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PUTTING BUDDHIST UNDERSTANDING BACK INTO MINDFULNESS TRAINING

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ABSTRACT

In recent years, mindfulness training techniques have been incorporated into a variety of Western psychological therapies. These mindfulness-based therapies have been demonstrated to be effective in reducing psychological distress in a wide range of populations; however, these interventions provide only superficial rationale for these techniques and do not include teachings about their origins or philosophical importance. The Positive Mindfulness Program (PMP) was developed by combining the well-established foundation of Western mindfulness-based programs with the rich Buddhist teachings from which mindfulness originates to include a more holistic and integrated mindfulness program. The present study explored the effectiveness of the PMP in improving well-being as well as reducing distress in Thai and Australian samples. Study 1 used a randomized control trial to test for changes in well-being, psychological distress, mindfulness, rumination, difficulties in emotional regulation, and understanding of the three characteristics of existence in a Thai-Buddhist sample. The results demonstrated that relative to a control condition, the PMP had a significant effect on well-being, major psychological distress (depression, anxiety, and stress), mindfulness, rumination, difficulties in emotional regulation), and the understanding of the three characteristics of existence. The effect size for rumination was large and the effect size for well-being, mindfulness, difficulties in emotional regulation, and the understanding of the three characteristics of existence was medium to large. For depression, anxiety, and stress, the effect size was small to medium. Furthermore, the results demonstrated no significant changes in the control condition. A multilevel model for the PMP revealed that positive and negative outcomes improved most rapidly across the first half of intervention (the first four sessions) showed smaller changes in the second half of intervention (the second four sessions), and that gains were maintained across the six week follow-up assessment.

In Study 2, the PMP was conducted using an Australian sample. This study aimed to replicate the results of Study 1 in a culture where Buddhist ideas are not familiar. Multilevel modelling demonstrated that the PMP significantly increased well-being, mindfulness, and the understanding of Buddhist concepts about the characteristics of existence and significantly reduced rumination, difficulties with emotional regulation, and distress (depression, anxiety, and stress). The program was most effective during the first half of intervention (the first four sessions), while the second half of the intervention (the second four sessions) was also effective but to a lesser extent. Treatment effects were maintained at six weeks follow-up across all measures. The effect size was large for measures of well-being, mindfulness, the understanding of the three characteristics of existence, rumination, difficulties in emotional regulation, depression, and stress. The effect size for measures of anxiety was medium to large.

Study 3 examined the mechanisms underlying the effects of the PMP on well-being and distress in a Thai-Eastern and Australian-Western sample using data from the first two studies. The first aim of this study was to examine the relationship between well-being, distress (depression, anxiety, and stress), mindfulness, rumination, difficulties in emotional regulation and the understanding of the Buddhist teachings about the characteristics of existence. The second aim of this study was to examine cultural differences as a mechanism underlying/mediating the effects of the PMP on well-being and distress. Results showed the PMP enhanced mindfulness and the understanding of the three characteristics of existence, and the effects of these changes on well-being and distress were mediated through reduced rumination and enhanced emotional regulation. The mediation processes were the same in Thai and Australian participants. Interestingly, the inclusion of the understanding of the three characteristics of existence in the PMP showed benefits in improving well-being and reducing distress for both the Thai and Australian samples, which suggests that the PMP can be applied to promote well-being and reduce distress in both Eastern and Western populations.

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This thesis is composed of my original work, and contains no material previously published or written by another person except where due reference has been made in the text. I have clearly stated the contribution by others to jointly-authored works that I have included in my thesis.

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A number of key academic contributions were made to the following thesis by others. Namely, Associate Professor Dr. John McLean (my primary supervisor) provided expert and insightful guidance on the development of the intervention used in this thesis. Associate Professor Dr. John McLean also assisted with reading, critical review and also contributed to the interpretation of results.

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Approximately 2,500 years ago, Siddhārtha Gautama attained enlightenment under a Bodhi tree. Subsequently, he has become known as “the Buddha”. One of the most important understandings that he propounded that later helped him to reach inner happiness, is the understanding of interconnectedness, numerous phenomena underlie every experience of every human being. Other than being one of the main topics in my thesis, thoughts about interconnectedness enter my mind when I write this acknowledgement. I have experienced this personally and therefore I feel gratitude toward so many people who have assisted me to finish this thesis. So I write this acknowledgement with contentment and humbleness.

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CHAPTER ONE

Introduction

According to Buddhist traditions, approximately 2,500 years ago, Siddhārtha Gautama who was later known as "the Buddha", experienced an awakening while he practiced meditation sitting under a Bodhi tree. As he performed **Ānāpānasati**, a form of meditation with breathing, he reached enlightenment. Over the ensuing two and half millennia, millions of people, mainly from the Eastern hemisphere, have followed Gautama's teachings by practicing various forms of meditation, including mindfulness. This meditation practice is believed to develop enlightenment, and in turn holds the promise of enhancing human well-being.

The modern discipline of psychology is dominated by research that occurs in the Western developed countries, particularly North America, Western Europe, and Australasia (O' Gorman, Shum, Halford, & Ogilvie, 2012). There has been a recurrent criticism of psychology for its strong focus on ideas developed in the West, and that the discipline does not attend enough to being a universally applicable discipline drawing on ideas developed in a wide range of cultures (Van de Vijver, 2013). In the last decade, the emergence of positive psychology has focused attention on some similar ideas about promoting human well-being as embedded in the Buddhist tradition (e.g., Seligman & Csikszentmihalyi, 2000; Ekman, Davidson, Ricard, & Wallace, 2005; Wallance & Shapiro, 2006). In particular there has been attention paid to the potential use of meditation or mindfulness. For example, the work of John Kabat-Zinn in Mindfulness Based Stress Reduction (MBSR; Kabat-Zinn, 2003) highlights the use of mindfulness to enhance well-being. Mindfulness has also been incorporated into some treatments of psychological disorder, with a particular emphasis on attending to the present moment. Some examples of psychological therapies that integrate mindfulness include Mindfulness-Based Cognitive Therapy (MBCT; Segal, Williams, and Teasdale, 2002), Dialectical Behaviour Therapy (DBT; Linehan, 1993), and Acceptance and Commitment Therapy (ACT; Hayes, Strosahl, & Wilson, 1999).

One distinction between recent Western applications of mindfulness and the Buddhist concept of mindfulness is that Western applications often view mindfulness as a set of skills that can ameliorate psychological distress (Baer & Krietemeyer, 2006). In the Buddhist tradition of the practice of mindfulness there is a philosophical basis. A complete Buddhist form of mindfulness training incorporates tranquillity, right understanding (i.e., an understanding of the doctrinal core of Buddhist concepts which are the basis of the Eastern philosophy of mindfulness), and a commitment to integrate mindfulness into daily life (Rosch, 2007).

In addition to the extra foci of mindfulness in Buddhist relative to Western applications of mindfulness, Western applications of mindfulness also differ from Buddhist traditions in their focus. Western applications tend to focus on ameliorating psychological distress (Baer & Krietemeyer, 2006), whereas the Buddhist tradition sees mindfulness as applicable to enhance well-being and not just to relieve distress (Payutto, 1998). Some researchers have begun to question the current use of mindfulness in Western psychology, challenging both its conceptualization as a skill-set, and its limited application in the West to enhance well-being. For instance, Rosch (2007) asks "Is it sufficient to conceptualize mindfulness as the skill of focusing on the present, moment by moment?" We may also ask, "Is the ability to focus on the present moment by being mindful enough to create long lasting psychological well-being and to ameliorate psychological distress?" While he practiced mindfulness underneath the Bodhi tree, Siddhārtha Gautama stated that he discovered the understanding of the three characterises of existence. According to Buddhist traditions, his discovery resulted in the beginning of inner peace and the end of suffering. Based on this account, the present research seeks to answer the following questions. Is it beneficial to reunite the understanding of the three characteristics of existence with the practice of mindfulness? Will the combination of the three characteristics of existence and mindfulness increase well-being? Can the effectiveness of this application of Buddhist traditions be tested within the scientific method? Will a comprehensive approach to mindfulness based on Buddhist traditions be relevant cross-culturally in both the East and the West?

In the present thesis, The Positive Mindfulness Program (PMP), a mindfulness-based intervention, was developed to build on existing Western mindfulness-based programs by adding aspects drawn from the rich Buddhist philosophies. The aim of the present research was to enhance the benefits of current interventions, particularly with respect to their potential effects on positive well-being. The effectiveness of the PMP in improving well-being and reducing distress was evaluated in two studies, one done in Thailand, a predominantly Buddhist country, and one conducted in Australia, which has a very low proportion of the population who adhere to Buddhist traditions. In addition to evaluating the outcomes of the PMP across cultures, the present research examined the mediators by which the PMP may improve well-being and reduce psychological distress. Specifically, I tested the proposition that the gaining of understanding of the three characteristics of existence through mindfulness is a mediator of improved well-being and distress. I also tested whether the mediators of effects were different across cultures.

This dissertation consists of eight chapters which cover three different research studies. Chapter 1 provides the prologue of this study. Chapter 2 provides an overview of the concepts of well-being and distress in Western psychology and from a Buddhist perspective. Chapter 3 discusses the definition of mindfulness, the process of mindfulness, and current research studies in

mindfulness in Eastern contexts and Western psychology. Chapter 4 describes the details of the Positive Mindfulness Program (PMP) which was developed for the present study. Chapter 5 describes Study 1, which examined the effectiveness of the PMP in enhancing well-being and reducing distress in a sample of Thai participants. Chapter 6 reports on Study 2 which examined the effectiveness of the PMP in enhancing well-being and reducing distress in an Australian (Western) sample. In chapter 7 reports on Study 3 which examined the mechanism of action underlying the PMP on well-being and distress within two cultures studied the Thai-Eastern context and the Australian-Western context. Moreover, the mediators of the effects of the PMP on well-being and distress are compared between the two cultures. Finally, Chapter 8 provides a general discussion of the findings and the implications for the use of the PMP.

CHAPTER TWO

Well-being and Distress

In recent years, psychologists have conducted extensive research into positive psychology in order to determine how to best define well-being and a life well-lived (Ryan & Deci, 2001; Seligman, 2002). Their investigations are developed from two seemingly disparate perspectives: the hedonic view of well-being and the eudaimonic view of well-being (Delle Fave, Brdar, Freire, Vella-Brodrick, & Wissing, 2011). This thesis provides a brief account of the distinction between the hedonic view of well-being and the eudaimonic view of well-being, as these concepts are central to the PMP.

The Hedonic and Eudaimonic Views of Well-being

The hedonic view. The hedonic view of well-being is based on the notion that increased pleasure and decreased pain leads to happiness. This idea can be traced back to the writings of scholars from the fourth century. For example, Aristippus, a pupil of Socrates and a founder of the ultra-hedonist Greek school of philosophy "The Cyernic School", stated in the fourth century BC that "the goal of life is to experience the maximum amount of pleasure" (Ryan & Deci, 2001). Hedonic concepts are based on the idea of subjective well-being, a scientific term commonly used to denote a "happy or good life". Deiner, Oishi and Lucas (2003) defined subjective well-being as a person's cognitive and affective evaluations of his or her life, which includes their emotions, satisfaction with particular areas of life, and global judgments of life satisfaction.

Diener (1984) developed a measure of subjective well-being based on three components: virtue, life satisfaction, and positive affect. Virtue or holiness refers to morally good behaviour which can be judged by external criteria. However, a limitation of this definition is that happiness is not viewed only as a subjective state, but rather a state that possesses some desirable qualities, such as satisfaction with one's current life, past, and future. Furthermore, life satisfaction refers to subjective judgements based on feelings and attitudes about one's life, while positive affect reflects the preponderance of positive affect over negative affect.

A number of correlational studies have examined the association between hedonic subjective well-being and psychological distress. Research shows that subjective well-being is negatively associated with mental difficulties, including depression and anxiety. For example, correlational studies using undergraduate students demonstrate a significant negative correlation between subjective well-being and depression, with large effect sizes ranging from r = -0.50 to -0.57 (Chang & Sanna, 2001 as cited in Tremblay, Blanchard, Pelletier, & Vallerand, 2006;

Schimmack, Oishi, Furr, & Funder, 2004). Furthermore, Neto (1993) conducted a study using an adolescent sample and found a significant negative correlation between subjective well-being and social anxiety, with a small effect size of r = -0.23. Headey, Kelley, and Wearing (1993) conducted a correlational study with an Australian adult population, aged 18 to 65. The findings from their study showed that satisfaction with life is moderately and negatively correlated with anxiety (r = -0.30) and depression (r = -.42). Finally, Brief, Butcher, George, and Link (1993) conducted a path analysis to examine the path relationship between negative affectivity, objective health (e.g., the frequency of doctor visits and the total number of days spent in a hospital), and life satisfaction through interpretation of life circumstances. Results showed that both negative affectivity and objective health indirectly affect life satisfaction, however, negative affectivity and objective health had no direct effect on life satisfaction. Together, these studies suggest that well-being is the product of low psychological distress and being able to attain positive feelings.

The eudaimonic view. The eudaimonic view of well-being is based on the notion that one's quality of life is derived from the development of their best potential, as well as their principles for the fulfilment of personally expressive, self-concordant goals (Sheldon, 2002, as cited in Waterman, 2008). This definition of well-being has been incorporated in both Eastern and Western philosophies of satisfaction (Ryan & Deci, 2001). In contrast to the hedonic views of Aristippus, Aristotle and his followers defined well-being as a state that is unrelated to feelings of pleasure, but related to the pursuit of self-development and restraint of passions (Waterman, 1993; Ryan & Deci, 2001).

Waterman (2008), a modern key proponent of the eudaimonic theory of well-being, defines the subjective experience of eudaimonia as the feeling of personal expressiveness. This experience occurs when an individual acts in ways that are consistent with their purpose in life and that develop their potential. Eudaimonia is also associated with a number of factors related to intrinsic motivation, including self-determination, a balance of challenges and skills, and the investment of considerable effort (Waterman, Schwartz, & Conti, 2008). According to Waterman et al. (2010) eudaimonic well-being consists of six interrelated categories, including—self-discovery, perceived development of one's best potentials, a sense of purpose and meaning in life, investment of significant efforts in pursuit of excellence, intense involvement in activities, and enjoyment of activities as personally expressive (see Table 2.1). Waterman et al. (2010) suggests that individuals can identify and develop talents and skills which represent their best potentials, and pursue goals that are purposeful and meaningful to their lives. Furthermore, they are capable of recognizing identity choices that are suitable for themselves and that serve as the basis for their personally meaningful commitments. These choices lead to the engagement of activities which produce

feelings of personal expressiveness. This process is closely associated to intrinsic motivation because an individual experiences a sense of autonomy and develops self-actualisation. As a result, an individual makes progress towards their goals having within themselves a sustainable source of motivation and a feeling of well-being.

