting their daily functioning. Furthermore, Bailey et al. (2019) examined the influence of education on future depressive symptoms over a span of 25

years, among African American and Caucasian males and females. Their research revealed a nuanced relationship between education, depressive symptoms, and chronic medical conditions. While education showed a protective effect against the development of chronic medical conditions, including depression, a threshold effect was observed. This was particularly evident among African American males with a high school diploma, where continued education led to an increase in depressive symptoms over time. These findings highlighted the complex interplay between education and mental health outcomes, with disparities in the impact of education on depressive symptoms observed across different demographic groups.

Additionally, the study by Bailey et al. (2019) examined gender differences by comparing the association between stressful life events (SLE) and major depressive episodes (MDE) among Caucasian men, African American men, Caucasian women, and African American women. Their results indicated a stronger association between SLE and MDE in Caucasian men than African American men, with no statistically significant difference between Caucasian and African American women. Their research confirmed existing research indicating gender disparities in depression prevalence, with females being twice as likely to have MDD compared to males, although the reasons behind this discrepancy remained inconclusive.

The research by Bailey et al. (2019) underscored the necessity of tailored treatment approaches that consider the unique needs of minority populations to improve mental health outcomes. The study acknowledged limitations such as the lack of primary data collection and potential biases in the selection of reviewed studies. The conclusion emphasized the importance of clinicians being aware of the disparities and addressing them to bridge the mental health care gap for minorities. Additionally, the study calls for further research on the effectiveness of culturally sensitive interventions and the impact of social determinants on depression outcomes

to enhance understanding and treatment of depression among diverse populations. This research supports the need for a culturally relevant framework for the treatment of depression and reinforces the possible application of the Medicine Wheel.

Complexity of Depression by Age. Research presented by Rice et al. (2018) sought to compare symptomatology between adults and adolescents with MDD using a family-based design. The study utilized data from the 'Early Prediction of Adolescent Depression', which involved 335 adults with recurrent MDD and their adolescent offspring. Adults were recruited mainly from primary care settings and had a biological child aged 9-17 years living at home. Clinical interviews were conducted on three different occasions, at approximately annual intervals for both adults and adolescents. Symptom assessments were done independently for parents and children using standardized diagnostic interviews. Rice et al. (2018) utilized the DSM-5 to assess the criteria for depression.

The findings from Rice et al. (2018) revealed that adolescents exhibited more vegetative symptoms, such as insomnia, appetite/weight changes, and energy loss, compared to adults. The validity of the study was supported by standardized assessments, and reliability was enhanced through repeated assessments and analysis. The noted limitation in the research was based on the recruitment differences between adult and adolescent samples, with the adults recruited mainly from primary care settings, while the adolescents were offspring of adults with recurring MDD. This focus of adolescents with a parental history of recurrent depression may have affected the generalizability of the findings.

Similar age-related changes were observed by Schaakxs et al. (2017), who investigated the evolving factors influencing depression at different stages of life. In their research they examined 19 established risk factors for depression, such as socioeconomic status, life stressor

and health conditions, across an individual's lifespan from 18 years - 93 years. Data was collected from the Netherlands Study of Depression and Anxiety (NEDSA) and the Netherlands Study of Depression in Older Persons (NESDO), involving 2215 participants who identified as currently depressed or never depressed adults. Their findings underscored the heterogeneous nature of risk factors across different age groups. Researchers noted that factors such as low income, recent negative life events, high neuroticism, low agreeableness, and smoking were more prevalent in younger individuals, while depression amongst older age was more associated with factors including less education, low openness, low conscientiousness, loneliness, higher body mass index (BMI), low physical activity, and chronic diseases.

The findings by Schaakxs et al. (2017) also revealed that while established risk factors for depression remained significant throughout life, the exposure to some risk factors varied with age. Specific risk factors such as childhood abuse, high BMI, high levels of pain, chronic diseases, and low income showed age-dependent effects. Schaakxs et al. (2017) noted that for these risk factors, depression was more frequent in cases where the occurrence was typically lowest and least expected. Researchers shared that the timing and anticipation of these stressors was more profound if they were not expected, with people showing better adaptation if stressors occur when they were more expected.

The findings by both Rice et al. (2018) and Schaakxs (2017) highlighted the importance of individual and context-sensitive approaches to treating depression, particularly when considering factors such as age and stage of life. This highlights the need to explore the Medicine Wheel as a potential framework for depression treatment, given its emphasis on holistic and personalized healing.

The Impact of Early Adverse Stressors. Gloger et al. (2021) explored the relationship between exposure to early adverse stressors (EAS) and the development of complex or severe depression. Gloger et al. (2021) conducted a cross-sectional study using a multivariate logistic regression model, analyzing data from 1013 adult outpatients diagnosed with depression. The study relied on data gathered from standardized clinical charts of outpatients with depression from the period between 2013 to 2014. Clinicians utilized diagnostic interviews to determine the presence of a major depressive episode and the severity of the symptoms. EAS were measured using the Brief Physical and Sexual Abuse Questionnaire (BPSAQ) which used yes/no responses to reflect exposure to seven types of traumatic incidents including: (a) traumatic separation from one's father, mother, and/or primary caregiver for more than 1 month; (b) experience of harsh physical punishment; (c) physical injury resulting from harsh punishment; (d) witnessing physical violence between parents and/or caregivers; (e) substance abusing family member in the home; (f) forced sexual contact with a relative; and (g) forced sexual contact with a nonrelative (Gloger et al., 2021).

The research from Gloger et al. (2021) showed that exposures to high levels of EAS significantly increased the likelihood of complex and severe depression, with 36.8% of complex depression being attributed to EAS. The researchers also noted that specific types of EAS, such as harsh physical punishment and forced sexual contact with a non-relative, were independently associated with depression. The study supported the threshold cumulative risk model, which indicates that beyond a certain trigger point, the harmful effects of childhood adversities dramatically increase. Gloger et al. (2021) found that exposure to high levels of early adverse stressors significantly increased the likelihood of complex and severe depression in adults, with nearly 40% of cases of complex and severe depression attributed to childhood trauma.

The cross-sectional nature of the study limits the ability to establish causality, making it challenging to determine the temporal sequence of events between early adverse stressors and depression. Furthermore, due to the single-site nature of the study there is a limited generalizability of the findings. However, the research reinforced the importance of considering early adverse stressors in the treatment of depression. Gloger et al. (2021) noted that clients with depression facing treatment resistance, psychotic symptoms, or suicidal ideation, faced higher medical and social costs and poorer functions, highlighting the global impact of the disorder. Gloger et al. (2021) advocated for tailored interventions and trauma-focused treatments. By recognizing the impact of early adverse stressors on depression, the study advocated for holistic and culturally relevant interventions that encompass all aspects of well-being. With the understanding of the various factors that impact depression, it is important to evaluate how the separate aspects interact and overlap to influence the state of depression. The following study explores the intersectionality of social determinants in depression.

The Intersectionality of Social Determinants in Depression. Research by Assari (2019) investigated the separate, additive, and multiplicative effects of race, gender, and socioeconomic status (SES) on the risk of MDE among American adults. Utilizing data from the National Survey of American Life (NSAL), which is a nationally representative sample of African American and non-Hispanic Whites, the study provided a comprehensive analysis of how these factors interact to influence depression risk. In gathering the information, NSAL employed face-to-face interviews using computer-assisted personal interviews in English to collect data on demographics, SES indicators, and 12-month MDE using the WHO Composite International Diagnostic Interview (CIDI). This information was extrapolated using data from 3570 African American and 891 non-Hispanic White individuals aged 18 or older.

The findings of this cross-sectional study by Assari (2019) revealed complex interactions between race, gender, and SES, in determining the risk of MDE. The results indicate that race and high-income generally serve as protective factors against MDE in the sample pooled, however the protective effects of high-income varied significantly by gender and race. Assari (2019) noted that high-income was found to be protective for white women but posed a risk for African American women. Findings from this study underscored the necessity of considering intersectionality when addressing depression, as the benefits and risks associated with SES are not uniform across different demographic groups.

The study's methodological rigor was bolstered by the use of nationally representative samples, and structured diagnostic interviews for MDE assessment, which enhanced the validity of the findings. Reliability was further ensured through standardized data collection methods and robust statistical analyses. However, the research had several limitations that included the focus on African American and non-Hispanic White individuals which limited the generalizability of the results to other racial and ethnic groups, the cross-sectional design, which restricted the ability to draw causal inferences, and the reliance on self-reported data could introduce response bias. Additionally, the data collection from American individuals may not be applicable to Canadian demographics, however similar research has not been conducted in Canada.

The research by Assari (2019) emphasized the understanding that depression requires consideration of the multifaceted and interconnected nature of different social factors and how they collectively contribute to mental health. Given this complexity, it is paramount to focus on balance and harmony across all domains and find a framework that integrates these social determinants with holistic healing.

Neuroendocrine Factors of Depression. Tang et al. (2019) investigated the relationship between biological markers, specifically cortisol and oxytocin, and quality of life (QoL) in individuals diagnosed with MDD. By examining how these biomarkers correlated with various domains of QoL, the study aimed to uncover the potential roles that neuroendocrine factors play in the overall well-being of those with MDD.

The study by Tang et al. (2019) utilized a cross-sectional design, recruiting participants diagnosed with MDD alongside a control group of healthy individuals. Data collection involved obtaining psychometric measures, blood samples to analyze cortisol and oxytocin levels, and conducting structured diagnostic interviews using the WHO (CIDI). The self-reporting QoL data was collected using the World Health Organization Quality of Life - Bref (WHOQOL-BREF) questionnaire. The WHOQOL-BREF assesses an individual's perception of their overall well-being and quality of life by covering four key domains: physical health, psychological health, social relationships, and environment (Skevington et al., 2004). Data was gathered at a single point in time, providing a snapshot of the biomarkers' levels and their association with QoL, which may not effectively capture the dynamic nature of the biomarkers.

Tang et al. (2019) found that cortisol levels were inversely related to all domains of QoL, suggesting that higher cortisol levels were associated with lower QoL across physical, psychological, social, and environmental aspects. Conversely, oxytocin levels showed a positive correlation with overall QoL, particularly influencing social and psychological domains. The study demonstrated that cortisol accounted for psychological QoL, while oxytocin contributed to variances in social QoL. Despite these associations, the effect sizes were small, suggesting that other factors also impacted QoL in individuals with MDD.

The study employed standardized psychometric tools and rigorous statistical analysis to enhance validity, while the use of objective biomarkers alongside self-reported data added robustness to the findings. However, the sample size and participant size were not clearly articulated which may affect the generalizability of the results. Additionally, the nature of the research, relying on a single-time measure may not fully capture the dynamic nature of the biomarkers, impacting the reliability of the study.

