

MINDFULNESS, GRATITUDE, AND PERCEIVED STRESS AMONG GRADUATE  
COUNSELLING PSYCHOLOGY STUDENTS

by

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## **Abstract**

This study uses data from a larger mindfulness study to investigate the impact of a mindfulness and gratitude intervention on mindfulness, gratitude and perceived stress among graduate counselling psychology students in clinic. Twelve participants took part in a weekly meditation and gratitude journaling intervention, and three participants were in a control group. Participants also completed a questionnaire package four times: pre-intervention, one week after mindfulness training (during the first week of the intervention), at six weeks of intervention, and at twelve weeks. The questionnaires completed were the Kentucky Inventory of Mindfulness Skills (KIMS; Baer, Smith, & Allen, 2004), Gratitude Questionnaire-Six Item Form (GQ-6; McCullough, Emmons, & Tsang, 2002) and the Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983). No significant differences for the main effect of intervention or the interaction between time and intervention were found between the control and intervention groups on the dependent variables. The main effect of time was found to be significant for the Observing subscale of the KIMS. Significant negative correlations were found between perceived stress and gratitude at 6 and 12 weeks. There were also significant negative correlations between perceived stress and the Observing and Describing subscales of the KIMS at pre-intervention, 1 week and 12 weeks. At 1 and 12 weeks, there was a significant negative correlation between perceived stress and the Acting with Awareness subscale of the KIMS. Finally, there was a significant correlation between perceived stress and Accepting without Judgement subscale of the KIMS at 6 weeks. Findings are discussed in context of the literature, as well as implications and future research.

## **Preface**

This thesis is original, independent, unpublished work by the author, Jessica C. Kam.

The data used in this proposal was approved by UBC's Behavioural Research Ethics Board, and is covered by UBC BREB Number H07-01336. Secondary use of data was also approved, and is covered by UBC BREB Number H15-00967.

## Table of Contents

Abstract.....	ii
Preface.....	iii
Table of Contents.....	iv
List of Tables.....	vi
List of Figures.....	vii
Acknowledgments.....	viii
Chapter 1: Introduction.....	1
Chapter 2: Literature Review.....	6
Stress.....	6
Mindfulness.....	10
Gratitude.....	16
Theoretical Framework: Gratitude And Mindfulness.....	21
Research Questions.....	24
Hypotheses.....	25
Chapter 3: Methodology.....	28
Research Design.....	28
Recruitment.....	28
Participants.....	29
The Intervention.....	29
Dependent Variables.....	30
Ethical Considerations.....	36
Chapter 4: Results.....	37
Demographics.....	37
Group Comparison Analyses.....	38
Correlational Analyses.....	39
Chapter 5: Discussion.....	47
Group Comparisons.....	47
Correlational Analyses.....	50
Limitations.....	52
Implications for Clinical Training Programs.....	53

Future Research.....	54
Summary of Findings and Conclusion.....	54
References.....	62
Appendix A.....	75
Appendix B.....	76
Appendix C.....	79
Appendix D.....	80
Appendix E.....	82
Appendix F.....	83
Appendix G.....	84
Appendix H.....	86
Appendix I.....	87

## **List of Tables**

Table 1. Demographic information.....	56
Table 2. Means and standard deviations for dependent variables.....	57
Table 3. Correlations among dependent variables pre-intervention.....	58
Table 4. Correlations among dependent variables at 1 week.....	59
Table 5. Correlations among Dependent Variables at 6 weeks.....	60
Table 6. Correlations among dependent variables at 12 weeks.....	61

## List of Figures

Figure 1. Graph of correlations between gratitude and Observing subscale of the KIMS across four time points.....	41
Figure 2. Graph of correlations between gratitude and Describing subscale of the KIMS across four time points.....	41
Figure 3. Graph of correlations between gratitude and Acting with Awareness subscale of the KIMS across four time points.....	42
Figure 4. Graph of correlations between gratitude and Accepting without Judgement subscale of the KIMS across four time points.....	42
Figure 5. Change of the correlations between gratitude and perceived stress across the four time points.....	43
Figure 6. Change of the correlations between perceived stress and Observing subscale of the KIMS across the four time points.....	44
Figure 7. Change of the correlations between perceived stress and Describing subscale of the KIMS across the four time points.....	45
Figure 8. Change of the correlations between perceived stress and Acting with Awareness subscale of the KIMS across the four time points.....	45
Figure 9. Change of the correlations between perceived stress and Accepting without Judgement subscale of the KIMS across the four time points.....	46

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## **Chapter 1: Introduction**

Helping professionals work with their clients to promote well-being, and this line of work can be intense. This type of work can have negative effects on helping professionals, particularly if they do not have self-care strategies. Figley (2002) suggests that the compassion and empathy needed in helping professions may result in increased stress. This increased stress can result in burnout and compassion fatigue. Burnout is a cognitive and emotional state that helping professionals can experience themselves, or see in others (Leiter & Harvie, 1996). They can also experience compassion fatigue and vicarious trauma, in addition to burnout (Baker, 2003). These stressors not only affect practicing professionals, but also those in training. Graduate school can be stressful, and surveys have shown that graduate students experience many different stressors, such as academic responsibilities, finances/debt, anxiety, and poor work/school-life balance (El-Ghoroury, Galper, Sawaqdeh, & Bufka, 2012). This stress can interfere with clinical training by reducing students' capacity for attention, concentration, and decision-making (Shapiro, Shapiro, & Schwartz, 2000).

Many counselling training programs stress the importance of self-care, but few of these programs include courses that teach students about the possible negative consequences of burnout and specific self-care tools (Newsome, Christopher, Dahlen, & Christopher, 2006; Newsome, Waldo, Gruszka, 2012). Moreover, Newsome and colleagues (2006) suggest that the quality of clinical programs may be compromised if self-care is not part of the curriculum.

These important issues around self-care are often not addressed in graduate counselling programs because these programs are typically intense, and lack time to directly teach self-care strategies (Christopher & Maris, 2010). Nonetheless, many researchers and counselling professionals emphasize the importance of training students to deal with stress in order to

prevent burnout or compassion fatigue (e.g. Carroll, Gilroy, & Murray, 1999; Newsome et al., 2012).

Recently, there has been an increase in attention and research into incorporating mindfulness as a clinical intervention, and also as a self-care tool for helping professionals. Mindfulness has its roots in Buddhism, and Kabat-Zinn (1993) writes that mindfulness is based on cultivating awareness “with the aim of helping people live each moment of their lives even the painful ones as fully as possible” (p. 260). Mindfulness can be described as intentionally focusing attention on the present moment in a non-judgemental or accepting way (Kabat-Zinn, 1990). Kabat-Zinn (2003) further expands mindfulness to include a presence of affection, compassion, interest, friendliness, and open-heartedness toward observed present moment experienced, regardless of its pleasantness.

Western helping professionals and researchers have argued that mindfulness may be of value to people who are experiencing a variety of different problems and disorders (Baer & Krietemeyer, 2006). For example, mindfulness has been shown to be beneficial when working with stress (Chiesa, & Serretti, 2009), addictions (Brewer et al., 2011; Rogojanski, Vettese, & Antony, 2011), depression (Klainin-Yobas, Cho, & Creedy, 2012; Vøllestad, Nielsen, & Nielsen, 2012), anxiety (Vøllestad et al., 2012), chronic pain (Kabat-Zinn, Lipworth. & Burney, 1985; Rosenzweig, Greeson, Reibel, Jasser, & Beasely, 2010), and eating disorders (Kristeller, Wolever, & Sheets, 2013; Telch, Agras, & Linehan, 2000).

In recent years, there has been increasing literature on the use of mindfulness as a self-care tool for students who are studying to be in the helping profession. This research has shown that incorporating mindfulness into clinical training programs has helped students decrease anxiety and perceived stress, and increase self-efficacy, self-awareness, empathy, and self-

compassion (Beddoe & O'Murphy, 2004; Cohen & Miller, 2009; Glockel, Burton, James, & Bryer, 2012; Glockel, Cain, Malove, & James, 2013; Greason & Cashwell, 2009; Newsome et al., 2012; Newsome et al., 2006). This research highlights the benefits of incorporating mindfulness into the clinical training programs; however, existent literature on mindfulness with students in clinical programs has not addressed gratitude. Gratitude has been thought to be one of the qualities that underlie mindfulness, and it has also been linked to well-being (ex. Allan, Steger, & Shin, 2013; Proyer, Ruch, & Buschor, 2013). Furthermore, previous studies have shown that gratitude is negatively correlated with perceived stress (Wood, Maltby, Gillett, Linley, & Joseph, 2008; Wood, Joseph, & Linley, 2007).

McCullough (2002) proposes that gratitude may be related to mindfulness, in that mindfulness is a key cognitive process underlying gratitude. In Shapiro and Schwartz's (2000) intentional systemic mindfulness model (ISM), gratitude is one of the twelve mindful qualities that are part of self-regulation practices, such as mindfulness meditation. Moreover, gratitude itself has been shown to be correlated with well-being (Allan et al., 2013; Proyer et al., 2013); however, there are few studies that look at the link between gratitude and perceived stress. Additionally, to date, there have been no quantitative studies on the link between mindfulness, gratitude and perceived stress.

Given the need to address the gap in research, the main research questions are:

- 1) Among counselling psychology graduate students in clinic, does a mindfulness and gratitude intervention impact gratitude?
- 2) Among counselling psychology graduate students in clinic, does a mindfulness and gratitude intervention impact perceived stress?

- 3) Among counselling psychology graduate students in clinic, does a mindfulness and gratitude intervention impact mindfulness?
- 4) Are mindfulness and gratitude significantly positively correlated?
- 5) Are gratitude and perceived stress significantly negatively correlated?
- 6) Are mindfulness and perceived stress significantly negatively correlated?

### **Nature of Study**

Data for this study comes from a larger study looking at the effectiveness of mindfulness training for promoting well-being of counsellor trainees. This research is quasi-experimental research that utilizes a mixed design ANOVA, with one within-factor (time) and one between-factor (intervention). Fifteen participants completed the study. Participants were students in a master's counselling psychology program at a western Canadian university, and were enrolled in a supervised clinical training course (clinic). Twelve participants were in the intervention (mindfulness meditation and gratitude journaling) group, and three participants were in the control group. Group assignment was based on availability to take part in the intervention. If the participants were unable to participate in the intervention due to scheduling, they were in the control group. The mindfulness intervention consisted of 10 minutes of mindfulness meditation and 5 minutes of gratitude journaling that took place prior to clinic.

The data was collected from 2011 to 2012. The study was approved by the UBC Behavioural Research Ethics Board. Participants completed the measures pre-intervention, one week after mindfulness training (during the first week of the intervention), after six weeks of intervention, and after twelve weeks of intervention. Participants completed the Kentucky Inventory of Mindfulness Skills (KIMS; Baer, Smith, & Allen, 2004), Gratitude Questionnaire-

Six Item Form (GQ-6; McCullough, Emmons, & Tsang, 2002) and the Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983).

### **Significance of Study**

Current research points to the utility of mindfulness meditation as a self-care tool for helping professionals; however, research has not specifically addressed the underlying qualities of mindfulness in their study of it as a self-care tool. Understanding the mechanisms of mindfulness is important to continue to improve upon interventions for both clients and practitioners. Furthermore, a greater understanding of the use of mindfulness meditation and gratitude journaling as a method of self-care for counsellor trainees is needed to better understand how to teach and implement self-care for trainees. As such, this study aims to fill in the gap by addressing the connection between mindfulness, gratitude and perceived stress among counselling psychology graduate students in clinic.

### **Definitions**

**Perceived Stress.** The perception that the demands of an external situation are beyond one's perceived ability to cope (Lazarus, 1966).

**Mindfulness.** Kabat-Zinn (2003, p. 145) defines mindfulness as “the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment” .

**Gratitude.** Gratitude is “the quality of reverence, appreciating and being thankful for the present moment” (Shapiro & Schwartz, 2000, p. 263).

## **Chapter 2: Literature Review**

The central research question – does a mindfulness meditation and gratitude journaling intervention impact gratitude and perceived stress among counsellor trainees in clinic - draws on three main areas of research that intersect. These areas are perceived stress, mindfulness, and gratitude. This chapter will address each of these areas of research, with perceived stress reviewed first, then mindfulness, and finally gratitude. The last section will cover Shapiro and Schwartz’s intentional systemic mindfulness (ISM) model, the theoretical framework for this study.

### **Stress**

Hans Selye (1936) was the first to coin the term “stress” when he exposed animals to noxious stimuli. He defined stress as the state an organism was in to adapt and respond to the environment (Viner, 1990). After the introduction of the concept of stress in the field of physiology and psychology, there was proliferation research on the impact of stress on the body and mental health. There are an overwhelming number of articles that demonstrate the impact of stress on the health and well-being of people. For example, stress has been shown to impact immune functioning and mental health (Ciarrochi, Deane, & Anderson, 2002; Cohen, Tyrrell, & Smith, 1993; DeLongis, Folkman, & Lazarus, 1988; Kendler, Karkowski, & Prescott, 1999; Tennant, 2002).

However, it is not solely only the presence of a stressor that makes a person experience stress, but also how the person perceives it.

### **Perceived Stress**

Stress is a multidimensional construct that is defined as the perception that the demands of an external situation are beyond one’s perceived ability to cope (Lazarus, 1966). It can either

be a positive or negative response to a stimulus (Lazarus, 2006). It is argued that stress is not intrinsic in any one situation, but is depends on the meaning that a person gives it (Lazarus, 2006). This is also known as perceived stress.

### **Negative Impact of Stress on Helping Professionals**

The literature is abundant with research that demonstrates the negative impact of stress on mental and physical health. Stress has been shown to be linked to increased susceptibility to colds, flues, and headaches (Cohen et al., 1993; DeLongis et al., 1988). It also has a negative impact on mental health, such as depression, suicidal ideation, and anxiety, (Ciarrochi et al., 2002; Kendler, et al., 1999; Tennant, 2002).

Stress also has influences on counsellors and other helping professionals that are specific to this profession. The compassion and empathy needed in helping professions may result in increased stress, and this may result in burnout and compassion fatigue (Figley, 2002). Burnout is a cognitive and emotional state that mental health workers can experience (Leiter & Harvie, 1996), and is connected to decreased personal wellness (Puig et al., 2012), decreased job satisfaction (Lee, Yang, & Lee, 2011), and emotional exhaustion (Evans et al., 2006). Helping professionals can also experience compassion fatigue and vicarious trauma in addition to burnout (Baker, 2003).

