THE ASSOCIATIONS OF DISPOSITIONAL MINDFULNESS WITH RECOGNITION OF PSYCHOLOGICAL DISORDERS AND WILLINGNESS TO SEEK HELP

An Honours Thesis

Submitted to the Faculty of Arts

In Partial Fulfillment of the Requirements

For the Degree of

Bachelor of Arts (Honours)

in

Psychology

University of Regina, Campion College

Supervised by Dr. Shadi Beshai, Ph.D.

By

Matea Gerbeza

Regina, Saskatchewan, Canada

April 18th, 2023

© 2023: Matea Gerbeza

Table of Contents

Acknowledgments ... *5*

Abstract ... *6*

Section 1: The Associations of Dispositional Mindfulness with Recognition of Psychological Disorders and Willingness to Seek Help ... *7*

1.2 Mental Health Literacy ... 8

1.3 Mindfulness ... 10

1.4 Dispositional and State Mindfulness ... 11

1.5 Dispositional Mindfulness and Mental Health ... 13

1.6 Current Study ... 14

Section 2: Method ... *15*

2.1 Participants ... 15

2.2 Measures ... 16

2.2.1 Patient Health Questionnaire ... 16

2.2.2 Generalized Anxiety Disorder Scale ... 16

2.2.3 Generalized Self-Efficacy Scale ... 16

2.2.4 Five Facet Mindfulness Scale: Short Form ... 17

2.2.5 Mental Help Seeking Attitudes Scale ... 17

2.2.6 Case Vignettes ... 18

2.3 Procedure ... 19

2.4 Data Analysis Plan ... 20

2.4.1 Zero-Order Correlation: Relationships of Dispositional Mindfulness and Mental Health Literacy Metrics 20

2.4.2 Hierarchical Multiple Regression Analyses 20

Section 3: Results *21*

3.1 Preliminary Data Checks 21

3.2 Direct Relationships of Dispositional Mindfulness and Mental Health Literacy Metrics.. 21

3.3 Incremental value of Dispositional Mindfulness in Predicting Psychological Disorder Recognition 22

3.4 Incremental value of Dispositional Mindfulness in Predicting Mental Help Seeking Attitudes 22

Section 4: Discussion *23*

4.1 Interpretation of Results 23

4.1.1 Hypothesis 1 23

4.1.2 Hypothesis 2 25

4.1.3 Hierarchical Regressions 26

4.2 Implications 27

4.3 Strengths 28

4.4 Limitations 28

4.5 Future Directions 29

Conclusion *30*

References *32*

Tables. *41*

Table 1. 41

Table 2. 43

Table 3. 44

Table 4. 45

Table 5. 46

Table 6. 47

Appendices *48*

Appendix A 48

Appendix B 54

Appendix C 58

Appendix D 62

Appendix E 63

Appendix F 65

Appendix G 66

Appendix H 68

Appendix I 70

Acknowledgments

First and foremost, I would like to thank my supervisor, Dr. Shadi Beshai, for his guidance, support, and unwavering confidence in my abilities as a student. This project would not have been possible without him and the DCC Lab. Further, I would like to acknowledge Saba Salimuddin, Dr. Beshai's Master's student, for her kindness, advice, and direction throughout this project. She will make a fantastic clinician. I would also like to acknowledge Peace Dukuye for her work with me over the summer and fall in helping me organize my project. I would like to thank my parents, Jadranka and Miroslav Gerbeza, for their unconditional love and support during this year and my entire life. They never know what I am talking about when I told them about this project, but they are always enthusiastic about it. I would like to thank my older sister, Tea Gerbeza, for her endless encouragement and love. You provided me with strength when it got hard. I would like to acknowledge my honours cohort for their kindness and welcoming atmosphere, which ended off my undergraduate experience with a full heart. Finally, I would like to thank my best friends, fellow Honours students Maija Kiviharju, Anas Arwini, and Holden Norrie, who have made this stressful year into the best year of my life with their unyielding support and compassion. This is a friendship I will cherish forever. I will never forget our coffee dates, movie nights, and late nights in Luther commons working on assignments and getting ice cream afterwards.

Abstract

Background: Psychological disorder symptoms impact a large portion of the Canadian population, and while effective treatments are available, few people seek them out. This can be partly attributed to low mental health literacy: lack of knowledge about where to seek help or poor recognition of psychological disorder symptoms when present. Dispositional mindfulness (DM) is the capacity to pay non-judgmental attention to present-moment experiences. This construct is typified by acceptance and non-reactivity toward inner experiences, including negative emotions and psychological distress. This suggests higher DM may facilitate the recognition of psychological symptoms and may be associated with higher MHL. **Purpose:** The objective of the present study is to examine whether DM scores were meaningfully associated with psychological disorder symptom recognition and mental help-seeking attitudes (MHSAS). **Method:** A total of $n = 299$ participants ($M_{age} = 41.04$; 49.5% cis women) were recruited via Amazon's Mechanical Turk and completed measures of depression (PHQ-9), anxiety (GAD-7), DM (FFMQ-24), and MHSAS (MHSAS-9). Further, participants read eight vignettes of fictitious patients (developed according to ICD-10 criteria) suffering from various psychological disorder symptoms, and the accuracy of their recognition of symptoms was tallied (PDR-V). **Results:** Correlation analyses revealed DM scores were positively associated with MHSAS ($r = 0.25$, $p < .001$), and PDR-V scores ($r = 0.18$, $p < .001$). Hierarchical regressions revealed that DM predicted variance in symptom recognition (1.3%) and MHSAS scores (6%) over and above demographic variables. **Implication:** DM shows an association with MHL components, and if an intervention effectively cultivates mindfulness, it may also enhance aspects of MHL.

Key terms: dispositional mindfulness, mental health literacy, mental help-seeking attitudes, mental health.

Section 1: The Associations of Dispositional Mindfulness with Recognition of Psychological Disorders and Willingness to Seek Help

The mental health of Canadians has steadily deteriorated over the past decade. In 2012, 10% of Canadians aged fifteen or older reported experiencing symptoms consistent with either major depressive disorder, generalized anxiety disorder, bipolar disorder, and/or substance abuse or dependence (Pearson et al., 2013). In 2020, these figures rose, with 14% of Canadians aged 12 and older reporting being diagnosed with either a mood or anxiety disorder (Statistics Canada, 2020). From 2015 to 2019, there was a significant decrease of 11% in the number of young adults aged 18-34 self-reporting that their mental health was “very good” or “excellent” (Statistics Canada, 2020). Alongside these increases, 1.2 million Canadians reported in 2018 that their mental health needs were not met (Statistics Canada, 2019). A large majority of these unmet needs stemmed from failing to pursue treatment because they were unaware of where they could receive it (Statistics Canada, 2019). Other reasons included feeling uncomfortable talking about their symptoms or unprepared to seek help (Statistics Canada, 2019). This lack of comfort and preparedness may be due to several reasons, such as mental health stigmatization, as individuals may be afraid to express their feelings because of adverse reactions or the fear of social exclusion from their peers, family, or community (Yamaguchi et al., 2011). Additional barriers to health seeking are the consequences of being labeled as “abnormal” if seen seeking help for their psychological distress (Yamaguchi et al., 2011). The general public plays an integral role in mental health, as stigmatization and misunderstanding of mental illness impede treatment-seeking behaviors due to fear of being isolated or judged (Jorm, 2000; Yamaguchi et al., 201) Together, these components contribute to the high rates of mental illness. This lack of treatment seeking may exacerbate psychological disorder symptoms, leading to dangerous

consequences such as poverty, social isolation, chronic illnesses, and suicide (Brådvik, 2018; Canadian Mental Health Association, 2008). Before seeking treatment and support, individuals must first recognize that they are experiencing psychological distress, and then understand where and how to seek appropriate and timely care. This acknowledgement and understanding comes forth as mental health literacy, first conceptualized by Jorm (2000).

1.2 Mental Health Literacy

Mental health literacy, or MHL, is defined as the knowledge, beliefs, and attitudes about psychological disorders and distress an individual has that assists in their recognition, management, and prevention (Jorm, 2000). It is closely related to emotional intelligence, since both constructs stress understanding and managing one's emotions (Conte, 2005; Jorm, 2000). However, MHL is founded upon six core components not explicitly seen in emotional intelligence, those being; a) the ability to recognize specific disorders or different types of psychological distress; b) knowledge and beliefs about risk factors and causes; c) knowledge and beliefs about self-help interventions; d) knowledge and beliefs about professional help available; e) attitudes that facilitate recognition and help-seeking; and f) knowledge of how to seek mental health information (Jorm, 2000). These components accentuate the notion of being aware of one's emotions and reactions, as well as properly recognizing them to facilitate better care for psychological distress. Research has shown that adults in the general population have poor recognition of psychological disorders and that poor MHL is a key barrier to seeking help for psychological distress (Furnharm & Swami, 2018; Perry et al., 2014). This component is especially critical, as previous research has found that recognizing and labeling psychological disorders is linked to earlier treatment seeking (Wright et al., 2007). Literature looking at treatment seeking have found that low perceived need and attitudinal barriers are the most

common reasons for individuals not seeking and adhering to treatment (Andrade et al., 2014). Hence, MHL is incredibly relevant in the pursuit to decrease psychological disorder rates and symptoms among the general population.

Researchers across several studies have demonstrated the efficacy of MHL interventions. In one study, researchers tailored a high school curriculum to include components of MHL. The tailored intervention improved MHL among Canadian high school students and reduced their stigmatizing attitudes (Mcluckie et al., 2014). More universal (non-targeted), population level MHL interventions have also been shown to improve MHL. The U.S. Campaign National Depression Screening Day results in extensive media coverage each year and dozens of individuals are screened for depression, increasing the likelihood of more people receiving treatment for their psychological distress (Jorm, 2000). Accordingly, MHL can be targeted, and extant literature demonstrates the efficacy of existing MHL interventions. Unfortunately, preconceived attitudes such as stigmatizations may deter help-seeking behaviours (Jorm, 2000). Researchers have observed that the public holds varying attitudes and beliefs about different psychological disorders, allowing for these attitudes to fester and stall psychological illness treatment (Reavley & Jorm, 2011). Positive attitudes towards mental health care, in contrast, have been found to predict future use of psychotherapy (Bonabi et al., 2016). Since MHL places great emphasis on recognition and awareness, approaches that integrate these qualities may reap benefits in increasing MHL. A possible philosophical approach that centres on awareness and recognition is that of mindfulness, which researchers have explored extensively in mental health literature upon its emergence in the West.