The research by Bailey et al. (2019), Rice et al. (2018), Schaakxs et al. (2017) and Gloger et al. (2021) highlighted the complexity and evolving nature of the factors influencing depression, as well as the disparities in the diagnosis, treatment, and outcomes, of depression among ethnically diverse populations. In other studies, Assari (2019) explored the intersectionality between risk factors, while Tang et al. (2019) focused on the impact depression has on neuroendocrine factors. Together, these findings underscore the need to find an effective approach to address the multifaceted nature of depression. The following section will delve into current research on effective treatment for depression

The Use of CBT in the Treatment of Depression

Researchers have regarded Cognitive Behavioural Therapy (CBT) as one of the best treatment modalities for the treatment of depression (Gautam et. al. 2020; Giosan, 2020; Lepping et at., 2017). Lepping et al. (2017) sought to compare the effectiveness of CBT with other psychological and pharmacological therapies in the treatment of depression. The researchers used a systemically published database of randomized trials on psychotherapies to treat depression. Adult participants had a diagnosis of depression with no psychiatric or physical comorbidity and implemented at least one type of psychological therapy. The scope of the study included a broad definition of CBT (but not including behavioural activation therapy) and aimed

to determine the relevance of CBT treatment in the treatment of depression. The researchers sought to determine which treatment plan was the most effective; focusing on CBT alone, other psychological monotherapies (active psychotherapies including behavioural activation), medicinal therapy (using only one drug) and combinations of active therapies. A control group included wait list controls, treatment as usual, and placebo.

The Hamilton Depression Scale (HAMD) was initially used by Lepping et al. (2017) to assess the severity of depressive symptoms and determine the baseline severity in the participants. The information from the HAMD was then changed to the Clinical Global Impression Scale (CGI), which provided a more holistic assessment of the patient's condition and functioning. Lepping et al. (2017) found that a combination of active therapies showed the best results, followed by CBT alone which performed better than control groups in terms of reducing depressive symptoms. CBT was also found to be more effective than other pharmacological monotherapies. The researchers found that there was no statistically significant difference between CBT alone and other psychological monotherapies. These results highlighted that when multiple therapies were combined, they resulted in the greatest clinical improvement.

In their research, Lepping et al. (2017) included various variables such as different forms of CBT, other psychotherapies, unidentified drug treatments and various active therapies. A limitation in this approach was that the wide range of variables made it difficult to pinpoint the effectiveness of individual specific treatment plans. Additionally, the small sample size and publication bias hindered a comprehensive understanding of depression. The use of data from 2013 further limited the study, as it does not account for more recent approaches to CBT and alternative methods, raising concerns about the validity of the results.

In similar research, Alang and McAlpine (2020) investigated factors influencing the perceived effectiveness of mental health services for adults with depression. The researchers utilized data from the 2015-2016 National Survey on Drug Use and Health (NSDUH) and included 4,169 adults that were receiving outpatient treatment for depression. The research focused on treatment modalities and patient characteristics and compared the effectiveness of medication-only, therapy-only, or combination of therapy and medication, in the treatment of depression.

Alang and McAlpine (2020) found that medication-only and therapy-only approaches had similar levels of perceived effectiveness, while the combination of both medication and therapy had higher perceived effectiveness based on self-reported responses. These results suggested that a combination of medication and counselling was associated with higher perceived effectiveness of treatment for depression. Factors such as poor self-rated health, substance use, and severe mental illness, were linked to lower perceived effectiveness. Additionally, patient characteristics like race, age, and pathway into care, influenced how individuals rated the effectiveness of their treatment.

The study by Alang and McAlpine (2020) used a large nationally representative sample, enhancing external validity while reliability was ensured through standardized survey methods. Limitations of the study included the lack of detailed information on counselling content and pharmacological specifics. The study reinforced that patient characteristics and treatment modalities are key considerations when tailoring treatment for depression.

Both Leppin et al. (2017) and Align and McAlpine (2020) revealed that combining different therapeutic modalities may be more effective in the treatment of depression. To further explore this, it is essential to examine the global presentation of depression and how treatment

impacts the overall quality of life across diverse populations. Understanding these aspects can provide deeper insights into how integrative approaches may enhance the effectiveness of depression treatment and improve holistic well-being and lending support to the critical question: *How can the Medicine Wheel be used in the treatment of depression?*

Effects of Treatment for Depression on Quality of Life

Hofmann et al. (2018) investigated the efficacy of CBT and selective serotonin reuptake inhibitors (SSRIs) on quality of life (QoL) for individuals with depression. The researchers employed a meta-analytical approach that encompassed 37 studies conducted over a period of 20 years, including 24 studies focused on the use of CBT and 13 that utilized SSRI treatments. The majority of participants were females with a mean age of 45 years. The study measured QoL by assessing various domains of QoL, including physical health, mental health, social functioning, emotional well-being, and included a subjective component of overall life satisfaction. Hofmann et al. (2018) found that both types of intervention led to improvements in QoL and reduced depressive symptoms.

No significant difference was observed between the two treatment approaches, although Hofmann et al. (2018) noted that the study was never intended to be comparative. The researchers observed that a substantial number of participants in CBT trials (45%) were also on medication when they started CBT, potentially impacting the improvement in QoL before the onset of the trial. In contrast, most SSRI trials did not specify if participants received additional psychotherapy alongside their treatment. This discrepancy made it challenging to isolate the specific effects of CBT on QoL improvement and limited the ability to draw clear conclusions on the independent effects of SSRIs on QoL. The disparity in representation and isolation for each type of treatment approach impacted both the validity and the reliability of the study.

Hofmann et al. (2018) maintained that effective treatment should focus on enhancing quality of life and not merely on symptom reduction. This consideration, alongside the QoL indicators mentioned in the study, highlights the need for a comprehensive approach to depression treatment. Exploring holistic frameworks and how they can be integrated into depression treatment could provide insights into its potential impact on improving depressive symptoms and overall quality of life.

Effectiveness of Current Treatment of Depression

Patten et al. (2016) conducted a study to analyze the prevalence, treatment, and impact, of Major Depressive Episodes (MDE) in Canada over a 10-year period, utilizing data from national mental health surveys in 2002 and 2012. The research employed the World Health Mental Health Composite International Diagnostic Interview in both surveys to ensure consistency in data collection and analysis. Participants, 15 years or older, were drawn from the national population with response rates of 77% in 2002 and 69% in 2012 to provide a representative sample for comparison.

In their research, Patten et al. (2016) focused on the changes in depression treatment in Canada. They observed a notable increase in the adequate treatment of depression from 41.3% in 2002 to 52.2% in 2012. Adequate treatment was defined as taking antidepressants or having six or more visits to health professionals for mental health reasons. Despite the increase in treatment access, the results did not show a significant decrease in the overall impact of MDE, suggesting that enhanced treatment availability did not directly translate to a reduction in the rate of depressive episodes.

The study faced limitations in consistency of the variable measurements between the 2002 and 2012 surveys, affecting the comparability of the results. Furthermore, the lack of

detailed treatment plans, including information on dosage, adherence, and treatment duration, hindered the assessment of treatment effectiveness. Moving forward, researchers should establish more comprehensive and consistent measures of relevant variables, collecting detailed data on dosage, adherences, and treatment duration. This will allow for better assessment of treatment adequacy and provide clearer direction for future treatment strategies.

With the increased treatment access, Patton et al. (2016) did not report a significant decrease in the prevalence or impact of MDE, suggesting that further research needs to address the burden of MDD and how the increased access can relay into more positive outcomes. While the study by Patten et al. (2016) shed light on the increasing access to depression treatment in Canada, further research is warranted to delve into the effectiveness of alternative therapeutic approaches. The subsequent section explores the treatment paradox to offer valuable insights into a more comprehensive understanding of depression treatment by highlighting the complexities and areas for improvement in existing research.

Treatment Paradox

The study by Ormel et al. (2022) sought to understand the treatment-prevalence paradox (TPP) in the treatment of depression by examining seven possible explanations. Ormel et al. (2022) explained that TPP refers to the discrepancy between the increased rates of treatment for depression and the lack of corresponding decrease in the prevalence of the disorder. The seven possible explanations for TPP include an increased societal awareness of depression, a genuine rise in depression rates, less effective treatments, the inconsistency between trials and real-life application, reduced efficacy of treatment over time, variance of efficacy based on case type, and counterproductive consequences of treatment (Ormel et al., 2022). The adult participants were individuals with MDD from five Western countries including the Netherlands, England, Canada,

Australia, and the United States. The study combined analysis and evidence from recent meta-analysis and involved reviewing epidemiological surveys and studies conducted since the 1980s.

The research presented by Ormel et al. (2022) demonstrated validity through the use of recent meta-analyses and epidemiological surveys, with reliability bolstered by the large sample size and the consistency of the findings across different Western nations. However, a significant limitation was the exclusion of Eastern countries and the lack of information on their influence in the topic of depression. This limitation affects the generalizability of the research and the robustness of its understanding of depression treatments. Another limitation was the lack of research on the possible counterproductive effects, which prevented a comprehensive understanding of the overall impact of the different approaches. Additionally, the study highlighted only seven plausible cases, potentially overlooking alternative reasons to explain TPP.

Ormel et al. (2022) queried the effectiveness and implementation of treatments for depression and the factors that contributed to the persistence of the disorder. The study noted that there had not been a consistent decrease in the actual occurrence of depression over the last 30-40 years, with perhaps an increase in prevalence being reported, particularly among young people. The study found strong evidence to suggest that the published literature overestimates the short- and long-term treatment efficacy, treatments were less effective in real-life settings, and treatment impact differed for chronic recurrent cases compared to non-recurrent cases. The research highlighted the need for a better understanding of the efficacy and real-world impact of treatments for depression. The following section will review an alternative treatment program that comprehensively addresses the psychosocial dysfunctions of patients with MDD.

Psychosocial Functioning

Knight et al. (2021) assessed the impact of cognitive, emotional, and social-cognitive training on psychosocial function in MDD patients. In their research, psychosocial deficits noted included impairment in occupational functioning, interpersonal relationships, autonomy, and self-perceived quality of life, with the underlying premise that targeting the psychological factors influencing psychosocial functioning in MDD might foster more holistic and long-term recovery. The research was a single-blind, randomized controlled trial conducted by the University of Adelaide investigating the efficacy of the Cognitive and Emotional Recovery Training for Depression (CERT-D). There were 112 adult participants aged 18-80 with current or previous diagnosis of MDD according to the DSM-5 involved in the study. Pre and post assessments were conducted to evaluate the impact of the interventions using the Cultural, Evidence-based, Research- and Treatment -guided framework for depression (CERT-D). The CERT-D is a multi-domain training program targeting cognitive, emotional, and social cognitive domains (Knight & Braun., 2017). Outcomes were assessed using various validated scales and tests, including the Functioning Assessment Short Test (FAST) which assesses dysfunction across six domains. Significant improvements were noted at the end of the intervention.