Burnout can also have negative effects on the overall organization (Lanham et al., 2012): burnout has been hypothesize to contribute to employee turnover (Chiu & Tsai, 2006), low morale and absenteeism (Hayes & Weathington, 2007), and an increase in grievance actions filed by employees (Kumar et al., 2006).

## **Graduate School Stressors**

Graduate school can be a highly stressful time for students, as they can experience numerous demands, including coursework, research, clinical training, and financial constraints (Meyers et al., 2012). In a sample of 387 psychology graduate students, reported stressors included academic responsibilities, finances/debt, anxiety, and poor work/school-life balance (El-Ghoroury et al., 2012). Moreover, Rodolfa, Kraft and Reilley (1988) found that therapist trainees experienced higher levels of perceived stress compared to mental health professionals who were already working. For students in the counselling field, their studies require learning clinical skills of how to counsel and the relational dimensions of counselling, in addition to other stressors common of other graduate programs (Fuenfhausen & Cashwell, 2013).

These stressors can impede clinical training by reducing students' capacity for attention, concentration, and decision-making (Shapiro et al., 2000). Among a sample of psychology graduate students, 70% reported that a stressor interfered with their optimal functioning (El-Ghoroury et al., 2012). Although many counselling training programs stress the importance of self-care, few clinical programs include educating students about the possible negative consequences of job-related stress, and detailed self-care strategies (Newsome et al., 2006; Newsome et al., 2012). Researchers and helping professionals have been critical of clinical training programs regarding this lack of instruction around self-care (Newsome et al., 2006). Furthermore, the quality of the graduate programs may be compromised if specific methods for self-care are not taught alongside academic and clinical training (Newsome et al., 2006). Although students can take responsibility unto themselves around issues of self-care, many researchers and helping professionals emphasize the importance of training students in self-care strategies (e.g. Carroll et al., 1999; Newsome et al., 2012).



The next section will briefly outline Lazarus and Folkman's transactional model of stress and coping to highlight the importance of teaching graduate students tools for self-care and managing stress.

### **Transactional Model of Stress and Coping**

Lazarus and Folkman's (1984) transactional model of stress and coping is a widely used and cited model of coping theory. This theory conceptualizes coping as a dynamic process, rather than a static trait or style. Stressful experiences are interpreted as person-environment transactions.

Lazarus and Folkman (1984) view stress as a relationship between the person and the environment that is appraised as potentially endangering to individuals' well-being, or as exceeding/exhausting their resources. There are two cognitive processes that mediate the relationship between the person and the environment, which are cognitive appraisal and coping. Cognitive appraisal is the evaluation of the significance of what is occurring in the person-environment relationship. Coping is the process through which the individual manages the demands of the person-environment relationship.

The cognitive appraisal of a stressor depends on primary and secondary appraisals, which occur essentially at the same time, and interact to determine the significance of events in relation to the individual's well-being. Primary appraisal is when the individual evaluates the situation with regards to the individual's values, beliefs, intentions, goals and well-being. The situation can be interpreted in three ways: irrelevant, benign/positive/beneficial, or stressful. When the situation is evaluated as stressful, it can take three forms: harm/loss (i.e., damage already experienced), threat (i.e., harms or losses are possible), or challenge (i.e., potential for mastery or gain). These forms are not mutually exclusive, and an event can be appraised in more than one

way. Secondary appraisal is the process that focuses on minimising harm and/or maximising gains through coping responses. This involves an evaluation of coping options, and available resources. Following the coping response, the result is re-appraised (tertiary appraisal), and another coping response may follow.

Coping is defined as the “constantly changing cognitive and behavioral efforts to manage specific external and internal demands that are appraised as taxing or exceeding the resources of the person” (Lazarus & Folkman, 1984, p. 141). Coping is neither a personality trait, nor static style. Rather, coping is thought to be a set of strategies that are used based on the situation. Furthermore, coping can be one of two general forms: problem-focused coping or emotion-focused coping. Problem-focused coping is intended to change the stressor, which may be directed either to the self or the environment. Emotion-focused coping strategies concentrate on internal states that are related to the stressor.

Given the number of stressors that may impact counsellor trainees, and the lack of direct education around self-care in graduate programs, the next section reviews mindfulness, and its application as a self-care tool and coping strategy for counsellor trainees.

### **Mindfulness**

Mindfulness can be generally defined as “paying attention in a particular way: on purpose, in the present moment, and non-judgmentally” (Kabat-Zinn, 1994, p. 4). In the context of the transactional model of stress and coping, mindfulness can encourage an individual to change his or her cognitive appraisal of a situation to be more objective and adaptive, and to perceive it in a neutral context (Kabat-Zinn, 1994). As such, mindfulness may encourage individuals to change their cognitive appraisals of a situation.

As a clinical intervention, mindfulness is a self-regulation technique (Shapiro & Schwartz, 2000). Mindfulness-based training and clinical interventions have been shown to improve both physical and mental health (Baer, 2003). Specifically, mindfulness has been associated with improvements in stress (Chiesa, & Serretti, 2009), addictions (Brewer et al., 2011; Rogojanski et al., 2011), depression (Klainin-Yobas et al., 2012; Vøllestad et al., 2012), anxiety (Vøllestad et al., 2012), chronic pain (Kabat-Zinn et al., 1982; Rosenzweig et al., 2010), and eating disorders (Kristeller et al., 2013; Telch et al., 2000). These studies on mindfulness show the potential of its use as clinical interventions for clients, and researchers and clinicians have noted the potential of mindfulness as a tool for professional development.

### **Definition of Mindfulness**

Mindfulness is a complex construct that has been operationalized in many different ways. Mindfulness can be described as both a state and trait (Germer, 2005). Mindfulness can be further differentiated as an outcome (mindful awareness) and a process (mindful practice) (Shapiro, 2009). It can be specifically conceptualized as a theoretical construct (mindfulness), a practice to cultivate mindfulness (meditation), and a psychological process (being mindful) (Germer, 2005). Bishop and colleagues (2004) conceptualize mindfulness as a process, and as such, is more of a state than a trait, as it can be developed through practice. As can be seen, mindfulness has been conceptualized in the literature to represent different aspects of the construct. As mindfulness is a subtle, non-verbal experience (Germer, 2004), it is a phenomenon that is not easily defined or investigated; however, Kabat-Zinn has (2003, p. 145) provided a working definition of mindfulness, which is that mindfulness is “the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment”.

## **Roots of Mindfulness**

Mindfulness has its roots in Eastern contemplative traditions such as Buddhism, and dates back at least 2,500 years in Buddhist history (Germer, 2005; Mace, 2007). It began in Northern India, with the teachings by a man named Siddhartha Gautama, who came to be known as “the Buddha” (Kang & Whittingham, 2010). Buddhist theory is a systemic psychology rather than a theology, and its purpose is to support practical teachings (Mace, 2007). Buddhist psychology is not a religion in a theistic sense, although some Eastern cultures worship the Buddha’s teachings and image (Gremer, 2005). Rather, the historical Buddha is understood to be human, whose work was dedicated to alleviating psychological suffering (Gremer, 2005). The core of Buddhist teaching can be found in the Four Noble Truths: (1) life brings suffering, (2) desire is the cause of this suffering, (3) this suffering can end through the elimination of desire, and (4) there is a path by which suffering may be ended (Mace, 2007; Olendzki, 2005).

Although there are many different Buddhist schools, mindfulness is typically a part of most Buddhist meditation; however, it should be noted that varying traditions have different practices and definitions of mindfulness (Goldstein, 2002; Kang & Whittingham, 2010). In Buddhist texts, mindfulness has been explained as: "simple bare awareness of moment to moment experience; ‘gatekeeping’ awareness; remembering and sustaining attention on a familiar object; a process of systematically recollecting a sequence of ideas; conjoined with introspective vigilance that monitors the stability and clarity of awareness; wisely directed attention that probes into the source of experiential content; and nondual coemergent awareness at the subtlest level of consciousness, free from all conceptual constructs and frames” (Kang & Whittingham, 2002, p. 163-164).

**Mindfulness in the West.** Recently, Western mental health practitioners and researchers have begun to apply mindfulness towards the treatment of people suffering from a wide range of problems and disorders (Baer & Krietemeyer, 2006). Baer and Krietemeyer (2006, p. 4) write that mindfulness has been transformed into a “[set] of skills that can be taught independently of any religious belief system [and] researchers and clinicians have made mindfulness training available to Western populations by incorporating it into interventions that are increasingly offered in mental health and medical settings.”

Although research on mindfulness has recently begun, ties between psychotherapy and Buddhist psychology can be traced back to Freud, who wrote in a letter that Eastern Philosophy was perhaps “beyond the limits of [his] nature” (Epstein, 1995, p. 2;). Carl Jung wrote about the Tibetan Book of the Dead in 1939, and had a lifelong interest of Eastern psychology (Germer, 2005). Furthermore, some psychotherapists incorporated meditation as a way to improve their lives in the late sixties (Germer, 2005).

The popularity that mindfulness has gained in psychology recently can be largely attributed to the work of Dr. Jon Kabat-Zinn. Kabat-Zinn developed Mindfulness-Based Stress Reduction (MBSR) as a clinical intervention for the treatment of chronic pain, at the Stress Reduction Clinic at the University of Massachusetts Medical Center (Baer, 2003; Kabat-Zinn, 1982). In this form, mindfulness-based stress reduction programs were adopted by more than 240 hospitals and clinics in the United States and in other countries (Baer, 2003). Other interventions and forms of therapy that incorporate mindfulness are mindfulness-based cognitive therapy (MBCT; Segal, Williams, & Teasdale, 2002), dialectical behavior therapy (DBT; Linehan, 1993a, 1993b), and acceptance and commitment therapy (ACT; Hayes, Strosahl, & Wilson, 1999).

## **Mindfulness-based Interventions**

Mindfulness-based clinical interventions have been shown in the literature to be an effective way of mitigating various mental health issues. One of the most researched mindfulness-based clinical interventions is the Mindfulness-Based Stress Reduction (MBSR) program developed by Kabat- Zinn. Studies have been done on the effectiveness of mindfulness based interventions on chronic pain (Rosenzweig et al., 2010), anxiety (Goldin & Gross, 2010; Vøllestad et al., 2011), panic attacks (Kim et al., 2010), depression (Hofmann, Ashley, Witt, & Oh, 2010), substance use (Bowen et al., 2006), stress reduction (Chiesa & Serretti, 2009), and fibromyalgia (Schmidt et al., 2011; Weissbecker et al., 2002).

**Mindfulness as self-care for students.** Given the benefits of mindfulness as a clinical intervention, mindfulness has started to be incorporated as part as professional development and self-care among helping professionals. Emerging studies have shown the benefits of mindfulness meditation as a tool for self-care among different helping professionals, such as doctors, nurses, social workers, physical therapists, (Birnbaum, 2008; Christopher & Maris, 2010; Gockel et al., 2013; Shapiro, Astin, Bishop, & Cordova, 2005; Smith, 2014). Mindfulness-based self-care has been shown to decrease stress, burnout, and anxiety in helping professionals (Birnbaum, 2008; Christopher & Maris, 2010; Gockel et al., 2013; Shapiro, et al. 2014; Smith, 2014). Many of the studies that have been done have been qualitative in nature, and they have reported varying benefits of mindfulness meditation (Birnbaum, 2008; Christopher & Maris, 2010; Gockel et al., 2013). Participants in these studies have reported that mindfulness has helped them with emotional regulation, preventing burnout, stress management and enhancing compassion (Birnbaum, 2008; Boellinghaus, Jones, & Hutton, 2013; Christopher & Maris, 2010; Felton, Coates, & Christopher, 2013; Gockel et al., 2013; McCollum & Gehart, 2010).

There have also been qualitative studies that focused on the application of mindfulness-based interventions for counsellor trainees as self-care. Felton, Coates and Christopher (2013) conducted a qualitative study with master's level counsellors, who participated in a 15-week MBSR-based course. The participants were asked to respond to 5 open-ended questions before and after the course. Using content analysis, one theme that the authors found was that students had an increased awareness of stress and burnout after completing the course. Another study by Boellinghaus, Jones and Hutton (2013) focused on loving-kindness meditation (LKM), a specific type of mindfulness meditation focusing on cultivating love. Therapist trainees participated in an 8 week MBCT course, which included a 30 minute guided LKM practice. Participants were encouraged to practice a LKM for 25 minutes a day, and were interviewed 6 weeks after the course. Using interpretive phenomenological analysis, a theme that emerged was one of self-compassion. More specifically, all participants spoke about being more accepting of the self, especially negative feelings. McCollum and Gehart (2010) found similar themes with master's level students studying to be therapists. Through thematic analysis of journal entries, the authors found themes of the ability to be present, and self-acceptance and compassion.

Although the majority of research on mindfulness and helping professional trainees have been qualitative in nature, two quantitative studies with counsellor trainees in particular were found. A study by Shapiro, Brown and Biegel (2007) investigated a MBSR intervention with master's level counsellors in training. Participants took part in an 8-week MBSR intervention as part of a "Stress and Stress Management" course. Participants who completed the MBSR training reported significantly decreased stress, negative affect, rumination, and anxiety. Participants also reported significant increases in positive affect and self-compassion.

Newsome, Waldo, and Gruszka (2012) conducted a study on the impact of mindfulness group exercises that included meditation on perceived stress and self-compassion. The participants in this study were students who were training to be in the helping profession (e.g. counselling, education, nursing, etc.), and included both graduate and undergraduate students. Participants met for 8 weekly group sessions, which were MBSR based. Participants were taught both sitting and walking meditation, as well as qigong, yoga, and a body-scan exercise, which were encouraged to be practiced 4 times a week. The authors found that perceived stress significantly decreased after the completion of the group sessions.

The authors of these studies, however, noted some limitations. Shapiro and colleagues (2007) noted that their study had limited generalizability, and similar studies need to be conducted in other clinical training programs. Newsome and colleagues (2012) acknowledge one limitation was the lack of a control group. As such, this proposed study will address some of these limitations.

## **Gratitude**

There has been an increased interest within positive psychology on topics such as positive affect, well-being, and coping (e.g Allan et al., 2013; Proyer et al., 2013). Within this trend, gratitude has been a renewed interest, with research indicating a link between gratitude and well-being (e.g. Proyer et al., 2013). Some researchers have also suggested the possibility of gratitude interventions to increase a person's well-being (e.g. Flinchbaugh, Moore, Chang, & May, 2012). This section of the literature review will cover conceptualizations of gratitude and the relationship between gratitude and well-being.