1.3 Mindfulness

Mindfulness, a concept influenced by Eastern contemplative and philosophical traditions, is construed as being an individual's capability to pay attention to their internal and external present-moment experiences with an attitude of openness, acceptance, and curiosity (Kabat-Zinn, 2003; Shapiro et al., 2006). Before gaining popularity in the West, mindfulness originated from contemplative and Buddhist traditions. Mindfulness is defined as paying attention, with purpose or intention, to the full gamut of present-moment experiences with acceptance, curiosity, and non-judgement. Mindfulness can be manifested as a state (i.e., paying momentary attention to present-moment experiences with acceptance) or as a general tendency or disposition, one's natural ability to have purposeful and accepting awareness. (Schmidt, 2011; Tomlinson et al., 2017). Engaging in increasing states of mindfulness, such as through meditative practice or in the context of a Mindfulness-Based Intervention (MBI), increases dispositional mindfulness (DM), and this increase in the general tendency to be mindful is hypothesized to be partially responsible for the effects of MBIs (Tomlinson et al., 2017). Mindfulness has been conceptualized along three axioms: intention, attention, and attitude (Shapiro et al., 2006). Intention refers to the purpose of engagement, attention refers to meaningful and nonjudgmental attention, and attitude is one's attitude to their perceptions of their external and internal stimuli (Shapiro et al., 2006). The axioms of attention and attitude hold particular importance in MHL, as they seem to be connected to recognition and attitudes in MHL (Jorm, 2000). Attention to one's internal and external stimuli is stressed in the attention axiom, which plausibly corresponds to recognition of psychological distress, as one needs to comprehend what they are feeling by paying attention to their thoughts and emotions (Shapiro et al., 2006). Additionally, the attitude axiom reflects the attitude and qualities one brings to their purposeful attention (Shapiro et al., 2006). This interacts

with treatment seeking, as one's attitude towards their emotions and treatment is integral to whether someone seeks help for their distress or not (Jorm, 2000; Shapiro et al., 2006). These axioms help to corroborate its relevance to MHL.

The five factor of facet model is another conceptualization of mindfulness (Baer et al.., 2006). This Five Facet Mindfulness Questionnaire (FFMQ, Baer et al., 2006) is the mindfulness scale that is derived from this five-facet conceptualization. These facets are "describe," "act with awareness," "non-judgment," "non-reactivity," and "observe" (Baer et al., 2006). Describe refers to one's capacity to label and comprehend emotions and thoughts, and acting with awareness refers to attentiveness to external and internal stimuli (Baer et al., 2006). Non-judgment focuses on the ability to approach thoughts and emotions with an accepting and non-evaluative focus, and non-reactivity refers to that through acceptance, emotions and thoughts are free to pass through an individual without reaction or restraint (Baer et al., 2006). Lastly, the observe facet refers to an individual's attendance to their internal and external experiences, thus tying in all facets (Baer et al., 2006). All facets have positively correlated with emotional intelligence and self-compassion, but acting with awareness, non-judgment, and non-reactivity specifically predicted psychological symptoms (Baer et al., 2006). These associations further support the notion that mindfulness may be beneficial in MHL.

1.4 Dispositional and State Mindfulness

In the East, mindfulness has reflected an individual's desire to begin a spiritual path towards self-transformation (Schmidt, 2011). In the West, it has been implicated in physical and mental health care to relieve chronic pain, self-regulation, and distress symptoms (Schmidt, 2011). DM has been theoretically linked to sitting with uncomfortable emotions and experiences, suggesting that psychological distress symptoms are interpreted as uncomfortable emotions and

experiences (Brown et al., 2007). Its utilization in the West implies a strong link to mental health. This link has thus been explored in a variety of areas of research, primarily to improve mental health, and has shown effectiveness. In one study utilizing state mindfulness, participants that engaged in a brief, online, mindfulness-based intervention resulted in higher mindfulness skills, and reduced perceived stress as well as depressive and anxiety symptoms (Beshai et al., 2020). Further, mindfulness-based cognitive therapy rooted in state mindfulness has yielded evidence in preventing depressive episode relapses, further accentuating the applicability of mindfulness in society (Fjorback et al., 2011). DM, rather than state mindfulness, was found to increase positive self-reports of mental health and found to be negatively associated with perceived stress (Bao et al., 2015; Mothes et al., 2014). Further studies on DM have revealed a negative relationship with negative emotions, as well as a positive relationship with emotional intelligence (Bränström et al., 2011; Conte, 2005). This relationship with emotional intelligence is crucial, since emotional intelligence reflects an individual's ability to understand, address, and regulate their emotions internally and externally (Conte, 2005). This is similar to the components of recognition and treatment seeking in MHL, as in order to recognize psychological disorder symptoms, one must understand their emotions and why they might be occurring (Conte, 2005). Moreover, to actively seek out care, they must know how to address these emotions (Conte, 2005). Since DM was shown to increase emotional intelligence, it may also increase other facets, such as psychological disorder recognition and treatment seeking. However, this perceived relationship has not been explicitly explored within the literature, indicating a gap. Its malleability as disposition, rather than state, is favourable since it is more feasible to elicit improvement in individuals. It does not require established interventions designed to minimize specific reactions. Its convenience and practicality arise from its ability to be incorporated into

any existing intervention or program to increase DM. However, its relationship with mental health has not been directly explored.

1.5 Dispositional Mindfulness and Mental Health

We speculate a positive relationship between DM and mental health based on a few observations: 1) An inverse relationship between DM and psychopathological symptoms; 2) a positive association between DM and adaptive cognitive processes; and 3) a positive relationship between DM and emotional intelligence (Conte, 2005; Tomlinson et al., 2017). It is reasonable to assume that an individual who possesses the qualities of DM, specifically the ability to direct open and accepting awareness to internal experiences, can recognize psychological distress in themselves and others, accept these feelings wholeheartedly and therefore seek professional help. Despite there being scarce research on DM in the context of psychological disorder recognition and help-seeking attitudes, studies have produced results that support this relationship. In one study, participants that received a mindfulness-based intervention exhibited improvement in their MHL, mental health symptoms, and help-seeking behaviours (Blignault et al., 2021). Another study yielded results supporting that mindfulness significantly predicted healthy life skills and satisfaction (Ari et al., 2020). Other evidence indicates that mindfulness may have a strong relationship with an individual's wellbeing and safeguard against the negative influences of perceived stress on wellbeing (Bränström et al., 2011). DM has also been implicated in other areas, such as emotional flexibility, and findings report that emotional flexibility is negatively associated with depressive symptoms, dysfunctional attitudes, and cognitive reactivity to sad moods (Beshai et al., 2017). Additionally, it was found to be positively associated with spontaneous mood recovery (Beshai et al., 2017). This collection of evidence postulates that DM may have a tie to MHL, as the research demonstrates DM facilitating changes that are tied to

MHL components and improved mental well-being. Other DM relationships explored have been with other constructs such as empathy and found its specific facets have been positively related to perspective taking, and negatively related to personal distress (Ardenghi et al., 2022). However, this relationship between DM and MHL is not yet clear. The identification of this gap leads to the objective of the present study, where we hope to explore the relationship between DM and its facets with psychological disorder recognition and treatment seeking.

1.6 Current Study

The available literature on psychological illness has established that in Canada, its rates are appallingly high, and Canadians are not receiving adequate care. This problem can be addressed by targeting MHL and DM, as researchers have exhibited the effectiveness that MHL, mindfulness-based interventions, and DM have on reducing psychological distress. These studies have not looked at DM in conjunction with MHL, indicating a gap in the literature. Does DM correlate meaningfully with an individual's MHL, specifically the components of accurate psychological disorder recognition and attitudes toward treatment seeking? This research question helped to formulate the present study that explored this gap. We hypothesized that participants with higher DM scores would also exhibit higher and more accurate psychological disorder recognition scores. We also hypothesized that participants with higher DM scores would have more positive attitudes about mental health professionals and treatments. The hypotheses and research question have been established according to Blignault et al., 2021's results on mindfulness's impact on MHL, as well as Ari et al., 2020's results regarding mindfulness and healthy life skills.

Section 2: Method

2.1 Participants

The study was administered on Amazon's Mechanical Turk, or "AMT," a crowdsourcing website where members sign up to complete research studies to receive compensation. A link to the Qualtrics survey where the survey measures are hosted were disseminated to AMT's community with the title of the study along with a short description. Interested participants could then follow the included hyperlink that directs them to the survey. Prior to completing any of the measures, participants are first required to provide their informed consent (appendix A). A total of n=299 participants were recruited and were from English-speaking countries, specifically Canada, the United States, the United Kingdom, New Zealand, and Australia. In order to be included in data analysis, participants were required to meet our eligibility criteria as assessed by our demographics form (appendix C) participants filled out at the end of the survey. These criteria were being eighteen years of age or older, having an English language proficiency of at least six on a scale of one to ten, and passing our fourth attention check question. After completing the study measures (PHQ-9; GAD-7; GSE-10; FFMQ-24; MHSAS-9; MHLS-35), reading the case vignettes (described below), and completing the demographic form, participants were debriefed, thanked, and provided with compensation ($2.50 USD). In the event that they felt any distress or discomfort while completing the survey, all participants were provided national and international mental health resources in both the consent and debriefing forms (appendix A, appendix B). The study has been approved by the University of Regina's Research Ethics Board on November 10, 2022 (File#2022-232). Participants' data will be available publicly after January 2024 and will be stored for seven years, following guidelines set by the Canadian Psychological Association, and participants were informed of this in the consent form.

2.2 Measures

2.2.1 Patient Health Questionnaire (PHQ-9; Kroenke et al., 2001; **appendix E)**: The PHQ-9 is a 9-item self-report measure of the severity of nine depressive symptoms consistent with DSM criteria over the past two weeks. Their responses are rated on a four-point Likert scale, ranging from 0 or "*not at all*" to 3 or "*nearly every day*". Higher scores are indicative to greater depressive symptoms experienced. Beshai and colleagues (2020) utilized the PHQ-9 with a similar sample size to the present study and exhibited a Cronbach's alpha of .88, demonstrating high reliability. The PHQ-9 has established validity and reliability across general population samples and is sensitive to change (Kroenke et al., 2010; Löwe et al., 2004).

2.2.2 Generalized Anxiety Disorder Scale (GAD-7; Spitzer et al., 2006; **appendix F):** The GAD-7 is a 7-item self-report measure that assesses the severity of seven symptoms of generalized anxiety, consistent with DSM criteria over the past two weeks. Participants' responses are rated on a four-point Likert scale, ranging from 0 or "*not at all*" to 3 or "*nearly everyday*". Higher GAD-7 scores are indicative of greater anxiety. Beshai and colleagues (2020) utilized the GAD-7 with a similar sample size to the current study's, which had produced a Cronbach's alpha of .89, indicative of high reliability. Likewise, it has been shown to be valid and reliable across general population samples, while also showing sensitivity to change (Löwe et al., 2008; Beard & Björgvinsson, 2014).