The use of standardized tests within Knight et al.'s (2021) research ensured validity in the study. The limited sample size, short intervention period, and lack of long-term follow up, are limitations and considerations for future research. Knight et al. (2021) reported that the CERT-D intervention was effective in improving psychosocial dysfunction associated with MDD with participants showing enhanced global psychosocial functioning and improved domain-specific functioning across all domains in the FAST. Additionally, cognitive, emotional, and social-

cognitive outcomes significantly improved over the intervention period. These findings highlight the potential benefits of comprehensive and culturally sensitive interventions.

Medicine Wheel in the Treatment of Depression

The Indigenous perspective of psychology maintains that people have a solid connection to community and to the land and have a holistic view of health that advocates for a balance among four domains (Graham et al., 2021). The four domains of human interaction included in the Medicine Wheel include: emotional factors such as love, belonging, fear, and joy, that often trace back to childhood experiences; physical factors that encompass aspects life diet, health, sexual identity, and maturity with issues like addiction, stress symptoms, and development; mental and social factors which incorporate intellectual abilities, social skills, education, career, parenting and relationships; and spiritual factors that involve moral values, respect, religious beliefs, and personal aspirations (Twigg & Hengen, 2009). Mashford-Pringle and Shawanda (2023) reinforced that in Indigenous teachings, achieving health and well-being necessitates balance across the four quadrants, with consideration of the self, family, community, and nation. They highlighted the sacred interconnectedness and emphasized the importance of living in harmony with all dimensions of life. Elder Wanda First Rider (2023), whose expertise is rooted in her status as a Blackfoot elder, echoed the sentiment, adding that when people are out of balance, they turn to the Creator, the land, community, and ceremony. Twigg and Hengen (2009), who have conducted extensive research on the use of the Medicine Wheel, added that the Medicine Wheel helped clients connect with their cultural roots and make informed decisions about their healing journey. These collective insights highlight the importance of integrating holistic approaches in health care, emphasizing the cultural context and interconnectedness.

In exploring how the Medicine Wheel can be used in the treatment of depression, it is important to acknowledge the limited research directly applying this framework to the condition. Therefore, to understand the potential efficacy, the following literature explores the impact of the individual components of the Medicine Wheel- spiritual, physical, social, and mental, on depression. The importance of the four domains in the Medicine Wheel can be seen in the way they have been incorporated into separate research studies. By examining how each of these domains affect mental health, we can gain insight into how the holistic and integrative approach of the Medicine Wheel may offer a comprehensive approach for the treatment of depression, supporting the research question: *How can the Medicine Wheel be used in the treatment of depression?*

Spirituality

Beaulieu and Reeves (2022) presented research that highlighted the value of spirituality and spiritual health. Their research noted that in the Indigenous model of wellness all aspects of life, including healing, evolve and heal through spirit. In Indigenous ways, healing often involves connecting spiritually to the Creator, ancestral spirits, or one's own spirit. Beaulieu and Reeves (2022) noted that Western mental health practices often overlook this aspect of spirituality, potentially missing a crucial element of holistic care for the individual. This research evaluates the relevance and suitability of incorporating spirituality into therapy for the treatment of depression.

Portnoff et al. (2017) explored the relationship between spirituality and depression across different cultures, focusing on the United States, India, and China. The researchers referenced studies that showed that spirituality can serve as a buffer against depression as a premise for their study, exploring the universality of the protective factor. Portnoff et al. (2017) posed questions

such as whether the protector factors of spirituality are comparable in extent across different regions/cultures and whether there is a universality in the inverse relationship between spirituality and depression across different levels of severity.

A large sample size of 5,512 was gained through internet crowdsourcing. The participants were from the United States, India, and China, and from various faith traditions. The study assessed depressive symptoms using standardized measures such as the Patient Health Questionnaire (PHQ-9) to determine the severity of depression levels in the sample population, and to investigate the relationship between spirituality and depressive symptoms across different cultural contexts. Spirituality scales were also used to assess the participants personal spirituality. The Delaney Spirituality Scale and the Daily Spirituality Experience subscale were employed to measure different aspects of spirituality including phenomenological and theistic perspectives. These scales helped to evaluate the participants spiritual beliefs, experiences, and practices in relation to their mental health outcomes, particularly depression and suicidal ideation.

Portnoff et al. (2017) found that religious and spiritual engagement was related to a decreased risk of depression, substance abuse, anxiety, and suicide. Comparable rates of depression were found across the United States, China, and India, with higher spirituality scores in India. The findings support the idea that high personal spirituality consistently showed protective benefits against depression across the different cultures. The use of standardized measures enhanced the validity, while the large sample size improved the reliability. One of the limitations in the study was the lack of representation from additional countries which limits the generalizability. These results underscore the potential universal benefit of spirituality as a protective factor against depression.

Running Bear et al. (2019) conducted a quantitative research study that utilized secondary data analysis from the AI-SUPERPFP (American Indian Service Utilization, Psychiatric Epidemiology, Risk and Protective Factors Project) to investigate the relationship between spirituality and mental health. The AI-SUPERPFP is a community-based cross-sectional survey that assesses the prevalence of alcohol, drugs, and mental disorders, as well as the service utilization in two distinct American Indian populations located in the Northern Plains tribes. The study included 1,636 participants, ranging in age from 15 to 54. From the data collected, two measures used to assess spirituality outcomes were the Meaning in Life Questionnaire (MIDI) and a tribal cultural spirituality measure that was developed in consultation with a focus group from the Northern Plains American Indian population. The study by Running Bear et al. (2019) found that tribal cultural spirituality was significantly associated with better mental health status as measured by the Mental Component Summary (MCS). Conversely, the MIDI reported that spirituality was not associated with mental health status. While these findings highlight the potential benefit of integrating spiritual components into mental health treatment, they also support the need for culturally resonant measures of spirituality.

The aforementioned research highlights the significant role that spirituality can play in supporting mental health and treating depression. Beaulieu and Reeves (2022) emphasized spirituality in Indigenous wellness, while Portnoff et al. (2017) showed its protective benefits across cultures. Running Bear et al. (2019) underscored the need for culturally specific measures of spirituality in mental health outcomes across American Indian populations. Together, these findings suggest that incorporating spirituality could enhance depression treatment.

Physical Activity

Tasci et al. (2018) investigated the effects of exercise on therapeutic response to depression treatment. The study involved 33 participants who were all diagnosed with depression and taking antidepressant medication. All participants were between the ages of 18-65, had no other Axis 1 condition, no cognitive delay, no history of alcohol or substance abuse or addiction within the last six months, and were deemed fit enough to participate as measured by a cardiologist. In the study, participants were divided into two groups. In group 1 participants were given antidepressants and directed to go for a brisk walk for at least 30 minutes a day four times a week for twelve weeks, while group 2 was solely given antidepressant medication for treatment. Levels of depression were measured at baseline, six weeks, and twelve weeks, using the Hamilton Depression Rating Scale, the Hamilton Anxiety Rating Scale and the Clinical Global Impression scale.

Tasci et al. (2018) reported that both anxiety and depression levels decreased in both groups over the 12-week period. The group that received both antidepressant medication and exercise showed a greater reduction in anxiety and depression. This suggests that combining pharmacological treatment with exercise may be an effective approach to the treatment of depression. The validity of the study was enhanced through the use of standardized testing, however the small sample size may affect generalizability. This research demonstrated the added benefit of supplementing depression treatment with physical activity, noting the benefits to both depressive and anxiety symptoms. This supports the premise of this capstone by highlighting the benefits of addressing physical aspects to benefit overall health.

Pearce et al. (2022) employed a systematic review and meta- analysis study looking to find the correlation between physical activity and depression. The study by Pearce et al. (2022)

included 191,130 participants, mostly females (64%), from high income countries including the United States, Japan, Europe, Australia, India, Ghana, Mexico, and Russia. The researchers used a standardized data collection form to gather data, extracting information on physical activity levels at different exposure levels, risk estimates for depression, and the duration of follow-up from prospective cohort studies. The study found an inverse association between physical activity and depression, with greater risk reduction noted at lower exposure levels. Interestingly the study found diminishing additional benefits after increased exposure levels, suggesting a threshold effect to the benefits of physical activity. The study estimated that 1 in 9 cases of depression could have been prevented if everyone achieved the recommended physical activity levels.

A notable limitation of the research by Pearce et al. (2022) was the presence of variability among the included studies. This variability, stemming from differences in study characteristics, may have influenced the results and posed challenges for generalizability and establishing causality. The findings of the study support the benefits of physical activity in the treatment of depression, while the threshold factor highlights the need for a personalized approach.

Both Tasci et al. (2108) and Pearce et al. (2022) highlighted the significant role of physical activity in reducing depression symptoms. Tasci et al. (2018) showed that exercise combined with antidepressants offered greater benefits, while Pearce et al. (2022) emphasized the preventative potential of regular physical activity. Despite some limitations, these findings underscored the importance of incorporating physical activity into depression treatments.

Social Connections

Kuczynski et al. (2018) examined the relationship between social interaction and mental well-being, specifically depressed mood and loneliness during the COVID-19 pandemic. The

study utilized a mixed methods approach and collected data through daily surveys completed by participants over a period of 75 consecutive days. Surveys were administered via telephone and focused on vulnerable self-disclosure and perceived responsiveness. Participants were adult residents of King County, Washington, predominantly cisgender women, white and employed adults between 19 - 81 years. Participants in the study recorded their experiences with depression but did not necessarily have a diagnosis of such.

The research explored the relationship between social connectedness and depression from two different perspectives, considering if a lack of social connection leads to poorer mental health, or if the inverse is true, that poorer mental health led to a lack of social connection. The study found that engaging in more frequent and high-quality social interactions was associated with lower levels of depressed mood and loneliness on a daily basis. The effects of social interaction quantity and quality varied among individuals, indicating that these factors have different impacts on mental health for different people. The study utilized a large study sample of 515 participants, however the scope of the study had limited demographic scope, reducing the generalizability and adding a cultural bias to the results. The findings by Kuczynski et al. (2018) underscore the importance of fostering meaningful social connections to enhance mental well-being, particularly during challenging times like the COVID-19 pandemic.

In another study, Matthews et al. (2016) explored the relationship between social isolation, loneliness, and depression, as well as the genetic and environmental influences on these associations. In a quantitative study using both regression analysis and diagnostic interviews, the researchers investigated 1,116 same-sex twins to determine their experiences with social isolation, loneliness, and depression. The participants completed standardized assessment tests and self-reported measures to record the information. In their research, Matthews et al.

(2016) emphasized the conceptual distinctions between social isolation and loneliness, reinforcing the importance of measuring the two separately. Loneliness was defined as a subjective feeling of distress arising from perceived inadequate social interactions while social isolation was described as a state of estrangement where social connections are limited or absent.