**Defining Gratitude.** Gratitude can be defined in a variety of different ways with diverse usages. It has been conceptualized as an emotion, an attitude, a coping response, a moral virtue, or a personality trait or disposition (Emmons & McCullough, 2003).

*Gratitude as an Emotion.* When gratitude is conceptualized as an emotion, it is defined as a positive emotion that occurs due to the helpful actions of another person (Emmons & McCullough, 2003; Wood, Froh, & Geraghty, 2010; Wood, Maltby, Stewart, Linley, & Joseph, 2008). Fitzgerald (1998) suggests there are three components to feeling gratitude: “(1) a warm sense of appreciation for somebody or something, (2) a sense of goodwill toward that individual or thing, and (3) a disposition to act which flows from appreciation and goodwill” (p. 120). It is an emotion that also requires a two-step cognitive process: (1) recognizing that a positive result has been reached and (2) identifying an external cause for it (Emmons & McCullough, 2003, Emmons & McCullough, 2004).

Personal and transpersonal gratitude can also be distinguished (Emmons & McCullough, 2004). Personal gratitude is thankfulness toward a specific person for the positive outcome or event. Transpersonal gratitude is gratefulness to a higher power, such as God or the cosmos.

*Gratitude as a coping response.* Gratitude has also been thought of as a coping response in times of stress, where an individual can uphold an attitude of gratitude (Emmons & Shelton, 2005). For example, in a study by Coffman (1996), who interviewed individuals affected by a hurricane, people had coped with loss through upholding gratitude for what they had not lost and for family members who remained safe.

*Gratitude as a moral virtue.* The literature has also conceptualized gratitude as a moral virtue, in that gratitude has interpersonal consequences (Emmons & Shelton, 2002). It is not that

gratitude as an emotion is a moral, but gratitude results from and motivates moral behaviour (Emmons & Shelton, 2002).

McCullough, Kilpatrick, Emmons, and Larson (2001) detailed a model of prosocial behaviour of gratitude as a moral virtue. They hypothesized that gratitude served three main moral functions: moral barometer, moral reinforcer, and moral motive.

As a moral barometer, it allows people to sense changes in their social relationships. People are likely to feel grateful when they have received some valuable benefit that was intentional and effortful. As a moral motive, gratitude can motivate people to act in a prosocial manner. Specifically, those who feel grateful of the benefactors' actions are more likely to respond to increase the welfare of the benefactor or another third party in the future.

Furthermore, the person in receipt from the benefactor will also likely hinder behavior detrimental to the benefactor. The function of gratitude as a moral reinforcer is that expressing gratitude causes the benefactor to behave morally in the future. When the benefactor receives gratitude, the benefactor's prosocial behaviour is reinforced. The opposite is also true, in that ingratitude could lead to the benefactor acting in a less prosocial manner.

*Gratitude as a trait or disposition.* Alternatively, when conceptualized as a trait or disposition, gratitude can be defined as a general tendency to recognize and respond to other's helpfulness with grateful emotion (Emmons & McCullough, 2003; McCullough et al., 2002; Wood et al., 2010). Wood and colleagues (2010) have also conceptualized gratitude as an orientation toward life that involves attending to and noticing the positives of life.

Watkins (2004) distinguishes state (emotion) and trait gratitude, whereby state gratitude is the immediate experience of the emotion, and trait gratitude is a person's tendency to experience this particular emotion. For example, a person high in trait gratitude may not

experience gratefulness at any given moment, but is be more likely to experience gratitude in response to benefits (Watkins, 2004).

McCullough, Emmons and Tsang (2002) suggest that there are four facets to a grateful disposition. The authors specifically termed them as facets and not dimensions, as they hypothesize that facets can co-occur. The four facets are intensity, frequency, span and density. Intensity refers to when dispositionally grateful people experience a positive event, they experience gratitude more intensely compared to someone who is less dispositionally grateful. The second facet is frequency. A dispositionally grateful person may feel more grateful more often, and for simple acts. Span refers to the number of aspects of life a person is grateful for. For example, a dispositionally grateful person may feel grateful for a number of things, such as family, employment, health, etc. Conversely, less dispositionally grateful people feel grateful for fewer things. The last facet is density. Density refers to the number of people that a person feels grateful towards for a single positive event.

### **Gratitude and Well-Being**

Emerging research has begun to investigate the relationship between gratitude and well-being (e.g. Allan et al., 2013; Proyer et al., 2013). Gratitude has been found to be positively correlated with life satisfaction, subjective happiness, hope, vitality, optimism, positive affect, spirituality, and religiousness (Emmons & Kneezel, 2005; Froh, Yurkewicz, & Kashdan, 2009; McCullough et al., 2002). Additionally, gratitude has been found to be negatively correlated with negative affect, anxiety, depression, distress, hostility, and neuroticism (McCullough et al, 2002; Ruini & Vescovelli, 2013).

Other studies have focused on gratitude interventions as a way to increase well-being. In a study with undergraduate business majors, the impact of gratitude journaling, stress

management techniques or a combination of both on student well-being on classroom engagement was investigated (Flinchbaugh et al., 2012). Students participated in the interventions for the duration of the semester. At the end of the semester, students in the gratitude journaling or combined intervention showed greater meaningfulness and engagement in the classroom.

Another study on gratitude interventions by Toepfer, Cichy, and Peters (2012) looked the impact of writing letters of gratitude on three aspects of well-being; happiness (positive affect), life-satisfaction (cognitive evaluation), and depression (negative affect). University students wrote three letters of gratitude over a 3 week period, and results showed that writing the letters increased happiness and life satisfaction, while decreasing depressive symptoms.

Emmons and McCullough (2003) examined the impact of gratitude on psychological and physical well-being among three groups of participants. In their first two studies, participants were assigned to one of three experimental groups (listing hassles, gratitude, or neutral life events or social comparison). In study 1, participants kept a weekly journal, and in study 2, participants kept a daily journal. Participants journaled about moods, coping behaviors, health behaviors, physical symptoms, and overall life appraisals. In study 3, participants with neuromuscular disease were randomly assigned to a gratitude condition or to a control condition. Across all three studies, gratitude was found to increase perceived well-being.

As a part of the larger study this current study draws data from, interviews were also conducted with participants (Chlebak, 2013). In these interviews, participants were questioned regarding their experience of the intervention. Some participants reported that they experienced greater gratitude through the intervention. A part of this current study is to examine if this finding translates into the quantitative data that was collected.

**Gratitude and Perceived Stress.** Despite the wealth of research on gratitude and well-being, there is much less literature that focuses on gratitude and perceived stress. A few studies have looked at gratitude and its relation to stress specifically. In a sample of undergraduate students, gratitude and perceived stress were significantly negatively correlated (Wood et al., 2007). In another study by Wood and colleagues (2008), gratitude was also shown to lead to lower perceived stress among undergraduate students. As such, more research is needed about the relationship between gratitude and perceived stress.

Given the importance of self-care, the potential for both mindfulness and gratitude to be self-care strategies, what is the link between the two? The next section of the literature review will explore the theoretical links between the two.

### **Theoretical Framework: Gratitude and Mindfulness**

McCullough (2002) articulates the link between mindfulness and gratitude as:

[O]ne of the key psychological processes governing gratitude may be a mindful awareness—specifically, awareness of how one's very life is held together through the benevolent actions of other people. Grateful people, on recalling a positive outcome in their lives, are mindful of the causal agents... Grateful people attend to the benefits in their lives, and are mindful that these benefits did not come out of nowhere... grateful people pay attention to the ways in which their lives are connected to other events and activities occurring in the social, natural, and (for some people) supernatural world... Grateful and hopeful people may both possess the cognitive habit of savoring their life circumstances, appreciating fully the good circumstances that come their way in the past and the meaningfulness of the goal pursuits they undertake in the present.

Shapiro and Schwartz (2000) proposed a model, intentional systemic mindfulness (ISM), which provides a theoretical link between mindfulness and gratitude. ISM is a model that offers a theory for the goal and processes of intention within a self-regulation practice, such as mindfulness. The core of ISM is intention, which utilizes twelve cognitive-affective mindfulness qualities, and intention is within a systems perspective. The cognitive-affective mindfulness qualities describe how we attend, and the systemic perspective explains why we attend. Furthermore, the ISM model is a systems theory approach to mindfulness, which can also be applied to other self-regulation techniques. First, the twelve cognitive-affective mindfulness qualities will be discussed, and then the systems perspective.

In the ISM model, the twelve cognitive-affective mindfulness qualities were first defined by Kabat-Zinn (1990), and then further expanded up on by Shapiro, Schwartz, and Bonner (1998). These mindfulness qualities are the pillars of mindfulness practice (Kabat-Zinn, 1990). Mindfulness qualities are the intentional incorporating and bringing into consciousness of these twelve: nonstriving, nonjudging, acceptance, patience, trust, openness, letting go, gratitude, gentleness, empathy, and loving kindness. The first seven qualities were defined by Kabat-Zinn (1990). The latter qualities were defined by Shapiro and colleagues (1998) to address the affective qualities of mindfulness. These qualities specify the way one attends to the self in an open and loving way. As a mindfulness quality, Shapiro and colleagues (2000, p. 263) defined gratitude as “the quality of reverence, appreciating and being thankful for the present moment”. These mindfulness qualities specify the way a person attends, and Shapiro and Schwartz (2000) suggest that the mindfulness qualities need to be part of a self-regulation technique, such as mindfulness meditation.

The systemic dimension of the ISM model refers to the simultaneous awareness of being a whole and being part of a whole, and incorporating the above mentioned mindfulness qualities. “Wholeness” is created by the approaching attention, through self-regulation technique, purposefully. There are multiple intentions at multiple levels, which are (1) awareness of interconnection, (2) awareness of dynamic interaction and constant change, (3) awareness of micro-macro levels, and (4) awareness of wholes within a larger whole. For example, a person can be aware of the self, and aware of the universe. The authors also acknowledge that intention does not follow a linear sequence, and as such, ISM is a continuous process of redefining intention. However, continual intention to attend to the mindfulness qualities is constant.

Shapiro and Schwartz (2000) suggest that ISM could possibly be applied to self-regulation interventions. One way to do this is to cultivate the mindfulness qualities through attention throughout an intervention.

## **Summary**

Graduate school is a stressful time for many students, and counsellor trainees in clinical graduate programs have the added stress of going through clinical training. However, graduate programs have been critiqued for a lack of formalized self-care training to help students cope with stress. Mindfulness has been shown to be a helpful tool for self-care among counsellor trainees, but existent literature has some limitations. Literature has also explored gratitude as a clinical intervention to increase well-being; however, existent literature is lacking on the relationship between gratitude and perceived stress. Furthermore, there is no existing literature on the relationship between mindfulness and gratitude, but there is a theoretical model that ties the two constructs together. Thus, the central research question of this study is: does an

intervention that includes both mindfulness meditation and gratitude journaling impact gratitude and perceived stress among counsellor trainees in a graduate counselling psychology program?

### **Research Questions**

The purpose of this proposed study is to explore the impact of a mindfulness meditation and gratitude journaling intervention on gratitude and perceived stress among counsellor trainees enrolled in a supervised clinical training course. The central research question is: does an intervention that includes both mindfulness meditation and gratitude journaling impact gratitude and perceived stress among counsellor trainees in clinic? The following are the research questions, as well as their corresponding hypotheses.

- 1) Among counselling psychology graduate students in clinic, does a mindfulness meditation and gratitude journaling intervention impact gratitude, as measured by the Gratitude Questionnaire – Six Item Form?
- 2) Among counselling psychology graduate students in clinic, does a mindfulness meditation and gratitude journaling intervention impact perceived stress, as measured by the Perceived Stress Scale?
- 3) Among counselling psychology graduate students in clinic, does a mindfulness meditation and gratitude journaling intervention impact mindfulness, as measured by the Kentucky Inventory of Mindfulness Skills (KIMS)?
- 4) Are mindfulness, as measured by the four subscales of the KIMS, and gratitude significantly positively correlated?
- 5) Are gratitude and perceived stress significantly negatively correlated?
- 6) Are mindfulness, as measured by the four subscales of the KIMS, and perceived stress significantly negatively correlated?



## Hypotheses

1. Among counselling psychology graduate students in clinic, does a mindfulness meditation and gratitude journaling intervention impact gratitude, as measured by the Gratitude Questionnaire – Six Item Form?
  - a.  $H_{10}$ : The null hypothesis states that a mindfulness meditation and gratitude journaling intervention does not significantly impact gratitude among counselling psychology graduate students.
  - b.  $H_{1a}$ : The alternative hypothesis states that a mindfulness meditation and gratitude journaling intervention does significantly impact gratitude among counselling psychology graduate students.
2. Among counselling psychology graduate students in clinic, does a mindfulness meditation and gratitude journaling intervention impact perceived stress, as measured by the Perceived Stress Scale?
  - a.  $H_{20}$ : The null hypothesis states that a mindfulness meditation and gratitude journaling intervention does not significantly impact perceived stress among counselling psychology graduate students.
  - b.  $H_{2a}$ : The alternative hypothesis states that a mindfulness meditation and gratitude journaling intervention does significantly impact perceived stress among counselling psychology graduate students.
3. Among counselling psychology graduate students in clinic, does a mindfulness meditation and gratitude journaling impact mindfulness, as measured the Kentucky Inventory of Mindfulness Skills?

- a. H3<sub>0</sub>: The null hypothesis states that a mindfulness meditation and gratitude journaling intervention does not significantly impact mindfulness among counselling psychology graduate students.
  - b. H3<sub>a</sub>: The alternative hypothesis states that a mindfulness meditation and gratitude journaling intervention does significantly impact mindfulness among counselling psychology graduate students.
4. Are mindfulness, as measured by the four subscales of the KIMS, and gratitude positively correlated? How do these correlations change over time?
  - a. H4<sub>0</sub>: The null hypothesis states that mindfulness and gratitude are not positively correlated.
  - b. H4<sub>a</sub>: The alternative hypothesis states that mindfulness and gratitude are significantly positively correlated.
5. Are gratitude and perceived stress negatively correlated? How do these correlations change over time?
  - a. H5<sub>0</sub>: The null hypothesis states that mindfulness and gratitude are not negatively correlated.
  - b. H5<sub>a</sub>: The alternative hypothesis states that mindfulness and gratitude are significantly negatively correlated.
6. Are mindfulness, as measured by the four subscales of the KIMS, and perceived stress negatively correlated? How do these correlations change over time?
  - a. H5<sub>0</sub>: The null hypothesis states that mindfulness and perceived stress are not negatively correlated.

- b. H5<sub>a</sub>: The alternative hypothesis states that mindfulness and perceived stress are significantly negatively correlated.