2.2.3 Generalized Self-Efficacy Scale (GSE-10; Schwarzer & Jerusalem, 1995; **appendix G):** The GSE-10 is a 10-item self-report measure of how effective an individual is at coping and adapting to daily life stressors. Their responses are rated on a four-point Likert scale, ranging from 1 or "*not at all true"* to 4 or "*exactly true*". Higher GSE-10 scores are indicative of higher and efficient coping skills. Schwarzer and Jerusalem (1995) reported on the measure's

reliability, with a Cronbach's alpha ranging from .76 to .90 in 23 different samples, with the majority in the .80s, establishing reliability. Its criterion validity was also examined in correlation studies wherein positive coefficients were found with favourable emotions, dispositional optimism, and higher work satisfaction (Schwarzer & Jerusalem, 1995). Further, negative coefficients were found with depression, anxiety, stress, burnout, and various health complaints (Schwarzer & Jerusalem, 1995).

2.2.4 Five Facet Mindfulness Scale: Short Form (FFMQ-24; Bohlmeijer et al., 2011; **appendix H):** The FFMQ-24 is a 24-item self-report measure of an individual's levels of mindfulness in their everyday experiences over the last month on five subscales. Their responses are rated on a five-point Likert scale, ranging from 1 or "*never or very rarely true*" to 5 or "*very often or always true*". Higher scores are indicative of higher levels of mindfulness. In a study with a similar sample size to the current study, researchers yielded a Cronbach's alpha of .79, demonstrating the scale's reliability (O'Brien et al., 2021). In another study researchers reported the scale's validity and sensitivity to change (Pelham et al., 2019).

2.2.5 Mental Help Seeking Attitudes Scale (MHSAS; Hammer et al., 2018; **appendix I):** The MHSAS is a 9-item scale that measures an individual's overall evaluation of mental health professionals in the case they found themselves with a mental health concern. Participants respond on a seven-point semantic differential scale, and are prompted with the phrase "*If I had a mental health concern, seeking help from a mental health professional would be..*" and are then provided with a list of opposite adjectives to describe their attitudes (e.g., useful vs useless). Higher scores are indicative of more positive attitudes towards mental health professionals and treatment. In Mahsoon and colleagues (2020) study with a similar sample size to the current study, Cronbach's alpha was reported to be .93, demonstrating high reliability. Further, Hammer

and colleagues (2018) reported on the scale's validity through experts and community adults, confirming the MHSAS items to be relevant and representative of the construct.

2.2.6 Case Vignettes (PDR-V; appendix D): After the participants completed all the measures, they were provided with eight different case vignettes of a fictional individual presenting with symptoms of either a psychological or physical problem. The case vignettes assessed the following disorders: major depressive disorder, social anxiety disorder, generalized anxiety disorder, post-traumatic stress disorder, bipolar disorder, schizophrenia, asthma, and heart disease. An example of these case vignettes is the following:

> Michelle is 52 years old. Michelle has been feeling unusually down on most days for the last few weeks. Michelle feels like she has no energy and like she is tired all the time. She has been sleeping excessively, especially during the day, and has gained a significant amount of weight in the last few weeks. Further, she has been moving very slowly, much to the concern of her loved ones. As a consequence of these developments, Michelle has been falling behind at work and missing deadlines. Michelle rarely drinks and has not had any major health conditions in the past. She is also currently not on medication. (appendix D).

The participant was then asked to answer two questions about each vignette to assess their psychological disorder recognition accuracy, and these questions are the following:

1) Is the individual in the above case sample experiencing a psychological, physical, or other type of problem? Please specify.

2) If psychological, what disorder or problem is the individual experiencing? If other, please specify.

These vignettes have been created by the first author and supervisor as well as developed according to ICD-10 criteria. ICD-10 criteria were used since the survey will be distributed internationally, rather than only in North America. The individuals in each vignette have also been given a name, according to Newman and colleagues (2018) paper on assigning names in case vignettes. Names were chosen according to table two, under high warmth and high competence. The ages of the individuals in the case vignettes were chosen through a random number generator, with ages ranging from 30 to 55. The major depressive disorder generalized anxiety disorder, and asthma vignettes had been previously developed by the supervisor's previous student and were used as a template for the other five vignettes. The heart disease vignette was adapted from Wijeratne & Harris' (2009) paper but modified to include a name consistent with Newmann and colleagues (2018) suggestions, as well as altered the age to remain consistent with the other ages in the vignettes. Participant vignette scores were tallied by taking their overall score and subtracting it from the correct total score of the vignettes.

2.3 Procedure

Once participants followed the hyperlink to our survey on Qualtrics and completed the consent form, they proceeded to answer the measures. Participants begin by completing the PHQ-9, followed by the GAD-7, GSE-10, FFMQ-24, and MHSAS-9. These measures were required to form a baseline of our participants' mental health, attitudes, and behaviours. Once they completed the MHSAS-9, they were presented with the eight short case vignettes. Participants were asked the same two questions about each case vignette. After the participants finished answering the questions on the case vignettes, they completed the MHLS-35, and then taken to the demographic information form (appendix C). In the demographic information form, they are asked an attention check question (i.e., *"What was this survey about? Please do not*

select "Mindfulness" but instead choose "Other" and type "Psychology" in the textbox") to assess whether their responses were reliable to use as data. After they completed the demographics form, they were presented with the debriefing form (appendix B) that outlines the study, its objectives, and future implications. The participants were thanked and automatically compensated through AMT.

2.4 Data Analysis Plan

2.4.1 Zero-Order Correlation: Relationships of Dispositional Mindfulness and Mental Health Literacy Metrics

Pearson correlation analyses were conducted to examine the first and second study hypotheses, namely that DM (FFMQ-24) scores will be positively associated with a) psychological disorder recognition scores derived from case vignettes (PDR-V), and b) scores on the mental help seeking attitude scale (MHSAS-9). Accordingly, we examined relationships between scores on study measures (PHQ-9, GAD-7, GSE-10, FFMQ-24, MHSAS-9, MHLS-35, and PDR-V).

2.4.2 Hierarchical Multiple Regression Analyses

Two hierarchical multiple regressions were conducted to examine whether scores on FFMQ-24 can predict variance in PDR-V scores over and above contributions by demographic variables alone. Both multiple regression models included one outcome variable and six independent variables. In the first and second model, pertinent demographic variables (i.e., age, gender, education, annual income, and marital status) were entered in step 1 of the model, with DM scores (FFMQ-24) being added in the second step. The outcome variable for the first model was recognition scores (PDR-V). This model tested whether DM scores predicted significant variance in PDR-V scores after controlling for variance contributed by demographic variables. In

the second model, the outcome variable was mental help-seeking attitude scores. This model tested whether DM scores would predict significant variance in help-seeking attitudes (MHSAS-9) after controlling for variance accounted for by demographic variables.

Section 3: Results

3.1 Preliminary Data Checks

Demographic characteristics are summarized in Table 1. Reliability (Cronbach alpha) coefficients, means, standard deviations, skewness, and kurtosis values for total scores on all study measures are summarized in Table 2. Skewness and kurtosis values were all within the suggested acceptable range (Cain et al., 2017). Skewness ranged from -1.36 (PDV-R) to 0.63 (PHQ-9); while kurtosis ranged from -0.65 (GAD-7) to 0.78 (PDV-R).

3.2 Direct Relationships of Dispositional Mindfulness and Mental Health Literacy Metrics

Correlation coefficients are presented in Table 3 and 4. DM (FFMQ-24) scores were significantly and negatively associated with depression (PHQ-9) scores (r = -0.62, p<.001) and anxiety (GAD-7) scores (r = -0.64, p<.001). DM scores were also positively and significantly correlated with general self-efficacy (GSE-10) scores (r = 0.55, p<.001), mental help-seeking attitudes (MHSAS-9) scores (r = 0.25, p<.001), and psychological disorder recognition (PDR-V) scores (r = 0.18, p<.001). Mental help-seeking attitude scores were significantly and negatively associated with depression scores (r = -0.345, p<.001), and anxiety scores (r = -0.32, p<.001), but positively and significantly correlated with DM facets of non-react (DM-NR) scores (r = 0.161, p<.001), act with awareness (DM-AA) scores (r = 0.232, p<.001), and describe (DM-D) scores (r = 0.183, p<.001) scores. Mental health literacy scores were significantly and positively associated with psychological disorder recognition scores (r = 0.63, p<.001), but significantly and negatively associated with depression scores (r = -0.20, p<.001) and anxiety scores (r = -

0.15, $p<.001$). Psychological disorder recognition scores were significantly and positively correlated with the DM facets of act with awareness ($r = 0.295$, $p<.001$), describe ($r = 0.184$, $p<.001$), and nonjudgment (DM-NJ) scores ($r = 0.172$, $p<.001$) scores.

3.3 Incremental value of Dispositional Mindfulness in Predicting Psychological Disorder Recognition

Results of the first planned hierarchical regression analysis revealed that the inclusion of demographic variables (Block 1) significantly predicted PDR-V scores, F (5, 293) = 10.50, $p < .001$, $R^2 = 0.15$. Demographic variables alone accounted for approximately 15% of the variance in PDR-V scores. Inclusion of DM (FFMQ-24) scores in the second step predicted significant incremental variance in PDR-V scores, $F(6, 292) = 9.59$, $p = 0.036$, $R^2 = 0.16$. Adding DM scores ($\beta = 0.12$, $p = 0.036$) in Block 2 contributed an additional 1.3% over and above variance accounted for by demographic variables alone. Model statistics are presented in Table 5.

3.4 Incremental value of Dispositional Mindfulness in Predicting Mental Help Seeking Attitudes

Results of the second planned hierarchical regression predicting mental help-seeking attitudes (MHSAS-9) revealed that demographic variables did not significantly predict scores on the MHSAS-9, $F(5, 293) = 1.54$, $p = 0.18$, $R^2 = 0.03$. Adding FFMQ-24 scores in the second step significantly predicted incremental variance in MHSAS-9 scores, $F(6, 292) = 4.50$, $p < .001$, $R^2 = 0.09$. The change from the first to the second block was also statistically significant, F (1, 292) = 17.07, $p < .05$, $R^2 = 0.054$. Statistically significant predictors in the second block ($p < .05$) were DM scores ($\beta = 0.26$, $p < .001$) contributed an additional 6% over and above variance accounted for by demographic variables alone. Model statistics are presented in Table 6.