Component	Definition
Self-discovery	One recognizes and lives in accordance with his/her true self and strives toward self-realization. Self-discovery also includes the process of identify formation.
Perceived development of one's best potentials	One learns about oneself concerning their unique potentials that represent the best they can become.
Sense of purpose and meaning in life	One's talents and skills used in deciding life goals and putting skills and talents towards the pursuit of personally meaningful objectives.
Investment of significant efforts in pursuit of excellence	Considerably greater level of effort is invested in personally meaningful activities than other activities.
Intense involvement in activities	The intensity of an individual's involvement in personally meaningful activities should be considerably higher than when engaging in other, more routine activities.
Enjoyment of activities as personally expressive	One enjoys what they are doing in their life, as there are exploratory purposes without any limitations

Table 2.1 Six Components of Eudaimonic Well-Being (Waterman et al., 2010)

Eudaimonic well-being is thought to arise from the awareness and development of one's potential (Ryan & Deci, 2001). This is congruent with Waterman, Schwartz, and Conti's research findings (2008) who found that in undergraduate students, eudaimonic well-being was moderately correlated with self-determination (r = 0.35 to 0.44, p <.001), self-realization (r = 0.49 to 0.54, p <.001), flow experiences (r = 0.49 to 0.55, p <.001), and level of effort (r = 0.32 to 0.40, p <.001). Sheldon, Ryan, and Reis (1996) examined people's daily fluctuations in satisfaction with autonomy and competence over two weeks. They found that at an interpersonal level, feelings of autonomy and competence predicted happiness and vitality. However, at an intra-personal level, variations in the experience of fulfilment of these two basic needs significantly predicted variations in affect. Recently, Fowers, Mollica, and Procacci (2010) found a significant correlation between eudaimonic well-being and self-efficacy, as well as eudaimonic well-being and positive affect (r = 0.24, p <.001 and r = 0.28, p <.001 respectively) in undergraduate students.

Research has also investigated the relationship between eudaimonic well-being and psychological distress. Waterman et al. (2010) found that eudaimonic well-being was moderately

and negatively correlated with anxiety (r = -0.35 to -0.37) and depression (r = -0.32 to-0.35). Keyes (2005) also found that eudaimonic well-being was negatively correlated with classic psychological distress symptoms, including depression (r = -0.26, p <.001), anxiety (r = -0.22, p <.001), and panic attacks (r = -0.19, p <.001).

In summary, research on well-being is mainly derived from two disparate perspectives: the hedonic view of subjective well-being and the eudaimonic view of psychological well-being. The conceptualization of hedonic well-being focuses on positive emotions and life satisfaction. On the other hand, eudaimonic well-being focuses on meaningfulness, self-actualization, personal growth, and a commitment to socially shared goals and values. While the eudaimonic view of well-being is perceived by both the Eastern and Western cultures as superior, the hedonic view of well-being is perceived as an inferior notion which enslaves individuals to their desires (Formm, 1981 as cited in Ryan & Deci, 2001). Research has also investigated the relationship between eudaimonic well-being and subjective well-being. Waterman et al. (2010) found that eudaimonic well-being was moderately and positively correlated with subjective well-being (r = 0.47).

Waterman (1993) suggests that eudaimonic well-being arises when individuals perceive congruency between their life activities, their values, and the meaning of their life. Although the hedonic and eudaimonic views represent two different perspectives, empirical studies demonstrate that both views have a negative association with distress, with small to medium effect sizes. These empirical studies indicate that well-being and distress are negatively correlated but not the opposite, suggesting that the absence of psychological distress is not supportive of psychological well-being. This notion is supported by Keyes, who proposes that well-being and distress are not opposite constructs, and that the absence of mental illness does not necessarily imply the presence of well-being. Thus, for the optimal development of well-being, psychological distress should also be considered (Keyes, 2005).

The current study attempts to integrate Buddhist understanding into a mindfulness-based psychological intervention to promote inner happiness rather than external happiness. Therefore, the concept of eudaimonic well-being is used to meausre sutdy outcomes as it better fits with ideas from Eastern mindfulness. The current study also attempts to build on existing Western mindfulness-based programs by integrating Eastern philosophies into a form of psychotherapy that promotes well-being and addresses psychological distress.

Well Being and Happiness: Programs and Interventions

Prior to World War II, psychology had the dual aims of treating mental illness and promoting excellence and positive communities. However, after the immense suffering caused by

World War II, many psychologists considered the urgent need to repair the psychological damage caused by the war (Wood & Tarrier, 2010). During the last four decades, professional psychologists have learnt how to effectively " bring people up from negative eight to zero, but also be as good at understanding how people raise from zero to positive eight" (Gable & Haidt, 2005).

Since the human potential movement in the 1970s, there have been over 100 interventions that claim to enhance well-being or happiness. Of these interventions, approximately 40 have been empirically tested, replicated, and formally offered. Recently, Seligman, Steen, Park, and Peterson (2005) conducted a randomized controlled trial and examined the effectiveness of a psychological intervention that aims to promote happiness. The study tested 577 adult participants who were randomly assigned to one of five treatment groups or a placebo group. Participants in the treatment groups completed five happiness exercises each week, while participants in the placebo condition wrote about their childhood memories. All participants received instructions via the internet, and were required to complete an exercise and a self-report measure of happiness each week for six months. Three treatment groups, including two groups that were assigned to identify their strengths and one group that was assigned to complete three good things, showed long-term increases in self-reported happiness. The two remaining treatment groups and the placebo group showed a short-term increase in happiness ratings which was not sustained at a one week follow-up assessment.

Sin and Lyubomirsky (2009) conducted a meta-analysis of 51 positive interventions with a total of 4,266 clinical and non-clinical depressed patients. The analysis examined the effectiveness of the interventions in developing positive feelings, positive behaviours, and well-being, as well as reducing depressive symptoms. The findings demonstrated that positive psychology interventions significantly enhanced well-being ($r = 0.29$) and significantly decreased depressive symptoms ($r = 0.31$).

To date, a number of studies (see Table 2.2) have evaluated the efficacy of positive interventions in enhancing well-being and positive psychological outcomes in non-clinical adult populations. Table 2.2 includes published studies on well-being and positive psychological outcomes that were conducted between 2003 and 2011. The studies include peer reviews, quasi-experimental designs, or randomised controlled trials with a control group.

Table 2.2: Studies Examining the Effect of Positive Psychology Interventions (PPI) on Well-being in Non-clinical Adult Populations

Study	Type of Participant (N)	Intervention / duration	Intervention delivery	Control groups	Main outcome
Emmons and McCullough, (2003)	Undergraduate students (132)	Gratitude (8-12 weeks)	Self-admin	NC (67)	PPI>NC: increase in positivity in life as a whole, positive expectations for upcoming week, and hours of exercise
Watkins et al. (2003)	Adults (156)	Gratitude (4 weeks)	Self-admin	NC (38)	PPI>NC: increase in positive affect
Burton and King, 2004	College students (90)	Positive writing (20 minutes for 3 executive days)	Self-admin	NC (42)	PPI>NC: increase in positive affect. PPI < NC: fewer health centre visits for illness
Otake et al. (2006)	undergraduate students (119)	Counting own kind behaviour (Less than 4 weeks)	Group-admin	NI (48)	PPI> NI: Increase in subjective happiness and motivation to perform kind behaviour
Sheldon and Lyubomirsky (2006)	Undergraduate students (67)	Gratitude and visualizing best possible self	Self-admin	Placebo (PC:21)	PPI > PC: increase in positive affect
Green, Oades and Grant (2006)	Adults (56)	Life coaching (10 weeks)	Group-admin	WL (28)	PPI > WL: increase in goal striving, well-being, and hope

AC= Active control. NC = No treatment control. NI = No control condition. PC= a Placebo control. PPI = Positive psychology intervention.

Table 2.2 *(Continued)*: Studies Examining the Effect of Positive Psychology Interventions (PPI) on Well-being in Non-clinical Adult Populations

Study	Type Participant (N)	Intervention / duration	Intervention delivery	Control groups	Main outcome
Goldstein, (2007)	Adult Volunteers (83)	Cultivating sacred moments (3 weeks)	Self-admin	AC, positive writing (42)	PPI=AC: increase in subjective well-being and psychological well-being
Spence and Grant (2007)	Adult (63)	Professional life coaching (10 weeks)	Individual therapy	Peer coaching (22), Control (200)	PPI>Peer coaching> Control: increase in positive affect, subjective well-being, and psychological well-being
MacLeod, Coates and Hetherton (2008)	Adults (64)	Goal and Plan setting (over a period of 3 weeks)	Group-admin	NI (35)	PPI > NI; increase in subjective well-being
Giannopoulos and Vella-Brodrick (2011)	Adults (181)	Writing positive things (pleasurable or meaningful event; 1 week)	Self-admin	NI (33), Daily event (DV:31)	PPI>NI=DV: increase in well-being

AC= Active control. NC = No treatment control. NI = No control condition. PC= a Placebo control. PPI = Positive psychology intervention

As shown in Table 2.2, Positive Psychology Interventions (PPI) increased well-being and positive psychological outcomes overall. For peer reviews, it is clear that PPI enhanced well-being and positive psychological outcomes. However, a limitation in the literature on existing PPI's is the failure to use an active control condition, such as a placebo condition. Therefore, the reported improvements in the treatment groups may be due to reasons other than the specific positive intervention that they received.

PPI's are also successfully used in clinical populations. For example, in addition to Cognitive Behavioural Therapy (CBT), Well-Being Therapy was successfully used to promote well-being in depressed patients (Fava et at., 2005). In contrast, the Positive Mindfulness Program (PMP) in the present study was conducted on a non-clinical population. A review of the effectiveness of Positive Psychology Interventions for clinical populations is beyond the scope of this study, but can be found in a meta-analysis conducted by Sin and Lyubomirsky (2009).

As seen in Table 2.2, a similarity between the PPI's typically involves small positive behavioural activities, such as gratitude or positive writing, which are administered alone or in small groups. Sin and Lyubomirsky (2009) conducted a meta-analysis of 51 PPI's. The findings from the meta-analysis showed that PPI's reduced distress ($r = 0.31$) and improved well-being ($r = 0.29$). PPI's only include positive behavioural activities which are similar to the behavioural activation used in CBT to improve negative mood. Therefore, the structure of PPI's can be viewed as lacking some of the beneficial components of psychotherapy. A common feature of these PPI's is that participants were asked to complete small tasks alone. Small tasks are easy and convenient to administer; however, they lack the benefits of receiving treatment from a therapist. As a result, the therapeutic alliance is not formed, there are no therapist effects, nuances of therapeutic communication (e.g., non-verbal language) are omitted, and there is no feedback process between the client and therapist (Rashid, 2009).

In some modes of treatment, mindfulness is integrated into group psychotherapy to promote well-being. The Mindfulness-Based Stress Reduction (MBSR) program aims to reduce negative psychological outcomes (Kabat-Zinn, 2003), and was adapted in the present study to promote well-being. In a recent study, Nyklíček and Kuijpers (2008) conducted a randomised control trial with adult participants to test the effectiveness of the MBSR program in reducing negative psychological outcomes and in improving positive affect. Participants were randomly assigned to either the MBSR group or the wait-list control group. A multiple repeated measures analysis of variance showed that relative to the control group, the MBSR group experienced improvements in positive affect. A number of other studies have also adopted the MBSR program to promote well-being. These research studies have demonstrated significant improvements in positive psychological outcomes (Nyklíček & Kuijpers, 2008, Jain et al., 2007–details please see chapter 3). The MBSR studies

provide a valuable foundation to build on, such that future research may utilise mindfulness for the enhancement of well-being.

The exact nature of the relationship between distress and well-being remains unclear in the literature. Keyes (2005) suggests that the absence of psychological distress does not guarantee the presence of psychological well-being. However, it is possible to imagine and observe instances in which a reduction in distress might lead to an improvement in well-being. It is important to note that existing mindfulness based interventions were designed to utilise mindfulness for the purpose of reducing psychological distress. As a limitation, the structure and nature of these interventions may only provide symptomatic relief and this may limit their usefulness for the enhancement of well-being. The enhancement of well-being may require a new approach to treatment, contents, and skills (Slade, 2010). Seligman (2002) believes that the practice of psychology should not only aim to examine ways to benefit people experiencing psychological difficulty, but should also aim to enhance the lives of people who are not operating at their full potential. However, the current therapeutic repertoire has little to offer to non-clinical individuals who want to progress from a neutral or benign existence to a higher state of happiness and prosperity (Shapiro, Schwartz & Santerre, 2002). There is a need to develop a formal and inclusive psychotherapy that builds on the knowledge from existing mindfulness-based programs.

Mindfulness originates from Eastern philosophy which has a strong focus on the concept of well-being. The practice of mindfulness itself has a long-standing tradition in the East where it is well conceptualized. Mindfulness may provide the positive behavioural components (i.e. meditation), cognitive components (i.e. insight into Buddhist teachings), and over-arching philosophy that could be used for the development of a new positive mindfulness-based program designed to enhance well-being. In the next section, an overview of well-being and happiness in Buddhism is provided.

Well-being and Happiness in Buddhism

Eastern cultures often characterise happiness based on a eudaimonic perspective of well-being that is derived from Eastern religions such as Buddhism (Ryan & Deci, 2001). Buddhism considers happiness to be a product of a balanced mind, which is attained by regularly training the mind through mindfulness and developing an understanding of the nature of the world. For example, the 14th Dalai Lama (Lama & Cutler, 2005) explained that *Sukha*, or lasting happiness, results from training the mind and also includes joy, compassion, and love. Ricard (2008), a famous French Buddhist monk, describes happiness as a deep sense of flourishing that arises from an exceptionally healthy mind. He suggests that happiness is not a mere pleasurable fleeting emotion or mood, but rather a state of being. Ricard believes that happiness is a way of interpreting the

world and that while it may be difficult to change the world, it is possible to change the way we look at it. Payutto (1998), a respected Thai-Buddhist monk, also states that happiness emerges whenever the mind is healthy, independent of any external environmental factors. According to Buddhism, happiness and well-being are different from feelings of pleasure, and Buddhism teaches that happiness is attained by training the mind and developing an understanding of insight rather than obtaining of external pleasures. Therefore, in the present thesis, a mindfulness program called "the Positive Mindfulness Program (PMP) was developed to build on existing Western mindfulness-based programs by adding aspects of the rich Buddhist understanding. The effectiveness of PMP was examined to improve well-being and distress.

In this section, the concept of happiness from an Eastern perspective is discussed. Happiness in Buddhism is a state of long-term well-being that manifests when the mind is free from mental blindness and negative emotions. It involves wisdom, which allows one to see the world as it is without prejudice or distortions, and it involves the experience of moving towards inner freedom and openness to others (Ricard, 2008). Wisdom requires a person to comprehend the true nature of oneself, the world, and the understanding of the three characteristics of existence (Payutto, 1998*)*. In Buddhism, the three characteristics of existence include *Anica* (i.e. impermanence), Dukka (i.e. suffering), and Anatta (i.e. non-self voidness of self) (Payutto, 1998). The understanding of the three characteristics of existence (detailed page 37) is developed by training the mind or practicing mindfulness (Lama & Cutler, 2005).