## **Chapter 3: Methodology**

In this chapter, the research design, the method, data, and data analysis will be outlined. Data for this study is from a previously completed study on mindfulness and counsellor training that had not been previously analyzed.

### **Research Design**

Given the research questions, the research utilized a mixed design ANOVA, with one within-factor (time) and one between-factor (intervention). Twelve participants were in the intervention (mindfulness meditation and gratitude journaling) group, and three participants were in the control group. Participants selected to be in either the intervention or control conditions based on their availability to participate in the intervention. If participants were unable to complete the intervention due to scheduling, participants were in the control group.

Participants completed the measures pre-intervention, one week after mindfulness training (during the first week of clinic), after six weeks of intervention, and after twelve weeks of intervention. Participants took 20 to 40 minutes to complete all questionnaires, and completed the questionnaires in the presence of a research assistant at a quiet location, at a time of their convenience. One participant in the control group did not complete the pre-intervention questionnaires due to scheduling.

### **Recruitment**

Participants were recruited by email through a listserve (electronic mailing listing) sent to graduate students in a counselling psychology program at a Western Canadian university. The email contained a brief overview of the purpose of the study, criteria to be eligible for the study, benefits regarding participation, and a description of an honorarium. The honorarium was

a free week pass to a yoga studio, and a free one-hour professional Vipassanā meditation training session.

### **Participants**

Sixteen participants were recruited for this study, and fifteen completed the study. Participants were students in a master's counselling psychology program at the university. All participants in this study were enrolled in a supervised training course (clinic) in counselling, which is the first clinical training course in the program. Students counselled clients once a week for eight months. They were supervised through direct or videotaped observation, and participated in individual and group supervision.

### **The Intervention**

All participants in the intervention group attended a one hour training session on mindfulness meditation. Participants were trained in three forms of mindfulness meditation, which were mindfulness of breath, body, and sounds. For the purpose of this study, the participants were asked to choose the one they were most comfortable with as their primary practice. After completing this training, participants met with a research assistant 30 minutes before clinic to practice 10 minutes of mindfulness meditation and 5 minutes of gratitude journaling. Participants were given a one sheet gratitude journal to complete. In this gratitude journal, participants were invited to list up to eight things they were grateful for in the past week. For each item, participants could list associated people and rate how grateful they felt towards it using a 3-point Likert scale. This format of gratitude journaling was established previously in the literature (e.g. Emmons & McCullough, 2003; McCullough, Tsang & Emmons, 2004).

## **Dependent Variables**

**Kentucky Inventory of Mindfulness Skills.** Mindfulness was measured using the Kentucky Inventory of Mindfulness Skills (KIMS; Baer, Smith, & Allen, 2004). The KIMS is a 39-item self-report questionnaire used to assess mindfulness skills. It consists of 39 items, which respondents are to rate how they identify with each statement on a Likert scale from 1 (Never or rarely true) to 5 (Very often or always true). Some examples of items are “I pay attention to whether my muscles are tense or relaxed” and “It’s hard for me to find the words to describe what I’m thinking”.

The purpose of the KIMS is to assess mindfulness in everyday life (Baer et al., 2004). The scale was also developed to be understandable regardless of meditation experience (Baer et al., 2004). It was also designed to measure different aspects of mindfulness, which were based on skills as conceptualized in Dialectical Behavioral Therapy (DBT). The KIMS has four subscales, which are Observing, Describing, Acting with Awareness, and Accepting without Judgment. The Observing subscale measures an individual’s tendency to pay attention to internal and external stimuli, such as emotions, cognitions and body sensations. The Describing subscale measures the ability to put into words the sensations, experiences, emotions, and perceptions an individual experiences. The Acting with Awareness subscale measures the extent to which an individual is fully present in the moment. The last subscale, Accepting without Judgment, measures the ability of an individual to experience phenomenon without judgement or self-criticism.

The KIMS has shown good validity and reliability (Baer et al., 2004). Baer and colleagues (2004) reported an internal consistency of a coefficient alpha ranging from .76 to .91 for the subscales with a sample of undergraduate students. They also reported a test-retest reliability of each subscale scale with undergraduate students, and the results are as follows:

Observing ( $r = .65$ ), Describe ( $r = .81$ ), Acting with Awareness ( $r = .86$ ), and Accepting without Judgement ( $r = .83$ )

Another previous thesis (Phipps, 2013), that also used data from the larger study, looked at the impact of the intervention on mindfulness as measured by the Mindful Attention Awareness Scale (MAAS; Brown & Ryan, 2003). This study did not find any significant difference in mindfulness. However, this current study used the KIMS as a measure of mindfulness. The MAAS is a unidimensional measure of mindfulness, used to assess individual differences in mindful attention, whereas the KIMS is a multifaceted measure. Moreover, Baer and colleagues (2004) note that the items of the MAAS most similarly match the items from the Acting with Awareness subscale of the KIMS. Baer and colleagues (2004) also correlated scores between the KIMS and MAAS in a sample of 115 undergraduate students. They found that the MAAS is strongly correlated with the Acting with Awareness subscale, and moderately with the Describe and Accepting without Judgement subscales. The MAAS was found to be uncorrelated with the Observing subscale. As such, the use of the KIMS may capture different aspects of mindfulness compared to the MAAS.

**Gratitude Questionnaire-Six Item Form.** The Gratitude Questionnaire-Six Item Form (GQ-6; McCullough, Emmons, & Tsang, 2002) is a six item self-report measure to assess the frequency and intensity of individual experiences of gratitude. The measure originally was developed with 39 items. After a series of correlational and factor analyses, it was determined that there was only one factor, and only six items should be on the questionnaire (McCullough et al., 2002). Examples of the items are “I have so much in life to be thankful for” and “I am grateful to a wide variety of people”. Items are answered using a seven point Likert scale, in

which 1 is “strongly disagree” and 7 is “strongly agree”. Higher scores indicate higher levels of gratitude (McCullough et al., 2002).

The GQ-6 has demonstrated good internal consistency in an adult sample ( $\alpha = 0.82$ ) (McCullough et al., 2002). The authors also report that the scores on the GQ-6 correlate significantly with higher in positive emotions, and life satisfaction and lower in negative emotions.

**Perceived Stress Scale.** Stress was measured using the Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983). The PSS is a global assessment of subjective stress that maps onto Lazarus and Folkman’s (1984) definition of stress: stress occurs when one appraises an event or situation as threatening, and one is needed to respond to the event or situation, and an appropriate response is not accessible.

The PSS consists of 14 items. Some examples of the items are “In the last month, how often have you felt confident about your ability to handle your personal problems” and “In the last month, how often have you felt that you were on top of things”. Items are answered using a 5-point Likert scale, in which 0 is “never” and 4 is “very often”.

Cohen et al. (1983) reported test-retest reliability of .85. Cohen et al. (1983) further reported convergent validity with depressive ( $r = .76$ ) and physical ( $r = .70$ ) symptomatology scales. Internal consistency reliability was high, with Cronbach’s alpha coefficient ranging from .84 to .86.

## **Research Questions and Hypotheses**

1. Among counselling psychology graduate students in clinic, does a mindfulness meditation and gratitude journaling intervention impact gratitude, as measured by the Gratitude Questionnaire – Six Item Form?



- a. H1<sub>0</sub>: The null hypothesis states that a mindfulness meditation and gratitude journaling intervention does not significantly impact gratitude among counselling psychology graduate students.
  - b. H1<sub>a</sub>: The alternative hypothesis states that a mindfulness meditation and gratitude journaling intervention does significantly impact gratitude among counselling psychology graduate students.
2. Among counselling psychology graduate students in clinic, does a mindfulness meditation and gratitude journaling intervention impact perceived stress, as measured by the Perceived Stress Scale?
- a. H2<sub>0</sub>: The null hypothesis states that a mindfulness meditation and gratitude journaling intervention does not significantly impact perceived stress among counselling psychology graduate students.
  - b. H2<sub>a</sub>: The alternative hypothesis states that a mindfulness meditation and gratitude journaling intervention does significantly impact perceived stress among counselling psychology graduate students.
3. Among counselling psychology graduate students in clinic, does a mindfulness meditation and gratitude journaling impact mindfulness, as measured the Kentucky Inventory of Mindfulness Skills?
- a. H3<sub>0</sub>: The null hypothesis states that a mindfulness meditation and gratitude journaling intervention does not significantly impact mindfulness among counselling psychology graduate students.

- b. H3<sub>a</sub>: The alternative hypothesis states that a mindfulness meditation and gratitude journaling intervention does significantly impact mindfulness among counselling psychology graduate students.
- 4. Are mindfulness, as measured by the four subscales of the KIMS, and gratitude positively correlated? How do these correlations change over time?
  - a. H4<sub>0</sub>: The null hypothesis states that mindfulness and gratitude are not positively correlated.
  - b. H4<sub>a</sub>: The alternative hypothesis states that mindfulness and gratitude are significantly positively correlated.
- 5. Are gratitude and perceived stress negatively correlated? How do these correlations change over time?
  - a. H5<sub>0</sub>: The null hypothesis states that mindfulness and gratitude are not negatively correlated.
  - b. H5<sub>a</sub>: The alternative hypothesis states that mindfulness and gratitude are significantly negatively correlated.
- 6. Are mindfulness, as measured by the four subscales of the KIMS, and perceived stress negatively correlated? How do these correlations change over time?
  - a. H5<sub>0</sub>: The null hypothesis states that mindfulness and perceived stress are not negatively correlated.
  - b. H5<sub>a</sub>: The alternative hypothesis states that mindfulness and perceived stress are significantly negatively correlated.

## Data Analysis

To answer the above research questions, data analysis was done using Statistical Package for the Social Sciences (SPSS Version 22 Windows). For each dependent variable (KIMS, GQ-6, and PSS), a 2x3 mixed design ANOVA was conducted. The assumptions of ANOVA are normal distributions, homogeneity of variance, and sphericity. Normal distribution was checked for skewness and kurtosis. Sphericity was checked through a Mauchly's Test of Sphericity and Greenhouse-Geisser epsilon using a cutoff of 0.75.

A 2x3 mixed design ANOVA was conducted to test for main effects of intervention, main effect of time, and an interaction of time and intervention. Pre-intervention measures were not analyzed as one pre-intervention measurement from the control group was not completed. The analysis was carried out by comparing scores between groups on the KIMS, GQ-6, and PSS to see if there was main effect of treatment. Scores of the dependent variables within groups were also compared to determine if there was main effect of time. An analysis of the interaction between intervention and time was also conducted. An alpha of 0.05 was used as the criterion for significance for all analyses.

Given that the sample size is small, it was very likely that the data analysis would yield non-significant results. As such, effect size and observed power were also reported. As significance tests do not tell the size difference between two measures, the American Psychological Association (APA) recommended all published statistical reports also include effect size (Fritz, Morris, & Richler, 2012). Reporting effect sizes allows the description of the size of the observed effect that is independent of the sample size (Fritz et al., 2012). As such, effects that are large but non-significant can suggest future research with greater power with a larger sample size (Fritz et al., 2012). The effect size for a mixed design ANOVA is calculated

by the eta square statistic. Observed power was also reported, as several authors have recommended observed power analysis for non-significant findings (ex. Cohen, 1988; Onwuegbuzie & Leech, 2004). Onwuegbuzie and Leech (p. 210, 2004) write that “statistically non-significant results in a study with low power suggest ambiguity.”

In addition, Pearson’s correlations were also calculated to examine the relationship between mindfulness and gratitude, gratitude and perceived stress, and mindfulness and perceived stress. Correlations were calculated and compared across time points for the intervention group. The correlations were not calculated for the control group, as the sample size was only three. An alpha of 0.05 was used as the criterion for significance. The correlations were plotted on a graph to illustrate the changes in correlations through time.

### **Ethical Considerations**

This study was approved by the UBC Behavioural Research Ethics Board. All physical data were stored in a locked filing cabinet in a locked room. Digital data was password protected, and stored on a computer in a locked room. All participants were provided with informed consent that described the research procedures, and a research assistant verbally discussed this with all participants.

## Chapter 4: Results

### Demographics

Sixteen participants were recruited for the study, and one participant dropped out for a completion rate of 93.75%. Twelve (80%) of the participants who completed the study were female, and three (20%) were male. The mean age of participants was 33.7 years, with a range from 25 to 56 years (see Table 1 for detailed demographic information).

### Missing Data

Three items were missing from the KIMS in all questionnaire packages filled out by participants. These were items 34 to 36. For the purposes of data analysis, these three items were not included. Overall, 0.48% of items were missing from the dataset. A non-significant Little's MCAR test,  $\chi^2(655) = 165.457$ ,  $p = 1.00$ , revealed that the data were missing completely at random (Little, 1988). Missing data was imputed using the expectation maximization algorithm in Missing Values Analysis with SPSS 22.0.

### Data Normality

Normal distribution of the data was checked. Although some data were skewed, it has been argued that is possible to conduct ANOVAs, as they are a robust test (Norman, 2010). Furthermore, all skewness fell within a -2 to 2 range, which is considered acceptable for an ANOVA (George & Mallery, 2010). It was also found that the power of ANOVA was insensitive to variations in skewness (Khan & Rayner, 2003).

Mauchly's test indicated that the assumption of sphericity for each mixed design ANOVA was not violated. Sphericity also was checked through the Greenhouse-Geisser epsilon using a cutoff of 0.75. For all data, the Greenhouse-Geisser epsilon was above 0.75.

## Group Comparison Analyses

The dependent variables (GQ-6, PSS, and the four subscales of the KIMS) were analyzed by a 2x3 mixed design ANOVA, in which the intervention served as the between-subjects variable, and time served as the within-subjects variable. Means and standard deviations are summarized in Table 2.

**Hypothesis 1.** The first hypothesis stated that the intervention would impact gratitude, as measured by the GQ-6. The main effect of intervention did not attain significance,  $F(1,13) = .240, p = .632$ , partial Eta sq. = .018, observed power = .074. The main effect of time also did not reach significance,  $F(2, 26) = 1.325, p = .283$ , partial Eta sq. = .092, observed power = .260. The interaction between intervention and time did not reach significance either,  $F(2,26) = 1.374, p = .271$ , partial Eta sq. = .096, observed power = .269.

**Hypothesis 2.** Hypothesis 2 stated that the intervention would impact perceived stress, as measured by the PSS; however, the main effect of intervention did not attain significance,  $F(1,13) = 1.742, p = .210$ , partial Eta sq. = .118, observed power = .232. The main effect of time also did not reach significance,  $F(2,26) = .819, p = .452$ , partial Eta sq. = .059, observed power = .175, and neither did the interaction between intervention and time,  $F(2,26) = 2.650, p = .090$ , partial Eta sq. = .169, observed power = .480.