The study found that loneliness had a stronger association with depression than social isolation, emphasizing the importance of addressing feelings of loneliness in interventions targeting depressive symptoms. By using twins in the study, Matthews et al. (2016) determined that certain traits and dispositions influenced how individuals experience social isolation, loneliness and depression. Overall, the study concluded that interventions should focus on enhancing social connections and addressing negative social cognitions to effectively reduce depressive symptoms. Understanding the interplay between social isolation, loneliness, and depression can inform strategies for mental health.

The study's use of twins, while helping to control genetic factors, limited the generalizability of the research as it may have influenced the perceptions of both social isolation and feelings of loneliness. Additionally, the cross-sectional design hindered the ability to establish causal relationships between social isolation, loneliness, and depression. Despite these limitations, the findings underscore the need for targeted interventions to address loneliness and improve social connections as part of depression treatment.

The studies by both Kuczynski et al. (2018) and Matthews et al. (2016) highlight the significance of social connections in mental well-being. The findings underscore the importance of addressing loneliness and enhancing social interactions in treating depression. By integrating social elements into depression treatment, it fosters a holistic framework.

Mental Health

Mindfulness-based Cognitive Therapy (MBCT) serves as a valuable model for understanding how to apply mental health interventions in the treatment of depression. A study by Eisendrath et al. (2016) explored the effectiveness of MBCT in treating treatment-resistant depression (TRD) compared to an alternative intervention, the Health Enhancement Program (HEP). MBCT combined guided meditation and CBT exercises to help participants identify and disengage from depression-focused ruminative thinking. Techniques included body scans, sitting meditation, mindful movement, and home practices, with modifications for TRD such as shorter meditation and a focus on accepting emotional events. HEP focused on aerobic exercise, functional movement, music therapy, and dietary education, with home practices like stretching, exercise, food monitoring, and musical activities.

The study utilized a randomized controlled trial with standardized measures like the Hamilton Rating Scale for Depression (HAM-D 17) whereby participants were randomly assigned to either the MBCT or HEP group. Data was collected through self-report assessments, clinical interviews, and monitoring of medication changes. There were 173 participants in the study, all of whom were adults from the San Francisco area, were diagnosed with TRD, fluent in English, and met the criteria for unipolar MDD according to the DSM-IV. The researchers note that TRD is no longer differentiated in the DSM-5, and instead is embedded in the diagnosis of persistent depressive disorder. In the study, 86 participants were assigned to the MBCT while 87 followed the HEP program.

The study demonstrated internal validity through randomization and the use of standardized measures. However, the lack of blinding could add potential bias to the study, as participants' awareness of interventions could affect external validity. Additionally, the study did

not account for patient preference before randomization, which may have affected the outcomes. Eisendrath et al. (2016) reported that MBCT had a significant impact on response rates, indicating a positive response to treatment and effectiveness in reducing depression severity. A follow up study found that remission rates did not show a marked difference than HEP. These results highlight the benefit of addressing the mental health aspect, but the lack of significant difference in remission rates suggest that a more comprehensive approach, such as the Medicine Wheel, may be necessary for improved outcomes.

Hu et al. (2022) employed a longitudinal study spanning two years to examine the relationship between depression and reasoning ability in adolescent students, with a focus on the moderating influence of growth mindset. The study was premised on prior research which showed that depression had a negative impact on reasoning skills, while other research showed that adolescents with a growth mindset were more resilient. Participants were from secondary vocational schools in Guangzhou, China, and data was collected at two different timepoints. The questionnaires assessed depression, reasoning ability, and growth mindset. The results revealed a negative correlation between depression and reasoning ability, with growth mindset acting as a moderator, highlighting the detrimental effects of depression on cognitive functioning. Despite these findings, the study was limited by its sample selection from vocational schools, potentially limiting generalizability to broader populations. Additionally, the study's validity was supported by existing research on depression and cognitive function, and its reliability was bolstered by the longitudinal design, ensuring consistency findings over time. The study underscored the importance of mental health awareness in cognitive development and suggested that interventions promoting a growth mindset could enhance cognitive resilience in adolescents facing depression.

The research presented underscored the importance of integrating mental health aspects into the treatment of depression. Eisendrath et al. (2016) found that MBCT effectively reduced depression severity, reinforcing the imperative of personal mindset and suggesting that a more comprehensive approach may be needed in depression treatment. Meanwhile, Hu et al. (2022) highlighted how a growth mindset could help mitigate the negative effects of depression on cognitive abilities, pointing to the potential benefits of integrating mental health strategies for improved treatment outcomes.

Bringing it All Together - The Components of the Medicine Wheel

Highlighting each aspect of the Medicine Wheel: the spiritual, the social, the physical, and the mental domains, showed that addressing the different facets can be efficacious for the treatment of depression. Portnoff et al. (2017) revealed the protective benefits of high personal spirituality against depression across culture, supporting the significance of the spiritual domain. Beaulier and Reeves (2022) reinforced this by emphasizing that in Indigenous wellness models, healing is deeply connected to spirituality. Running Bear et al. (2019) further demonstrated the importance of culturally specific spiritual practices, finding that tribal cultural spirituality is associated with better mental health outcomes. In the physical domain, Tasci et al (2018) reported that combining regular physical activity with pharmacological interventions resulted in greater reductions in depression compared to medication alone. Pearce et al. (2022) supported these findings showing an inverse relationship between physical activity and depression, noting a threshold effect on this relationship, reinforcing the need for personalized treatment plans. Kuczynski et. al (2018) highlighted the benefits of social interaction, showing that frequent and high-quality connections are linked to lower levels of depression, meanwhile, Matthews et al. (2016) highlighted that loneliness, not just social isolation, had a stronger association with

depression. Finally, Eisendrath et al. (2016) demonstrated the effectiveness of mindfulness-based approaches in reducing depression, while Hu et al. (2022) showed how a growth mindset can mitigate the negative effects of depression on cognitive functioning, highlighting the importance of mental health interventions in enhancing resilience. Together, these findings underscore the relevance of a holistic approach, suggesting that integrating spiritual, social, physical, and mental health practices can provide a more comprehensive and effective strategy for treating depression. The Medicine Wheel framework recognizes the interconnectedness of different aspects of well-being, promoting a balanced and inclusive method for mental health care that respects Indigenous teachings and may offer benefits for diverse populations.

While the Medicine Wheel offers a holistic approach, several challenges and critiques need to be considered. A primary limitation is that it is rooted in Indigenous practices, which may be challenging for individuals from non-Indigenous backgrounds who may not share the same cultural values or perspectives. Research by Arnett (2016) highlighted the dominance of psychology research dedicated to American populations, who make up less than 5% of the worldwide population, and advocated for more diversification. While this reinforces the need for more diversification in research practices, it may be erroneous to assume that an Indigenous approach would better capture the needs of the diverse population without further research.

The research presented in this capstone has shown the positive impact of the social, emotional, mental, and physical health aspects when considered in isolation. However, the beauty of the Medicine Wheel lies in the harmonization and balance of the four domains. The integrative nature of the Medicine Wheel, where all aspects are interrelated and balanced, has not adequately been researched, and the relevance of the framework has not been ascertained (Bhattacharjee & Maltby, 2017). The lack of comprehensive studies on the holistic nature of the

Medicine Wheel negates its essence and limits an understanding of its full potential. Addressing the limitations of the Medicine Wheel is crucial for ensuring its effective and appropriate use in therapeutic settings.

Having explored the pervasive and multifaceted nature of depression, the limitations of current treatment approaches, and the potential benefits of a holistic framework, it is imperative to consider the practical implications for counselling practice. Understanding how to integrate the Medicine Wheel into therapeutic interventions requires a nuanced appreciation of its foundational principles and how they can complement existing research. The following section will delve into the practical application of the Medicine Wheel in counselling, highlighting its potential to enhance treatment efficacy and foster comprehensive mental health care.

Implications for Counseling Psychology

The premise of this capstone project was to explore how the Medicine Wheel could be used in the treatment of depression. The Medicine Wheel offers a comprehensive approach that addresses mental, emotional, physical, and spiritual well-being. This holistic framework resonates deeply with Indigenous perspectives and provides universal principles of balance and harmony that can benefit all clients (Elder Firstrider, 2023). The approach promotes a balanced perspective on health, encouraging a comprehensive view of well-being rather than focusing on symptom management. Elder Simon Moss discussed the Medicine Wheel in relation to mental wellness, emphasizing the interconnectedness of physical, emotional, spiritual, and mental aspects, as well as the significant influence of family, friends, and the land (Schill et al., 2019). This section will create inferences and implications for how the Medicine Wheel can be used in the treatment of depression. Specifically, it will explore five different considerations that emerge from the research presented: the complex dynamics of depression, the need for cultural

sensitivity and relevance, the research practices, the benefits of a holistic approach, and the integration of the Medicine Wheel with existing treatment modalities.

Understanding the Complexities of Depression

Research presented in the literature review highlighted the prevalence and varied presentation of depression. Notably, Knoll and MacLennan (2017) found that a lack of social support was linked to suicidal ideation and attempts, negative childhood experiences predicted adult depression, and lower levels of positive mental health and life satisfaction were associated with MDD. Bailey et al. (2019) observed the debilitating effect of depression on daily life, while also noting that minority groups experienced fewer episodes of acute MDD but are at a higher risk of chronic depression. Schaakxs (2017) revealed a nuanced relationship between established risk factors and age, noting that depression was more common in instances when the risk was lowest and least anticipated. Rice et al. (2018) observed that adolescent experience of depression was more vegetative in presentation than in adults. Together, these studies reveal the diversity in the presentation of depression, and the need for a multifaceted approach that can address varied factors in a holistic and encompassing manner.

Stringaris (2017) observed a lack of consensus regarding the definition and classification of depression, noting that the ambiguity in defining depression complicates efforts to measure and diagnose the condition effectively. He emphasized the need for a nuanced and multidimensional approach that better addresses individual needs, ultimately improving outcomes for those affected. Assari (2019) further emphasized the complexity of depression by investigating the intersectionality of social determinants like race, gender, and SES. This research highlighted the diverse impacts and intersectionality of social determinants on mental health, necessitating an inclusive approach to the treatment of depression. In light of these

complexities, the Medicine Wheel offers a compelling framework for addressing the multidimensional nature of depression.