In Theravada Buddhism, happiness or well-being has different levels (Payutto, 1998). Kama-sukka is happiness that results from bodily sensations, such as sight, hearing, touch, smell, and taste, which then lead to feelings of desire and pleasure. There are two subtypes of Kama-sukka, including Vatthukama and Kilesakama. Vatthukama, also referred to as objective sensuality, reflects the pleasurable sensation of interacting with a desirable object through the five senses. An example of Vatthukama is the desire for materialistic goods, such as cars, houses, and money. On the other hand, Kilesakama, or sensuality as defilement, reflects the pleasurable sensations obtained from fulfilling psychological needs, such as the need for love, belongingness, fame, and sexual gratification. In Buddhism, Kama-sukka is the lowest type of happiness because it is transient and relies on external factors. It involves a person relying on objects or conditions to fulfil their needs, which may increase over time. Kama-sukka is unrefined and can cause a person's mind to be filled with different and changing emotions, such as excitement, worry, and anxiety. This dynamic emotional state blinds individuals from recognizing that this type of happiness is unrealistic to maintain and instead, leads to preoccupation and obsession. However, it is possible to maximize the

benefits of Kama-sukka by using mindfulness techniques, which can help a person to recognize that 'unrefined' happiness is transient and dependent on external factors that cannot be fully controlled.

Jhana-sukka, also referred to as joy and serenity from meditation, is a more refined and subtle type of happiness compared to Kama-sukka. It results from a sense of serenity by training the mind. Jhana-sukka occurs when an individual fills their mind and body with serenity, stripping away their desire for satisfaction and their avoidance of dissatisfaction. It is a product of equanimity which can be controlled and obtained in any situation, unlike happiness that results from external factors. According to Buddhist tradition, Jhana-sukka leads to complete tranquillity and calmness. Although it has several benefits, the development of Jhana-sukka requires extensive practice as it is at the centre of meditation skills. While it is superior to Kama-sukka, Jhana-sukka is still considered to be transient because it requires practice, skill, tranquillity, and calmness. It ceases when the mind wanders or when the practice of meditation is interrupted. Jhana-sukka is an essential foundation for the development of a longer lasting, ultimate happiness, referred to as Nibbana-sukka.

Nibbana-sukka, or a pure serenity from understanding the ultimate truth, is the highest level of happiness that can only be obtained after achieving Jhana-sukka. It extends on the experience of happiness through meditation, by including the development of insight. In Buddhism, insight means recognizing the true nature of the world and includes the three characteristics of existence (i.e. Anica, Dukka, and Anatta. Insight into the three characteristics of existence leads to changes in the structure of the mind and in an individual's personality, and instills a prolonged equanimity within the mind. Generally, those who obtain this type of happiness are free from the transient suffering and happiness of Kama-sukka and Jhana-sukka (Payutto, 1998), and can respond to uncontrollable external factors with calmness, stability, and wisdom.

An example of Nibbana-sukka is in the story of Peter, who regularly practices mindfulness. Peter recently lost his wife in a car accident. He dealt with his loss with acceptance. He empathetically consoled his children for their loss and became a pillar of strength. He gently restored a normal routine back into the lives of his family members. On the day of the funeral, Peter calmly watched as his wife was put to rest in a funeral ceremony that he had organized. He also gently pacified his distressed children by telling them that "things have their own ways" and that "there is nothing to resist". In this example, Peter views the loss of his beloved wife through the recognition of the three characteristics of existence and responds to the loss with understanding, calmness, acceptance, and wisdom.

A second example is in the case of Richard, who had an excellent experience while hiking. Richard was very impressed with the amount of peace he experienced while hiking and decided to hike the same mountain again. However, it rained during his second hike. Although Richard thought that he would have a similar experience, he was able to acknowledge the fact that the

second hike was a different experience. This acknowledgement helped him to stay connected with his life and with the reality of the situation. In this example, Richard recognized the transience of his phenomenological experience and understood the three characteristics of existence. Furthermore, Richard did not hold on to his first experience or demand more from his second experience, thereby accepting his second hiking experience for what it was.

Nibbana-sukka is an enduring type of happiness that is derived from the feelings of joy and serenity in meditation, as well as the understanding of inevitable states of suffering, impermanence, and non-self attachment. While there are attempts to bridge the gap between Buddhist ideas and Western psychology (e.g. Buddhist psychology), empirical evidences are not yet mature. The notion of Nibbana-sukka has not been empirically tested, thus it is limited in terms of its use as a valid predictor of psychological outcomes. However, the conceptualization of eudaimonic well-being, which involves the cultivation of actions and behaviours that lead to happiness, is similar to Nibbana-sukka. Eudaimonic well-being and Nibbana-sukka both claim that happiness is attained through internal processes and the cultivation of actions and behaviours, as opposed to external sources of pleasure.

The Western and Buddhist conceptualizations of happiness differ in many aspects. Western psychology views well-being from two different perspectives, the hedonic and eudaimonic perspectives. The primary difference between these two perspectives is that hedonic well-being is focused on gaining life satisfaction through pleasure and positive feelings, whereas eudaimonic well-being is derived from self-actualization, virtue, and progress towards life goals. Both the hedonic and eudaimonic views of well-being believe that happiness can be attained by enhancing a positive sense of self, such as improving one’s self-esteem, autonomy, or self-efficacy. In contrast, the Buddhist point of view claims that authentic happiness is derived from insight of the true nature of reality. In Buddhism, the construct of happiness has different levels which include a deep sense of long lasting well-being, and is related to stable traits. Furthermore, happiness always involves compassion for others, minimal dependence on external factors related to satisfaction, a reduction in a person's sense of self (ego), and recognition of interconnectedness with others and other beings in the environment (Ekman, Davidson, Richard, & Wallace, 2005). The following thesis does not aim to measure or to investigate the Buddhist concept of happiness, but instead builds on the idea that conceptual understanding of impermanence, suffering, and non-self attachment will help to improve well-being and distress when they are incorporated into the practice of mindfulness as it is claimed by Buddhist mindfulness.

Bridging the Gap between Buddhism and Western Psychology

Levine (2000 as cited in Mikulas, 2007) suggests that there are a number of commonalities between Buddhism and Western psychology, as both practices are concerned with alleviating human suffering and focus on the human condition in natural, rather than religious terms. Buddhism and Western psychology also agree that humans are caught in a matrix of forces, such as cravings and drives, which originate from biological urges and cultural beliefs. They both teach the appropriateness of compassion, concern, and unconditional positive regard toward all beings, and encourage personal growth. They also acknowledge that the mind functions at both a superficial and deep level.

Bridging the gap between Buddhism and Western psychology is still in its infancy because few studies from Western psychology have examined Buddhist concepts from an empirical perspective. For example, Neff (2003) constructed a scale to measure self-compassion based on Buddhist concepts. She found that in undergraduate students in the US, higher levels of self-compassion were associated with lower levels of distress and higher levels of life satisfaction. Sahdra, Shaver, and Brown (2010) developed a scale of non-attachment based on the Buddhist concept that non-attachment is psychologically and socially adaptive. They found that higher levels of non-attachment were positively associated with life satisfaction, self-acceptance, and positive relationships, whereas lower levels of non-attachment were negatively associated with distress. Furthermore, Wallace and Shapiro (2006) proposed a conceptual framework which combines Western concepts of well-being with Buddhist teachings. Their conceptual framework includes concepts related to training the mind to enhance health and well-being, and includes four principle components: conative balance, attentional balance, cognitive balance, and affective balance.

Conative balance. Conative balance refers to the faculties of intention and volition. It is the ability to apply one's intentions purposefully, persistently, and effectively, as required by the task at hand (Reitan & Wolfson, 2005). The application of conative balance involves a commitment to, and an investment in, personal growth. Achenbaum and Orwoll (1991) suggest that conative balance is one of the key components of wisdom. Wisdom is gained through the process of transforming intrapersonal, interpersonal, and transpersonal experiences into the domains of cognition, personality, and conation. Furthermore, conation plays an important role in the development of spiritual commitment.

According to Wallace and Shapiro (2006), conative imbalance occurs when individuals experience a loss of motivation to pursue true happiness and instead, become fixated on obsessive goals that obscure the reality of the present (Asanga, 2001 as cited in Wallace & Shapiro, 2006). According to Buddhism, meditation in the reality of impermanence and suffering can alleviate this

imbalance. In meditation, the contentment and recognition of the true causes of both suffering and well-being are cultivated to remedy these mistaken goals. Research supports the importance of conative balance, with evidence to suggest that possessing personal goals that are congruent with one another and making progress towards these goals increases self-reported ratings of subjective well-being (Emmons, 1986). High levels of conative motivation also play an important role in the process of changing addictive behaviours (Prochaska, DiClemente, & Norcross, 1992).

Attentional balance. Attentional balance refers to the ability to voluntarily sustain and direct attention. Attentional imbalances occur when one experiences compulsive distraction or laxity. The theories of flow and self-regulation highlight the benefits of attentional balance. For example, research studies have identified a positive relationship between attention and effortful control (Critchley & Mathias, 2003). Research has also shown that attention can be improved by avoiding too much exertion (Olivers & Nieuwenhuis, 2005). Furthermore, flow, a construct similar to attentional balance, is positively associated with novelty seeking, persistence, and self-transcendence, and is inversely related to self-directedness (Teng, 2011). Despite the various benefits of flow, there is a need for balance when the level of challenge becomes excessive, as the level of attentional control is compromised. For example, when there is too much attentional arousal, the level of effort that is exercised becomes excessive and as a result, attentional balance cannot be maintained (Critchley & Mathias, 2003). In the Buddhist tradition, attentional balance can be achieved through meditation, such as the practice of breathing in mindfulness (Wallace & Shapiro, 2006). However, the successful practice of meditation depends on both conative and attentional balances, as the two concepts cannot be separated (Payutto, 1998). Conative and attentional balances can be viewed as a single component of mindfulness. Different scales of mindfulness have been developed, including The Mindfulness and Attention Awareness Scale (MAAS; Brown & Ryan, 2003), The Kentucky Inventory of Mindfulness Scale (KIMS; Baer, Smith, & Allen, 2004), The Five Facets Mindfulness Questionnaire (FFMQ; Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006), and The Toronto Mindfulness Scale (TMS; Lau et al., 2006).

However, these measures of mindfulness were developed from a Western perspective and these mindfulness inventories are not likely to reflect Buddhist constructs directly (Grossman & Van Dam, 2011). In the present study, The Positive Mindfulness Program (PMP) primarily focuses on the role of Buddhist understanding in improving well-being and reducing distress. In line with this specific focus, The Freiburg Mindfulness Inventory (FMI) was selected to capture mindfulness because it was directly developed from Buddhist perspective using participants who attended meditation retreat program (Buchheld, Grossman, & Walach, 2001).

Cognitive balance. Cognitive balance refers to the sense of knowing as opposed to purely discursive thought (Wallace, 2005 as cited in Wallace & Shapiro, 2006). Individuals without

cognitive balance are disconnected from reality (Wallace & Shapiro, 2006) and are susceptible to rumination, which consists of repetitive thinking about the causes, consequences, and symptoms of negative affect (Nolen-Hoeksema, 1991). Ultimately, rumination contributes to the development and maintenance of depression and anxiety (McLaughlin & Nolen-Hoeksema, 2011) and is caused by fear, perceived threat, loss, or injustice (Trapnell & Campbell, 1999). Individuals with high levels of rumination experience a number of negative psychological experiences, such as repetitive thoughts (Watkins, Moberly, & Moulds, 2008), obsessions (Obsessive Compulsive Cognitions Working Group, 1997), worries (Segerstorm, Tsao, Alden, & Craske, 2000), and neuroticism (Nolan, Roberts, & Gotlib, 1998). Luyckx, Soenens, Berzonsky, Smits, Goossens, and Vansteenkiste (2007) found that college students who experienced low levels of rumination reported greater levels of subjective well-being. Mindfulness training can help to reduce rumination and negative thoughts. Thus, mindfulness helps to improve cognitive balance (Huffziger & Kuehner, 2009).

In Buddhism, cognitive balance is developed by learning how to attend to what is presented to one's senses and to develop an inner awareness of one's own mental processes (Gunaratana, 1991 as cited in Wallace & Shapiro, 2006). As Buddha said "in the seen, there is only the seen; in the heard, there is only the heard; in the sensed, there is only the sensed; in the known, there is only the known" (Analayo, 2006 as cited in Wallace & Shapiro, 2006). The practice of mindfulness has been shown to improve cognitive balance by assisting individuals to discern the true nature of their bodily sensations and emotions, and by increasing their awareness of their mental states and thought processes. Furthermore, mindfulness has been shown to decrease rumination and increase well-being. Shapiro, Oman, Thoresen, Plante, and Flinders (2008) conducted a randomised controlled study to test the effectiveness of mindfulness in undergraduate college students. Participants were randomly allocated to one of two meditation-based interventions or a waitlist control condition. The result showed that mindfulness significantly helped to reduce rumination in the two meditation-based interventions compared to the control group, and the cultivation of mindfulness was dependent on reduced levels of rumination.

Affective balance. Affective balance refers to the state of being free from excessive emotional vacillation, emotional apathy, and inappropriate emotions. Affective imbalance occurs when one's emotional regulation responses are inappropriate, such as extreme elation, hope, fear, adulation, or contempt. Emotional regulation can be defined as the ability to regulate emotions and emotional responses (Gross, 1998; Chiesa, Serretti, & Jakobsen, 2013), whereas adaptive emotional regulation is theorized to support adaptive functioning and mental health (Gross & Munoz, 1995 as cited in Chiesa, Serretti, & Jakobsen, 2013). Indeed, deficits in emotional regulation are found in the diagnosis of several psychiatric disorders (Repetti, Taylor, & Seeman, 2002 as cited in Chiesa,

Serretti, & Jakobsen, 2013). Emotional regulation is also associated with calmness and life satisfaction (Geisler, Vennewald, Kubiak, & Weber, 2010).

Mindfulness in meditation can facilitate attentional self-regulation and emotional regulation (Chambers, Gullone, & Allen, 2009). Roemer, Lee, Salters-Pedneault, Erisman, Orsillo, & Mennin, 2009) found that higher self-reported ratings of mindfulness were related to lower scores on the Difficulties in Emotion Regulation Scale. Feldman, Hayes, Kumar, Greeson, and Laurenceau (2007) also found a strong positive correlation between self-reported mindfulness and self-reported use of adaptive emotional regulation strategies.

Wallace and Shapiro's conceptual framework of well-being (2006) attempts to combine Buddhist ideas with Western psychological approaches and claims that conative, attentional, cognitive, and affective balances are important Buddhist teachings that should be included in Western mindfulness-based programs. Wallace and Shapiro suggest that Buddhist insight into the fluctuating, impermanent nature of all phenomena, along with an independent ego, are the root of psychological problems. They believe that the integration of a motivation to change (conative balance) and the practice of mindfulness (attentional balance) are the key to achieving well-being.