Section 4: Discussion

In this study, we investigated dispositional mindfulness (DM) and its relationship with mental help-seeking attitudes and psychological disorder recognition, an important component of mental health literacy (MHL). DM has often been examined in the context of psychological disorder symptom severity. Our aim was to understand how DM is associated with psychological disorder symptom recognition and treatment seeking. MHL is directly associated with help-seeking attitudes and behaviours; specifically, where and from whom to seek help for psychological distress. Researchers found that the ability to recognize and label psychological disorder symptoms is associated with earlier initiation of care (Wright et al., 2007). Despite the availability of several effective interventions, very few who would benefit from them seek them out. Accordingly, understanding factors which improve help-seeking and early recognition of symptoms is important. No studies to date examined DM's relationship with components of MHL, despite the established association of DM and emotional intelligence (Bao et al., 2015). Emotional intelligence operates closely to illness recognition and treatment seeking because of its emphasis on the ability to understand, address, and regulate one's emotions (Conte, 2005).

4.1 Interpretation of Results

4.1.1 Hypothesis 1

In the first hypothesis, we predicted that DM scores will be positively correlated with psychological disorder recognition scores. Consistent with this hypothesis, we found a positive correlation between DM scores and psychological disorder recognition accuracy. This implied that individuals with high DM levels were more likely to correctly identify psychological disorders and their symptoms presented in the vignettes. The core skill typified by high DM is capacity for nonjudgmental present-moment awareness, including of one's emotions (Shapiro et

al., 2006). This is related to psychological symptom recognition as individuals high in DM are suggested to be more competent in identifying symptoms of distress and make decisions to increase well-being and decrease that identified distress (Brown et al., 2007; Salmon et al., 2004). These characteristics make it likely that they are better able to identify psychological disorders as they are familiar with different emotions and their implications (Brown et al., 2007).

Further supporting our first hypothesis, the DM facets of acting with awareness, describe, and non-judgment were correlated with psychological disorder recognition scores. This supports the first hypothesis as it insinuates that not only does general DM facilitate in recognition, but specific facets as well. The relationship between describe and emotional intelligence was the strongest correlation in Baer and colleagues (2006) analysis, suggesting it would also be high in psychological disorder symptom recognition. Acting with awareness and non-judgment were also correlated with emotional intelligence, but not as large (Baer et al., 2006). However, Baer and colleagues (2006) reported that non-judgment, non-reactivity, and acting with awareness would predict psychological symptoms. This is inconsistent with our findings failing to find a significant correlation between non-reactivity and psychological disorder recognition. The discrepancy between their findings and ours wherein non-reactivity was not correlated with psychological disorder recognition could be due to Baer and colleagues (2006) focusing on solely predicting whether an individual experiences these psychological symptoms. Our study focused on whether individuals can recognize these symptoms. Non-reactivity is important in experiencing symptoms as low levels of non-reactivity is indicative of reacting to thoughts and emotions and this can facilitate distress. However, possessing high or low levels of non-reactivity does not explicitly mean they can recognize these symptoms, only that it can predict experiencing symptoms. Meanwhile, describe, non-judgment, and acting with awareness imply

that individuals are better at recognizing symptoms as they can describe their experiences and emotions with acceptance and act accordingly (Baer et al., 2006).

4.1.2 Hypothesis 2

For the second hypothesis, we predicted DM scores would be positively correlated with more positive attitudes regarding seeking professional help for psychological distress. Consistent with this hypothesis, we found a positive correlation between DM scores and scores on a measure of mental help-seeking attitudes. Individuals with higher DM were more likely to endorse positive attitudes regarding mental health professionals and treatments, as well as a higher willingness to seek out treatment. Essentially, these results suggest that individuals higher in DM may also have more positive attitudes toward mental health treatment. This may be further explained by Baer et al. (2006) results on DM facets of mindfulness, as negative correlations between experiential avoidance and four out of five facets. This may be indicative of treatment seeking in DM as the less people engage in experiential avoidance, the more likely they may be to seek treatment (Baer et al., 2006). Openness to experience was positively correlated with three out of five facets, which may further support our results that DM may be associated with treatment seeking (Baer et al., 2006). This is because individuals higher in DM may be more open and accepting of treatment options due to that relationship with openness (Baer et al., 2006). However, there is little research that explicitly explored DM in this capacity. If DM does have a relationship with increasing treatment seeking behaviours, it is imperative for future research to explore.

Treatment seeking and the DM facets of non-reactivity, acting with awareness, and describe were positively correlated with one another. This supports our second hypothesis further as not only does general DM predict treatment seeking, but its specific facets also play an

integral role. Higher levels of non-reactivity in one study were associated with lower incidences of substance use but lower levels were associated with more substance use (Eisenlohr-Moul et al., 2012). It is plausible to assume that higher levels of non-reactivity may help with treatment seeking and lower levels may lead to treatment avoidance, as in one study they found fewer than 25% sought treatment for their alcoholism (Blanco et al., 2008). This evidence supports our results, as non-reactivity was positively associated with treatment seeking, indicative of this suggested relationship. Further, the relationship between treatment seeking and acting with awareness and describe imply that those with higher capacities to attend to and comprehend internal and external experiences are more inclined to seek treatment. This suggests they are more inclined to seek treatment rather than those with lower levels of act with awareness and describe, aligning with our results.

4.1.3 Hierarchical Regressions

We made no specific hypotheses pertaining to the hierarchical regressions; however, the pattern of results from these analyses are consistent with the findings derived from the main analyses. The first hierarchical regression found the inclusion of DM scores predicted significant incremental variance in accurate psychological disorder recognition scores. These results suggest that DM levels can offer incremental explanatory power in understanding accuracy in psychological disorder recognition, in addition to contributions by demographic variables. The second hierarchical regression found that the inclusion of DM scores predicted significant incremental variance in treatment seeking attitudes. This suggests that DM levels can offer further incremental explanatory power for treatment seeking. No demographic variables were identified as significant predictors.

4.2 Implications

Findings from the current study offer several clinical implications. First, our results show that incorporating mindfulness into mental health literacy programs may increase the likelihood of improving treatment-seeking attitudes and accuracy of symptoms, as demonstrated by mindfulness' impact on these specific MHL components. Second, clinicians may be inclined to incorporate mindfulness and its specific facets into their therapies to promote recognition in their clients and prevent future relapses. Their clients may also be more willing to accept their therapy and adhere to its approach. Third, it shows that DM may have significance in acting as a protective factor against developing psychological illnesses. This may encourage clinicians to both utilize and target DM in therapies and interventions, such as Interpersonal Therapy or Cognitive Behavioural Therapy.

Further implications include developing mindfulness-based activities that can be implemented into education curriculums for school-aged children as a proactive intervention against psychopathology. Since results show there is a relationship between DM levels and psychological disorder recognition, treatment seeking attitudes may increase as a function of increasing qualities of DM. Additionally, literature posits that teachers are integral to the prevention, identification, management, and intervention of mental health difficulties in children and youth (Leschied et al., 2019). This suggests that targeting the teacher population with MHL campaigns that utilize DM would increase their MHL, consequently increasing their students' MHL. It would also help teachers to guide their students to receive help if psychological disorder symptoms arise. This would, in turn, help decrease rates of psychological illness in the Canadian population.

Lastly, mindfulness and its facets may be beneficial to incorporate into self-help books, websites, and mobile apps to indirectly target DM. DM can be targeted across a wider population instead of just clinical populations. Anyone desiring a mood mobile app on their mobile device may reap the benefits that mindfulness has to offer if mindfulness activities are included.

4.3 Strengths

The current study has several robust design features. In the current study, we recruited a relatively large sample size, which provided sufficient power to detect differences where they exist. The sample was diverse, including an equal number of people identifying as male and female with diverse backgrounds from different countries across the globe (i.e., Canada, USA, UK, New Zealand, and Australia). This is a strength because it allows greater generalizability of the results. Most of our participants did not have experience with mindfulness interventions (81.6%) nor had a personal mindfulness practice (70.2%) and had a relatively mediocre level of mindfulness knowledge (4.74/10) allowing for the results to be more reflective of DM.

The case vignettes utilized in the study were also developed by independent mental health experts, and there was consensus among them about the validity of the vignettes. Additionally, our case vignettes covered six prevalent psychological disorders across core sections of the ICD (i.e., mood and psychotic disorders), as well as included two physical disorder case vignettes to ensure participants were not primed to answer psychological for each vignette. Accordingly, the design was thoughtful, and our sample was representative.

4.4 Limitations

Despite several strengths of the present study, it also has several limitations that pave the way for future research in this area. First, the design was cross-sectional design in nature. Accordingly, we cannot draw causal inferences or tease apart temporality between DM,

symptom recognition, and help-seeking attitudes. While the representativeness of the sample was better than other published research, there are still potential generalizability concerns. Most of participants ethnicity was reported to be white (77.3%) and from English-speaking countries strictly. This limits our generalizability, as other ethnicities were not as represented. This suggests the need to test in future research in other cultures.

Each vignette only had two questions that only asked to identify whether it was a physical or psychological problem and what disorder it was. There were no questions that asked different methods of treatment, best line of treatment, or its causes. There may be differences in identification of the disorder against identification of its causes or treatment, which would specify areas that need further investigation.

The nature of the study also presents limitations, as it is an online-based study. Meaning, online samples may have better mental health literacy than non-online recruited samples. We also may be missing a demographic that does not have access to internet, indicating limited representation and generalizability (Pretorius et al., 2019).

4.5 Future Directions

Future research directions in this line of clinical research are abundant. It could utilize a longitudinal design to determine the directionality of DM between psychological symptom recognition and mental help seeking attitudes. This way, DM could be studied more closely to see its individual impact on both psychological symptom recognition and mental help seeking attitudes. If DM levels are the influencer of higher or lower recognition and treatment seeking scores, then it supports the notion of incorporating mindfulness-based activities and interventions to facilitate higher MHL. However, if recognition and treatment seeking are what causes this relationship, then further attention should be at MHL and what may be aiding this relationship.

Replication studies should be done to ensure the study's validity, as well as conduct it across cultures and age groups to ensure better representation and enhance the generalizability of our findings. It would also help to understand which demographic group needs intervention the most and see what may be accounting for these differences between demographic groups.

Further research may also take these results and develop an intervention utilizing mindfulness as its core activity to facilitate MHL, or develop a MHL program with a section devoted to mindfulness. Through an experimental design, it could also help to identify the causality between DM and psychological symptom recognition and treatment seeking.

The previous claim that this knowledge of how DM plays a role in improving treatment seeking remains prevalent. Upon further comprehension of the findings, exploration into other factors that may be contributing to them is beneficial, as it would complement the proposition that mindfulness may help with improving treatment seeking for psychological distress.

The relationship between the MHL components of recognition, attitudes, and treatment seeking also implies that other facets of MHL may have an association with mindfulness. Future research should expand on this idea by exploring other components of MHL with mindfulness, and specific facets of mindfulness with different MHL components. With these relationships established, it may expedite development of effective mindfulness-based interventions for MHL.