Howell et al. (2016) proposed that integrating the Medicine Wheel into therapeutic practice is essential, as it offers a comprehensive approach that addresses all aspects of well-being. Howell et al. (2016) examined the significance of Indigenous knowledge and traditional healthcare practices within the urban Indigenous community of Vancouver, Canada. The premise of the research was to explore how traditional models, based on the Medicine Wheel, could be utilized in the treatment of depression. The research supported the advantages of the Medicine Wheel, citing improved mental health outcomes, such as reduced depression and less reliance on antidepressants, as a result of engaging in traditional healing practices and cultural activities. The emphasis on empowerment, identity, and community care in the study reflected the diverse impacts and intersectionality of social determinants on mental health, reinforcing the call for a comprehensive approach, like the Medicine Wheel, in treating depression. Although this research presented compelling support for the use of the Medicine Wheel in the treatment of depression, the narrow focus on specifically Indigenous clients poses potential limitations. Conducting additional studies across diverse populations could help determine the generalizability of the findings and assess the effectiveness of holistic healthcare and the relevance of the Medicine Wheel across different demographics.

Maj et al. (2020) continued this attention on the complexity of depression and explored personalized assessment and treatment approaches for depression. Consideration of various factors such as environmental influences, cognitive deficits, and family history were highlighted. The study noted the need for personalized treatment based on clinical variables. Mashford-Pringle and Shawanda (2023) noted that at minimum, the Medicine Wheel can serve as a visual

model to better conceptualize a client's presenting concerns. Their research highlighted the use of the Medicine Wheel as a conceptual framework and evaluation tool in health research. The researchers emphasized the interconnectedness of various factors and the need to consider multiple dimensions when addressing health issues. This aligns with the idea that depression is a complex condition that can be affected by various factors.

Understanding depression as influenced by a range of interconnected factors, aligns with the Medicine Wheel's emphasis on balance and harmony across all domains of well-being. This perspective highlights the potential to integrate the complex social determination of depression, thereby offering a comprehensive and culturally relevant approach to personalized treatment. Elder Wanda First Rider (2023) emphasized the interconnectedness of the Medicine Wheel, adding that all aspects of a person are connected, reinforcing the ethical imperative to consider the whole person in the therapeutic practice.

Cultural Sensitivity and Relevance

The literature review reinforced the diversity in the presentation and treatment of depression among different ethnicities (Bailey et al., 2019). A concept that was underscored by Assari (2019) who went further and noted the intersectionality and compounding effect of various factors when addressing depression. These findings emphasized the critical importance of addressing cultural difference and the cumulative impact of various lived experiences in depression treatment, highlighting the need for tailored approaches that acknowledge and incorporate these diverse factors.

Bansal (2023) observed that current psychology is premised on Western principles that may not adequately resonate with different cultural groups. Bedi and Bassi (2020) contend that the therapeutic methodologies evolved within Western cultural paradigms, addressing

predominantly Western-centric issues that align with prevailing Western worldviews, result in concerns regarding the universality and relevance of diverse populations. Within health care systems, biases can manifest through the stereotyping of cultural groups, potentially resulting in inadequate or ill-suited intervention or overdiagnosis for those seeking help. Gopalkrishnan (2018) addressed this concern and noted that racism and discrimination have profound implications for mental health, often resulting in social isolation, heightened fear, reduced access to crucial services, and other detrimental effects on well-being.

Gopalakrishnan (2018) noted that the variances among cultures have diverse implications on mental health practices, ranging from individual perspectives on health and illness, approaches to seeking treatment, the nature of the therapeutic relationship, and issues of racism and discrimination. Gopalakrishnan (2018) reported that religion, gender, language, class, ethnicity, and social norms affected views on health and wellness. As a result, counselling therapy may not be as effective for individuals who do not resonate with the assumptions, customs, cultural principles, and objectives underlying Western therapeutic practices. By acknowledging and respecting the cultural identities of clients, therapists can create a safe and inclusive space for therapy, fostering trust and collaboration. This approach aligns with the CPA (2017) ethical principle of respect for the dignity of persons. This principle emphasizes the inherent worth of all individuals and calls for psychologists to respect and value the unique cultural backgrounds and perspectives of their clients. In consideration of Gopalakrishnan's (2018) view on the impact of diverse factors on mental health and the significance of the therapeutic alliance, the Medicine Wheel becomes a viable model that resonates deeply with diverse cultural perspectives. By embracing the Medicine Wheel, therapists can integrate cultural

humility and respect into their practice, fostering a more inclusive environment that acknowledges diverse cultural perspectives.

Mosher et al. (2017) reinforced that cultural humility played a significant role in building strong working relationships between the therapist and clients from diverse backgrounds. This humility involves not only acknowledging cultural differences but also actively listening to the client's unique perspectives and experience. By honoring the whole person the therapist can establish a therapeutic alliance based on mutual respect and trust. The Medicine Wheel allows for a deeper understanding of the client's cultural context and values, which are essential for tailoring therapeutic interventions that resonate with the client's individual needs. Listening attentively to the client' s narrative empowers them to actively participate in their healing process. It reinforces the client's agency and autonomy in shaping their therapeutic journey, contributing to more meaningful and effective outcomes in the treatment of depression.

Research Practices

Arnett (2016) highlighted how psychological research samples, particularly in early literature, were predominantly drawn from western, educated, industrialized, rich, and democratic (WEIRD) populations. He noted that current research only addresses five to seven percent of the overall population, arguing that psychological research often centers on a limited population segment and needs to pay more attention to the vast diversity of human experiences. Nielsen et al. (2017) noted that the lack of diversity in sampling has led to a substantial gap in understanding the full scope of human development, as most psychological research often assumes findings are generalizable when they may be specific to particular populations. Ciofalo (2019) observed that Western psychology attempts to impose its theories as universal truths, ignoring different cultures' diverse contexts and values.

Marsella (2014) reported that Western psychology often favors reductionist approaches, seeking to break down complex phenomena into smaller, more manageable parts. This reductionist view can lead to an oversimplification of human experiences by overlooking the holistic nature of human beings within their cultural and social environments. Western psychology has historically placed a heavy emphasis on quantifiable measures and observable behaviors, which can lead to the dismissal or devaluation of subjective experiences, emotions, and cultural nuances that are not easily quantified (Marsella, 2014). These findings underscore the importance of ethical principles such as respect for the dignity of persons and responsible caring, as outlined in the CPA (2017). Respect for the dignity of persons calls for psychologists to value and respect cultural diversity and individual differences, while responsible caring emphasizes the need to consider the well-being of all individuals, ensuring that research and practice are inclusive and sensitive to cultural contexts. One way to achieve this is by incorporating frameworks like the Medicine Wheel, which promote inclusivity by recognizing and valuing the diversity of human experiences and honoring those experiences as an integral part of the healing journey.

The Benefits of a Holistic Approach

Oulanova and Moodley (2016) reported that the urge to find alternative healing treatments reflects a critique of the Western mental health care model for its perceived failure to address health issues holistically and comprehensively. Oulanove and Moodley (2016) found that people of diverse cultural backgrounds opt for therapeutic approaches incorporating Indigenous healing practices alongside more conventional Western treatments. This idea highlights the desire of clients to incorporate more holistic measures in their treatment plans.

In their research, Oulanove and Moodley (2016) highlighted the key differences between Western-based and traditional approaches. They noted that while Indigenous healing views wellness holistically; integrating spiritual, physical, mental, and emotional aspects, Western practice often focuses solely on mental and emotional elements, primarily overlooking the spiritual component. Spirituality holds a central place in Indigenous healing but remains overlooked in Western mental health care (Beaulieu & Reeves, 2022). Oulanove and Moodley (2016) advocated for a new treatment paradigm that adopts a holistic approach and integrated traditional healing practices that emphasizes interconnectedness, adding that facilitating collaborative care between traditional healers, Elders, and Western mental health models, can further enhance treatment outcomes. This model reflects an opportunity for counsellors to expand their therapeutic toolkit and provide more culturally responsive care that honors and integrates diverse healing traditions into mainstream mental health practices. Such an approach aligns with the CPA (2017) ethical practice of responsible caring which reinforces the importance of considering the well-being of clients in a comprehensive manner, addressing their holistic needs. Additionally, the therapeutic relationship in Indigenous healing is didactic, emphasizing guidance and instruction based on wisdom and teachings, while Western-based approaches are less directive and more discovery based. The CPA's principle of integrity in relationships supports the idea that incorporating diverse cultural practices with honesty and transparency fosters trust and collaboration (2017). Cuijpers et al. (2021) reported that non-directive approaches were markedly less effective, supporting the idea that a more didactic and guidance-oriented approach like the Medicine Wheel, may be beneficial.

Kyoon-Achan et al. (2021) explored a First Nations mental wellness framework in eight First Nations communities and revealed significant insights into factors influencing mental well-

being. Their findings underscored the importance of Indigenous teachings of connection, balance, and holism as reflected in the medicine wheel concept. The survey respondents highlighted the significance of helping others, being on the land, and living to maintain positive mental health. These results aligned with the traditional First Nation Elders' recommendations to use Medicine Wheel teachings for holistic action toward health and well-being (Kyoon-Achan et al., 2021)

In their quest for an effective mental health model, Nasir et al. (2021) found common themes that emerged, including a holistic approach to wellness that included spirituality, autonomy over social and economic structures, and the importance of reclaiming their Indigenous identity. Nasir et al. (2021) noted that spiritual connections are an integral part of Indigenous culture and combine with social and emotional well-being and the reclamation of Indigenous identity to provide the pathway to holistic health for Indigenous people suffering from depression. Findings by Mehl-Madrona and Mainguy (2022) showed links between mental health improvements and participation in communal ceremonies, connections with fellow community members, and involvement in prescribed daily practices endorsed by the community.

Research presented by Lee et al. (2022) focused on the importance of agency in treating Indigenous peoples. Their study examined various interventions, including psychoeducation, cultural healing practices, collaborative care management, and cognitive-behavioral therapy, among others, but highlighted the importance of participants' active engagement. The study underscored the significance of agency and active participation of Indigenous individuals in mental health treatment interventions, particularly in addressing depression and improving mental health outcomes (Lee et al., 2022).

The holistic nature of the Medicine Wheel offers a profound opportunity to bridge the gap between Western mental health care and Indigenous healing practices, providing counsellors with a framework that promotes culturally responsive care. Through the Medicine Wheel, which emphasizes empowerment and agency, counsellors encourage clients to become active participants in their own healing journey. This active participation aligns with the CPA (2017) ethical principles, particularly related to informed consent and autonomy. By involving clients in their treatment plans, therapists ensure that clients are fully informed and provide their consent, thereby respecting their autonomy and right to make decisions regarding their own care. This approach not only honors Indigenous wisdom and traditions but also enhances treatment outcomes by fostering a deeper connection to cultural identity, community support, and spiritual wellness.