In the current study, Wallace and Shapiro's conceptual framework of well-being helps to illustrate cognitive and emotional components that may be changed by the mindfulness intervention. However, it is not the aim of this thesis to provide empirical support or to verify Wallace and Shapiro’s conceptual framework.

Psychological Distress in Western Psychology

Psychology has traditionally been focused on assessing and treating human suffering and psychological research has gone to great lengths to define, quantify, and treat disorders such as depression, anxiety, and stress (Seligman, 2002). Levels of psychological distress are often used as indicators of mental health. However, well-being and psychological distress are not at opposite ends of the same continuum, given that the absence of mental illness does not necessarily imply the presence of psychological well-being. On the other hand, a number of correlational studies have reported that well-being is negatively correlated with psychological distress, with small to moderate correlations. Thus, it is possible that to attain an optimal level of well-being, psychological distress should be considered (Keyes, 2005).

The PMP focuses on mindfulness and the importance of understanding the three characteristics of existence in order to promote well-being. It also aims to alleviate depression, anxiety, and stress by improving mindfulness skills and reducing rumination and difficulties in emotional regulation. Most of the existing mindfulness-based psychological interventions use mindfulness to tolerate and accept negative cognitions and emotions. Therefore, the next section

reviews literature that examines the relationship between psychological distress and cognitive-emotional models of psychological distress. Selected concepts of depression, anxiety, and stress that are related to this study are presented.

There are a number of ways to consider the development and maintenance of psychological distress. For example, the biological model views distress as the product of dysfunctional neurological processes, whereas the interpersonal model views distress as the product of poor social support and unsupportive interpersonal relationships (Young, Rygh, Weinberger, & Beck, 2008). This review of psychological distress in western psychology will focus on cognitive models of distress since mindfulness interventions deal directly with thought processes to promote cognitive flexibility. Although mindfulness interventions may also effect biological and social factors, the aim of the mindfulness practice is to focus on the cognitive factors. Furthermore, cognitive and emotional models of distress have a considerable body of research that examines the influence of cognitive and emotional processes on distress and well-being. Previous research on mindfulness has also focused on the role of negative cognitions and emotions (Baer & Krietemeyer, 2006). The mindfulness intervention in the current study primarily focuses on the role of Buddhist understanding and its effect on cognitive and affective components

Depression

Cognitive models of depression. The cognitive model of depression suggests that cognitive factors are causal agents in the diagnosis of Major Depressive Disorder (Young, Rygh, Weinberger, & Beck, 2008). Beck proposed a classical cognitive theory of vulnerability to depression called a negative schema model. The model suggests that depressed patients have a complex system of negative schemas and cognitions which include a negative view of the self, the world, and the future (i.e. the "cognitive triad"). Depressed individuals view themselves as worthless, inadequate, unlovable, and deficient, and see the environment as overwhelming and unsupportive. Furthermore, they view the future as hopeless and believe that their own efforts will be insufficient to change the unsatisfying course of their lives. Depressed individuals consistently distort and misinterpret events as a result of negative self-schemas, which are activated by underlying dysfunctional attitudes. The cognitive triad is activated and maintained by negative self-schemas which are developed during childhood (Beck 2002).

A negative schema is characterised by the automatic activation of negative past experiences and stable memory. It can occur without intention or effort if a person is depressed (Haeffel, Abramson, Brazy, Shah, Teachman, & Nosek, 2007). The activation of negative schemas and the cognitive triad has drawn significant attention from a number of research studies associated with depressive symptoms. For instance, Timbremont and Braet (2006) conducted a longitudinal study

with 162 children and adolescents diagnosed with depression. The findings showed that the three components in the cognitive triad (i.e. the negative self, the world, and the future) were positively associated with depressive symptoms, both in children (r = 0.51 to 0.73, p <.001) and in adolescents (r = 0.37 to 0.84, p <.001). Schmidt, Joiner, Young, and Telch (1995) investigated the correlates of the Schema Questionnaire with more than 1,000 undergraduate students. The questionnaire consisted of 13 negative schemas such as emotional deprivation, mistrust, abandonment, and fear of losing control. Their findings showed that the Schema Questionnaire was positively correlated with depression, with medium to large effect sizes, r = 0.37 to 0.84, p <.001. Overall, research has shown that negative cognitive triads and negative schemas are positively associated with depression.

Aside from the negative schema model in clinical psychology, Beevers (2005) also proposed a theory of cognitive vulnerability to depression. This theory is similar to the "dual process model" in social and personality psychology, which focuses on cognitive information processing. According to the dual process model, the associative processing and reflective processing modes are engaged. A review of these two modes is outlined below.

Associative processing mode. The associative processing mode is an automatic, implicit, unconscious, and intuitive form of processing. It occurs quickly and is viewed as an effortless information processing tool. The associate processing mode is associated with the current stimulus, as well as the stimulus experienced in the past which remains influential in information processing. Associative processing relies on memory that is formed with repeated experiences. For example, a man may see a clock and wonder what time it is or he may see his romantic partner and suddenly feel a sense of love and affection (Smith & DeCoster, 2000). Individuals with depressive symptoms tend to have a negatively biased, self-referent associative processing mode, which enhances their cognitive vulnerability to depression.

Reflective processing mode. The reflective processing mode is an explicit, controlled, conscious, and rational form of processing. It involves significantly more intention and awareness than the associative processing mode. The reflective process is slow as it contains a series of thoughts and interpretations regarding current situations. Furthermore, the reflective processing mode is a secondary process, whereas the associative processing mode is a primary process. For example, as mentioned previously, depressed individuals tend to have a negatively biased, self-referent associative processing mode. As a secondary source, the reflective processing mode may fleet a series of negative thoughts which then lead to dysphoria (Figure 2.1).

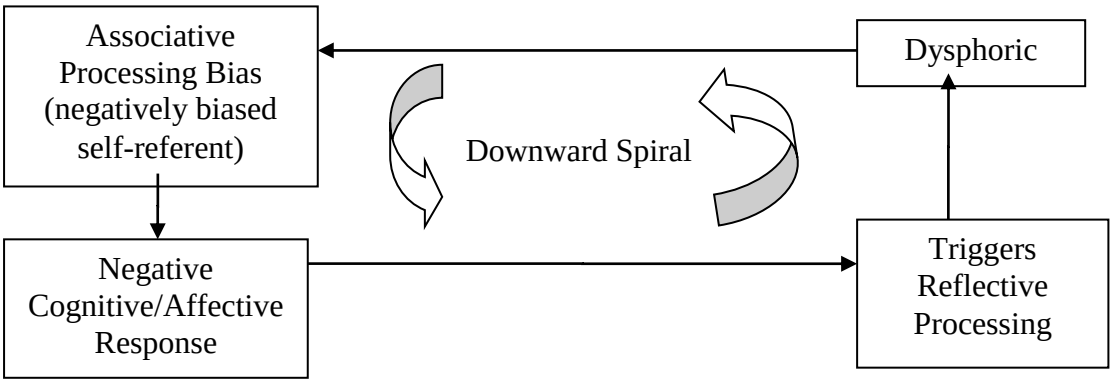

Figure 2.1: A dual process of cognitive vulnerability to depression (Beevers, 2005)

According to the dual process model of cognitive vulnerability to depression, negatively biased, self-referent associative processing is the starting point of a downward spiral that triggers a series of negative thoughts in reflective processing. As a result, individuals experience a dysphoric mood. For instance, when confronted with a new situation, a vulnerable person might think that he will fail at a new task or that he should avoid a new acquaintance. This may subsequently provoke a negative cognitive or affective response. As a result, a series of negative thoughts (i.e., reflective processing mode) that are relevant to the current situation may lead to a dysphoric mood. This process essentially becomes a cycle of rumination and self-focused attention (Mor & Winquist, 2002).

A meta-analysis of correlational studies showed that rumination was strongly correlated with depression in clinical samples (d = 0.82) compared to subclinical (d = 0.43) and non-clinical samples (d = 0.50) (Mor & Winquist, 2002). Recent research has also found similar findings. Berman, Peltier, Nee, Kross, Deldin, and Jonides (2011) found that rumination was positively associated with depression, with a large effect size (r = 0.79, p <.001). Hence, it is hypothesised that a reduction in rumination will ameliorate depression.

Depression and Difficulties in Emotional Regulation

Difficulties in emotional regulation can diminish the capacity to experience, respond to, and differentiate a full range of emotions. These difficulties can be just as maladaptive as deficiencies in the ability to attenuate and modulate strong negative emotions. Based on Wallace and Shapiro's conceptual framework of well-being, the experience of ongoing difficulties in emotional regulation is an affective imbalance. Difficulties in emotional regulation can be expressed in a number of ways, such as the lack of awareness and understanding of emotions, the non-acceptance of emotions, the inability to engage in goal-directed behaviour, the inability to refrain from impulsive behaviour, and the lack of adaptive emotional regulation strategies. These difficulties are associated

with a number of mental illnesses, including depression (Gratz & Roemer, 2004). For instance, emotional suppression and avoidance are viewed as a maladaptive process in maintaining negative emotions and can reduce an individual's acceptance of such emotions (Gross, 2008). This process can lead to a depressive mood, as well as negative consequences on physiological and memory outcomes (Gross, 1998).

A number of studies have explored the association between depression and emotional regulation. A meta-analysis of 114 psychopathologies from clinical and non-clinical samples (71 cross-sectional, 18 experimental, and 25 longitudinal) found significant positive correlations between depression and maladaptive emotional regulation strategies, emotional avoidance (r = .48), and suppression (r = 0.36) (Aldao, Nolen-Hoeksemaand, & Schweizer, 2010). Furthermore, research has shown that individuals who recover from depression are distinguishable from non-depressed individuals because they engage in more emotional suppression, t (71) = 2.71, p <.005 (Ehring, Tuschen-Caffier, Schnulle, Fischer, & Gross, 2010). Based on the findings from these studies, depression is clearly associated with both negative cognitions and difficulties in emotional regulation. Indeed, there seems to be a reciprocal influence between difficulties in emotional regulation and depression. Therefore, an improvement in difficulties in emotional regulation may reduce depression. Given that the PMP in the current study was developed to alleviate depression, this thesis aims to examine whether rumination and difficulties in emotional regulation mediate the effects of the PMP on depression.

Anxiety

Anxiety is the state in which an individual fails to differentiate between a real and an imagined threat (Amstadter, 2008). As a result, their perspective towards themself and ongoing situations becomes self-focused and future-oriented (Barlow, 1991 as cited in Amstadter, 2008). Anxiety is associated with a number of mental disorders, including social phobia, specific phobia, obsessive-compulsive disorder, panic disorder, generalized anxiety disorder, and posttraumatic stress disorder. The term anxiety refers to a set of three major components, including somatic arousal, avoidance behaviour, and threat perception. Somatic arousal is conceptualized as a biological warning system that is triggered by either external or internal stimuli (e.g. negative thoughts). It consists of panic attacks, sweating, breathing difficulties, and rapid changes in heart rate. Avoidance behaviour typically involves controlling and reducing physical arousals that are provoked by fear or stimuli. Threat perception is a cognitive component that differs across the spectrum of anxiety disorders. An example of threat perception in patients with panic disorder is the experience of catastrophic thoughts regarding their panic symptoms. On the other hand, patients

with social phobia or obsessive-compulsive disorder exhibit self-focused attention and narrow their concentration on a perceived threat (Ouimet, Gawronski, & Dozois, 2009).

Cognitive models of anxiety. Current models of cognitive vulnerability to anxiety, posit that individual differences in the processing of threat-relevant materials contribute to the etiology and maintenance of anxiety disorders (Ouimet, Gawronski, & Dozois, 2009). Research has indicated that anxious individuals tend to exhibit selective processing, which reflects their biased worldviews of danger. Mogg and Bradley (2004) found that these worldviews were associated with anxiety symptoms. Research on the cognitive vulnerabilities of anxiety suggests that the etiology and maintenance of anxiety disorders is the result of two key sources, which are attentional biases and the interpretation of ambiguous information. The two sources differ in terms of the focus at each processing stage. While the early stages focus on the attentional biases, the later stages focus on the interpretative biases (Ouimet, Gawronski, & Dozois, 2009).

Attentional biases occur when attention is selectively given to particular stimuli. In the case of anxiety disorders, a large amount of attention is given to threatening stimuli. Attentional biases occur in the early stages of processing when people are consciously aware of their thoughts. The early stages of processing involve the orientation towards threatening stimuli, the attentional engagement with stimuli, the subsequent disengagement from stimuli, and the avoidance of attention from stimuli. This process has been shown to exaggerate the effects of negative experiences in people with high trait anxiety (MacLeod & Hagan, 1992 as cited in Koster, Crombez, Verschuere, Van Damme, & Wiersema, 2006). Models of attentional bias explain why people with high anxiety tend to response to threatening stimuli with hypervigilance.

A large body of empirical evidence supports the model of attentional biases in anxiety. A meta-analysis of 172 studies based on experimental paradigms (e.g. emotional Stroop, dot probe, and emotional spatial cuing) indicated that for anxious and non-anxious, control participants, threat-related bias were present in anxious participants but not in non-anxious participants. The overall effect of the difference was medium (d = .41, p <.001) (Bar-Haim, Lamy, Pergamin, Bakermans-Kranenburg, & Ijzendoorn, 2007).

Aside from the model of attentional biases, some researchers propose that cognitive vulnerability to anxiety can also result from the interpretation of ambiguous information. That is, anxious individuals tend to interpret ambiguous stimuli and events as negative or threatening (Amir, Beard, & Bower, 2005) This idea is consistent with Beck's theory (Beck, 2002) which posits that threat-relevant schemas activate negative cognitions in anxious individuals. A number of studies based on this model have demonstrated that when participants are provided with ambiguous sentences, participants with anxiety disorder are more likely to perceive threatening interpretations compared to recovered and non-anxious participants (Eysenc, 1992 as cited in Ouimet, Gawronski,

& Dozois, 2009). Furthermore, Teachman (2005) investigated the interpretation and memory biases in participants, based on negative schema theories, using the Schematic, Memory Processing Implicit Association Test (IAT) (Greenwald, McGhee, & Schwartz, 1998). The findings showed that interpretation and memory biases were associated with the Panic Disorder Severity Scale in undergraduate students with a high sensitivity to anxiety, compared to students with a low sensitivity to anxiety ($\chi 2 = 9.76$, $p = .003$). Finally, a quasi-experimental study showed that undergraduate students with high social anxiety rated ambiguous videos, F (1, 38) = 7.30, $p < .005$, and negative videos, F (1, 38) = 16.40, $p < .001$) as more negative than participants with low social anxiety.

Anxiety and Difficulties in Emotional Regulation

Unsurprisingly, anxiety is associated with difficulties in emotional regulation (Amstadter, 2008). Cicchetti, Ackerman, and Izard (1995) suggest that individuals with anxiety can experience two categories of emotional regulation difficulties. The first category involves problems in modulating emotional experiences and/or expressions. This can occur when individuals experience emotions with great intensity but are unable to adequately modulate the experience (e.g., self-soothe or inhibit emotional expression). The second category involves frequent, automatic attempts to control or suppress emotional experiences and/or expressions. In this scenario, an individual may engage in control strategies to prevent the experience of an emotion. As a result, highly anxious individuals tend to use maladaptive emotional strategies, such as avoidance or suppression, to regulate their aversive emotions (Mennin, Heimberg, Turk, & Fresco, 2002).