Conclusion

In the present study, we investigated the relationship DM has with psychological symptom recognition and mental help seeking attitudes. This was achieved by asking participants to identify the correct psychological disorder in vignettes of a fictional individual through a survey administered on Amazon's Mechanical Turk. Our aim was to understand how DM may help to improve treatment seeking, as one of the integral reasons Canadians suffer high

rates of psychological illness is because they do not seek treatment for their distress. We based our study on the notion that this lack of active treatment seeking is due to an inability to recognize psychological illness symptoms, a lack of knowledge of where to seek treatment, and negative attitudes towards mental health professionals and treatment. Since our results supported our hypotheses, they can contribute to the expansion and advancement of interventions that integrates mindfulness to improve treatment seeking in the general population. This indirectly affects the mental health outcomes of individuals, as if they are more adept at seeking help for their symptoms, their illness can be treated, thus improving their quality of life.

References

Andrade, L. H., Alonso, J., Mneimneh, Z., Wells, J. E., Al-Hamzawi, A., Borges, G., Bromet, E., Bruffaerts, R., de Girolamo, G., de Graaf, R., Florescu, S., Gureje, O., Hinkov, H. R., Hu, C., Huang, Y., Hwang, I., Jin, R., Karam, E. G., Kovess-Masfety, V., … Kessler, R. C. (2013). Barriers to mental health treatment: Results from the WHO World Mental Health Surveys. *Psychological Medicine*, *44*(6), 1303–1317. https://doi.org/10.1017/s0033291713001943

Ardenghi, S., Russo, S., Luciani, M., Salvarani, V., Rampoldi, G., Bani, M., Ausili, D., Di Mauro, S., & Strepparava, M. G. (2022). The association between Dispositional Mindfulness and empathy among undergraduate nursing students: A Multicenter cross-sectional study. *Current Psychology*. https://doi.org/10.1007/s12144-022-02829-1

Arı, Ç., Ulun, C., Yarayan, Y., Dursun, M., & Bozkurt, T., & Ustun, U., (2020). Mindfulness, healthy life skills and life satisfaction in varsity athletes and university students. Progress in Nutrition. 22. 2020024. 10.23751/pn.v22i2-S.10561

Bao, X., Xue, S., & Kong, F. (2015). Dispositional mindfulness and perceived stress: The role of emotional intelligence. *Personality and Individual Differences*, *78*, 48–52. https://doi.org/10.1016/j.paid.2015.01.007

Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., & Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment*, *13*(1), 27–45. https://doi.org/10.1177/1073191105283504

Beard, C., & Björgvinsson, T. (2014). Beyond generalized anxiety disorder: Psychometric properties of the gad-7 in a heterogeneous psychiatric sample. *Journal of Anxiety Disorders*, *28*(6), 547–552. https://doi.org/10.1016/j.janxdis.2014.06.002

Beshai, S., Prentice, J. L., & Huang, V. (2017). Building blocks of emotional flexibility: Trait mindfulness and self-compassion are associated with positive and negative mood shifts. *Mindfulness*, *9*(3), 939–948. https://doi.org/10.1007/s12671-017-0833-8

Beshai, S., Bueno, C., Yu, M., Feeney, J. R., & Pitariu, A. (2020). Examining the effectiveness of an online program to cultivate mindfulness and self-compassion skills (mind-op): Randomized controlled trial on Amazon's mechanical turk. *Behaviour Research and Therapy*, *134*, 103724. https://doi.org/10.1016/j.brat.2020.103724

Blanco, C., Okuda, M., Wright, C., Hasin, D. S., Grant, B. F., Liu, S.-M., & Olfson, M. (2008). Mental health of college students and their non–college-attending peers. *Archives of General Psychiatry*, *65*(12), 1429. https://doi.org/10.1001/archpsyc.65.12.1429

Blignault, I., Saab, H., Woodland, L., Mannan, H., & Kaur, A. (2021). Effectiveness of a community-based group mindfulness program tailored for Arabic and Bangla-speaking migrants. *International Journal of Mental Health Systems*, *15*(1). https://doi.org/10.1186/s13033-021-00456-0

Bohlmeijer, E., ten Klooster, P. M., Fledderus, M., Veehof, M., & Baer, R. (2011). Psychometric Properties of the five facet mindfulness questionnaire in depressed adults and development of a short form. *Assessment*, *18*(3), 308–320. https://doi.org/10.1177/1073191111408231

Bonabi, H., Müller, M., Ajdacic-Gross, V., Eisele, J., Rodgers, S., Seifritz, E., Rössler, W., & Rüsch, N. (2016). Mental Health Literacy, attitudes to help seeking, and perceived need as predictors of mental health service use. *Journal of Nervous & Mental Disease*, *204*(4), 321–324. https://doi.org/10.1097/nmd.0000000000000488

Brådvik, L. Suicide Risk and Mental Disorders. *International Journal of Environmental Research and Public Health*. 2018 Sep 17;15(9):2028. doi: 10.3390/ijerph15092028. PMID: 30227658; PMCID: PMC6165520

Brown, K. W., Ryan, R. M., & Creswell, J. D. (2007). Mindfulness: Theoretical foundations and evidence for its salutary effects. *Psychological Inquiry*, *18*(4), 211–237. https://doi.org/10.1080/10478400701598298

Cain, M. K., Zhang, Z., & Yuan, K.-H. (2017). Univariate and multivariate skewness and kurtosis for measuring nonnormality: Prevalence, influence and estimation. *Behavior Research Methods*, *49*(5), 1716–1735. https://doi.org/10.3758/s13428-016-0814-1

The Relationship between Mental Health, Chronic Illness and Chronic Physical Conditions. Canadian Mental Health Association Ontario. (n.d.). Retrieved April 14, 2023, from https://ontario.cmha.ca/documents/the-relationship-between-mental-health-mental-illness-and-chronic-physical-conditions/

Conte, J. M. (2005). A review and critique of emotional intelligence measures. *Journal of Organizational Behavior*, *26*(4), 433–440. https://doi.org/10.1002/job.319

Corrigan, P. W., Druss, B. G., & Perlick, D. A. (2014). The impact of mental illness stigma on seeking and participating in mental health care. *Psychological Science in the Public Interest*, *15*(2), 37–70. https://doi.org/10.1177/1529100614531398

Creswell, J. D. (2017). Mindfulness interventions. *Annual Review of Psychology*, *68*(1), 491–516. https://doi.org/10.1146/annurev-psych-042716-051139

de Vibe, M., Solhaug, I., Rosenvinge, J. H., Tyssen, R., Hanley, A., & Garland, E. (2018). Six-year positive effects of a mindfulness-based intervention on mindfulness, coping and well-being in medical and psychology students; results from a randomized controlled trial. *PLOS ONE*, *13*(4). https://doi.org/10.1371/journal.pone.0196053

Eisenlohr-Moul, T. A., Walsh, E. C., Charnigo, R. J., Lynam, D. R., & Baer, R. A. (2012). The "what" and the "how" of dispositional mindfulness. *Assessment*, *19*(3), 276–286. https://doi.org/10.1177/1073191112446658

Furnham, A., & Swami, V. (2018). Mental health literacy: A review of what it is and why it matters. *International Perspectives in Psychology*, *7*(4), 240–257. https://doi.org/10.1037/ipp0000094

Fjorback, L. O., Arendt, M., Ørnbøl, E., Fink, P., & Walach, H. (2011). Mindfulness-based stress reduction and mindfulness-based cognitive therapy - A systematic review of randomized controlled trials. *Acta Psychiatrica Scandinavica*, *124*(2), 102–119. https://doi.org/10.1111/j.1600-0447.2011.01704.x

Hammer, J. H., & Parent, M. C., & Spiker, D. A. (2018). Mental Help Seeking Attitudes Scale (MHSAS): Development, reliability, validity, and comparison with the ATSSPH-SF and IASMHS-PO. Journal of Counseling Psychology, 65, 74-85. doi: 10.1037/cou0000248

Jorm, A. F. (2000). Mental health literacy. *British Journal of Psychiatry*, *177*(5), 396–401. https://doi.org/10.1192/bjp.177.5.396

Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: Past, present, and future. *Clinical Psychology: Science and Practice*, *10*(2), 144–156. https://doi.org/10.1093/clipsy.bpg016

Kroenke, K., Spitzer, R. L., & Williams, J. B. (2001). The PHQ-9. *Journal of General Internal Medicine*, *16*(9), 606–613. https://doi.org/10.1046/j.1525-1497.2001.016009606.x

Kroenke, K., Spitzer, R. L., Williams, J. B. W., & Löwe, B. (2010). The patient health questionnaire somatic, anxiety, and depressive symptom scales: A systematic review. *General Hospital Psychiatry*, *32*(4), 345–359. https://doi.org/10.1016/j.genhosppsych.2010.03.006

Kutcher, S., Wei, Y., Costa, S., Gusmão, R., Skokauskas, N., & Sourander, A. (2016). Enhancing mental health literacy in young people. *European Child & Adolescent Psychiatry*, *25*(6), 567–569. https://doi.org/10.1007/s00787-016-0867-9

Leschied, A. W., Saklofske, D. H., & Flett, G. L. (2019). *Handbook of School-Based Mental Health Promotion: An evidence-informed framework for implementation*. Springer International

Löwe, B., Unützer, J., Callahan, C. M., Perkins, A. J., & Kroenke, K. (2004). Monitoring depression treatment outcomes with the patient health questionnaire-9. Medical Care, 1194–1201. https://doi.org/10.1097/00005650-200412000-00006

Löwe, B., Decker, O., Müller, S., Brähler, E., Schellberg, D., Herzog, W., & Herzberg, P. Y. (2008). Validation and standardization of the Generalized Anxiety Disorder Screener (GAD-7) in the general population. *Medical Care*, *46*(3), 266–274. https://doi.org/10.1097/mlr.0b013e318160d093

Mahsoon, A., Sharif, L., Banakhar, M., Alasmee, N., Almowallad, E., Jabali, R., Bahamil, A., & Assur, S. (2020). Parental support, beliefs about mental illness, and mental help-seeking among young adults in Saudi Arabia. *International Journal of Environmental Research and Public Health*, 17(15), 5615. https://doi.org/10.3390/ijerph17155615

Mcluckie, A., Kutcher, S., Wei, Y., & Weaver, C. (2014). Sustained improvements in students' mental health literacy with use of a mental health curriculum in Canadian schools. *BMC Psychiatry*, *14*(1). https://doi.org/10.1186/s12888-014-0379-4

Mothes, H., Klaperski, S., Seelig, H., Schmidt, S., & Fuchs, R. (2014). Regular aerobic exercise increases dispositional mindfulness in men: A randomized controlled trial. *Mental Health and Physical Activity*, *7*(2), 111–119. https://doi.org/10.1016/j.mhpa.2014.02.003