**Hypothesis 3.** This hypothesis stated that the intervention would impact mindfulness, as measured by the four subscales of KIMS. For the Observing subscale, the main effect of intervention did not attain significance,  $F(1,13) = .726, p = .406$ , partial Eta sq. = .054, observed power = .125. The main effect of time did reach significance,  $F(2,26) = 4.911, p = .016$ , partial Eta sq. = .274, observed power = .757. Post hoc tests, however, did not reveal any significant differences between the time points (1 week and 6 weeks:  $p = .085$ , Cohen's  $d = 0.421$ , observed

power = 0.108; 1 week and 12 weeks:  $p = .097$ , Cohen's  $d = 0.589$ , observed power = 0.171; 6 weeks and 12 weeks:  $p = 1.000$ , Cohen's  $d = 0.132$ , observed power = 0.042). The interaction between intervention and time did not reach significance,  $F(2,26) = 1.258$ ,  $p = .301$ , partial Eta sq. = .088, observed power = .249.

For the Describing subscale, the main effect of intervention did not attain significance,  $F(1,13) = .149$ ,  $p = .706$ , partial Eta sq. = .011, observed power = .065. The main effect of time also did not reach significance,  $F(2,26) = 2.117$ ,  $p = .141$ , partial Eta sq. = .140, observed power = .395, and neither did the interaction between intervention and time,  $F(2,26) = 2.537$ ,  $p = .099$ , partial Eta sq. = .163, observed power = .462.

For the Acting with Awareness subscale, the main effect of intervention did not attain significance,  $F(1,13) = .676$ ,  $p = .426$ , partial Eta sq. = .049, observed power = .119, and the main effect of time also did not reach significance,  $F(2,26) = .181$ ,  $p = .836$ , partial Eta sq. = .014, observed power = .075. The interaction between intervention and time also not did attain significance,  $F(2,26) = .154$ ,  $p = .858$ , partial Eta sq. = .012, observed power = .071.

For the Accepting without Judgement subscale, the main effect of intervention did not attain significance,  $F(1,13) = 1.709$ ,  $p = .214$ , partial Eta sq. = .116, observed power = .228. The main effect of time also did not reach significance,  $F(2,26) = .046$ ,  $p = .955$ , partial Eta sq. = .004, observed power = .056, and neither did the interaction between intervention and time,  $F(2,26) = 1.558$ ,  $p = .230$ , partial Eta sq. = .107, observed power = .300.

### **Correlational Analyses**

A correlational analysis was carried out to determine the relationships between the dependent variables (Please see Tables 3 to 6).

**Hypothesis 4.** The fourth hypothesis stated that mindfulness and gratitude would be significantly positively correlated. There were non-significant positive correlations between gratitude and the Observing subscale of the KIMS for all four time points (pre-intervention:  $r = .256, p = .423$ ; 1 week:  $r = .154, p = .634$ ; 6 weeks:  $r = .478, p = .116$ ; 12 weeks:  $r = .515, p = .087$ ). There were also non-significant positive correlations between the Describing subscale of the KIMS and gratitude at all four time points (pre-intervention:  $r = .212, p = .508$ ; 1 week:  $r = .410, p = .186$ ; 6 weeks:  $r = .560, p = .059$ ; 12 weeks:  $r = .334, p = .289$ ). There were non-significant positive and negative correlations between gratitude and the Acting with Awareness subscale of the KIMS (pre-intervention:  $r = -.140, p = .664$ ; 1 week:  $r = -.023, p = .943$ ; 6 weeks:  $r = .201, p = .530$ ; 12 weeks:  $r = .088, p = .786$ ). There were also non-significant positive and negative correlations between gratitude and the Accepting without Judgement subscale of the KIMS (pre-intervention:  $r = -.191, p = .552$ ; 1 week:  $r = .196, p = .541$ ; 6 weeks:  $r = .305, p = .335$ ; 12 weeks:  $r = -.163, p = .612$ ). Please see Figure 1 to 4 for a graph of the change of correlations over time.



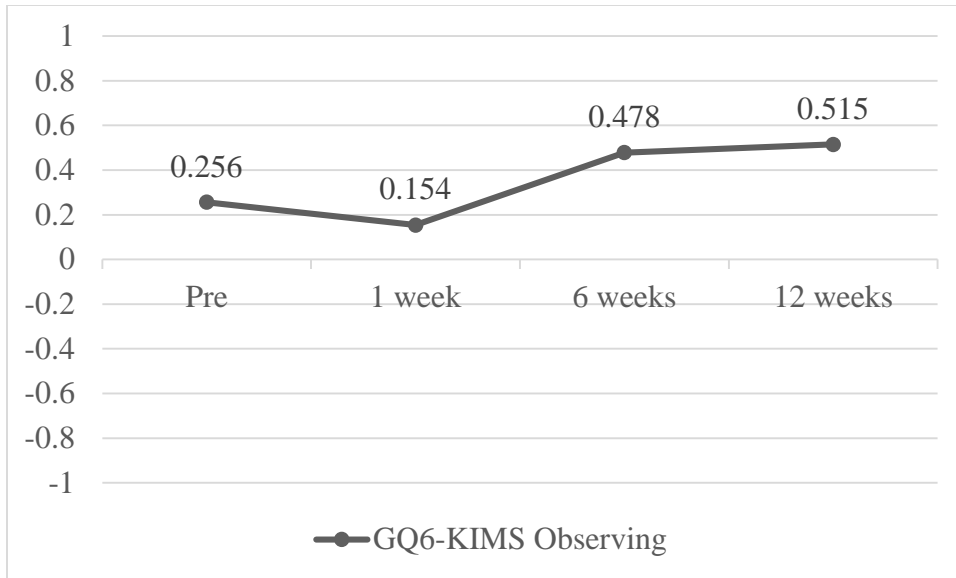


Figure 1. Graph of correlations between gratitude and Observing subscale of the KIMS across four time points.

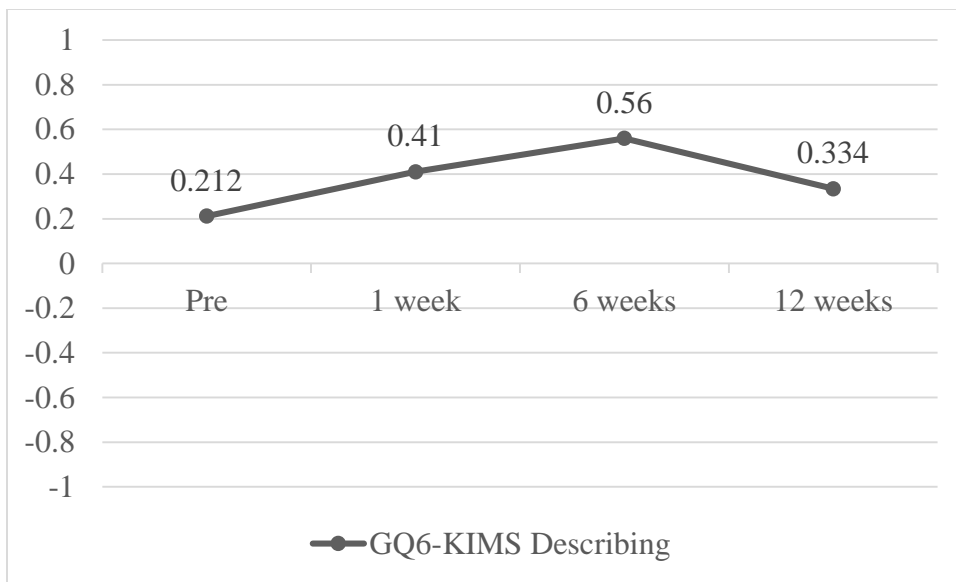


Figure 2. Graph of correlations between gratitude and Describing subscale of the KIMS across four time points.

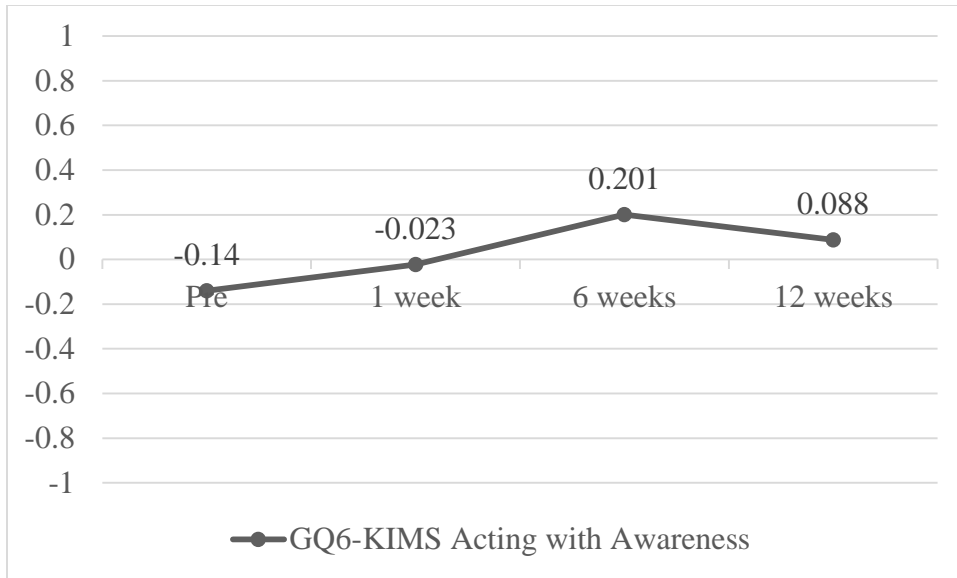


Figure 3. Graph of correlations between gratitude and Acting with Awareness subscale of the KIMS across four time points.

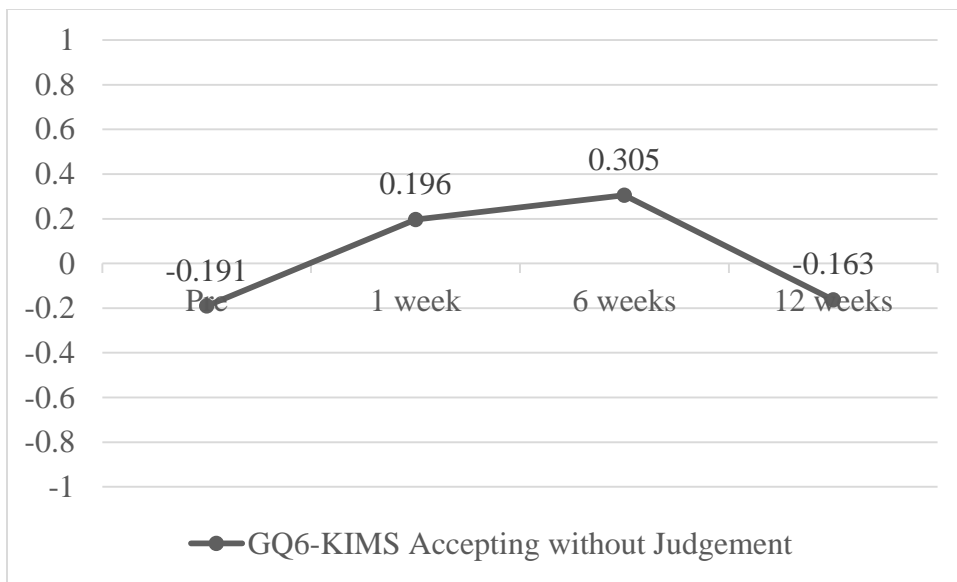


Figure 4. Graph of correlations between gratitude and Accepting without Judgement subscale of the KIMS across four time points.

**Hypothesis 5.** This hypothesis stated that gratitude and perceived stress would be negatively correlated. It was found that gratitude and perceived stress were negatively correlated. At 6 weeks and 12 weeks, the negative correlations were significant (6 week:  $r = -.653, p = .021$ ;

12 week:  $r = -.589, p = .044$ ). The negative correlations were not significant at pre-intervention and 1 week (pre-intervention:  $r = -.309, p = .329$ ; 1 week:  $r = -.472, p = .122$ ). Please see Figure 5 below for a graph illustrating the change of the correlations across the four time points.

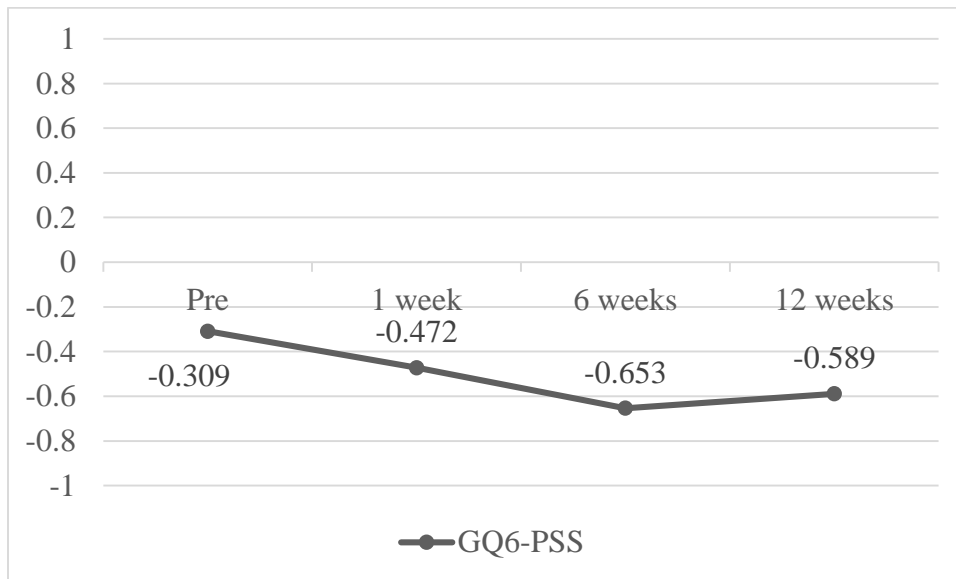


Figure 5. Change of the correlations between gratitude and perceived stress across the four time points.