A meta-analysis of 114 studies examining anxiety symptoms in clinical and non-clinical samples (71 cross-sectional, 18 experimental, and 25 longitudinal) found significant positive correlations between anxiety and maladaptive emotional regulation strategies, including emotional avoidance ($r = 0.37$) and emotional suppression ($r = 0.29$) (Aldao, Nolen-Hoeksemaand, & Schweizer, 2010). Suveg, Morelen, Brewer and Thomassin (2010) conducted a path analysis with undergraduate students using Lisrel. The findings indicated that difficulties in emotional regulation had a direct positive effect on anxiety and mediated the relationship between negative perceptions of family climate and behavioural inhibition in childhood experiences of anxiety. Furthermore, Campbell-Sills, Barlow, Brown and Holfmann (2006) conducted a quasi-experimental study in which participants were required to watch an emotional-provoking film and complete a self-report measure on their experiences in acceptability and suppressed emotions. Participants with anxiety disorders scored higher on emotional suppression and lower on emotional acceptability compared to non-clinical participants.

Current research studies show that cognitive and emotional processes contribute to the etiology and maintenance of anxiety disorders. The PMP was developed in the current study to alleviate anxiety. This thesis also aims to examine whether negative cognition (rumination) and difficulties in emotional regulation mediate the effects of the PMP on anxiety.

Stress

Based on the cognitive-behavioural coping concept, stress is a state that arises when individuals perceive a discrepancy between their environmental demands and their available resources. Individuals tend to respond to such transactions by either appropriately balancing their demands or exhibiting a failed response called "the stress response" (Lazarus, 1998). The stress response is associated with both physiological and psychological disorders. For example, well-established literature has associated Gastrointestinal Disorder, Cardiovascular Disorder, Respiratory Disorder, Brief Reactive Psychosis, Posttraumatic Stress Disorder, and Adjustment Disorder with stress (Everly-Jr & Lating, 2013).

Stress and cognitive and emotional processes. Over the years, Lazarus and his colleagues (Lazarus & Folkman, 1984 as cited in Karademas & Kalantzi-Azizi, 2004) have conducted an extensive body of research on cognitive appraisal as a key variable that mediates the relationship between stressors and stress reactions. Cognitive appraisal includes two processes; the primary appraisal and the secondary appraisal. In the primary appraisal, when individuals interact with a stressor, the stressor is judged as harmful, threatening, and challenging. While harm refers to damage that has already happened, threat refers to the potential for harm or loss in the future. Finally, challenge refers to the potential for gain even in difficult situations. In the secondary appraisal, the individual evaluates the coping resources and options to respond to a given stressor. Coping refers to the cognitive and behavioural effort to manage a discrepancy between environmental demands and resources. When an individual evaluates the stressor as harmful, the coping strategies they engage in are more likely to be negative and emotionally-focused, compared to those who perceive the situation as a threat or challenge. The latter group of individuals tend to develop positive, problem-solving coping strategies (Folkman & Lazarus, 1985).

Research has shown that coping appraisals and strategies are associated with different psychological symptoms and emotional states. For instance, Peacock and Wong (1990) conducted a cross-sectional study with undergraduate students and found that cognitive appraisal of threat was positively correlated with psychological symptoms ($r = 0.36$, $p < .001$) and low mood ($r = 0.55$, $p < .001$). Additionally, individuals who perceived that the stressful situation could be controlled by the self-reported a lower mood ($r = -0.26$, $p < .001$) and individuals who perceived that the stressful situation could be controlled by others also reported a lower mood ($r = -0.29$, $p < .001$). Similarly,

Dixon, Heppner, and Anderson (1991) found that in undergraduate students, the stress avoidance-approach style was positively correlated with the hopelessness scale ($r = 0.29$, $p < .001$). Recently, Noorbakhsh, Besharat and Zarei (2010) reported that in university students, the regulation of emotion was positively associated with problem-focused coping ($r = 0.46$, $p < .001$) and positive emotional coping ($r = 0.27$, $p < .001$). Furthermore, the regulation of emotion was negatively associated with negative emotional coping ($r = -0.32$, $p < .001$). Florian, Mikulincer and Taubman (1995) conducted a path analysis using male adults in military service. Causal relationships between hardiness, cognitive appraisals, psychological well-being, and distress were found. In particular, cognitive appraisals of threat had a direct effect on psychological well-being ($\beta = -0.21$, $p < .001$) and psychological distress ($\beta = 0.16$, $p < .001$). Cognitive appraisals of threat were also a mediator between control and commitment hardiness, psychological well-being, and psychological distress. Another path analysis indicated that cognitive restructuring (i.e. positively reframing the meaning of life) had an indirect effect on psychological distress in both men ($\beta = -0.78$, $p < .005$) and women ($\beta = -1.74$, $p < .005$). Finally, the experience of stress at work was a mediator between distress and cognitive restructuring (Guelzow, Bird, & Koball, 1991).

It is clear that depression, anxiety, and stress are common elements that contribute to mental health problems, despite the fact that they have different pathologies and symptoms. Research studies have shown that rumination and difficulties in emotional regulation are present in depression, anxiety, and stress. Moreover, rumination and difficulties in emotional regulation are also associated with a low level of well-being. It is hypothesised that any psychological treatments that can reduce negative cognitive and emotional processes, should not only help to improve depression, anxiety, and stress, but should also improve well-being. The PMP that was developed in the current study aims to alleviate depression, anxiety, and stress. This thesis also aims to examine whether rumination and difficulties in emotional regulation mediate the effect of the PMP on depression, anxiety, and stress.

Suffering and Psychological Distress in Buddhism

In Buddhism, the word suffering or “dukkha” refers to a state of dissatisfaction as described below (Kyabgon, 2001).

1. Physical suffering refers to the inevitability of physical pain, injury, illness, aging, and death.

2. Psychological suffering refers to the pain those results from mental factors. These are categorised into three types that reflect inevitable circumstances.

2.1 Being separated from someone, or something, that we like or love.

2.2 Desiring or wishing to obtain a possession, or someone, or something, but failing to obtain the object of desire

2.3 Encountering someone, or something, that we dislike.

According to Buddhism, there are three kinds of feelings and mental formations that cause suffering. The terms "feeling" and "perception" used in this context does not refer to complex physiocognitive states or emotions as they do in Western psychology (Grabovac, Lau, & Willett, 2011; Olendzki, 2005a). Instead, "feelings" and "perceptions" are defined as things that arise naturally as a result of bodily sense in combination with consciousness. Feelings and perceptions can be categorized as pleasant, unpleasant, or unknown.

1. A pleasant feeling is the feeling of pleasure, joy, and excitement. This feeling arises naturally when one interacts positively with the environment. It is always a very brief and specific event, conditioned by the particular sense modality and one's underlying attitude toward the particular object or person. However, without mindfulness, this pleasant feeling may lead to a mental formation called desire. Desire is a form of biased thought. One may aim to satisfy desire by attempting to increase, cling to, or prolong the feeling, and desire may be transformed into action. Suffering arises when one fails to maintain pleasant feelings.

2. An unpleasant feeling is the feeling of dislike or avoidance. This feeling arises naturally when one interacts negatively with the environment. It is also always a very brief and specific event, conditioned by the particular sense of displeasure or pain and one's underlying attitude against the particular object or person. However, without mindfulness, this unpleasant feeling may lead to a mental formation called hatred. Hatred is a biased from of thought that reflects one's attempt to avoid or to eliminate the feeling, and hatred may be transformed into action. Suffering arises when one fails to avoid the object or to eliminate the situation that causes the feeling.

3. A neither pleasant nor unpleasant feeling, or a neutral feeling, arises naturally when one interacts indifferently with the environment. However, without mindfulness, this neutral feeling may lead to a mental formation called ignorance. Ignorance is a biased form of thought that one feels when there is confusion or apathy in response to the environment.

Misunderstanding of self as an origin of suffering

In Buddhism, misunderstanding or ignorance of the self is the deepest root of suffering. It is believed that suffering occurs when individuals perceive themselves at the centre of the world, as a separate individual, and ignore the impermanent nature of life (Tyson & Pongruengphant, 2007). The mind responds to pleasurable or unpleasable experiences when one misunderstands the self and desires for pleasure to continue or for pain to cease (Olendzki, 2005b). With the understanding of

the self and mindfulness, pleasurable or unpleasable experiences arise naturally as a part of every experience. The tension that is created by struggling to satisfy a desire and not having the desire met is lessened through contemplation. On the other hand, without mindfulness, desire for a pleasurable experience is the expression of tension between what is happening and a person's attempt to maximize gratification. Furthermore, hatred for an unpleasable experience is the expression of tension between what is happening and a person's attempt to minimise displeasure. Without mindfulness and understanding of the self, individuals believe that they can maximize gratification by clinging to behaviours and reduce discomfort by avoiding behaviours. Olendzki (2005b) explained that clinging to and avoiding behaviours reinforce the construct of selfhood. In that moment of grasping something or pushing something away, the self as an agent is created. A sought-after object is labelled as 'mine', while a rejected object is defined in labelled as 'not mine'. Most external and internal experiences arise from a natural unfolding of interconnected objects. This experience usually cannot be prolonged or avoided, but when an individual misunderstands the nature of the self and tries to prolong or control things unsuccessfully it leads to endless suffering (Payutto, 1998).

A number of psychologists believe that Buddhist concepts and practices can provide important contributions to Western psychology, however, the implementation of Buddhist ideas into modern psychology is still in its infancy (De Silva, 1990, Ekman, Davison, Ricard, & Wallace, 2005; Wallace & Shapiro, 2006). Currently, there are no empirical studies or psychometric measures that measure the Buddhist concept of suffering. In Buddhism, suffering is an array of physical and psychological symptoms that indicate misunderstanding of the nature of suffering, impermanence and non-self attachment (Payutto, 1998) (detailed page 37). However, modern psychological measures only evaluate or assess well-being using psychological and physical symptoms. Measures that reflect a person's understanding of the nature of suffering, impermanence and non-self attachment are necessary and future research must examine and develop measures that objectively measure Buddhist concepts.

This chapter provides an overview of Western psychology and Buddhist concepts regarding well-being and distress. It is clear that Buddhist and Western conceptualizations of well-being and distress are different. Western psychology views well-being from two different perspectives – the hedonic perspective and eudaimonic perspective. Hedonia is focused on gaining life satisfaction through pleasure and positive feelings, while eudaimonia is focused on self-actualization, virtue, and progress towards life goals. Both the hedonic and eudaimonic views of well-being believe that happiness can be attained by increasing a positive sense of the self, such as improving self-esteem, autonomy, and self-efficacy. It should be mentioned that the eudaimonic view of well-being is

closest to the Buddhist concept and that in some instances, Eastern and Western views are entirely consistent.

On the other hand, the Buddhist point of view claims that authentic happiness is derived from insight and knowledge of the true nature of reality. The construct of happiness in Buddhism includes a deep sense of long lasting well-being which is related to stable traits, rather than transient experiences. Moreover, the state of happiness involves compassion for others, reduced dependence on external circumstances for satisfaction, reduced sense of self (ego), and recognition of interconnectedness with other people and other beings in the environment (Ekman, Davidson, Richard, & Wallace, 2005). Western psychology views distress as the result of negative, cognitive, and emotional process. In contrast, Buddhism claims that distress is the result of misunderstanding or ignorance of the nature of the self and the three characteristics of existence.

The current thesis aims to develop a new and inclusive mindfulness-based psychotherapy to increase well-being and to reduce distress. The new mindfulness-based psychotherapy aims to build on existing mindfulness-based programs by integrating the Buddhist teaching of the understanding of the three characteristics of existence. It is suggested that mindfulness combined with the understanding of the three characteristics of existence can increase long lasting happiness (i.e. eudaimonic well-being) and reduce distress. Chapter three outlines the conceptual framework and empirical evidence of mindfulness from both a Western and Buddhist perspective.

CHAPTER THREE

Mindfulness

Mindfulness originates from Eastern philosophies and the traditions of meditation. According to Buddhism, mindfulness is recognised as a successful method to reduce suffering and enhance well-being. In Western cultures, several researchers, primarily from physiology and psychology, have investigated the phenomenon of meditation since the early 1960s (Kiran-Kumar, 2002). Aside from its integration into clinical practice, mindfulness is viewed as a cognitive process in self-regulation strategies and the science of consciousness. A number of scholars in modern psychology have contributed their own knowledge of meditation and mindfulness into Western society, to advance cognitive scientific research and to improve well-being and distress. Some examples of these scholars include Jack Kornfield (1979), Roger Walsh (1983), Daniel Goleman (1984), Joseph Goldstein (1994), and Mathieu Ricard (2008). Since the publishing's of these scholars, a number of research studies have been produced (Shapiro & Giber, 1978 as cited in Kiran-Kumar, 2002). Given that mindfulness in self-regulation strategies is beyond the scope of this study, the following review focuses on mindfulness in psychotherapy contexts.

Recently, Western psychotherapies have paid a great deal of attention to the integration of mindfulness-based techniques into the treatment of mental illness. A number of research studies demonstrate the success of this inclusion (Baer & Krietemeyer, 2006). However, since mindfulness originates from Eastern philosophies, especially Buddhism, the Western mindfulness-based psychotherapies are arguably different to the Eastern mindfulness-based psychotherapies. Keng, Smoski, and Robins (2011) suggest that there are differences between mindfulness in Buddhism and mindfulness in Western psychotherapy, and that these differences occur at a contextual, process, and content level. At the contextual level, mindfulness in the Buddhist tradition is viewed as one factor in an interconnected system of practices, which are necessary to attain long lasting well-being or liberation from suffering. On the other hand, the Western psychotherapy of mindfulness is primarily used to reduce psychological difficulties. Mindfulness is considered to be independent from any specific, surrounding philosophy or system of practices. At the process level, mindfulness in Buddhism is practiced with reflection and contemplation of the key aspects of Buddha's teachings, such as impermanence, non-self, and suffering. The Western practice of mindfulness, on the other hand, places less emphasis on non-self and impermanence. Finally, with regards to content, in Buddhist teachings, mindfulness not only encompasses introspective awareness, but also physical and psychological processes as well as experiences and their relationship to understanding impermanence, non-self attachment, and suffering. In contrast,

Western mindfulness-based psychotherapies view mindfulness as a form of awareness that encompasses one's internal and external experience, including the features of external sensory objects like sights and smells.

This chapter provides a preliminary overview of the conceptualization of mindfulness in Western psychotherapy and Eastern philosophies. The review focuses on mindfulness from Theravada because it is one of the major traditions of Buddhism. Moreover, Theravadan Buddhism has had influence on MBSR and MBCT, two prominent Western mindfulness based interventions (Grabovac, 2014; Dorjee, 2010).