Practical Applications of the Medicine Wheel in Mental Health Treatment

The Medicine Wheel has been increasingly recognized for its potential applications in mental health treatment. This section explores existing programs that are specifically based on the Medicine Wheel and different modalities that have integrated the Medicine Wheel into their existing treatment approaches. By examining these applications, we can better understand how the Medicine Wheel's principles of balance and interconnectedness can enhance mental health practices and support individuals in their healing journeys. Integrating the Medicine Wheel into counselling practice promotes a more holistic approach, fosters cultural sensitivity, and provides counsellors with additional tools to address diverse client needs. This inclusivity not only improves client outcomes but also enriches the counsellor's skill set, ultimately leading to more effective and empathetic mental health care.

Existing Programs Based on the Medicine Wheel

The Medicine Wheel is increasingly incorporated into various programs aiming to enhance mental health and well-being. Programs, such as Build a Nation (BAN) and the DUDES Club, demonstrate how holistic frameworks support individuals and communities, emphasizing the interconnectedness of well-being across different domains.

Build a Nation Program. Twigg and Hengen (2020) conducted a case study as part of the Models and Metaphors Research Project, focusing on the BAN program in Saskatchewan. They used principles of the Medicine Wheel to provide a blend of traditional and Western-based practices to guide therapeutic interventions. BAN served a predominantly Indigenous population, with an estimated 90% of the population identifying as Indigenous but the program extended to other demographics as well. Twigg and Hengen (2020) reported that the program effectively provided support and therapy to individuals, particularly marginalized groups. They shared that by integrating Indigenous psychology principles and traditional healing practices, BAN was able to contribute positively to the mental health outcomes of the individuals. In addition to individual and group counseling, healing activities included traditional celebrations and ceremonies, continued support and social gatherings.

At BAN, the Medicine Wheel was integrated into both assessment and therapy processes to provide a holistic approach to mental health care. The approach at BAN was premised on relationship building and highlighted the importance of the therapeutic alliance.
As an assessment tool, the Medicine Wheel was used to identify trauma or instability in emotional, physical, mental, and spiritual dimensions, guiding both counsellor and client to comprehensively understand the client's needs. In therapy, the Medicine Wheel served as a tool

to help clients lead balanced lifestyles, empowering them to take ownership of their personal histories and set growth goals.

DUDES Club. Gross et al. (2016) examined the effectiveness of the DUDES Club, a community-based health promotion program in the downtown Eastside neighborhood in Vancouver, British Columbia. Participants in the program were primarily Indigenous men, but the program also included members from different ethnicities and cultural backgrounds. The program consisted of biweekly meetings, health discussions, cultural teachings and clinics for health screenings. DUDES Club incorporates the Medicine Wheel approach by structuring activities and evaluations around the four dimensions of the medicine wheel. Participants engaged in activities that addressed physical, mental, emotional, and spiritual well-being, and then developed clusters for evaluation, ensuring that all aspects of Indigenous approaches to health were honored. By focusing on these dimensions, the program aimed to provide holistic support and promote well-being among its members.

The research team used the Medicine Wheel framework to guide the linkages among the program's inputs, outputs, and outcomes. They collected relevant success indicators and developed survey questions aligned with Indigenous approaches in evaluating the program. Key findings from their research, based in the Medicine Wheel, included a significant improvement to mental and spiritual wellness as reported through attendance in DUDES Club, improvements in physical health through the effects on thinking and behaviours as observed in proactive health considerations, and improvements in social supports through connectedness and social belonging demonstrated through friendships and camaraderie facilitated through participation in DUDES Club. Additionally, direct and indirect mental health benefits were reported that instilled trust, safety, resilience, and positive outlook among the members.

The key findings indicated that frequent attendance at DUDES Club meetings led to significant improvements in quality of life, mental health benefits, and overall health confidence for all participants, highlighting the positive impact of the program on the well-being of its members across all aspects of the Medicine Wheel. Research results reported an overall 90.6% improvement in quality of life due to participation in the DUDES Club program.

The use of the Medicine Wheel in mental health treatment, as demonstrated by programs like the DUDES Club and Build a Nation, highlighted the efficacy of holistic approaches in addressing mental health issues. These programs integrated the Medicine Wheel's holistic framework to support individuals and communities by emphasizing the interconnectedness of well-being across spiritual, physical, mental, and emotional domains. By structuring activities and evaluations around these dimensions, they promoted comprehensive healing and empowered participants to improve their quality of life and overall well-being. Such initiatives underscored the importance of culturally grounded interventions that honored and integrated Indigenous perspectives in mental health care, offering a promising pathway towards holistic health and community resilience.

Integrating the Medicine Wheel into Existing Treatment Modalities

Lam et al. (2016) emphasized that effectively treating depression requires a multifaceted approach. This includes comprehensive assessment, building a solid therapeutic alliance, promoting self-management, utilizing evidence-based treatments, and implementing measurement-based care to optimize treatment outcomes. Research presented by McCabe (2016) noted a substantial interest in the healing practices of Indigenous healers and elders by non-Indigenous people, reporting that many of those that used traditional healers felt helped by the interventions they experienced. It was also noted that many Indigenous people were seeking help

from both traditional healers and mainstream mental health professionals. McCabe (2016) proposed an integrated model that housed twelve therapeutic conditions; personal readiness, spirituality, sacred ceremony, sacred teachings, authenticity, role modeling, life lessons, safety, respect, empathy, challenges, and self-knowledge, which are believed to contribute to the healing process and are deeply rooted in Indigenous culture. In his research, McCabe (2016) suggested that the interaction between Indigenous healing practices and mainstream psychology created an effective integrative model. He emphasized the importance of understanding empathy, authenticity and spirituality in this approach. Some modalities have already success

Positive Psychology

Craven et al. (2016) sought to establish a treatment framework for Indigenous people that integrated the basic tenets of positive psychology with the holistic principles of Indigenous understandings to develop a reciprocal model of Indigenous thriving. The driving force behind the collaboration was to empower Australian Indigenous children, youth, and community with the tools to flourish and succeed in various aspects of life. The model highlighted the integration of positive psychology principles, focused on strength and well-being, with Indigenous holistic principles emphasizing community, culture, and interconnectedness. It underscored the importance of combining positive psychology approaches like resilience and positive self-concept, with Indigenous knowledge to promote thriving behaviours. In their study Craven et al. (2016) highlighted the benefits of focusing on positive attributes, noting the detrimental effect of deficit thinking. Additionally, the approach included community considerations which was crucial due to the significant influence of family and community in Indigenous perceptions of well-being and success. This approach reinforced the importance of focusing on strength for both individuals and communities.

The research by Craven et al. (2016) demonstrated success in improving psychological well-being among the targeted Indigenous children and youth. The study revealed positive outcomes, including enhanced thriving, autonomy and motivation. However, the generalizability of these findings may be limited by the specific demographics of the study group. It is interesting to note that while the program aimed to positively influence the mental health of Indigenous students, it did not require the presence of specific mental health issues as criteria for participation. This proactive approach resonates with Indigenous perspectives, as the Medicine Wheel purports balance and equilibrium, and the notion of addressing depression, which focuses on one aspect, conflicts with the holistic principles of the Medicine Wheel.

Expressive Therapies

Whyte (2023) began her research premised on the fundamental concept of self, highlighting the significance of this concept among Indigenous peoples in Canada. Her research revealed how the separation and degradation of self among Indigenous people led to identity loss, shame, and negative self-concept. Whyte (2023) examined the integration of Indigenous principles with expressive therapies by emphasizing the significance of cultural safety, highlighting the need to recognize and address the impact of colonial trauma on Indigenous identity focusing on identity loss, restoration, and resilience within therapy. Whyte (2023) based her approach on the Expressive Therapies Continuum (ETC) which is a model that encompasses various expressive therapy modalities such as art therapy, music therapy, dance/movement, drama therapy, and poetry therapy. ETC emphasizes the importance of using creative expression to address emotional, cognitive and physical aspects of healing, offering a framework for understanding and facilitating therapeutic processes. Whyte proposed a shift from the hierarchical nature of ETC, suggesting a more cyclical approach that aligning with the

interconnectedness of Indigenous experiences. By incorporating the Medicine Wheel's holistic framework, the integrated model aimed to connect the physical, mental, emotional, and spiritual domains into each component of the ETC components, emphasizing the importance of addressing all domains.

Whyte (2023) shared that the integration of the Medicine Wheel into expressive therapies enabled individuals to access their cultural heritage, such as ceremony, symbolism and culturally relevant materials, while also incorporating Western modes of expression. Throughout her research, Whyte advocated for a two-eyed seeing approach. This approach, introduced by Mi'kmaq Elders, Albert, and Murdena Marshall, focuses on bringing together Indigenous ways of knowing and Western perspectives (Wright et al., 2019). Whyte asserted that the integration provided a holistic approach that honored diverse cultural traditions and supported individuals in exploring their identities through a blend of Indigenous and Western perspectives.

The research and programs discussed in this section illustrate the practical applications of the Medicine Wheel in mental health treatment. Programs like Build a Nation or the DUDES Club demonstrated how incorporating the Medicine Wheel's holistic framework can effectively support individuals and communities. These programs highlighted the importance of relationship- building, cultural sensitivity, and the integration of traditional healing practices with conventional mental health approaches, incorporating a two-eyed seeing approach.

Integrating the Medicine Wheel into existing treatment modalities offered a promising alternative for building holistic health and community resilience. Positive psychology and expressive therapies showed how Indigenous understandings can guide and enrich therapeutic approaches. reinforcing how empathy, authenticity, and spirituality can enhance therapeutic practice.

Applications for Counseling Practice

The research presented in this literature review has reinforced the relevance and positive contributions that the Medicine Wheel offers in the treatment of depression. To begin to understand how this concept can be applied into the therapeutic space, one must first recognize the Western-based paradigm that counseling is based on. Whyte (2023) highlighted the importance of recognizing the Western based principles in counseling practices, which could unintentionally preserve colonial ideas. This acknowledgement is an essential foundation to move forward with decolonization and develop culturally respectively practice.

Oulanova and Moodley (2017) reinforced the crucial role that the Medicine Wheel offers in the treatment of depression and highlighted how to effectively integrate it into the therapeutic practice. To begin, Oulanova and Moodley (2017) suggested that mental health professionals educate themselves on local protocols and cultural practices to ensure cultural sensitivity and appropriateness. This can be done by engaging with Indigenous communities, seeking cultural competency training, consulting with knowledge keepers, studying Indigenous history and current issues, participating in cultural events and professional development and collaborating with Indigenous professionals. This elevated level of knowledge and awareness enables therapists to create a more inclusive and respectful therapeutic environment, enhancing the effectiveness of the Medicine Wheel in addressing depression. Additionally, this movement towards cultural reconciliation supports the work addressed in *Psychology's Response to the Truth and Reconciliation Commission of Canada's Report (CAP, 2018)* which states that psychologists must "take responsibility for their past unethical conduct" and commit to genuine reconciliation with Indigenous populations (2018, p. 9). Involving Elders and traditional healers into the therapeutic process can provide valuable insights and guidance, aligning well with the

holistic nature of the Medicine Wheel. (Oulanova & Moodley, 2017). Elders, with their deep understanding of cultural traditions and spiritual practices, can help bridge the gap between conventional mental health practices and Indigenous ways of healing. Their involvement can enhance the therapeutic experience by incorporating spiritual and cultural dimensions crucial to the Medicine Wheel's holistic approach. Oulanova and Moodley (2017) went further to advocate for providing access to ceremonial or spiritually significant space for clients. This practice further aligns with the Medicine Wheel's emphasis on creating a balanced and harmonious space, which is essential in the treatment of depression.