Newman, L. S., Tan, M., Caldwell, T. L., Duff, K. J., & Winer, E. S. (2018). Name norms: A guide to casting your next experiment. *Personality and Social Psychology Bulletin*, *44*(10), 1435–1448. https://doi.org/10.1177/0146167218769858

O'Brien, W. H., Wang, S., Varga, A. V., Lim, C. X., Xu, H., Jarukasemthawee, S., Pisitsungkagarn, K., Suvanbenjakule, P., & Braden, A. (2021). Trait mindful nonreactivity and nonjudgment prospectively predict of COVID-19 health protective behaviors across a two-month interval in a USA sample. https://doi.org/10.1101/2021.07.21.21260971

O'Connor, M., & Casey, L. (2015). The mental health literacy scale (MHLS): A new scale-based measure of mental health literacy, *Psychiatry Research,* http://dx.doi.org/10.1016/j.psychres.2015.05.064

Pearson, C., Janz, T., & Ali, J. (2013). Mental and substance use disorders in Canada. *Statistics Canada: Health at a Glance*. Catalogue no. 82-624-X

Pelham III, W. E., Gonzalez, O., Metcalf, S. A., Whicker, C. L., Scherer, E. A., Witkiewitz, K., Marsch, L. A., & Mackinnon, D. P. (2019). Item response theory analysis of the five facet mindfulness questionnaire and its short forms. *Mindfulness*, *10*(8), 1615–1628. https://doi.org/10.1007/s12671-019-01105-x

Perry, Y., Petrie, K., Buckley, H., Cavanagh, L., Clarke, D., Winslade, M., Hadzi-Pavlovic, D., Manicavasagar, V., & Christensen, H. (2014). Effects of a classroom-based educational resource on adolescent mental health literacy: A cluster randomised controlled trial. *Journal of Adolescence*, *37*(7), 1143–1151. https://doi.org/10.1016/j.adolescence.2014.08.001

Pretorius, C., Chambers, D., Cowan, B., & Coyle, D. (2019). Young people seeking help online for mental health: Cross-sectional survey study. *JMIR Mental Health*, *6*(8). https://doi.org/10.2196/13524

Reavley, N. J., & Jorm, A. F. (2011). Stigmatizing attitudes towards people with mental disorders: Findings from an Australian national survey of mental health literacy and stigma. *Australian & New Zealand Journal of Psychiatry*, *45*(12), 1086–1093. https://doi.org/10.3109/00048674.2011.621061

Salmon, P., Sephton, S., Weissbecker, I., Hoover, K., Ulmer, C., & Studts, J. L. (2004). Mindfulness meditation in clinical practice. *Cognitive and Behavioral Practice*, *11*(4), 434–446. https://doi.org/10.1016/s1077-7229(04)80060-9

Schmidt, S. (2011). Mindfulness in east and west – is it the same? *Studies in Neuroscience, Consciousness and Spirituality*, 23–38. https://doi.org/10.1007/978-94-007-2079-4_2

Schwarzer, R., & Jerusalem, M. (1995). Generalized Self-Efficacy scale. In J. Weinman, S. Wright, & M. Johnston, *Measures in health psychology: A user's portfolio. Causal and control beliefs* (pp. 35-37). Windsor, UK: NFER-NELSON

Shapiro, S. L., Carlson, L. E., Astin, J. A., & Freedman, B. (2006). Mechanisms of mindfulness. *Journal of Clinical Psychology*, *62*(3), 373–386. https://doi.org/10.1002/jclp.20237

Spitzer, R. L., Kroenke, K., Williams, J. B., & Löwe, B. (2006). A brief measure for assessing generalized anxiety disorder. *Archives of Internal Medicine*, *166*(10), 1092. https://doi.org/10.1001/archinte.166.10.1092

Statistics Canada. (2019). *Mental health care needs, 2018* Catalogue no. 82-625-X. https://www150.statcan.gc.ca/n1/pub/82-625-x/2019001/article/00011-eng.htm

Statistics Canada. (2020). *Canadian Community Health Survey, 2019* Catalogue no. 11-001-X. https://www150.statcan.gc.ca/n1/daily-quotidien/200806/dq200806a-eng.htm

Taylor, H., Strauss, C., & Cavanagh, K. (2021). Can a little bit of mindfulness do you good? A systematic review and meta-analyses of unguided mindfulness-based self-help interventions. *Clinical Psychology Review*, *89*, 102078. https://doi.org/10.1016/j.cpr.2021.102078

Tomlinson, E. R., Yousaf, O., Vittersø, A. D., & Jones, L. (2017). Dispositional mindfulness and psychological health: A systematic review. *Mindfulness*, *9*(1), 23–43. https://doi.org/10.1007/s12671-017-0762-6

Wijeratne, C., & Harris, P. (2009). Late life depression and dementia: A mental health literacy survey of Australian general practitioners. *International Psychogeriatrics*, *21*(02), 330. https://doi.org/10.1017/s1041610208008235

Wright, A., Jorm, A. F., Harris, M. G., & McGorry, P. D. (2007). What's in a name? is accurate recognition and labelling of mental disorders by young people associated with better help-seeking and treatment preferences? *Social Psychiatry and Psychiatric Epidemiology*, *42*(3), 244–250. https://doi.org/10.1007/s00127-006-0156-x

Yamaguchi, S., Mino, Y., & Uddin, S. (2011). Strategies and future attempts to reduce stigmatization and increase awareness of mental health problems among young people: A narrative review of educational interventions. *Psychiatry and Clinical Neurosciences*, *65*(5), 405–415. https://doi.org/10.1111/j.1440-1819.2011.02239.x

Tables.

Table 1.

Summary of Pertinent Sample Demographics.

Total sample (*n*)	*n* = 299	
Age	*M*	*SD*
	41.04	11.61
Gender	*n*	%
Cis woman	148	49.5
Cis man	145	48.5
Other	6	1.9
Ethnicity	*n*	%
Black	25	8.4
White	231	77.3
East Asian	11	3.7
Southeast Asian	10	3.3
Latinx	14	4.7
Other	8	2.6
Marital Status	*n*	%
Single, never married	123	41.1
Married	136	45.5
Separated/Divorced	35	11.7
Widowed	5	1.7
Annual Income (CAD)	*n*	%
Unemployed /No yearly income	13	4.3
10, 000- 30,000	84	28.1
31,000- 50,000	66	22.1
51,000- 75,000	59	19.7
76,000- 99,000	40	13.4
100,000 and over	34	11.4
None of the above, please specify	3	1.0
Highest Level of Education	*n*	%
Secondary (high) school graduation diploma or equivalent	60	20.1
Trades certificate or diploma	14	4.7
Other non-university certificate or diploma	14	4.7
University certificate or diploma under bachelor level	28	9.4
Bachelor's degree	121	40.5
Master's degree	45	15.1

Other	17	5.7
Religion/Beliefs	*n*	%
Christianity	157	52.5
Atheism	50	16.7
Agnosticism	61	20.4
Other	31	10.4
Prior Mental Illness Diagnosis		
Yes, please specify the condition here	94	31.4
No	192	64.2
Prefer not to disclose	13	4.3
Prior Psychotherapy	*n*	%
Yes, if so, please specify here	80	26.8
No	207	69.2
Prefer not to disclose	12	4.0
Degree of Mindfulness Knowledge Scale	*M*	*SD*
	4.74	2.86
Prior Mindfulness Meditation Practices	*n*	%
Yes	85	28.4
No	210	70.2
Prefer not to disclose	4	1.3
Prior Mindfulness-Based Interventions	*n*	%
Yes	49	16.4
No	244	81.6
Prefer not to disclose	6	2.0

Table 2. *Cronbach's alpha, means, standard deviations, skewness, and kurtosis values for study measures.*

Measures	*M*	*SD*	Skewness	Kurtosis	Cronbach
PDR-V	10.04	2.56	-1.36	.78	.86
MHSAS-9	5.37	11.39	-0.84	0.50	.94
FFMQ-24	82.56	14.49	0.29	-0.22	.90
MHLS-35	123.09	16.33	-0.56	-0.25	.91
PHQ-9	8.01	6.86	0.63	-0.44	.92
GAD-7	6.62	5.84	0.62	-0.65	.93
GSE-10	29.73	5.63	-0.46	0.68	.91

Note *Psychological Disorder Recognition (PDR-V), Mental Help Seeking Attitudes Scale (MHSAS-9), Five Facet Mindfulness Questionnaire (FFMQ-24), Mental Health Literacy Scale (MHLS-35), Patient Health Questionnaire (PHQ-9), Generalized Anxiety Disorder (GAD-7), and General Self-Efficacy (GSE-10).*

Table 3. *Correlations between study measures.*

Measures	1PDR-V	2MHSAS-9	3FFMQ-24	4MHLS-35	5PHQ-9	6GAD-7	7GSE-10
1	-	0.140	0.183**	0.628**	-0.261**	-0.185**	0.056
2	-	-	0.253**	0.367**	-0.345**	-0.316**	0.198
3	-	-	-	0.133	-0.616**	-0.643**	0.553**
4	-	-	-	-	-0.198**	-0.151**	0.132**
5	-	-	-	-	-	0.825**	-0.454**
6	-	-	-	-	-	-	-0.445**

Note: *Psychological Disorder Recognition (PDR-V), mental help-seeking attitudes (MHSAS-9), dispositional mindfulness (FFMQ-24), mental health literacy (MHLS-35), depression symptoms (PHQ-9), anxiety symptoms (GAD-7), and general self-efficacy (GSE-10) total scores.*
** $p < 0.01$

Table 4. *Correlations between dispositional mindfulness (FFMQ-24) facets and psychological disorder recognition (PDR-V) scores and mental help-seeking attitudes (MHSAS-9) scores.*

Measures	1PDR-V	2MHSAS-9	3DM-D	4DM-O	5DM-AA	6DM-NR	7DM-NJ
1	-	0.140	0.184**	0.045	0.295**	-0.113	0.172**
2	-	-	0.183**	0.125	0.232**	0.161**	0.138
3	-	-	-	0.329**	0.491**	0.317**	0.427**
4	-	-	-	-	0.166**	0.204**	-0.006
5	-	-	-	-	-	0.225**	0.514**
6	-	-	-	-	-	-	0.300**

Note: *Psychological Disorder Recognition (PDR-V), mental help-seeking attitudes (MHSAS-9), describe (DM-D), observe (DM-O), act with awareness (DM-AA), non-reactivity (DM-NR), and non-judgment (DM-NJ).*
** $p < 0.01$

Table 5. *Variance contributed by dispositional mindfulness (FFMQ-24) over and above variance by demographics (Step 1) and FFMQ-24 (Step 2) in predicting Psychological Disorder Recognition (PDR-V) total scores.*

Model 1: Significant Variance	*B*	*SE*	*β*	*t*
Step 1: $R = 0.39$, $R^2 = 0.15$**				
Annual Income	0.011	0.105	0.007	0.108
Age	0.044**	0.013	0.201	3.445
Gender	-0.013	0.135	-0.005	-0.094
Education	-0.382**	0.064	-0.354	-0.595
Marital Status	-0.312	0.210	-0.088	-1.480
Step 2: $R = 0.41$, $\Delta R^2 = 0.01$*				
Annual Income	-0.013	0.105	-0.007	-0.120
Age	0.036*	0.013	0.161	2.647
Gender	-0.025	0.134	-0.010	-0.186
Education	-0.366**	0.064	-0.339	-5.692
Marital Status	-0.278	0.210	-0.079	-1.326
FFMQ-24	0.021*	0.010	0.120	2.112

Note: ** = significant at $p < 0.01$; * = significant at the $p < 0.05$.