Mindfulness in Eastern Contexts: A Theravada Buddhist Perspective

It is believed that approximately 2,600 years ago, before attaining enlightenment, Siddhartha Gautama, who was later called the Buddha, practiced *Anapanasati* (i.e. mindfulness of breathing). The Buddha endeavoured to obtain insight into the true nature of human suffering and to identify a way to liberate humans from suffering. Since this experience, mindfulness has become a central part of Buddhist practice. In Theravada Buddhism, mindfulness is translated into the word 'Sati', which means continuous recollection and remembering. Sati is the state of recollection, remembrance, non-fading, and non-forgetting (Bhikkhu, 2001). According to Theravada Buddhism, mindfulness promotes psychological and personal development that extends beyond the reduction of psychological distress. The traditional prescriptions of mindfulness emphasise the cultivation and integration of mindfulness into daily life, through ongoing practice of various meditation techniques. Through disciplined practice, it is possible to extend the mind to produce a perpetual endogenous awareness that bears the qualities of mindfulness. This awareness is believed to support the achievement of insight into the nature of living (i.e., Sammaditthi). Insights reveal the fluctuations and impermanence of all phenomena (Bhikkhu, 2001).

The four foundations of mindfulness (Satipatthana)

The word *"*satipatthana*"* can be translated into "the foundation of sati, or mindfulness". The foundation of sati is categorized into four components, which are briefly described below (Payutto, 1998).

1. Kayanupassana, or mindfulness of the body, entails the contemplation and awareness of the body. It involves the use of one's body to develop concentration and insight. Individuals focus their attention on a part of the body or a body movement, such as walking, eating, drinking, and talking. Mindful breathing is generally used to develop mindfulness of the body since breathing helps to calm and control the body indirectly. Calmness and tranquillity are believed to emerge

during the practice of mindfulness of the body. These qualities provide a platform to build insight into the nature of the body (Bukkhu, 2001).

2. Vedananupassana, or mindfulness of feelings and perceptions, entails the contemplation and awareness of feelings and perceptions. Similar to Kayanupassana, mindful breathing is also required for the practice of Vedananupassana. According to Buddhist perspective, the purpose of mindfulness of feelings and perceptions is to promote a better understanding of the three common feelings in human experience, which are pleasant, unpleasant, and unknown. Without mindfulness, these feelings and perceptions can generate mental formations and thoughts that impact one's emotions and their physical body. In this type of mindfulness, the three feelings are used as an object of concentration.

3. Cittanupassana, or mindfulness of mental formation, entails the contemplation of mental formation or the state of being mindful. This state occurs when the mind is free from the three mental formations of desire, hatred, and ignorance.

3.1 The meaning of desire is broad. It includes feelings of desire towards materialistic objects such as money, food, housing, and possessions. It also includes the desire for non-materialistic items such as sexual relationships, intimacy, and psychological needs. These desires lead to the behaviour of fulfilling the needs and wants and can ultimately become a source of psychological suffering.

3.2 The meaning of hatred is also broad. In some cases, an external object, such as a person or situation, can attract hatred through feelings of anger, oppression, irritation, offense, or resentment. The feeling of hatred can even cause an individual to avoid or eliminate the subject of hatred, which can become a source of psychological suffering.

3.3 Ignorance entails the feeling of being infatuated with objects or states, but failing to really understand them. Ignorance arises from unknown feelings, which can lead to the experience of confusion or apathy and cause a reduction in the emotional experience. Ignorance can also become a source of psychological suffering.

4. Dhammanupassana, or mindfulness of natural phenomena, entails the contemplation and awareness of natural phenomena. Mindfulness of natural phenomena means being mindful of the impermanence and interconnectedness of everything, including what is happening in our bodies, feelings, perceptions, and thoughts. It also means realising that all phenomena are constantly occurring. According to Buddhism, these realizations are not only beneficial in reducing psychological suffering, but are also essential for personal development.

The current study attempted to integrate Buddhist insight into the provision of a mindfulness-based psychological intervention called the Positive Mindfulness Program (PMP). The Four Foundations of Mindfulness (Satipatthana) provide a useful framework for the practice of

mindfulness. Therefore, Satipatthana was used as the structure and direction for developing mindfulness activities in the PMP (further details on page 66).

How the mind, body, and mindfulness function

In Eastern philosophy, especially in Buddhism, it is believed that life is composed of the mind and body. When the mind and body work together in harmony, life runs smoothly (Kyabgon, 2001). The body itself is the passive part of this equation, as it is under the influence of the mind. In order to interact with the world and with others consciously, a total of six perceptions are required. While the body is the host of five perceptions (i.e., sight, sound, taste, smell, and bodily feelings), the mind is the sixth perception. The mind is at the centre of all activities because it provides meaning through the five bodily senses (Payutto, 1998). When interacting with the world, one experiences a continuous stream of consciousness which is produced by the rapid series of feelings and thoughts arising and passing away. This process occurs extremely quickly with dozens of mental events in a given second (Payutto, 1998; Grabovac, Mark, & Willett, 2011). When interacting with the world, the mind and body experience either a pure process or an impure process depending on a person's skills in the practice of mindfulness (Payutto, 1998).

1. Pure process: The body and the mind are together with mindfulness.
2. Impure process: The body and the mind are together without mindfulness.

Pure process: The body and the mind are together with mindfulness

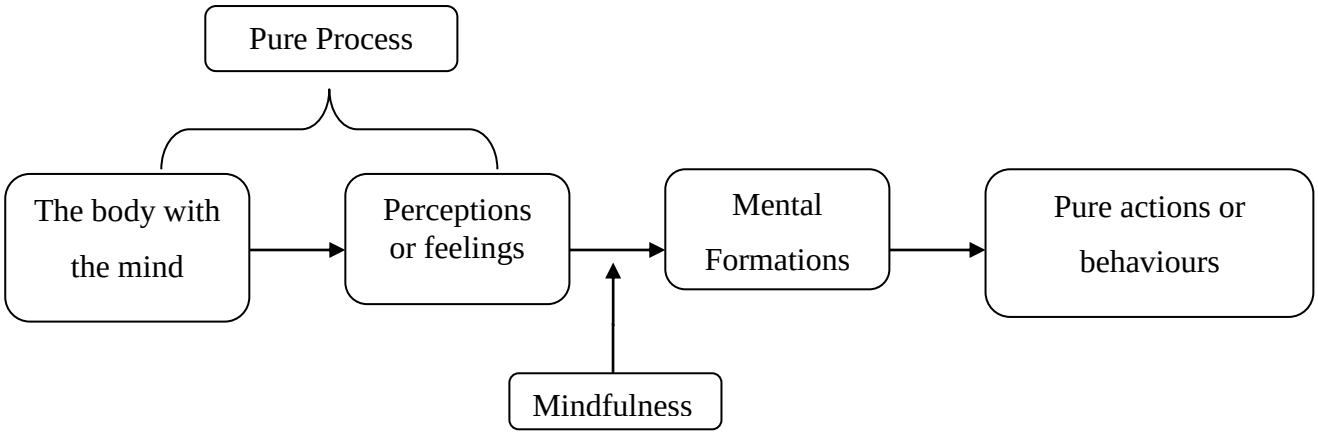

Figure 3.1. Mindfulness and the pure process.

According to Figure 3.1, the body is the host of the five senses of sight, sound, taste, smell, and touch. The body combines with consciousness to produce perceptions and feelings (i.e., pleasant, unpleasant and unknown) that arise naturally and inevitably. During mindfulness, one

becomes aware of their perception. As a result, mental formations are wisely generated without bias, emotion, or feeling. The model represented in Figure 3.1, explains the interconnectedness of the body, perceptions, feelings, mental formations, and actions as a naturally occurring network. With mindfulness, an individual's perceptions and feelings create an unbiased mental formation, which then produces wise actions in dealing with situations. That is, the situations are accepted without unduly influences from pleasant (attachment), unpleasant (aversive) feelings which one is conditioned (Grabovac, Mark, & Willett, 2011) as well as past experiences or expectations. The mental formations and pure actions in this model are the outcomes of the pure process. An example of the pure process is the story of Jim, who is not fond of one of his friends who often picks on him. Jim does not understand his friend's behaviour. On many occasions, Jim will be talking to someone and his friend will come over and interrupt or insult him. Jim finds these experiences to be unpleasant (perception or feeling). With mindfulness, Jim is aware of his unpleasant perception. As a result, Jim does not want to meet his friend and calmly explains the unpleasant feelings to him.

Impure process: The body and the mind are together without mindfulness

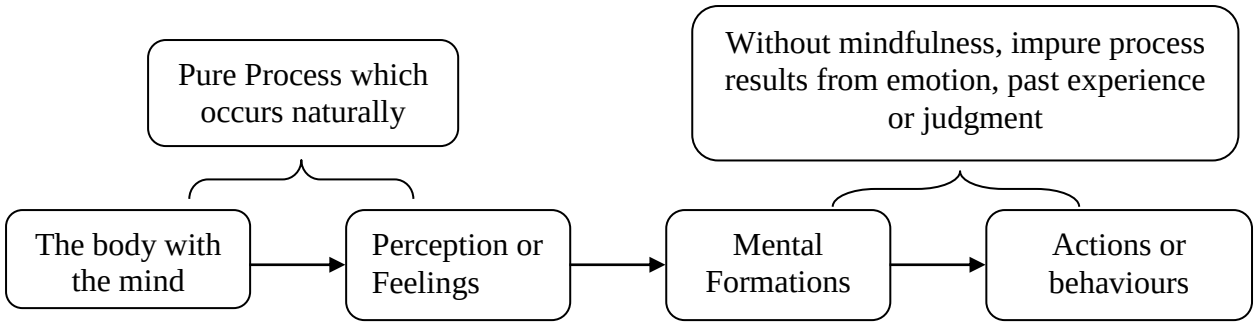

Figure 3.2. Mindfulness and the impure process.

According to Figure 3.2, the body is the host of the five senses of sight, sound, taste, smell, and touch. The body combines with consciousness to produce perceptions and feelings that arise naturally. At this point of in process, the perceptions and feelings (pleasant, unpleasant and unknown) are still a part of the pure process. However, without mindfulness, mental formations and thoughts are generated habitually with bias, leading to an impure process. As a result, actions and behaviours are influenced by pleasant (attachment), unpleasant (aversive) feelings which one is conditioned (Grabovac, Mark, & Willett, 2011) as well as emotions and past experiences. It is believed that the impure process leads to endless psychological suffering.

We can apply the impure process to the example of Jim and his friend. As previously mentioned, Jim is not fond of one of his friends who often picks on him. Often when Jim is talking

to someone, his friend will interrupt and insult him, which causes Jim to experience unpleasant feelings. Without mindfulness, the impure process occurs and his perceptions lead to biased mental formations and emotions. Jim dislikes his friend and feels anxious around him, and rudely trades insults when he is unable to escape him. As a result, the exchange between Jim and his friend enhances his own suffering and may also enhance his friends suffering. It is also possible that the conflict creates some discomfort for the surrounding people.

In Theravada Buddhism, mindfulness is used to maintain the pure process and prevent it from transforming into the impure process. However, without mindfulness, the impure process will naturally occur as we are conditioned. This particularly happens when one's mental formations create negative thoughts and suffering based on emotions or past experiences. The opposite occurs in the pure process. Although perceptions and feelings naturally occur as a result of the body and of consciousness, they do not necessarily have an impact on mental formations when mindfulness is maintained. This process not only helps to reduce psychological suffering, but also improves personal development (Payutto, 1998).

Two Types of mindfulness in Buddhism.

There are two types of mindfulness in Buddhism that are required to develop Sati. These types are Samatha Samadhi and Vipassana Samadhi. The purpose of Samatha Samadhi is to attain higher concentration of the mind. Samatha Samadhi is the concentration of mind on a single object. Concentration is practiced till one reaches a "one-pointed" type of awareness with a singular focus. In Samatha Samadhi, mindfulness keeps the mind focused on the object of concentration. When the mind's attention is held onto the object for a long period of time, the mind becomes absorbed, still, and unwavering. Furthermore, when the focus is long lasting and continuous to the extent that the individual becomes at one with the object, Samadhi occurs. According to Buddhist tradition, Samadhi is characterised as complete tranquillity, calmness, and meta-cognitive awareness (Bhikkhu, 2001). When an individual achieves Samadhi, the experience of non-relevant thoughts and sensations are abandoned in favour of the primary object in concentration (e.g., the breath, a word, or a phrase). Samatha Sammadhi entails awareness, present experience, and acceptance. However, Samatha Sammadhi does not include the understanding of the three characteristics of existence or Sammaditthi, a form of insight which includes wisdom and true understanding. Hence, Samatha Sammadhi entails a temporary state of tranquillity that can only be maintained during the practice of mindfulness of concentration (Payutto, 1998).

Vipassana Samadhi is the mindfulness of insight. The purpose of Vipassana Samadhi is to attain insight into the importance of the mind, body, and constructed reality (Payutto, 1998; Chavan,

2008). The understandings of the three characteristics of existence and Samatha Sammadhi (or maintained concentration) are necessary to obtain Vipassana Samadhi.

The understanding of the three characteristics of existence.

According to Buddhist tradition, the understanding of the three characteristics of existence (i.e., suffering, impermanence, and voidness of self) is a realisation of the fundamental attributes of humans and nature. The three characteristics of existence are not always apparent due to distortions in perception. For example, momentary changes in our surroundings may not be perceivable. Additionally, the characteristics of existence are only revealed though careful and disciplined investigations of experience during the practice of mindfulness (Payutto, 1998; Germer, 2005).

Impermanence, or Anica, is the characteristic of being born, evolving, and inevitably proceeding to dissolution. Impermanence characterises the stream of consciousness that makes up the subjective flow of human awareness. Hence, the world that is constructed by the mind is actually composed of very brief episodes of events that arise and pass with great speed. More generally, impermanence refers to the observation that all phenomena are fleeting.

Suffering, or Dukkha, refers to the inevitability of physical pain, injury, illness, aging, and death, and also the subtle psychological distresses that result from the impermanence and insatiability of desire. Not getting what you want, having to cope with what you do not want, and confusion about the conflicting desires, go hand in hand in daily living and are encompassed by suffering.

Voidness of the self, or Anatta, refers to the notion that existence is comprised of conditioned and learnt behaviours. Due to impermanence, the whole human existence lacks any essence or numinous core. According to Buddhism, the belief in ownership of thoughts, feelings, and sensations (e.g., “these are mine” or “this is me”) is unfounded, maladaptive, and produces psychological difficulties.

According to Payutto (1998), the use of reasoned analysis, as well as an eagerness to learn, can aid in the attainment of insight and the realisation of the three characteristics of existence.

Vipassana Samadhi and Samatha Samadhi.

To obtain Vipassana Samadhi, Samatha Samdhi is also necessary. Samatha Samadhi and Vipassana Samadhi could be developed simultaneously. The role of Samatha Samadhi is the development of concentration which leads to calm and serenity. Such calm and serenity helps practitioners to accurately recognize and understand mental objects and to understand the three characteristics of existence (Payutto, 1998).