Within the counselling practice, a holistic approach to treatment that considers the interconnectedness of the spiritual, physical, emotional, and mental aspects of the individual is an effective way to address the multifaceted nature of mental health conditions such as depression. This holistic perspective is central to the Medicine Wheel, which views these aspects as interdependent and essential for overall well-being. By acknowledging and integrating these interconnected aspects, mental health professionals can offer more comprehensive and effective care for individuals experiencing depression. This integration not only respects and honors Indigenous traditions but also enhances the overall therapeutic experience for clients, promoting healing and well-being in a more holistic and culturally appropriate manner.

Integration and Decolonization

Research presented by McCabe (2016) noted a substantial interest in the healing practices of Indigenous healers and elders by non-Indigenous people, reporting that many of those that used traditional healers felt helped by the interventions they experienced. It was also noted that many Indigenous people were seeking help from both traditional healers and mainstream mental health professionals. This reinforces the value of a model that incorporates the principles of the

Medicine Wheel into different treatment modalities. The integration of the Medicine Wheel into positive psychology and expressive arts therapy, demonstrated its adaptability and promoted its universal application to different therapies. In his research, McCabe (2017) suggested that the interaction between Indigenous healing practices and mainstream psychology created an effective integrative model. He emphasized the importance of empathy, authenticity, and spirituality to bridge Indigenous healing practices with mainstream psychology.

Ethical Considerations When Using the Medicine Wheel

Addressing the application of the Medicine Wheel within the framework of mental health therapy, specifically the treatment of depression, requires a nuanced and culturally sensitive approach. According to *Psychology's Response to the Truth and Reconciliation Commission of Canada's Report* (CPA, 2018) this approach should be guided by principles such as cultural allyship, humility, collaboration, critical reflection, respect, and social justice. Integrating these principles ensures that therapeutic practices are respectful and inclusive of Indigenous perspectives. The Canadian Code of Ethics for Psychologists (CPA, 2017) provides comprehensive guidelines to ensure the respectful and effective integration of Indigenous principles, addressing cultural, ethical, and professions considerations. These guidelines assure that practices honour Indigenous traditions and knowledge. By adhering to the principles outlined in the CPA, therapists create a therapeutic environment that is inclusive and respectful, while promoting the well-being of both Indigenous and non-Indigenous clients and enhancing the therapeutic practice for a diverse population. The following section will delve into the ethical considerations embedded in the CPA.

Respect for the Dignity of Persons and Peoples

When integrating Indigenous practices into therapy, it is essential for therapists to educate themselves on local Indigenous protocols and cultural practices to ensure that the practices are being used respectfully and appropriately. Educating yourself involves engaging with Indigenous communities, Elders, and traditional healers, to provide valuable insights to support alignment within the cultural context (CPA, 2017 section 1.1). As previously noted, the number and diversity of Indigenous nations creates variances between nations, which is an important consideration when using traditional healing frameworks, like the Medicine Wheel, in your practice.

Obtaining informed consent is critical in the therapeutic process. When integrating the use of the Medicine Wheel into therapy, clients must be aware of the use of the Medicine Wheel and its Indigenous relevance. Informed consent includes engaging in dialogue to help clients to understand the nature, purpose, and potential benefits of the use of the Medicine Wheel (CPA, 2017, section 116). While it is imperative to use a modality that you as the therapist are comfortable with, it is also important to make sure that your client is aware and aligns with this approach. Transparency in this area allows for clients to ask questions and express concerns, fostering a respectful and inclusive therapeutic environment.

When integrating Indigenous practices into therapy, particularly when involving Elders or knowledge keepers, therapists must ensure the confidentiality of the clients. This means obtaining consent from the client before involving any third party, clearly explaining the role of the Elder or knowledge keeper, outlining the type of information that will be shared, and sharing the measures that are in place to protect the client's confidentiality (CPA, 2017, section I.41).

Responsible Caring

Therapists must be competent in their knowledge of the Indigenous practices, like the Medicine Wheel, that they incorporate into their therapeutic practice, and ensure that the use of these practices benefits the client and does not cause harm (CPA, 2017, section II.2). This competence goes beyond basic knowledge and includes a deep understanding of the cultural, spiritual, and historical contexts of the Medicine Wheel. This may require additional training with Indigenous Elders or knowledge keepers, reinforcing the need for continuous professional development and cultural competency that are essential for responsible caring (CPA, 2017).

Therapists must remain mindful of the limitations of their expertise regarding Indigenous practices and align their practice with their specific competencies. This may involve reaching out to Elders or community members for support (CPA, 2017, section II.6). Additionally, therapists need to connect with invested Indigenous stakeholders to ensure that the application of the Medicine Wheel aligns with Indigenous intent and is used in a manner that honours Indigenous principles, guidelines and traditions (CPA, 2017, section II.18/19).

Integrity in Relationships

Maintaining honesty and transparency about the level of expertise with Indigenous practices is crucial to avoid ethical breaches and harm to the client (CPA, 2017, section III.2). Therapists need to clearly communicate their competencies to the client, including where their training comes from. This acknowledgement addresses the training while also honoring the Indigenous knowledge keepers who provided the training and authenticates the wisdom of the therapists practice. As outlined in the CPA, therapists need to recognize the expertise and contributions of other professionals, including collaboration with Indigenous Elders, knowledge keepers or traditional healers (CPA, 2017, section III.31). When incorporating Indigenous

practices into therapy, therapists should avoid dual relationships or other situations that could lead to biased decision making and compromise their professional judgement (CPA, 2017, section III.9). This awareness will ensure that their practice remains ethical and client focused.

Responsibility to Society

Therapists need to recognize and respect the value of Indigenous knowledge and healing practices and avoid cultural appropriation by seeking guidance and permission from Indigenous community members. Acknowledging the origins of Indigenous practices and giving credit to the cultural traditions and communities that developed them is essential for ethical practice (CPA, 2017, section IV.15).

Therapists should advocate for the inclusion of Indigenous practices in mental health care and educate others about the values and proper use. This includes promoting awareness and understanding of Indigenous healing practices, like the Medicine Wheel, to the broader mental health community. Supporting efforts to decolonize mental health practices and promote culturally respectful treatments aligns with the responsibility to society (CPA, 2017, section IV.6).

By adhering to these ethical considerations, therapists can integrate Indigenous practices into their work in a manner that is respectful, effective, and aligned with the Canadian Code of Ethics for Psychologists.

Challenges with Adopting the Medicine Wheel into Current Treatments

Although integrating the Medicine Wheel into mental health practice offers profound cultural relevance and holistic opportunity for overall wellness, it also presents significant challenges. These challenges include shifts in fundamental understandings, practical

implementation concerns, the acquisition of necessary knowledge, and the imperative to avoid cultural appropriation.

Research presented by Bedi and Bassi (2020) underscored the Western-based nature of mental health practices, emphasizing the shift from an individual to a collective perspective. This transition challenges therapists to consider clients within their social contexts rather than in isolation. Marsalla (2014) further emphasized a holistic view of the individual rather than the deficit-oriented approach typical of Western based treatments. Together, these studies advocate for recognition of the interconnectedness of different facets of the client's life. They urge therapists to address underlying social, cultural, environmental factors, embedded in the holistic aspects addressed in the Medicine Wheel, alongside the presenting issue, and not focus solely on the immediate concern. This approach necessitates a deeper understanding of cultural contexts and societal influences, posing challenges for therapists as they navigate the complexities of their client.

Therapists encounter significant challenges when integrating Indigenous practices, such as the Medicine Wheel, into their therapeutic practice. This integration requires meaningful collaboration with Indigenous Elders and/or knowledge keepers, requiring not only respectful engagement but also a commitment to ongoing education in Indigenous ways of knowing and healing. This challenge is compounded by the difficulty accessing these knowledge keepers, as colonization has created a division and disrupted the transmission of traditional Indigenous wisdom. Additionally, therapists must navigate the complexities of collaborating with external stakeholders, ensuring that therapeutic interventions align with both the needs of the client and the Indigenous protocols and values. Therapists must approach these collaborations with

humility, sensitivity, and a commitment to ethical practice to ensure that Indigenous practices are integrated in a respectful, culturally competent manner.

The integration of the Medicine Wheel into mental health practice necessitates a careful balance between appreciation and appropriation. Therapists must approach this integration with respect for Indigenous cultures. Appreciation involves recognizing the holistic framework of the Medicine Wheel as a profound tool for healing, rooted in Indigenous ways of knowing. However, appropriation occurs when the knowledge is used without proper understanding, context, or permission, potentially trivializing its meaning. Bansal (2023) highlighted the risk of pan-Indigenous perspectives in psychology, which fail to acknowledge the diverse cultural dynamics and evolution within Indigenous communities. It is critical that the use of the Medicine Wheel is authentic, respectful, and beneficial to clients without perpetuating harm or disrespecting cultural boundaries.

Next Steps for Research

Future research on the use of the Medicine Wheel in the treatment of depression could take several key directions to advance our understanding and application of this holistic framework. Research studies are crucial to establish the efficacy of Medicine Wheel interventions compared to conventional therapies. Integrating longitudinal studies into the evaluation of programs like BAN (Twigg & Hengen, 2020) and DUDES Club (Gross et al., 2016) would provide valuable insights into their long-term efficacy in treating depression and addressing quality of life and overall wellness among participants. Qualitative research can explore participants' experiences and cultural contexts, offering deeper insight into how the Medicine Wheel promotes healing and resilience. Collaborative partnerships with Indigenous communities and knowledge keepers are essential to ensure research respects cultural protocols

and ethical considerations, enhancing the relevance and applicability of findings across diverse populations.

Additionally, future research could explore enhancing the therapeutic impact of the Medicine Wheel in depression treatment through the integration with other modalities. Adapting the Medicine Wheel framework to diverse cultural contexts and therapeutic settings is critical to expand its accessibility beyond Indigenous communities. As research shifts away from WEIRD biases, prioritizing diverse study populations will be essential to ensure findings are applicable across various cultural backgrounds. Building on Hofmann et al.'s (2018) investigation of CBT and SSRIs, a future quantitative study could compare the efficacy of these treatments alone and with applications of the Medicine Wheel framework. This study would use standardized measures to assess physical, mental, emotional, and spiritual well-being, providing a comprehensive evaluation of quality of life and mental health outcomes.