Table 6. *Variance contributed by dispositional mindfulness (FFMQ-24) over and above variance by demographics (Step 1) and FFMQ-24 (STEP 2) in predicting mental help seeking attitudes (MHSAS-9) total scores.*

Model 1: Nonsignificant Variance	*B*	*SE*	*β*	*t*
Step 1: $R = 0.16$, $R^2 = 0.03$				
Annual Income	0.168	0.499	0.022	0.336
Age	0.117	0.061	0.119	1.903
Gender	-0.892	0.643	-0.082	-1.387
Education	0.248	0.305	0.052	0.811
Marital Status	-1.756	1.002	-0.112	-1.753
Step 2: $R = 0.29$, $\Delta R^2 = 0.06$**				
Annual Income	-0.061	0.488	-0.008	-0.125
Age	0.033	0.063	0.034	0.530
Gender	-1.010	0.625	-0.092	-1.616
Education	0.401	0.299	0.084	1.345
Marital Status	-1.438	0.975	-0.092	-1.475
FFMQ-24	0.202**	0.047	0.257	4.338

Note: ** = significant at $p < 0.01$; * = significant at the $p < 0.05$.

Appendices

Appendix A

Participant Consent Form

Project Title: Mindful Recognition: The associations of dispositional mindfulness with recognition of psychological disorders and willingness to seek help

Researcher(s):

Matea Gerbeza, Undergraduate Honours Student, Department of Psychology, University of Regina

Contact at: (306) 585 4459 or mgw737@uregina.ca

Shadi Beshai, Ph.D., Assistant Professor, Department of Psychology, University of Regina

Contact at: (306) 585-4026 or shadi.beshai@uregina.ca

Purpose(s) and Objective(s) of the Research:

- You are invited to participate in a study, and the purpose is to explore whether mindfulness (awareness of present-moment experiences with openness and curiosity) and its properties have any relationships with the capacity to recognize mental and physical health conditions, and the capacity to differentiate between them. Additionally, we are exploring whether the capacity for mindfulness is also associated with willingness to seek help in times of distress. With a relationship established, further action can be taken to develop

programs that fuse mindfulness with mental health literacy training for maximal benefit. The data collected will be used as part of a Psychology Undergraduate Thesis project, conference presentations, and publications.

Procedures:

- As a participant, you will first be asked to complete a consent and demographics form, then a series of self-report questionnaires that determine if you are experiencing any depression symptoms, your level of anxiety in the past 2 weeks, and your level of general self-efficacy, questions gauging your capacity for mindfulness in everyday situations, as well as attitudes regarding seeking mental health treatment. Subsequently, you will be asked to read several case studies of fictitious patients describing several symptoms. You will then be asked to answer a number of questions after reading each of the cases. If you do not feel comfortable answering a question, you may skip the question.
- We encourage you to contact us with any questions or concerns you may have regarding the procedure and the study's objectives.
- The completion of this study will take approximately 30-45 minutes, depending on your pace.
- Please note that researchers cannot contact you because this survey is anonymous, and if you do contact the researchers with any questions, you will no longer be anonymous to us. However, your responses will remain anonymous because we are unable to separate your responses in the data pool because all the responses are anonymous.

Potential Risks:

- The risks of any negative psychological or emotional incident linked to this study are low. You may feel mild discomfort answering certain questions, as they can be invasive because

they pertain to your mental health. However, there are resources in place if you do experience significant distress and risk located at the end of this document as well as at the end of the debriefing form. If you do experience any distress or risk, you can drop out of the study at any time.

Exclusion Criteria:

- To be an eligible participant in this study, you must be 18 years old or older, as well as read English at an eighth-grade reading level.

Compensation:

- For your participation in the study, you will be compensated $2.50 USD. Compensation will be distributed automatically through Amazon's Mechanical Turk.

Confidentiality:

- To ensure your confidentiality, you will be given a random number to classify all your data, making you anonymous. You will not be required to give any identifying information, and there will be no distribution of personal data that may reveal your identity. The data collected for the study will be in aggregate form, meaning that all the data collected from the study will be summarized together. This makes it impossible for anyone to be identified as a participant in the study because it is difficult to find one single person from a large group of data using a private identification number. This number is only accessible to the researchers, and we do not log or record your IP address.

Right to Withdraw:

- Participation in the study is completely voluntary and you are not expected nor required to answer any question you feel uncomfortable or uneasy about. You have the right to

withdraw from the study at any point, without needing to supply a reason. There is no penalty for withdrawing from the study.

- If you do withdraw from the study, you will still be compensated $2.50 USD if you follow the instructions at the end of the study. Your withdrawal from the study allows for your answers to be deleted and they will not be included in our analyses.
- Once you have completed the study and submitted your answers, you will be unable to withdraw from the study because data collection is anonymous, so there is no way to separate your data from the aggregate.

Follow up:

- If you would like to view the results of the study, the link supplied below will take you to the summarized results after January 2024 at: https://www.shadibeshai.ca/ and https://www.researchgate.net/profile/Shadi-Beshai

Questions or Concerns:

- If you have any questions or concerns, the contact information for the researchers is listed at the beginning of this document.
- This study has been approved on ethical grounds by the University of Regina Research Ethics Board on November 10th, 2022. Any questions regarding your rights as a participant may be addressed to the committee at 306-585-4775 or research.ethics@uregina.ca. Any participants living outside of Regina may phone to collect.

CONSENT:

By moving to the next page, it indicates that you have read and understood the research description provided to you on this page and that you are giving your consent to participate in the present research project.

It is advised that you make a printed copy of this consent form for your own personal records.

Please click below for a list of Mental Health Resources available:

International:

Befrienders

IMALIVE

International Suicide Hotlines

7 Cups of Tea

Canada:

Crisis Services Canada 1-833-456-4566

Mental Health Mobile Crisis Telephone Line 902-429-8167

Canadian Association for Suicide Prevention 819-339-3356

Canadian Mental Health Association

Mentalhealthcanada.com

Anxiety Panic Support

Depression Hurts

U.S.A:

Mental Health America 1-800-273-TALK (8255)

HopeLine

National Alliance on Mental Illnesses

PTSD Foundation of America

Depression Alliance

Anxiety and Depression Association of America

United Kingdom:

Samaritans 116 123

HopeLine UK 0800 086 4141

Together

Rethink Mental Illness

Australia:

Lifeline Australia 13 11 14

Samaritans 13 52 47

Your Health In Mind

Sane

mindhealthconnect

Living Is For Everyone

beyondblue

Anxiety Australia

Europe:

European Federation of Associations of Families of People with Mental Illness

WHO Europe

Appendix B

Debriefing Form

Mindful Recognition: The associations of dispositional mindfulness with recognition of psychological disorders and willingness to seek help

Thank you for providing us with your valuable feedback on this project. This project was specifically designed to answer the question: "is dispositional mindfulness associated with mental health literacy and willingness to seek mental health treatment?". We hypothesized the following: a) dispositional mindfulness scores will be significantly and positively correlated with better mental disorder recognition scores (an important component of mental health literacy,) and b) those with higher dispositional mindfulness scores will likely have more positive attitudes regarding seeking professional help for mental distress.

During the study, you were asked to fill out several questionnaires relating to dispositional mindfulness (i.e., capacity to pay attention to present-moment experiences with an attitude of acceptance and openness), your current levels of mental health symptoms, general sense of self-efficacy and confidence, and mental health seeking attitudes, as well as read short case studies and asked to decide what condition was being described (among other questions). The purpose of these questionnaires was to understand your level of mental disorder recognition, dispositional mindfulness, and professional help-seeking behaviours without any prior introduction or prompts from our researchers.

When an individual is able to recognize a mental disorder in themselves or a loved one, it is more likely they will seek treatment, thus managing a mental disorder and preventing it from worsening. Since awareness is a critical component of both mindfulness and mental health literacy, it is plausible that those higher on the capacity to pay attention with acceptance would

also be higher on the capacity to recognize experiences related to mental distress. This mindful knowledge may help with increasing mental disorder recognition because one is understanding themselves and others more because they pay attention with an open mind to the feelings occurring around them.

As stated in our hypotheses, we predicted that there would be a significant correlation between dispositional mindfulness scores and mental disorder recognition scores. This means that if someone has higher dispositional mindfulness scores, they will also have higher correct mental disorder identification scores. Our second hypothesis predicted that there would also be a significant correlation between dispositional mindfulness scores and positive attitudes towards professional help for mental distress. This prediction meant that we believed that if someone has higher dispositional mindfulness scores, they will also have more favourable professional help-seeking attitudes. For both hypotheses, higher mindfulness scores translate to having more awareness, acceptance, and being more knowledgeable toward mental distress. If our hypotheses are correct, this allows researchers to develop mental health literacy programs that embed mindfulness as a core component for maximal benefits and efficiency.

You were asked to complete a variety of questionnaires that measured your personal levels of depression and anxiety. While completing these, if you discovered that you have been experiencing symptoms of depression and/or anxiety, we strongly advise and encourage you to look into the resources we have supplied at the end of this form. However, you will not be able to withdraw your responses now that you have submitted your data as this survey is anonymous we will not be able to identify your data from the others.

If you are interested in learning about the results from this study, and to see if our hypotheses were correct, you can use the link below after January 2024 to receive an article that

summarizes the final results. This data will be used in an undergraduate honours thesis in psychology, conference presentations, and publications.

https://www.shadibeshai.ca/

https://www.researchgate.net/profile/Shadi-Beshai

If you have any further questions about the study, its process, and future research, please contact Dr. Shadi Beshai at (306) 585-4026, or at shadi.beshai@uregina.ca. You can also contact Matea Gerbeza at mgw737@uregina.ca. Either one of us will happily answer any questions you may have.

All the researchers thank you for your participation in this research as it would not have been possible without your time and effort. Your participation is highly appreciated as it will assist in future research on mental disorders. We wish you all the best.