**Hypothesis 6.** It was hypothesized that perceived stress and mindfulness would be negatively correlated. There was a negative correlation between the Observing subscale of the KIMS and perceived stress across all four time points. The negative correlations were significant at pre-intervention, 1 week and 12 weeks, but not at 6 weeks (pre-intervention:  $r = -.795, p = .002$ ; 1 week:  $r = -.813, p = .001$ ; 6 week:  $r = -.538, p = .071$ ; 12 week:  $r = -.673, p = .017$ ). The correlations between perceived stress and the Describing subscale of the KIMS had the same pattern (pre-intervention:  $r = -.891, p = .000$ ; 1 week:  $r = -.755, p = .005$ ; 6 week:  $r = -.495, p = .102$ ; 12 week:  $r = -.668, p = .018$ ).

There were also negative correlations between the other two KIMS subscales (Acting with Awareness and Accepting without Judgement) and perceived stress. For the subscale Acting

with Awareness, the correlations were significant at 1 and 12 weeks, but not at the other two time points (pre-intervention:  $r = -.132$ ,  $p = .684$ ; 1 week:  $r = -.719$ ,  $p = .008$ ; 6 week:  $r = -.551$ ,  $p = .063$ ; 12 week:  $r = -.651$ ,  $p = .022$ ). The correlations between perceived stress and Accepting without Judgement was only significant at 6 weeks (pre-intervention:  $r = -.507$ ,  $p = .092$ ; 1 week:  $r = -.479$ ,  $p = .115$ ; 6 week:  $r = -.632$ ,  $p = .027$ ; 12 week:  $r = -.145$ ,  $p = .654$ ). Please see Figures 6 to 9 for a graph illustrating the change of correlations over time.

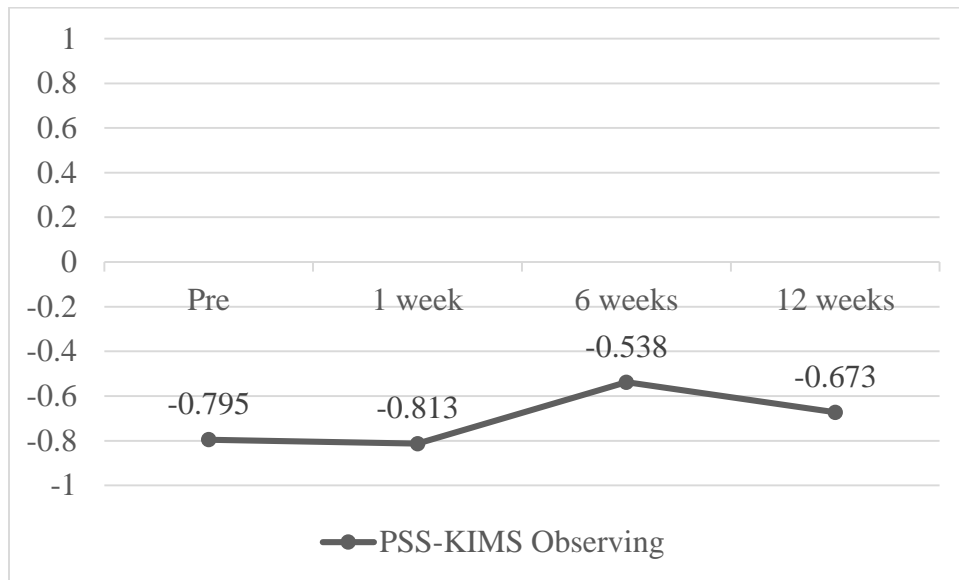


Figure 6. Change of the correlations between perceived stress and Observing subscale of the KIMS across the four time points.

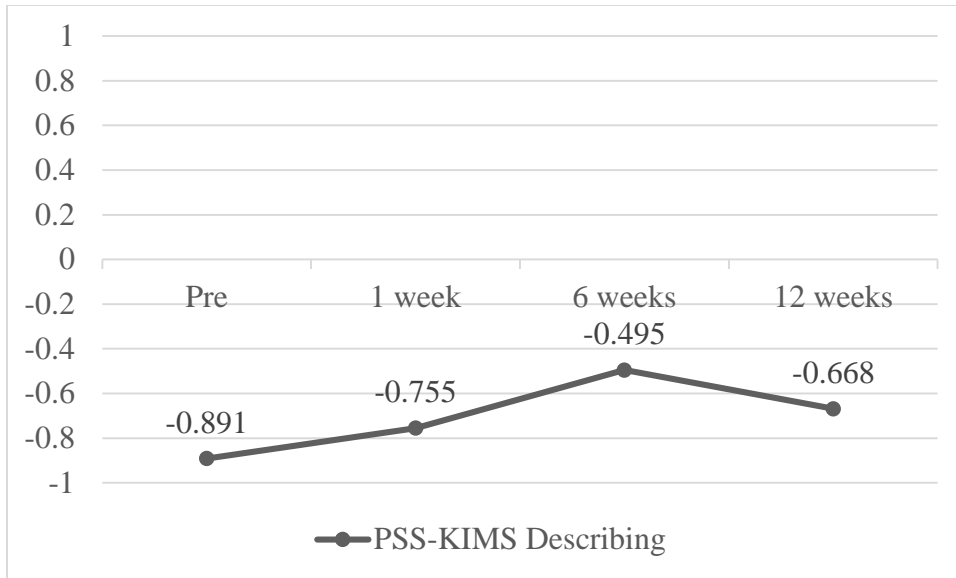


Figure 7. Change of the correlations between perceived stress and Describing subscale of the KIMS across the four time points.

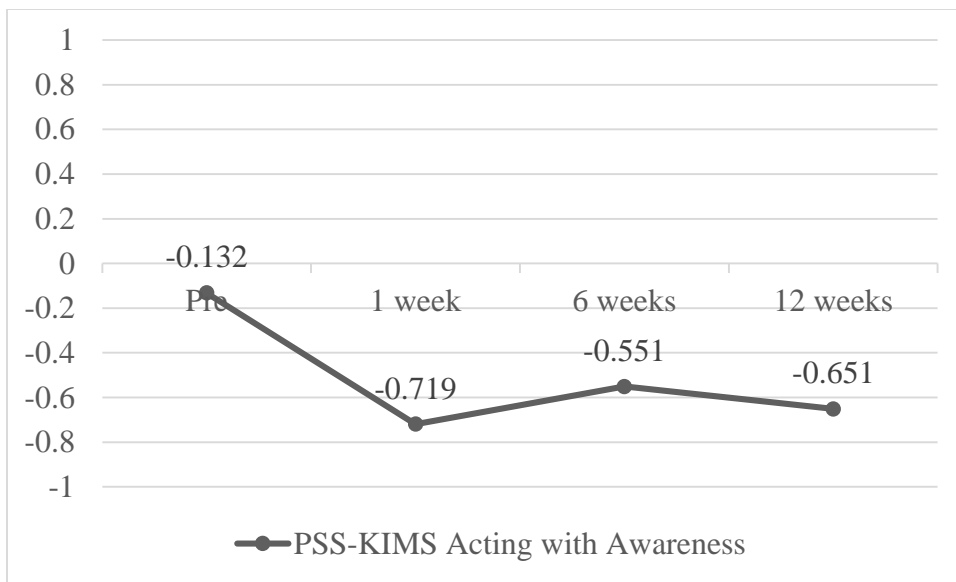


Figure 8. Change of the correlations between perceived stress and Acting with Awareness subscale of the KIMS across the four time points.

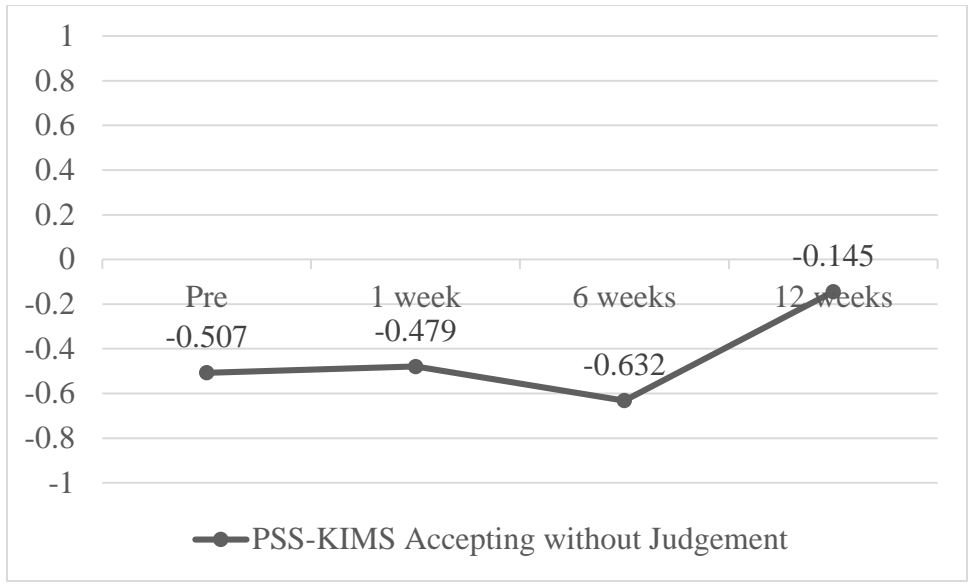


Figure 9. Change of the correlations between perceived stress and Accepting without Judgement subscale of the KIMS across the four time points.

## **Chapter 5: Discussion**

Counselling psychology graduate programs can be stressful, and this may interfere with students' well-being. Many researchers have critiqued the lack of direct education around self-care practices in counselling psychology programs. Incorporating the teaching of self-care into graduate programs may be useful for professional development, and to help students mitigate the negative impacts of stress. The aim of the present research was to investigate the impact of a mindfulness meditation and gratitude journaling intervention on gratitude and perceived stress among graduate counselling psychology students during a clinical training experience (clinic), as well as the relationships between mindfulness, gratitude and perceived stress.

Six 2x3 mixed design ANOVAs were conducted to determine the impact of the mindfulness meditation and gratitude journaling intervention on each of the dependent variables (GQ6, PSS, and the four subscales of the KIMS). The main effect of intervention, the main effect of time and the interaction between time and intervention were non-significant, except for the main effect of time on the Observing subscale of the KIMS. Correlational analyses were conducted amongst the dependent variables, and significant negative correlations were found between gratitude and perceived stress, and mindfulness and perceived stress.

### **Group Comparisons**

The first hypothesis stated that the mindfulness meditation and gratitude journaling intervention would have a significant impact on gratitude; however, results showed that there was no significant impact of the intervention on gratitude. A possible explanation of the non-significant finding is it may be that the intervention has no impact on gratitude. Furthermore, there was a small effect size of the intervention (partial Eta sq.= .018). According to Cohen's

(1988) guidelines, a small effect size is 0.01, a medium effect size is 0.06, and a large effect size is 0.14. As such, only 1.8% of the variation in perceived stress was attributed to the intervention.

The interaction between time and intervention had a medium effect size (partial Eta sq. = .096), but had low observed power (.269). Cohen (1988) suggests that power should be at least .80. Given the low observed power due to small sample, it is possible that interaction between time and intervention was not detectable. As such, the medium effect size suggests that there is potentially a time and intervention interaction on gratitude.

Hypothesis 2 stated that the intervention would impact perceived stress, as measured by the PSS; however, this study did not find a significant difference between the control and intervention group. It should be noted, nonetheless, that there was a medium effect size (partial Eta sq. = .118), and 11.8% of the variation was accounted by the intervention. However, observed power was .175. It may be that there was non-significance due to lower power, and the intervention may possibly decrease perceived stress in the intervention group. There was a large effect size for the interaction between time and intervention (partial Eta sq. = .169), but again, observed power was low at .480.

It should also be noted that the means of the PSS for the intervention group were lower than the means for the control group. As such, these results in combination suggest that this intervention could potentially impact perceived stress, but due to small sample size, the effect was not detected. However, this non-significant finding matches results from a study by Moore (2008). This author also did not find a significant reduction in perceived stress among a sample of 23 clinical psychologists in training who participated in a brief mindfulness meditation intervention. Both the current study and the study by Moore employed a brief mindfulness meditation intervention. It may be that a brief mindfulness meditation is not enough to decrease



perceived stress amongst counsellor trainees, and further research is needed to determine the appropriate length of meditation.

It was also hypothesized that the mindfulness meditation and gratitude journaling intervention would impact the four subscales of the KIMS. The main effect of intervention was found to be non-significant for all subscales, but the main effect of time was found to significantly impact the Observing subscale of the KIMS. This suggests that participants change over time on the Observing subscale, but the intervention did not impact this facet of mindfulness. Furthermore, post hoc tests did not reveal any significant differences between the time points, but this may be due to the conservative Bonferroni post hoc test.

There was a large effect size for the interaction between time and intervention (partial Eta sq. = .163) for the Describing subscale, but again, there was low observed power (.462). There was a medium effect size for both the main effect of intervention (partial Eta sq. = .116) and interaction between time and intervention (partial Eta sq. = .107) for the subscale Accepting without Judgement. This potentially suggests that the intervention and the interaction between time and intervention may have an impact on these facets of mindfulness, but was non-significant in this study due to low power.

In summary, with the non-significant main effect of intervention for each dependent variable, it is possible that this brief mindfulness meditation and gratitude journaling intervention may have had no impact on mindfulness, gratitude and perceived stress. However, there may be some other possible explanations. One possible explanation is lack of power due to the small sample size of 15 participants.

Hypotheses two and three were based on previous literature. One study by Shapiro and colleagues (2007) found changes in perceived stress and mindfulness amongst counselling

trainees who participated in a MBSR based intervention. It was found that among master's counselling trainees, those who participated in a MBSR based intervention reported decreased perceived stress as measured by the PSS and increased mindfulness as measured by the MAAS. The difference in results may be due to differences in the mindfulness intervention. The present study only used mindfulness meditation as the intervention, whereas the previous study included other mindfulness-based interventions, such as yoga and body scans. As such, there may be a more robust change in mindfulness, given the more encompassing intervention.

Furthermore, it may be that the intervention did not occur for long enough for the changes to be detected. The intervention in the present study lasted for approximately 15 minutes per week, whereas the intervention in the study by Shapiro et al. (2007) included a weekly two hour training session. As such, it may be that the intervention in the present study was not lengthy enough for changes to be detected. Another explanation for the discrepancy is the difference in sample size. The study by Shapiro and colleagues (2007) had a much larger sample size of 54 participants, and as such, greater power.

### **Correlational Analyses**

The fifth hypothesis stated that there would be a significant positive relationship between gratitude and mindfulness, as measured by the four subscales of the KIMS, for the intervention group; however no significant relationships were found. There was a non-significant positive correlation between gratitude and the Observing subscale of the KIMS at all four time points, with the correlation becoming larger over time. At twelve weeks, there was a .515 correlation between the GQ-6 and Observing subscale of the KIMS. This potentially suggests that the relationship between gratitude and this facet of mindfulness may become stronger over time. The Observing subscale measures a person's tendency to notice internal and external stimuli. This

result may indicate that the more a person is aware of their internal and external experience, the more likely they are to be aware of their experience of gratitude.