Reflective Statement

When I began this Capstone project, I wanted to highlight the benefits of the Medicine Wheel as a versatile model relevant for diverse populations. I emphasized the benefits of a holistic approach, highlighting how the Indigenous Medicine Wheel comprehensively addresses all facets of an individual's well-being. However, as my research concludes, I have come to realize two interconnected insights. Firstly, there’s the irony in my initial question, which focused on a single aspect of overall health, while advocating for a holistic approach. Secondly, I recognize a broader theme of holism that I unintentionally overlooked throughout my research. I realize that despite advocating for the use of the Medicine Wheel, I failed to fully embody the foundational premise of this Indigenous framework.

Ironically, the question that I proposed: *How can the Medicine Wheel be used in the treatment of depression,* failed to honor the holistic principle that it queries. It is a Westernized approach to suggest that treatment is intended for one aspect of a person's wellness, namely depression, when the overarching premise of this paper was to avoid the dichotomization of ailments and consider the benefit of a holistic approach. When I began this research, I recognized within myself a propensity for a holistic approach, and yet throughout this capstone I overlooked that same principle. Over the progression of this capstone, what I realized is that the Medicine Wheel does not have to be a viable alternative, rather, to be most effective, it needs to be considered in light of how well it can be integrated into the therapeutic process.

One of the challenges that I faced in this journey was sourcing relevant research. My initial premise conflicted with the reality that our current structure is deeply rooted in Western paradigms. Ironically, the approach that I championed, advocating for a holistic Indigenous model, clashed with the predominantly Western framework I sought to challenge. This misalignment made finding pertinent studies difficult. Existing research presents a bias towards Western based psychology and often overlooks Indigenous perspective. I found that creating change within a structure that dictates how things need to be done is difficult. This Westernized bias was further evident with the limited scope of Indigenous mental health research, which focuses primarily on addiction and alcoholism.

As I explored the holistic framework of the Medicine Wheel, I discovered models that had incorporated different components of the Medicine Wheel. The biopsychosocial-spiritual model has many similarities to the Medicine Wheel as noted by Vermette and Doolittle (2022) who report the biopsychosocial-spiritual model is a framework that addresses the physical, psychological, social, and spiritual needs of the client. Similarly, Maslow's hierarchy of needs,

while universally acknowledged, lacks the depth and cultural specificity that the Medicine Wheel embodies. Recent research by Taylor and Seager (2021) suggested that a revised model of Maslow's work that moves from a hierarchy to a cyclical model would highlight the dynamic interaction between the biological, psychological, social and environmental factors. These variations to the Medicine Wheel reinforce that the strength of the Indigenous model lies not merely in its four domains, or in its circular shape, but in its profound integration of reciprocity, land appreciation, community, and Elder wisdom. These underlying aspects of the Medicine Wheel enrich its application beyond mere theoretical framework and create a model that can be adjusted and responsive to the needs of clients.

As I conclude my research on the use of the Medicine Wheel, I realize that the best approach to mental health is one that is holistic. It is not about separate entities, but rather it is looking at the beauty and benefit of the whole picture. It is not that the Medicine Wheel is better than other approaches, rather it can be integrated with other approaches to enhance both and optimize the outcome. Thus, I find myself drawn to a two-eyed seeing approach whereby the best of both worldviews come together (Wright et al., 2019). The best use of the Medicine Wheel may be its integration into different treatment modalities, incorporating the best understanding of both Western and Indigenous principles. This integration into two-eyed seeing is a full-circle moment, resonating deeply with me as an Indigenous person living in a Western world.

Conclusion

In summary, this capstone explored the research question: *How can the Medicine Wheel be used in the treatment of depression?* This capstone examined the pervasive and multifaceted nature of depression, emphasizing the limitations of current treatment modalities and the need for innovative frameworks. The Medicine Wheel, rooted in Indigenous traditions, emerged as a

promising alternative by integrating spiritual, social, physical, and mental health considerations into a cohesive therapeutic model. Next, the principles of balance and interconnectedness embedded in the Medicine Wheel, were highlighted for their potential to be responsive in supporting individuals in their healing journey.

The integration of the Medicine Wheel into existing treatment modalities, such as expressive therapies and positive psychology, demonstrated its adaptability and universal application. This holistic approach not only honored Indigenous wisdom, but also provided a comprehensive framework that could enhance treatment efficacy. By applying the principles of two-eyed seeing, this model could further enrich the therapeutic process, promoting a more inclusive approach to mental health care.

The research in this capstone was guided by the principles of cultural allyship, humility, collaboration, critical reflection, respect, and social justice in psychology practice as outlined in *Psychology's Response to the Truth and Reconciliation Commission of Canada's Report* (CPA, 2018). Adhering to these principles ensures that therapeutic interventions are inclusive and respectful. The capstone concluded that embracing the principles of the Medicine Wheel can provide a path towards more comprehensive and responsive mental health care, enhancing the therapeutic practice for a diverse population.

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Appendix

Methodology

Author	Year	Title	Sample Size	Selection/ Recruitment	Data Collection Process	Data Analysis Process	Qual/Quant/ Mixed Case Study	Notes
Gloger, Sergio; Vöhringer, Paul A; Martínez, Pablo; Chacón, M Victoria; Gloger, Sergio; Vöhringer, Paul A; Martínez, Pablo; Chacón, M Victoria; Cáceres, Cristian; Diez de Medina, Dante; Cottin, Marianne; Behn, Alex	2021	The contribution of early adverse stress to complex and severe depression in depressed outpatients. *Depression and Anxiety*, 431- 438. https://doi.org/10.1002/da.23144	1013 participants	Study was conducted at a large clinical and research mental health facility in Santiago, Chile. Adults aged 18 years or older seeking outpatient care. Low- and middle-income population.	Clinical diagnostic interviews with adult individuals seeking outpatient care for probable depression. Interviews were conducted by psychiatrists or senior psychiatrist residents. Data extraction too place from 2013 - 2014.	Deidentified data was extracted taken from the standardized clinical charts of outpatients with depression Data analysis involved examining the association between exposure to early adverse stressors and complex and severe depression using logistic	Cross-sectional	A high prevalence of early adverse stressors were observed with 69.1% of individuals experiencing at least one. Certain traumatic experiences, such as harsh physical punishment and forced sexual contact with a nonrelative during childhood and adolescence, were found to double the risk of developing complex and severe depression.

						regression models. Odds ratios (ORs) were calculated to measure the strength of the association. They investigated whether the relationship between traumatic events and depression was linear or had a threshold effect.		Exposure to a higher number of early adverse stressors significantly increased the likelihood of complex and severe depression The study estimated that 36.8% of cases of complex and severe depression could be attributed to exposure to at least one early adverse stressor Due to the expansive nature of the effects of depression, the importance of holistic treatment approaches that address both psychological and

								social factors was noted.
Grahan,.S., Stelkia, K. Wieman, C. Adams, E.	2021	Mental Health Interventions for First Nations, Inuit, and Métis Peoples in Canada: A Systematic Review. *International Indigenous Policy Journal, 12*(2), 1-31. https://doi.org/10.18584/iipj.2021.12.2.10820	14 research studies	Inclusion criteria were that they needed to be interventions addressing suicide, depression or anxiety among Indigenous people in Canada.	Searching multiple data bases including MEDLINE, PubMed, PsychINFO, and Web of Science Varied demographic locations including 5 urban, 5 non-urban and 4 multiple sites		Systematic review using	Beneficial interventions included being on the land, ceremony, engaging in social groups, culturally grounded indoor and outdoor activities, and sharing of knowledge.

Kyoon-Achan, G., Ibrahim, N., Eni, R., Phillips-Beck, W., Lavoie, J. G., Kinew, K. A., & Katz, A.	2021	Beyond Care: Validating a First Nations Mental Wellness Framework. Canadian *Journal of Community Mental Health, 40*(1), 67–80. https://doi.org/10.7870/cjcmh-2021-005	292 surveys conducted	Eight First nations communities participated in the study.	Paper based surveys administered in person. 56 questions divided into 3 parts: demographics, mental illness and mental wellness. Data collection was between Sept. 2014 and April 2016.	Descriptive analysis of survey responses using Data analysis was conducted by 2 university-based researchers (one qualitative and one quantitative) and 2 community-based partners.	Mixed methods study	Study highlighted the importance of complex health determinants and resources in promoting First Nations health. Significance of intergenerational relationships with Elders in teaching traditional approaches to Indigenous mental health was noted. Validation of traditional Indigenous knowledge and practices in supporting mental, emotional, spiritual, and physical well-being. There is a need to increase awareness and utilization of cultural resources within First Nations communities for

								holistic healthcare approaches.
Matthews, T., Danese, A., Wertz, J., Odgers, C., Ambler, A., Moffitt, T., and Arseneault, L.	2016	Social Isolation, Loneliness and Depression in Young Adulthood: A Behavioural Genetic Analysis. *Social Psychiatry and Psychiatric Epidemiology, 51*(3), 339-348. https://doi.org/10.1007/s00127-016-1178-7	1,116 same-sex twin pairs	Participants were part of the Environmental Risk Longitudinal Twin Study, a birth cohort of British children born 1994-1995	Data was collected through home visits at ages 5, 7, 10, 12, and 18. At age 18, interviews were conducted with the participants only. Data was collected through self-reporting and structured interviews.	The study used regression analysis to test associations between social isolation, loneliness, and depression	Qualitative twin study	The study found moderate genetic influences on social isolation (40%) and loneliness (38%). Loneliness was more strongly associated with depression than social isolation.

Pearce, M., Garcia, L., Abbas, A., Strain, T., Schuch, F., Golubic, R., Kelly, P., Khan, S., Utukuri, M., Laird, Y., Mok, A., Smith, A., Tainio, M., Brage, S., Woodcock, J.	2022	Association Between Physical Activity and Risk of Depression: A Systematic Review and Meta-Analysis. *2 JAMA Psychiatry, 79(*6), 550-559. https://doi.org/10.1001/jamapsychiatry.2022.0609	Fifteen studies comprising of 191, 130 participants.	Cohort studies of adults aged 18+ Studies with fewer than 3,000 participants or shorter than 3 years were excluded. Included both men and women. 49% women.	Data was collected using self-reports of depressive symptoms, use of antidepressants, and physicians' diagnosis.	A 2-stage random-effects-dose-response meta-analysis between physical activity and depression. The data analysis process involved statistical methods to assess the association between physical activity and incident depression.	Systematic Review and Meta-analysis Quantitative research study	An inverse curvilinear dose-response association between physical activity and depression was observed. Engaging in physical activity can have mental health benefits, even at low levels. Findings emphasize the importance of physical activity in mental health and have a positive impact on health outcomes.