Online Resources

Get Involved Raven

The Firelight Group

National Institute of Mental Health

TalkSpace

Anxiety

Anxiety Resource Center

Anxiety Canada

Anxiety & Depression Association of America

Rise Uk

Black Dog Institute Australia

I’m Enough New Zealand

Depression

Everyday Health

WHO Depression

Canadian Mental Health Association

American Counselling Association Depression Resources

ReachOut Australia

Depression: Ministry of Health New Zealand

Self-help Books

30 Best Self-help Depression Books

13 Best Books for Anxiety

13 Best Mental Health Books

Other Mental Health Resources List

HelpGuide

Health and Wellness

Mental Health Australia

Trek Medics International

Mental Health Foundation of New Zealand

Counselling Services

betterhelp

Online Counselling

Mental Health and Well-Being

Appendix C

Demographic Form

1. **Which gender do you identify with? Please mark the appropriate box.**

   Cis-woman ☐
   Cis-man ☐
   Non-binary ☐
   Gender-fluid ☐
   Two-Spirit ☐
   Trans woman ☐
   Trans man ☐
   Not listed ☐ Please specify: __________
   Prefer not to disclose ☐

2. **Age (please write your answer): ______**

3. **We know that people of different races do not have significantly different genetics. But our race still has important consequences, including how we are treated by different individuals and institutions. Which race category best describes you? Check all that apply:**

   Black ☐
   White ☐
   East Asian ☐
   Southeast Asian ☐
   Latinx ☐
   Middle Eastern ☐
   South Asian ☐
   Indigenous (First Nations, Métis, Inuk/Inuit, Native American) ☐
   Another race category ☐ Please indicate here: ______
   Prefer not to answer ☐
   Do not know ☐

4. **What is your current marital status? Please mark the appropriate box.**

   Single, never married ☐
   Married ☐
   Separated/Divorced ☐
   Widowed ☐

5. **Do you have children? Please mark the appropriate box.**

   Yes ☐ If yes, how many? _______

No ☐

6. **What is your approximate yearly income in CAD? Please mark the appropriate box.**

Unemployed/No yearly income ☐
10,000 - 30,000 ☐
31,000 – 50,000 ☐
51,000 – 75,000 ☐
76,000 – 99,000 ☐
100,000 and over ☐
None of the above ☐ Please specify: _______

7. **What is your highest level of education? Please check off the highest level only.**

No degree, certificate, or diploma ☐
If so, please indicate last grade completed: _____
Secondary (high) school graduation diploma or equivalent ☐
Trades certificate or diploma ☐
Other non-university certificate or diploma ☐
University certificate or diploma under bachelor level ☐
Bachelor's degree ☐
University certificate or diploma above bachelor level ☐
Degree in medicine, dentistry, veterinary medicine, or optometry ☐
Master's degree ☐
Doctorate ☐

8. **What religion/belief system do you follow?**

Christianity ☐
Islam ☐
Judaism ☐
Buddhism ☐
Atheism ☐
Agnosticism ☐
Other ☐ Please specify: ___________

9. **What is your first language?**

English ☐
French ☐
Spanish ☐
Cree ☐
Other ☐ Please specify: _______

10. **What language is primarily spoken in your family's home?**

English ☐
French ☐
Spanish ☐
Cree ☐
Other ☐ Please specify: _______

11. **Have you ever been diagnosed with a mental health condition (e.g., anxiety, depression, Schizophrenia, etc.)?**

No ☐
Yes ☐ Please specify the condition here: _____________
Prefer not to disclose ☐

12. **Have you ever received any form of Psychotherapy (e.g., Cognitive Behavioural Therapy, Counselling and Supportive Psychotherapy, Interpersonal Psychotherapy, etc.)?**

No ☐
Yes ☐ If so, please specify here: _______
Prefer not to disclose ☐

13. **As it stands, how much do you know about Mindfulness or Mindfulness Based Interventions?**

1=Not at all/very little, 10= extremely knowledgeable about the topic.

14. **Do you currently have a mindfulness meditation practice (i.e., do you engage in mindfulness meditation on a regular basis):**

Yes ☐
No ☐
Prefer not to disclose ☐

15. **Have you ever been a participant in a mindfulness-based intervention (e.g. Mindfulness-Based Stress Reduction; Mindfulness-Based Cognitive Therapy)?**

Yes ☐
No ☐
Prefer not to disclose ☐

16. **Are you currently taking any anti-depressant medication?**

Yes ☐

No ☐
Prefer not to disclose ☐

17. **On a scale of 1-10, with 1= no proficiency and 10= extremely proficient, how would you rate your English language proficiency? Please indicate in the space provided.**

____

Appendix D

Sample Case Vignette

Michelle is 52 years old. Michelle has been feeling unusually down on most days for the last few weeks. Michelle feels like she has no energy and like she is tired all the time. She has been sleeping excessively, especially during the day, and has gained a significant amount of weight in the last few weeks. Further, she has been moving very slowly, much to the concern of her loved ones. As a consequence of these developments, Michelle has been falling behind at work and missing deadlines. Michelle rarely drinks and has not had any major health conditions in the past. She is also currently not on medication.

Appendix E

Patient Health Questionnaire (PHQ-9; Kroenke et al., 2001)

Over the last 2 weeks, how often have you been bothered by any of the following problems?	Not at all	Several days	More than half the days	Nearly everyday
a) little interest or pleasure in doing things	0	1	2	3
b) feeling down, depressed, or hopeless	0	1	2	3
c) trouble falling or staying asleep, or sleeping too much	0	1	2	3
d) feeling tired or having little energy	0	1	2	3
e) poor appetite or overeating	0	1	2	3
f) feeling bad about yourself – or that you are a failure or have left yourself or your family down	0	1	2	3
g) trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3

h) moving or speaking so slowly that other people could have noticed? Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual?	0	1	2	3
i) thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3

If you checked any problems, how difficult have they made it for you to do your work, take care of things at home, or get along with other people?

Not difficult at all ___

Somewhat difficult ___

Very difficult ___

Extremely difficult ___

Appendix F

Generalized Anxiety Disorder Scale (GAD-7; Spitzer et al., 2006)

Over the last two weeks, how often have you been bothered by the following problems?	Not at all	Several days	More than half the days	Nearly everyday
a) feeling nervous, anxious, or on edge	0	1	2	3
b) not being able to stop or control worrying	0	1	2	3
c) worrying too much about different things	0	1	2	3
d) trouble relaxing	0	1	2	3
e) becoming easily annoyed or irritable	0	1	2	3
f) feeling afraid, as if something awful might happen	0	1	2	3

If you checked any problems, how difficult have they made it for you to do your work, take care of things at home, or get along with other people?

Not difficult at all ___

Somewhat difficult ___

Very difficult ___

Extremely difficult ___

Appendix G

Generalized Self-Efficacy Scale (GSE-10; Schwarzer & Jerusalem, 1995)

	Not at all true	Hardly true	Moderately true	Exactly true
a) I can always manage to solve difficult problems if I try hard enough	1	2	3	4
b) If someone opposes me, I can find the means and ways to get what I want	1	2	3	4
c) It is easy for me to stick to my aims and accomplish my goals	1	2	3	4
d) I am confident that I could deal efficiently with unexpected events	1	2	3	4
e) Thanks to my resourcefulness, I know how to handle unforeseen situations	1	2	3	4
f) I can solve most problems if I invest the necessary effort.	1	2	3	4

g) I can remain calm when facing difficulties because I can rely on my coping abilities	1	2	3	4
h) When I am confronted with a problem, I can usually find several solutions	1	2	3	4
i) If I am in trouble, I can usually think of a solution	1	2	3	4
j) I can usually handle whatever comes my way	1	2	3	4

Appendix H

Five Facet Mindfulness Scale: Short Form (FFMQ-24; Bohlmeijer et al., 2011)

1 = never or very rarely true

2 = not often true

3 = sometime true, sometimes not true

4 = often true

5 = very often or always true

1	I’m good at finding the words to describe my feelings	
2	I can easily put my beliefs, opinions, and expectations into words	
3	I watch my feelings without getting carried away by them	
4	I tell myself that I shouldn’t be feeling the way I’m feeling	
5	It’s hard for me to find the words to describe what I’m thinking	
6	I pay attention to physical experiences, such as the wind in my hair or sun on my face	
7	I make judgments about whether my thoughts are good or bad	
8	I find it difficult to stay focused on what’s happening in the present moment	
9	When I have distressing thoughts or images, I don’t let myself be carried away by them	
10	Generally, I pay attention to sounds, such as clocks ticking, birds chirping, or cars passing	
11	When I feel something in my body, it’s hard for me to find the right words to describe it	

12	It seems I am "running on automatic" without much awareness of what I'm doing	
13	When I have distressing thoughts or images, I feel calm soon after	
14	I tell myself I shouldn't be thinking the way I'm thinking	
15	I notice the smells and aromas of things	
16	Even when I'm feeling terribly upset, I can find a way to put it into words	
17	I rush through activities without being really attentive to them	
18	Usually when I have distressing thoughts or images I can just notice them without reacting	
19	I think some of my emotions are bad or inappropriate and I shouldn't feel them	
20	I notice visual elements in art or nature, such as colours, shapes, textures, or patterns of light and shadow	
21	When I have distressing thoughts or images, I just notice them and let them go	
22	I do jobs or tasks automatically without being aware of what I'm doing	
23	I find myself doing things without paying attention	
24	I disapprove of myself when I have illogical ideas	

Appendix I

Mental Help Seeking Attitudes Scale (MHSAS-9; Hammer et al., 2018)

INSTRUCTIONS: For the purposes of this survey, “mental health professionals” include psychologists, psychiatrists, clinical social workers, and counselors. Likewise, “mental health concerns” include issues ranging from personal difficulties (e.g., loss of a loved one) to mental illness (e.g., anxiety, depression).

Please mark the circle that best represents your opinion. For example, if you feel that your seeking help would be extremely useless, you would mark the circle closest to "useless." If you are undecided, you would mark the "0" circle. If you feel that your seeking help would be slightly useful, you would mark the "1" circle that is closer to "useful."

	3	2	1	0	1	2	3	
Useless	☐	☐	☐	☐	☐	☐	☐	Useful
Important	☐	☐	☐	☐	☐	☐	☐	Unimportant
Unhealthy	☐	☐	☐	☐	☐	☐	☐	Healthy
Ineffective	☐	☐	☐	☐	☐	☐	☐	Effective
Good	☐	☐	☐	☐	☐	☐	☐	Bad
Healing	☐	☐	☐	☐	☐	☐	☐	Hurting
Disempowering	☐	☐	☐	☐	☐	☐	☐	Empowering
Satisfying	☐	☐	☐	☐	☐	☐	☐	Unsatisfying
Desirable	☐	☐	☐	☐	☐	☐	☐	Undesirable