There was also a non-significant positive correlation between gratitude and the Describing subscale at the four time points, and these correlations increased over time. At six weeks, there was a .56 correlation. This may suggest that the relationship between these two constructs may change over time. The Describing subscale measures a person's ability to put into words the sensations, experiences, emotions, and perceptions the person experiences. The positive correlation may suggest that the more a person is able to verbalize their experiences, the more gratitude they experience.

Contrary to what was hypothesized, there was a non-significant negative correlation between gratitude and the Acting with Awareness subscale at pre-intervention and 1 week, and a non-significant positive correlation at 6 and 12 weeks. There was a non-significant negative correlation between gratitude and the Accepting without Judgement subscale at pre-intervention and at 12 weeks, but a non-significant positive correlation at 1 week and 6 weeks. It is of interest to note the switch in direction of the correlations. This may be of interest to explore in future studies.

Gratitude and perceived stress were hypothesized to be significantly negatively correlated. There was partial support for this hypothesis. The negative correlations became larger over time, and were significant at 6 and 12 weeks. This relationship may indicate that the more gratitude a person experiences, the less stress they perceive. This result is consistent with previous literature, which has also found a negative correlation between perceived stress and gratitude (Wood et al., 2007; Wood et al., 2008). Wood and colleagues (2008) suggest that if

gratitude is a protective factor against perceived stress, increasing a person's gratitude may possibly build up psychological capital to buffer against difficult times in a person's life.

The sixth hypothesis stated that there would be a significant negative relationship between perceived stress and mindfulness, as measured by the four subscales of the KIMS, across the four time points for the intervention group. There was a significant negative correlation between perceived stress and the four subscales of the KIMS at different time points. Although the correlations were not all significant across all times, it is worth noting that all the correlations between perceived stress and mindfulness were negative. This may indicate that the more mindful a participant was, the less stress they perceived. This relationship supports findings from Palmer and Rodger (2009), who also found that mindfulness and perceived stress were negatively correlated. It is of interest to note that although there were significant negative correlations, there was a non-significant change in perceived stress due to the intervention, which may be due to small sample size.

### **Limitations**

The present study was limited in a few different ways. First, this was not a randomized experiment. Participants were assigned to either the intervention or control group based on availability to take part in the intervention. The lack of random assignment may mean there were pre-existing differences between the two groups that are not accounted for. The use of a convenient sample also limits the generalizability of this study to other clinical programs and student populations. However, it is still important to bear in mind that this is an exploratory study as to the possibility of incorporating mindfulness as self-care into graduate counselling psychology programs.

Another limitation of this study is the small sample size. With a sample size of only 15 participants, there was low observed power, which may mean that the medium and large effect sizes may have not been detected. In addition, the sample consisted of only master's level students, and as such, the results may not be generalizable to other students, such as undergraduate and doctoral level students.

The study also employed the use of self-report measures, and the assumption is that participants responded reliably and accurately. If participants are not able to respond accurately and reliably, the impact of the intervention may not be detectable. For example, a participant may rate himself or herself as higher or lower in mindfulness, but this may not be an accurate reflection of her or his actual level of mindfulness.

### **Implications for Clinical Training Programs**

Although there were no significant findings regarding the impact of the intervention on gratitude, perceived stress and mindfulness, significant correlations were found between the dependent variables. Results indicated that there was a significant negative correlation between mindfulness and perceived stress, which suggests that mindfulness may have a role in decreasing perceived stress. Furthermore, it was also found that gratitude and perceived stress were negatively correlated, suggesting that decreased perceived stress may result from experiencing gratitude. The significant negative correlations show the potential for mindfulness and gratitude to decrease counsellor trainees' perception of stress.

This study also highlights the importance of including self-care education in clinical training programs. Although many graduate programs curricula are intense, a brief intervention of mindfulness meditation may be one way to incorporate didactic teaching of self-care. Given the short intervention occurred weekly, and the possibility of this decreasing

perceived stress, it is of importance to continue to research the possibility of incorporating teaching self-care in graduate programs.

### **Future Research**

Future studies are needed to continue to fill in the gaps in the literature that remain in the present study. Future research should address the use of observational measures in conjunction with self-report measures. For example, measurements of physical changes in stress could be used to detect changes in stress. Specifically, cortisol levels may be useful to investigate changes in perceived stress. There is some literature to support this. Two studies with cancer patients found that a MBSR program decreased cortisol levels (Carlson, Speca, Faris, & Patel, 2007; Witek-Janusek et al., 2008). Future research should include larger sample sizes to increase power, as well as include both master's and doctoral level students from various clinical programs. Research should also include random assignment to the control and intervention groups.

This research integrated both mindfulness and gratitude interventions together. To further understand the relationship between the two constructs, future research should conduct interventions that compare the two separately and together. More research is needed to continue to expand the understanding of the underlying qualities of mindfulness to continue to improve upon self-care strategies for helping professionals and trainees.

### **Summary of Findings and Conclusion**

Although this present study did not find significant differences in gratitude and perceived stress between the intervention and control group, it provides further evidence of the relationship between mindfulness, gratitude and perceived stress among counsellor trainees. Significant negative correlations in the intervention group were found between gratitude and perceived

stress, and mindfulness and perceived stress. It was also found that some of these correlations became larger over time.

This study also provides continued understanding of the usefulness of a brief mindfulness meditation and gratitude journaling intervention as a self-care tool for counsellor trainees in a supervised clinical course. It is hoped that this research contributes to the foundational understanding of mindfulness and gratitude as self-care to provide a basis for future research. Future research should continue to explore this possibility.

**Table 1**

<i>Demographic information</i>		
Demographic Variable	N	Percent
Age		
30 and over	9	60
30 and younger	6	40
Gender		
Male	3	20
Female	12	80
Ethnicity		
Caucasian	11	73.3
Other	4	26.7



**Table 2***Means and Standard Deviations for Dependent Variables*

Dependent Variable	Intervention				Control			
	Pre-inter <i>M (SD)</i>	1 week <i>M (SD)</i>	6 week <i>M (SD)</i>	12 week <i>M (SD)</i>	Pre-inter <i>M (SD)</i>	1 week <i>M (SD)</i>	6 week <i>M (SD)</i>	12 week <i>M (SD)</i>
Observing	40.8 (7.3)	41.5 (8.2)	43.3 (6.1)	44.4 (4.2)	41.5 (2.1)	41.7 (5.0)	48.7 (4.0)	47.7 (2.5)
Describe	24.6 (6.4)	24.6 (6.5)	26.5 (6.6)	27.8 (5.7)	27.5 (7.8)	28.3 (4.2)	26.7 (6.0)	28.3 (4.9)
Acting with Awareness	27.8 (2.7)	28.3 (4.1)	28.5 (3.8)	28.3 (3.0)	26.5 (7.8)	25.7 (2.5)	26.7 (7.4)	26.7 (8.1)
Accepting without Judgement	25.8 (6.8)	27.8 (6.1)	29.5 (5.1)	30.0 (5.6)	30.0 (5.7)	26.0 (4.4)	24.7 (7.6)	23.3 (8.1)
Gratitude	38.3 (4.9)	37.8 (5.1)	38.1 (4.7)	38.5 (3.6)	39.0 (0)	36.0 (3.5)	38.7 (2.5)	36.0 (4.4)
Perceived stress	23.2 (7.3)	22.8 (7.3)	24.0 (6.3)	21.8 (7.2)	23.0 (4.2)	30.0 (8.1)	24.3 (11.4)	30.7 (6.3)

**Table 3**

*Correlations among Dependent Variables Pre-Intervention*

Dependent Variables	GQ6	PSS	KIMS Observing	KIMS Describing	KIMS Acting with Awareness	KIMS Accepting without Judgement
GQ6		-0.309	0.256	0.212	-0.14	-0.191
PSS			-0.795**	-0.891**	-0.132	-0.507

\* $p < .05$ , 2-tailed, \*\* $p < .01$ , 2-tailed

**Table 4**

*Correlations among Dependent Variables at 1 week*

Dependent Variables	GQ6	PSS	KIMS Observing	KIMS Describing	KIMS Acting with Awareness	KIMS Accepting without Judgement
GQ6		-0.472	0.154	0.410	-0.023	0.196
PSS			-0.813**	-0.755**	-0.719**	-0.479

\* $p < .05$ , 2-tailed, \*\* $p < .01$ , 2-tailed

**Table 5**

*Correlations among Dependent Variables at 6 weeks*

Dependent Variables	GQ6	PSS 6 week	KIMS Observing	KIMS Describing	KIMS Acting with Awareness	KIMS Accepting without Judgement
GQ6		-0.653*	0.478	0.560	0.201	0.305
PSS			-0.538	-0.495	-0.551	-0.632*

\* $p < .05$ , 2-tailed, \*\* $p < .01$ , 2-tailed

**Table 6**

*Correlations among Dependent Variables at 12 weeks*

Dependent Variables	GQ6	PSS 6 week	KIMS Observing	KIMS Describing	KIMS Acting with Awareness	KIMS Accepting without Judgement
GQ6		-0.589*	0.515	0.334	0.088	-0.163
PSS			-0.673*	-0.668*	-0.651*	-0.145

\* $p < .05$ , 2-tailed, \*\* $p < .01$ , 2-tailed

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## Appendix A

### Recruitment Email

Good day!

As many of you know, Dr. James heads an exciting mindfulness study to evaluate the effectiveness of incorporating mindfulness training into counsellor training. The time has come to start our recruitment for this year and we need you folks to make it happen!

**NOTE: ELIGIBLE PARTICIPANTS ARE ONLY MASTERS STUDENTS REGISTERED FOR CNPS 588 (CLINIC) STARTING SEPTEMBER 2011**

Here's what it's about:

Purpose of the study:

Mindfulness is a growing area of interest in psychotherapy. The purpose of this study is to evaluate the connection between mindfulness for counselling trainees [AND] their clinical training (CNPS 588/Clinic). The training program may include either a brief practice (15 minutes) before each day of clinic for one semester [AND/OR] the collection of self-report measures and qualitative data.

Your commitment will be discussed with the researchers and may include...

==This commitment runs from September - December, 2011==

- Attending a free meditation training session on Sunday, August 28 OR Sunday, September 4 from 7:30-8:30pm at the City Studio at Semperviva Yoga (#100-1985 West Broadway). Five additional training sessions will be provided at the same time each Sunday night until October 9. Ongoing attendance in these additional sessions is strongly encouraged, but not mandatory.
- Weekly mindfulness practice (15 minutes). This will require you to arrive to a location within 5 minutes of the clinic 30 minutes prior to your clinic start (i.e. 8:30am OR 2:30pm)
- Completing 4 sets of measures during specified times (each set takes about 30 minutes to complete). First session will be scheduled for mid august in a time that fits for you and the rest will be during the fall semester.
- Completion of a 1-hour interview at the end of term.

Your Goodies:

- Unlimited one-week yoga pass to Semperviva Yoga
- Free meditation training
- Opportunity to contribute to CNPS program improvement!
- A fun learning opportunity

Ready to sign up?

Contact [ubcmindfulnessstudy@gmail.com](mailto:ubcmindfulnessstudy@gmail.com) by the latest Friday, August 12

For questions, contact Art Phipps at [ubcmindfulnessstudy@gmail.com](mailto:ubcmindfulnessstudy@gmail.com)

Our best,

Dr. Susan James, Principal Investigator and Associate Professor & the Research Assistants

## Appendix B

### Consent Form



Department of Educational and Counselling Psychology, and Special Education,  
Faculty of Education

### Consent Form

Title of Study: Evaluating the Effectiveness of Mindfulness Training for Promoting the Well-Being of Counselling Trainees

Principal Investigator:

Dr. Susan James, Associate Professor.

Department of Educational and Counselling Psychology, and Special Education,  
UBC Faculty of Education.

TEL: 604-822-6664

Co-Investigators:

Dr. Marvin Westwood, Professor,

Department of Educational & Counselling Psychology, and Special Education,  
UBC Faculty of Education

TEL: Phone: 604-822-6457

The data collected from this research will be used anonymously for publications and presentations by the team members, and also used for Masters Theses by students in the Counselling Psychology Master's program.

Purpose:

Counselling novices often tend to feel highly anxious before and during their clinic, when they begin to work with clients. The purpose of this study is to evaluate the effectiveness of a mindfulness training program in reducing anxiety and promoting the well-being of counselling trainees enrolled in CNPS 588/Clinic and to explore the relationships between mindfulness, self-compassion, self-efficacy and gratitude.

Study Procedures:

You may be asked to participate in a 15-minute mindfulness and journaling exercise before beginning your clinic each week. The commitment will continue for the duration of the course for one semester. Prior to this, 1 hour of training in mindfulness will be offered outside of class time.

At four times during the research study, you will be asked to fill in some written measures (approx 15 – 30 minutes.) The questionnaire package will be given a couple of times at the start of project; at the half-way mark in the semester; and at the end of the clinic course.

You may be asked to participate in an interview at the conclusion of the study. This interview will be audio taped and will take approximately one hour of your time. Students who agree to be involved in the study will be randomly (or conveniently) assigned to either the treatment group or control group.

**Potential Risks:**

Filling in questionnaires and/or participation in interviews may cause you to reflect on current life issues. Should you wish to explore any issues that may arise in more depth, in a therapeutic context, we will provide a counselling referral list.

**Potential Benefits:**

Participating in the mindfulness training and exercises could potentially offer you useful tools for coping with life stressors and the potential stress of working with clients in clinic. You will also be contributing to research that may have potential benefits for other students and their clients. After the research is completed the results of the study will be posted on the website of the principal investigator [http://educ.ubc.ca/faculty/sjames/research\\_projects.htm](http://educ.ubc.ca/faculty/sjames/research_projects.htm)

**Confidentiality:**

Only members of the research team will have access to the data. You will not be identified by name on any of the written measures or qualitative interviews. Your confidentiality will be protected by identifying all documents by a code number and these will be kept in a locked filing cabinet. Nor will your name appear in any reports of the completed study.

The audio tapes of the interview with the principal investigator will only be listened to by the principal investigator and three research assistants who will transcribe the tapes. After transcription, the tapes will be kept in a locked drawer in the office of Susan James in the Department of Educational and Counselling Psychology, at UBC.

Computer files will be under password protection. All data from the study will be kept for at least 5 years, in accordance with guidelines. After that, paper copies will be shredded, computer files deleted, and videotapes will be de-magnetized.