In Vipassana Samadhi, the purpose is to directly experience the three characteristics of existence by bringing attention to them. For example, the meditator attempts to become aware of

the three characteristic of existence using breathing. In this way, the meditator experiences the breath as changing all the time (fast, slow, or rough) and may become that no two breaths are the same. This increases awareness of impermanence, the first characteristics of existence. The meditator may also notice the style of breath that they prefer and become aware of their efforts to change the breath to be the one that they preferred. This experience reflects the second characteristics of existence (suffering). Over time, the meditator will also notice that if they do not try to control the breath, the breathing still occurs naturally, without their intervention. The meditator may become aware of the third characteristic, voidness of the self (Grabovac, Mark, & Willett, 2011). Finally, the meditator's experience of the three characteristics of existence from breathing may generalize to other experiences in daily life. It is believed that Vipassana Samadhi can lead to long lasting inner happiness (Grabovac, Mark, & Willett, 2011). It is hypothesized that the development of concentration and insight will be developed simultaneously during the PMP.

Mindfulness in Buddhism has been practiced for over 2,500 years with the intention to cultivate well-being by identifying and treating psychological distress. However, bridging the gap between Buddhist ideas and modern psychology is still in its infancy. However, a few studies have been conducted in psychological science. Sahdra, Shaver, and Brown (2010) created a scale to measure non-attachment based on the Buddhist concept of voidness of the self. Items on the scale were developed alongside 18 Buddhist experts and the scale demonstrated good convergent and discriminant validity. The scale was used in a study of 382 undergraduate students in the United States. The findings from the study showed a significant positive correlation between non-attachment scores and life satisfaction ($r = 0.55$, $p < .001$), and a significant positive correlation between non-attachment scores and pleasant affect ($r = 0.58$, $p < .001$). Moreover, non-attachment was positively associated with personal growth ($r = 0.45$, $p < .001$), positive relationships, ($r = 0.40$, $p < .001$), purpose in life, ($r = 0.37$, $p < .001$), and life satisfaction ($r = 0.37$, $p < .001$). Conversely, non-attachment was negatively correlated with anxiety ($r = -0.35$, $p < .001$), difficulties in emotional regulation ($r = -0.48$, $p < .001$), and personal distress ($r = -0.42$, $p < .001$). Although a positive association between non-attachment and positive psychological outcomes was demonstrated, the study was limited by the cross-sectional and correlational design.

In Theravada Buddhism, the understanding of the three characteristics of existence is one of the most important doctrines and is inherent in the practice of mindfulness (Bhikkhu, 2001). In the current study, the PMP was developed to promote psychological well-being and reduce psychological distress through the combination of the four foundations of mindfulness (Satipatthana). The three characteristics of existence were used to develop the contents of the insight component in the program (see page 67 for further details).

Mindfulness in the Psychotherapy Context

A brief history of mindfulness in psychotherapy. Over the past 20 years, mainstream clinicians, psychologists, and other mental health professionals, have recognized the benefits of mindfulness (Baer & Krietemeyer, 2006). Clinicians and health professionals are interested in mindfulness for a number of reasons, including the clinical, scientific, theoretical, and personal benefits. According to the Academic Mindfulness Interest Group (2006), the integration of mindfulness into Western medicine and psychology can be traced back to the growth of Zen Buddhism in America during the 1950's and 1960's. Other contributions have come from early writings, such as "Zen in the Art of Archery" by Herrigel in 1953, "The World of Zen: An East-west Anthology" by Ross in 1960, and "The Method of Zen" by Herrigel, Hull, and Tausend in 1960. In the 1990s, Mark Epstein (1995) wrote the book "Thoughts without a Thinker", which explained the traditions of the East in helping patients to recognize their problems in order to heal them. In Australia, during the 1970's, Ainslie Meares was among the first researchers to bring meditation to the attention of clinicians and psychotherapists. An interest grew in the application of meditation in pain control, anxiety, and cancer management (Academic Mindfulness Interest Group, 2006). Recently, the work of John Kabat-Zinn has brought attention to the clinical and psychotherapeutic applications of mindfulness. Kabat-Zinn established the Centre for Mindfulness at the University of Massachusetts Medical School to treat chronic illnesses (Kabat-Zinn, 2003).

Mindfulness-based psychotherapies. In recent decades, Western mental health professionals have integrated the practice of mindfulness into mindfulness-based psychotherapies and have made mindfulness training available to Western populations. These interventions include Mindfulness-Based Stress Reduction (MBSR), Mindfulness-Based Cognitive Therapy (MBCT), Dialectical Behaviour Therapy (DBT), and Acceptance and Commitment Therapy (ACT). These mindfulness-based psychotherapies have incorporated mindfulness-related principles into the practice of psychotherapy with different levels of usage. This review includes both meditation-oriented interventions (e.g. MBSR and MBCT), as well as interventions that teach mindfulness as a single component (e.g. DBT and ACT). These interventions are a necessary foundation for a wider range of interventions that target cognitive, emotional, and behavioural changes. Since the Western mindfulness techniques were adopted from the Eastern traditions, they all attempt to increase distress tolerance by developing present moment awareness and acceptance. This attempt is a substantial departure from the traditional cognitive-behavioural approaches, which aim to change negative thoughts and behaviours.

Mindfulness-Based Stress Reduction (MBSR). Much of the interest in the clinical application of mindfulness has been sparked by the introduction of the Mindfulness-Based Stress

Reduction (MBSR) program. The MBSR program is a manualized treatment program that was originally developed by John Kabat-Zinn in the 1980's, for the management of chronic pain and stress-related conditions (Kabat-Zinn, 2003). The program is often referred to as a course based "psychoeducation approach" to clinical work. As the centre of the therapeutic process, the program aims to cultivate present-moment-focused attention and non-judgemental perceptions of life experiences, particularly in the face of challenging circumstances (Salmon, Sephtonm, & Dreeben, 2011). Such cultivation reduces the preoccupation with memories, fantasies, plans, or worries, and alters the automatic behaviours that are related to physical difficulties (Baer & Krietemeyer, 2006). MBSR is now widely used to reduce the psychological morbidity that is associated with chronic illnesses (e.g. cancers and heart disease) and to treat emotional and behavioural problems (e.g. depression and anxiety) (Kabat-Zinn, 1998 as cited in Bishop et al., 2004). For psychological difficulties, present-moment sensations are decoupled from automatic thoughts and emotions that would otherwise amplify the overall level of distress. For example, depressive negative thoughts and feelings are usually linked to past or future events. Mindfulness can diminish the power of these thoughts when one realises the connection between automatic thoughts and emotions (Salmon, Sephtonm, & Dreeben, 2011).

A standard MBSR program consists of 8 weekly sessions. Each session lasts for approximately 2.5 to 3 hours. The sixth session is an exception for when an all-day intensive mindfulness session is required. Participants are expected to practice homework extensively and regularly. Sessions may include up to 30 participants with a wide range of disorders or conditions (Baer & Krietemeyer, 2006). Mindfulness activities, namely the body scan (i.e., inner directed body-focused attention), Hatha Yoga (i.e., gentle movement and stretching), sitting meditation, and walking mediation, are mainly used to cultivate the state of the present moment (Salmon, Sephton & Dreebe, 2011). Homework generally includes 45 minutes of formal mindfulness activities (e.g. seated meditation), which are often guided by audiotapes provided by the group leader. Homework also includes informal practice of mindfulness in daily life, which is 5 to15 minutes long for 6 days each week. During the mindfulness practice, individuals are encouraged to accept all experiences that arise. These experiences might include boredom, irritation, emotional reactions, fears, or uncertainties about the helpfulness of mindfulness (Baer & Krietemeyer, 2006).

MBSR was first proved effective in assisting patients with chronic pain and stress-related conditions (Kabat-Zinn, Lipworth, & Burney, 1985). Kabat-Zinn, Lipworth, and Burney (1985) reported a significant reduction of chronic pain in 90 patients with a variety of chronic pain conditions. Since then, MBSR has proved its effectiveness in a behavioural medical setting for populations with a wide range of chronic disorders, including fibromyalgia, cancer, heart disease, and mental health problems (Rosenzweig, Greeson, Reibel, Green, Jasser, & Beasley, 2010). Meta-

analyses and randomised controlled trials reported a moderate to large effect of MBSR in improving physical, psychosomatic, and psychiatric problems (e.g., pain, cancer, heart disease, depression, and anxiety) in both clinical and non-clinical settings (d =0.42-1.36, p <.001) (Grossman, Niemann, Schmidt, & Walach, 2004, Jain et al., 2007, Vøllestad, Sivertsen, & Nielsen, 2011). In addition, a longitudinal study on adult chronic pain patients, found that MBSR was effective in reducing back and neck pain. Findings from a 4-year follow up shows that the improvement in pain maintained in 60% to 72% of the 225 patients. However, these studies did not have a comparison group (Kabat-Zinn, 1990 as cited in Rosenzweig, Greeson, Reibel, Green, Jasser, & Beasley, 2010). MBSR is effective in reducing a wide range of psychological difficulties in both clinical and non-clinical populations. Table 3.1 shows the effectiveness of MBSR in improving psychological health outcomes for non-clinical adult populations. Table 3.1 includes published, peer reviewed, randomized controlled trials that were designed with a control group and assessed psychological health outcomes in non-clinical adult populations. Overall, table 3.1 shows that MBSR reduced the self-reported level of negative psychological outcomes, including anxiety, rumination, and depression in non-clinical population. Moreover, MBSR increased the level of positive psychological outcomes such as self-compassion, satisfaction with life, positive affect, and mindfulness.

Table 3.1: Randomised controlled trials of Mindfulness-Based Stress Reduction (MBSR) on psychological outcomes, in non-clinical adult samples.

Study	N	Type participant	No. of treatment session	Control groups	Main outcome
Astin, 1997	28	College students	8 X 2-h sessions	NI (14)	MBSR>NI: reduction in psychological symptoms, increases in sense of control and spiritual experiences
Shapiro, Schwartz, & Bonner, 1998	78	Medical & premedical students	7 X 2.5-h sessions	WL (41)	MBSR>WL: reduction in state and trait anxiety, overall distress, & depression, increases in empathy & spiritual experiences
Williams, Kolar, Reger,& Pearson, 2001	103	Community adults	8 X 2.5-h sessions VS 1X 8-h session	Received educational materials and referral to community resources (44)	MBSR> Control Group: reductions in daily hassles, distress, & medical symptoms
Shapiro, Astin, Bishop, & Cordova, 2005	38	Health care professionals	8 X 2-h sessions	WL (20)	MBSR>WL: reductions in perceived stress & burnout, increases in self compassion & satisfaction with life
Jain et al., 2007	81	Students	4 X 1.5 h-sessions	Relaxation (24) and NI (30)	MBSR (a shortened program)=Relaxation > NI:reductions in distress & increase in positive mood states; MBSR>NI: reductions in rumination & distraction
Oman, Shapiro, Thoresen, Plante, & Flinders, 2008	44	College undergrads	8 X 1.5-h sessions	EPP (14), WL (15)	MBSR=EPP>WL: reductions in perceived stress & rumination, increase in forgiveness
Nyklíček & Kuijpers, 2008	60	Community adults with symptoms of stress	8 X 2.5-h sessions, 1 X 6-h session	WL (30)	MBSR>WL: reductions in perceived stress & vital exhaustion, increases in positive affect & mindfulness
Shapiro, Brown, Thoresen & Plante (2011)	32	Undergraduate students	8 X 1.5-h sessions	WL (15)	MBSR> WL: increases mindfulness, subjective well-being, and reduction in stress

NI = No Treatment; WL = Waitlist Control

Table 3.2 shows the effectiveness of the MBSR program on psychological outcomes in clinical adult populations. Table 3.2 focuses on published, peer review research studies that are randomized controlled trials assessing the psychological health outcomes in clinical adult populations. Table 3.2 shows that overall, the MBSR programs reduced self-reported levels of negative psychological outcomes, including anxiety, rumination, and depression in clinical populations.

Table 3.2. Randomised controlled trials of Mindfulness-Based Stress Reduction (MBSR) on psychological outcomes, in clinical adult samples.

Study	N	Type participant	No. of treatment session	Control groups	Main outcome
Speca, Carlson, Goodey, & Angen, 2000	90	Cancer patients	7 X 1.5-h sessions	WL (37)	MBSR>WL: reductions in mood disturbance & symptoms of stress
Weissbecker et al., 2002	91	Fibromyalgia patients	8 X 2.5-h sessions	WL (40)	MBSR>WL: increase in disposition to experience life as manageable and meaningful
Koszycki, Benger, Shlik, & Bradwejn, 2007	53	Generalized social anxiety disorder patients	8 X 2.5-h sessions, 1 X 7.5-h session	MBSR=CBGT: improvements in mood, functionality, & quality of life CBGT (27)	MBSR=CBGT: improvements in mood, functionality, & quality of life; MBSR<CBGT: reductions in social anxiety & response and remission rates
Sephton et al., 2007	91	Fibromyalgia patients	8 X 2.5-h sessions, 1 day-long session	WL (40)	MBSR>WL: reductions in depressive symptoms
Lengacher et al., (2009)	84	Survivors of breast cancer	6 X 2-h sessions	Usual care (43)	MBSR > Usual care: reduction in depression, anxiety, and fear of recurrence
Grossman et al., (2010)	150	Patients with multiple sclerosis	8 X 2.5-h sessions, 1X 7-h session	Usual care (74)	MBSR>Usual care: increases in health-related quality of life, reductions in fatigue & depression

CBGT = Cognitive Behavioural Group Therapy; NI = No Treatment; WL = Waitlist Control

Mindfulness-Based Cognitive Therapy (MBCT). Mindfulness-Based Cognitive Therapy (MBCT) is an attempt to integrate mindfulness training and Cognitive Behavioural Therapy (CBT). Segal, William, and Teasdale (2002) ran an 8 to 12 week group program using MBCT, which was designed to prevent the relapse of depression. The program aimed to assist clients to develop an awareness of, and to respond more effectively to, negative thinking patterns, such as avoidance (Ma

& Teasdale, 2004). Didactic information regarding the nature of depression was presented during the program. In addition, cognitive therapy exercises, such as thought and feeling exercises and discussions of automatic thoughts, were incorporated into MBCT. The cognitive exercises assisted participants to develop an understanding of the relationship between negative thoughts and feelings, and to pursue a shift in emotional processing from an "automatic pilot" mode to an awareness mode (Segal, William, & Teasdale, 2002). The exercises re-affirmed the desire to transform automatic thinking into a less simplistic, more contemplative process. MBCT borrows mindfulness techniques from MBSR, including sitting meditation, yoga, the three-minute breathing space, body scan, walking meditation, and informal mindfulness exercises (e.g., washing dishes). The reason for this is to help participants accept negative thought patterns and respond to these patterns in an intentional and skilful way (Fresco, Flynn, Mennie, & Haigh, 2011). A recent meta-analysis of six randomized controlled trials indicated that MBCT significantly reduced the risk of relapse or the recurrence of depression, with a risk ratio of 0.66, compared to usual treatments or placebo controls. This finding corresponds to a relative risk reduction of 34%. In a pre-planned subgroup analysis, the relative risk reduction was 43% for participants with three or more previous episodes, while no risk reduction was found for participants with only two episodes. In two studies, MBCT was just as effective as the maintenance antidepressant medication (Piet, Hougaard, Hecksher & Rosenberg, 2010). Recently, Keng, Smoski and Robins (2011) reported empirical evidence from several randomised controlled trials on the effectiveness of the MBCT in successfully preventing relapse in depression (see Table 3.3). To date, many studies on MBCT have reported the effectiveness of MBCT in relieving psychological distress. Teasdale, Segal, Williams, Ridgeway, Soulsby, & Lau (2000) reported that patients with three or more major depressive episodes, who participated in MBCT, showed significantly lower relapse rates at a 1-year follow-up. It has been posited that MBCT reduces the relapse of depression by increasing metacognitive awareness of the differences between individuals thought contents and themselves (Teasdale, Moore, Hayhurst, Pope, Williams, & Segal, 2002). Others have suggested that insight into the three characteristics of existence may play a role in the reduction of depressive symptoms (Grabovac, Lau, & Willett, 2011).