**Remuneration/Compensation:**

All participants will receive a one-week, unlimited yoga pass for Semperviva Yoga [www.semperviva.com](http://www.semperviva.com) in Vancouver.

**Contact for information about the study:**

If you have any questions or desire further information with respect to this study, you may contact Dr. Susan James, at 604 822-6664, Dr. Marvin Westwood at 604-822-6457, or Art Phipps at by email at [ubcmindfulnessstudy@gmail.com](mailto:ubcmindfulnessstudy@gmail.com)

**Contact for concerns about the rights of research subjects:**

If you have any concerns about your treatment or rights as a research subject, you may contact the Research Subject Information Line in the UBC Office of Research Services at 604-822-8598 or if long distance e-mail to [RSIL@ors.ubc.ca](mailto:RSIL@ors.ubc.ca)

**Consent:**

Your participation in this study is entirely voluntary and you may refuse to participate or withdraw from the study at any time without jeopardy to your class standing, future employment, or participation in any other studies. Similarly, if you feel uncomfortable with any part of the study, you are welcome to only participate in the parts of the study that you feel comfortable with. Furthermore, if you decide to withdraw from the study you will still receive the remuneration/compensation as discussed above.

Your signature below indicates that you have received a copy of this consent form for your own records.

Your signature indicates that you consent to participate in this study.

---

Your signature

Please also print your name

Date

## Appendix C

### Liability Release Form



Department of Educational and Counselling Psychology, and Special Education,  
Faculty of Education

Title of Study: Evaluating the Effectiveness of Mindfulness Training for Promoting the  
Well-Being of Counselling Trainees  
(the “UBC Mindfulness Study”)

#### Liability Release Agreement

I wish to participate in the UBC Mindfulness Study. I understand that my execution of this Liability Release Agreement is a condition of participation in the UBC Mindfulness Study. I further understand that my participation in the UBC Mindfulness Study is voluntary and that I can withdraw from the UBC Mindfulness Study at any time.

In consideration for the permission to participate in the UBC Mindfulness Study to be conducted on the real property located at 834 Eighth Street, New Westminster, BC, and in further consideration of the receipt from Karl Maier, the owner of that real property, of the sum of \$1 (the receipt and sufficiency of which is hereby acknowledged), I, \_\_\_\_\_, hereby agree to assume any risk of, and take full responsibility for, any and all personal injury (including death), loss, or damage which may occur to me or my personal property in any way connected to the UBC Mindfulness Study, and I hereby release Karl Maier from any and all claims for personal injury (including death), loss, or damage which may occur to me or my personal property in any way connected to the UBC Mindfulness Study.

I understand that by signing this Liability Release Agreement I have given up considerable future legal rights. I confirm that I have signed this Liability Release Agreement freely, voluntarily, and under no duress, and that I have been given the opportunity to obtain independent legal advice concerning this Liability Release Agreement before signing it. My signature is proof of my intention to execute a complete and unconditional release of Karl Maier.

\_\_\_\_\_  
Signature of Witness

\_\_\_\_\_  
Signature of Participant

\_\_\_\_\_  
Name of Witness (Please Print)

\_\_\_\_\_  
Name of Participant (Please Print)

\_\_\_\_\_  
Date

## Appendix D

### Mindfulness Meditations

#### Breathing

1. Find a comfortable place to sit for the next 10 minutes. Sit with an upright posture, your arms gently at your side, your hands resting in your lap or on your thighs.
2. Bring your attention to the movement of your breath near your navel. Notice the movement; in and out with each breath.
3. Notice how the mind wanders to other sensations, thoughts, or emotions. Acknowledge and accept these and bring your attention back to the sensation of each breath moving in and out.

#### Body Scan

1. Find a comfortable place to sit for the next 10 minutes. Sit with an upright posture, your arms gently at your side, your hands resting in your lap or on your thighs.
2. Bring your attention to the top of your head and notice any sensations that exist there.
3. Slowly scan over your body for the next 10 minutes, starting with the top of the head and working your way down to the bottom of the feet and toes. As you move from one part of the body to the next, notice any sensations or lack of sensations in each place. If you notice yourself thinking about the sensation (or lack of sensation) or describing it as good or bad; pleasing or displeasing simply notice the thoughts and bring your attention back to the sensation itself.
4. If there is one particular part of the body in which a sensation stands out for you, feel free to linger in this place; feeling the sensations as they are without judgment.



## Focus on Sounds

1. Find a comfortable place to sit for the next 10 minutes. Sit with an upright posture, your arms gently at your side, your hands resting in your lap or on your thighs.
2. Bring your attention to any sounds that are around you in the present moment.
3. Notice each sound as it begins, occurs and ends.
4. Notice them as they come into, and dissolve out of, existing with an attitude of openness and acceptance. If you have thoughts or feelings about these sounds, such as judgment about whether they are pleasant or unpleasant or a sense of wanting some to stay and others to go, bring these too, into your awareness and then move your attention back to the sounds themselves.

## Appendix E

### Gratitude Journal

There are many things in our life, both big and small, that we could be grateful about. Think back over the past week and write down on the lines below up to 8 things in your life that you are grateful or thankful for. For each situation, list the specific people to whom you felt grateful towards; then, rate the associated intensity level of gratitude.

	What am I Grateful For?	Associated People	Rate Intensity of Gratitude Experienced (please circle number) 1= somewhat grateful 3= extremely grateful
1.			1      2      3
2.			1      2      3
3.			1      2      3
4.			1      2      3
5.			1      2      3
6.			1      2      3
7.			1      2      3
8.			1      2      3

*When complete, please place in provided envelope, seal, and hand to person overseeing exercises. Shred envelope with your name on it to maintain confidentiality.*

## Appendix F

### Mindfulness Attention Awareness Scale (MAAS)

Instructions: Below is a collection of statements about your everyday experience. Using the 1-6 scale below, please indicate how frequently or infrequently you currently have each experience. Please answer according to what *really reflects* your experience rather than what you think your experience should be.

1	2	3	4	5	6
Almost always	Very frequently	Somewhat frequently	Somewhat infrequently	Very infrequently	Almost never

		1	2	3	4	5	6
1.	I could be experiencing some emotion and not be conscious of it until some time later.						
2.	I break or spill things because of carelessness, not paying attention, or thinking of something else.						
3.	I find it difficult to stay focused on what's happening in the present.						
4.	I tend to walk quickly to get where I'm going without paying attention to what I experience along the way.						
5.	I tend not to notice feelings of physical tension or discomfort until they really grab my attention.						
6.	I forget a person's name almost as soon as i've been told it for the first time.						
7.	It seems I am "running on automatic" without much awareness of what I'm doing.						
8.	I rush through activities without being attentive to them.						
9.	I get so focused on the goal I want to achieve that I lose touch with what I am doing right now to get there.						
10.	I do jobs or tasks automatically, without being aware of what I'm doing.						
11.	I find myself listening to someone with one ear, doing something else at the same time.						
12.	I drive places on "automatic pilot" and then wonder why I went there.						
13.	I find myself preoccupied with the future or the past.						
14.	I find myself doing things without paying attention.						
15.	I snack without being aware that I'm eating.						

## Appendix G

### Kentucky Inventory of Mindfulness Skills (KIMS)

Please rate each of the following statements using the scale provided. Circle the number that best describes your own opinion of what is generally true for you.

1	2	3	4	5
Never or very rarely true	Rarely true	Sometimes true	Often true	Very often or always true

1.	I notice changes in my body, such as whether my breathing slows down or speeds up.	1	2	3	4	5
2.	I'm good at finding the words to describe my feelings.	1	2	3	4	5
3.	When I do things, my mind wanders off and I'm easily distracted.	1	2	3	4	5
4.	I criticize myself for having irrational or inappropriate emotions.	1	2	3	4	5
5.	I pay attention to whether my muscles are tense or relaxed.	1	2	3	4	5
6.	I can easily put my beliefs, opinions, and expectations into words.	1	2	3	4	5
7.	When I'm doing something, I'm only focused on what I'm doing, nothing else.	1	2	3	4	5
8.	I tend to evaluate whether my perceptions are right or wrong.	1	2	3	4	5
9.	When I'm walking, I deliberately notice the sensations of my body moving.	1	2	3	4	5
10.	I'm good at thinking of words to express my perceptions, such as how things taste, smell, or sound.	1	2	3	4	5
11.	I drive on "automatic pilot" without paying attention to what I'm doing.	1	2	3	4	5
12.	I tell myself that I shouldn't be feeling the way I'm feeling.	1	2	3	4	5
13.	When I take a shower or bath, I stay alert to the sensations of water on my body	1	2	3	4	5
14.	It's hard for me to find the words to describe what I'm thinking	1	2	3	4	5
15.	When I'm reading, I focus all my attention on what I'm reading.	1	2	3	4	5
16.	I believe some of my thoughts are abnormal or bad and I shouldn't think that way.	1	2	3	4	5
17.	I notice how foods and drinks affect my thoughts, bodily sensations, and emotions.	1	2	3	4	5
18.	I have trouble thinking of the right words to express how I feel about things.	1	2	3	4	5
19.	When I do things, I get totally wrapped up in them and don't think about anything else.	1	2	3	4	5

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20.	I make judgments about whether my thoughts are good or bad.	1	2	3	4	5
21.	I pay attention to sensations, such as the wind in my hair or sun on my face.	1	2	3	4	5
22.	When I have a sensation in my body, it's difficult for me to describe it because I can't find the right words.	1	2	3	4	5
23.	I don't pay attention to what I'm doing because I'm daydreaming, worrying, or otherwise distracted.	1	2	3	4	5
24.	I tend to make judgments about how worthwhile or worthless my experiences are.	1	2	3	4	5
25.	I pay attention to sounds, such as clocks ticking, birds chirping, or cars passing.	1	2	3	4	5
26.	Even when I'm feeling terribly upset, I can find a way to put it into words.	1	2	3	4	5
27.	When I'm doing chores, such as cleaning or laundry, I tend to daydream or think of other things.	1	2	3	4	5
28.	I tell myself that I shouldn't be thinking the way I'm thinking.	1	2	3	4	5
29.	I notice the smells and aromas of things.	1	2	3	4	5
30.	I intentionally stay aware of my feelings.	1	2	3	4	5
31.	I tend to do several things at once rather than focusing on one thing at a time.	1	2	3	4	5
32.	I think some of my emotions are bad or inappropriate and I shouldn't feel them.	1	2	3	4	5
33.	I notice visual elements in art or nature, such as colors, shapes, textures, or patterns of light and shadow.	1	2	3	4	5
37.	My natural tendency is to put my experiences into words. I pay attention to how my emotions affect my thoughts and behavior.	1	2	3	4	5
38.	I get completely absorbed in what I'm doing, so that all my attention is focused on it.	1	2	3	4	5
39.	I notice when my moods begin to change.	1	2	3	4	5

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## Appendix H

### Gratitude Questionnaire-Six Item Form (GQ-6)

Using the scale below as a guide, write a number beside each statement to indicate how much you agree with it.

1 = strongly disagree

2 = disagree

3 = slightly disagree

4 = neutral

5 = slightly agree

6 = agree

7 = strongly agree

\_\_\_ 1. I have so much in life to be thankful for.

\_\_\_ 2. If I had to list everything that I felt grateful for, it would be a very long list

\_\_\_ 3. When I look at the world, I don't see much to be grateful for.

\_\_\_ 4. I am grateful to a wide variety of people.

\_\_\_ 5. As I get older I find myself more able to appreciate the people, events, and situations  
That have been part of my life history.

\_\_\_ 6. Long amounts of time can go by before I feel grateful to something or someone.

## Appendix I

### Perceived Stress Scale (PSS)

Instructions: The questions in this scale ask you about your feelings and thoughts during the last month. In each case, please indicate with a check how often you felt or thought a certain way.

1. In the last month, how often have you been upset because of something that happened unexpectedly?

\_\_\_0=never \_\_\_1=almost never \_\_\_2=sometimes \_\_\_3=fairly often \_\_\_4=very often

2. In the last month, how often have you felt that you were unable to control the important things in your life?

\_\_\_0=never \_\_\_1=almost never \_\_\_2=sometimes \_\_\_3=fairly often \_\_\_4=very often

3. In the last month, how often have you felt nervous and "stressed"?

\_\_\_0=never \_\_\_1=almost never \_\_\_2=sometimes \_\_\_3=fairly often \_\_\_4=very often

4. In the last month, how often have you dealt successfully with irritating life hassles?

\_\_\_0=never \_\_\_1=almost never \_\_\_2=sometimes \_\_\_3=fairly often \_\_\_4=very often

5. In the last month, how often have you felt that you were effectively coping with important changes that were occurring in your life?

\_\_\_0=never \_\_\_1=almost never \_\_\_2=sometimes \_\_\_3=fairly often \_\_\_4=very often

6. In the last month, how often have you felt confident about your ability to handle your personal problems?

\_\_\_0=never \_\_\_1=almost never \_\_\_2=sometimes \_\_\_3=fairly often \_\_\_4=very often

7. In the last month, how often have you felt that things were going your way?

\_\_\_0=never \_\_\_1=almost never \_\_\_2=sometimes \_\_\_3=fairly often \_\_\_4=very often

8. In the last month, how often have you found that you could not cope with all the things that you had to do?

\_\_\_0=never \_\_\_1=almost never \_\_\_2=sometimes \_\_\_3=fairly often \_\_\_4=very often

9. In the last month, how often have you been able to control irritations in your life?

\_\_\_0=never \_\_\_1=almost never \_\_\_2=sometimes \_\_\_3=fairly often \_\_\_4=very often

10. In the last month, how often have you felt that you were on top of things?

\_\_\_0=never \_\_\_1=almost never \_\_\_2=sometimes \_\_\_3=fairly often \_\_\_4=very often

11. In the last month, how often have you been angered because of things that were outside of your control?

\_\_\_0=never \_\_\_1=almost never \_\_\_2=sometimes \_\_\_3=fairly often \_\_\_4=very often

12. In the last month, how often have you found yourself thinking about things that you have to accomplish?

\_\_\_0=never \_\_\_1=almost never \_\_\_2=sometimes \_\_\_3=fairly often \_\_\_4=very often

13. In the last month, how often have you been able to control the way you spend your time?

\_\_\_0=never \_\_\_1=almost never \_\_\_2=sometimes \_\_\_3=fairly often \_\_\_4=very often

14. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

\_\_\_0=never \_\_\_1=almost never \_\_\_2=sometimes \_\_\_3=fairly often \_\_\_4=very often