Recently, MBCT has been used beyond the context of depression. A study by Kim and his colleagues (Kim et al., 2009) found that patients with Panic Disorder and Generalized Anxiety Disorder reported a significant decrease from baseline upon completion of the MBCT. This decrease was significantly higher than the observed decrease in the psycho-education group. The authors suggested that MBCT reduced anxious and depressive symptoms in patients with Panic Disorder or Generalized Anxiety Disorder by moderating levels of worry and rumination. However, the authors did not rule out the contribution of prescribed medication to the observed improvements in anxious and depressive symptoms. The majority of research on the effectiveness of the MBCT

has been conducted on patients with depression and has assessed negative depressive or anxious psychological outcomes (Keng, Smoski, & Robins, 2011). MBCT was mainly designed to prevent the relapse of depression. To date, there is no randomised controlled trial that examines the effectiveness of MBCT in promoting well-being with non-clinical populations. Table 3.3 shows the effectiveness of MBCT in improving psychological outcomes for clinical adult populations. Table 3.3 focuses on published, peer review research studies that were randomized controlled trials assessing the symptoms of depression and anxiety in clinical adult populations. Table 3.3 shows that overall; MBCT reduced the magnitude of depressive and anxious symptoms.

Table 3.3: Randomized controlled trials of Mindfulness-Based Cognitive Therapy (MBCT) on depressive and anxiety symptoms.

Study	N	Type participant	No. of treatment session	Control groups	Main outcome
Teasdale et al., 2000	145	Patients in remission from depression	8 X 2-h sessions	TAU (69)	MBCT>TAU: reduction in rate of depressive relapse/recurrence for patients with 3 or more previous relapses, but not patients with 2 or fewer episodes
Ma & Teasdale, 2004	75	Patients in remission from depression	8 X 2-h sessions	TAU (38)	MBCT>TAU: reduction in rate of depressive relapse/recurrence for patients with 3 or more previous relapses, but not patients with 2 or fewer episodes
Barnhofer, Crane, Hargus, et al., 2009	31	Patients with recurrent depression and a history of suicidal ideation	8 X 2-h sessions	TAU (15)	MBCT>TAU: reductions in depressive symptoms & number of patients meeting full criteria for depression at post-treatment
Hepburn et al., 2009	68	Patients in remission from depression and with a history of suicidal ideation	8 X 2-h sessions, 1 X 6-h session	TAU (35)	MBCT>TAU: reductions in depressive symptoms & thought suppression
Hargus, Crane, Barnhofer, & Williams, 2010	27	Depressed patients with a history of suicidal ideation or behavior	8 X 2-h sessions	TAU (13)	MBCT+TAU>TAU: reduced depression severity, increased meta-awareness of & specificity of memory related to previous suicidal crisis

GCBT + Group Cognitive Behavioural Therapy; TAU= Treatment as Usual; WL = Waitlist Control

Table 3.3 (Continued): Randomized controlled trials of Mindfulness-Based Cognitive Therapy (MBCT) on depressive and anxiety symptoms.

Study	N	Type participant	No. of treatment session	Control groups	Main outcome
Williams et al., 2008	68	Patients with unipolar and bipolar disorders	8 X 2-h sessions, 1 all-day session	WL (35)	MBCT>WL: reduced depressive symptoms in both subsamples & less increase in anxiety among bipolar patients
Godfrin & van Heeringen, 2010	106	Recovered depressed patients with a history of 3 or more depressive episodes	8 X 2.75h sessions, TAU (54)	TAU (54)	MBCT+TAU>TAU: reduced rate of depressive relapse/recurrence, depressive mood & quality of life
Piet, Hougaard, Hecksher, & Rosenberg, 2010	26	Patients with social phobia	8 X 2-h sessions, GCBT (12)	GCBT (12)	MBCT=GCBT: reductions in symptoms of social phobia
Thompson et al., 2010	53	Patients with epilepsy and depressive symptoms	8 1-h sessions,	TAU (27)	MBCT>WL: reduction in depressive Symptoms

GCBT + Group Cognitive Behavioural Therapy; TAU= Treatment as Usual; WL = Waitlist Control

Dialectical Behaviour Therapy (DBT). Dialectical Behaviour Therapy (DBT) is a treatment that was originally developed by Linehan and her colleagues, to treat chronically suicidal individuals (Linehan, 1987). Linehan observed that most of the individuals that were treated with DBT also meet the diagnostic criteria for Borderline Personality Disorder (BPD). Consequently, DBT was used in the treatment of BPT. The applicability of DBT has been extended to other psychological problems including depression and intimate partner violence (Baer & Krietemeyer, 2006).

DBT is the integration of acceptance and change. It incorporates a variety of cognitive-behavioural strategies that assist clients to change their thoughts, emotions, and behaviours. Mindfulness skills are also developed and used to promote acceptance and change (Linehan, 1987). The rationale for the DBT is that the inability to be mindful of one's attention can lead to several common problems, including an inability to stop thinking about the past, the future, or current difficulties, as well as an inability to concentrate on treatment tasks (Baer & Krietemeyer, 2006).

In DBT, mindfulness skills are promoted and used as a method to attain the wise mind. The wise mind is a balance between the reasonable mind, which is the part that thinks logically and intellectually, and the emotional mind, which is the part that thinks creatively and passionately. However, without mindfulness, the reasonable mind may be distorted when the emotional mind is

working, an imbalance of these minds may lead to psychological difficulties (Linehan, 1993). Baer and Krietemeyer (2006) posited that the healthy mind (i.e., balanced mind) could reflect the use of the head and the heart.

DBT is effective at reducing psychological distress symptoms related to BPD. A meta-analysis of efficacy studies on DBT showed that overall; DBT significantly reduced psychological distress in relation to BPD symptoms, with a moderate effect and large effect compared to the wait list control group (Öst, 2008). In 2003, Lynch, Morse, Mendelson, and Robins (2003) found that participants in a DBT group reported lower levels of self-rated depressive symptoms. A randomised controlled trial was conducted, comparing DBT with clinical management and pharmacotherapy. At a 6-month follow up, there was a significant difference between the two groups in remission of symptoms, favouring the DBT group. This finding is also congruent with a report by Soler et al. (2009) who conducted a randomised control trial comparing the DBT skills training with a standard group therapy. Most research studies on the effectiveness of the DBT were conducted on patients with BPD, depression, and substance dependence, and mainly assessed the negative psychological outcomes of BPD symptoms (e.g. self-harm, suicidal ideation, depression, and mood regulation). There are no research studies that examine the effectiveness of DBT in promoting well-being or improving psychological distress in non-clinical populations.

Table 3.4 shows the effectiveness of DBT at improving psychological outcomes in clinical adult populations. Table 3.4 is primarily focused on published, peer review research studies that are randomized controlled trials assessing suicidal ideation, self-injurious behaviours, and interpersonal sensitivity, in adult clinical populations with BPD. Table 3.4 shows that overall; DBT reduced self-reported levels of suicidal ideation, self-injurious behaviours, and interpersonal sensitivity.

Table 3.4. Randomized controlled trials of Dialectical Behaviour Therapy (DBT) on suicidal ideation, self-injurious behaviours, and interpersonal sensitivity

Study	N	Type participant	Duration of treatment	Control groups	Main outcome
Linehan, Heard, & Amstrong, 1993	39	Chronically parasuicidal patients with BPD	1 year	TAU (20)	DBT>TAU: increases in global functioning & social adjustment, reductions in parasuicide behavior & number of psychiatric inpatient days
Turner, 2000	24	Patients with BPD	1 year	CT (12)	DBT>CCT: reductions in parasuicide behavior, suicidal ideation, depression, impulsivity, anger, & number of psychiatric inpatient days, & increase in global functioning
Koons et al., 2001	28	Patients with BPD	6 months	TAU (14)	DBT>TAU: reductions in suicidal ideation, depression, hopelessness, dissociation, & anger expression
Verheul et al., 2003	58	Patients with BPD	1 year	TAU (31)	DBT>TAU: reductions in self-mutilating & self harm behaviors, treatment retention
Linehan et al., 2006	101	Patients with BPD	1 year	CTBE (49)	DBT>CTBE: reductions in suicide risk, medical risk of suicide attempts & self injurious behavior, psychiatric hospitalizations & emergency visits, treatment retention
Lynch et al., 2007	35	Patients with co-morbid depression and personality disorder	24 weeks	MED (14) (Note: In this study, MED was compared against MED+DBT)	DBT>MED: reductions in interpersonal sensitivity & interpersonal aggression

BPD = Borderline Personality Disorder; CT = Cognitive Therapy; CTBE = Community Treatment by Expert; MED = Antidepressant Medication; TAU = Treatment as Usual

Acceptance and Commitment Therapy (ACT). ACT is a mindfulness-based therapy which promotes mindfulness and ongoing, non-judgemental contact with psychological and environmental events. It is intended as a solution for problems that are created by the imperfect nature of our verbal language (Hayes, Luoma, Bond, Masuda, & Lillis, 2006). An example of the problematic nature of language is the difficulty of describing colour to a blind person. ACT

incorporates mindfulness as one of the six core processes, which are present moment, identifying valued directions, engaging in committed action, recognising the self as a context, cognitive defusion, and acceptance (Hayes, 2004). These six core processes are not independent of one another. They are better conceptualized as the different lenses through which patterns of behaviours are viewed (Wilson & DuFrene, 2009 as cited in Wilson, Bordieri, Flynn, Lucas, & Slater, 2011).

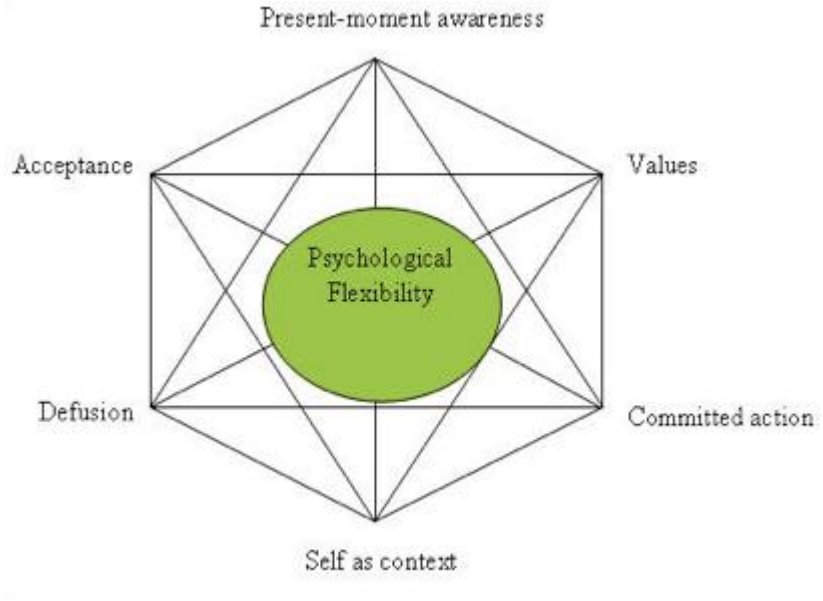

Figure 3.3: Six core components of Acceptance and Commitment Therapy (Luoma, Hayes, & Walser, 2007).

All of the six components in ACT work together to promote psychological flexibility (Luoma, Hayes, & Walser, 2007). However, in treatment, each process is independently described for its utility in clinical interventions and research (Willson, Bordieri, Flynn, Lucas, & Slater, 2011). In ACT, the mindfulness activities are used to promote contact with the present moment, acceptance, defusion, and the self-as context. During ACT, the therapist asks the clients to notice their thoughts and emotions in a continuous manner (i.e., present moment processes) while accepting them (i.e., acceptance processes). By being in the present moment, one is less likely to be influenced by thoughts and emotions that are transient (i.e., defusion processes). Furthermore, one can acknowledge the self that is distinct from the observed stream of events (i.e., self-processes) (Willson, Bordieri, Flynn, Lucas, & Slater, 2011). As a result, psychological flexibility gradually emerges. These six core processes become a basis for the implementation and identification of values (i.e., value identification), directions, and patterns of effective action (i.e., engagement in committed action) (Luoma, Hayes, & Walser, 2007). Dalrymple and Herbert (2007) found a significant improvement in social anxiety symptoms as well as quality of life, from pre-treatment to

a follow-up of ACT. This finding is congruent with emerging research which shows that ACT is efficacious in the psychological treatment of a wide range of problems, including drug dependence, chronic pain, epilepsy, depression, work stress, trichotillomania, and BPD (Hayes, Luoma, Bond, Masuda, & Lillis, 2006, Öst, 2008, Powers, Zum Vörde Sive, Vörding, & Emmelkamp, 2009). There are a number of randomised controlled trials that examine the effectiveness of ACT on psychological outcomes in both non-clinical and clinical populations. With regards to non-clinical populations, Bond and Bunce (2000) conducted a randomised controlled trial with adult volunteers from an organization. A total of 90 participants were randomly allocated into the ACT treatment group, the Innovative Promotion Program (IPP), or a waitlist control group. The findings showed that both the ACT and the IPP groups reported reduced depression and increased propensity to innovate. There was no significant change in the waitlist control condition. Also, a study conducted in a university setting, demonstrated that ACT is effective in reducing mathematics anxiety. A total of 24 college students who experienced math anxiety were randomly allocated into ACT or Systematic Desensitization Therapy. The findings indicated that students from both conditions experienced significantly less math and test anxiety (Zettle, 2012). Table 3.5 shows the effectiveness of ACT on psychological outcomes in adult clinical populations. It focuses on published, peer reviewed research studies that are randomized controlled trials assessing symptoms of depression and anxiety. Table 3.5 shows that overall; ACT reduces self-reported levels of depression and anxiety.

Table 3.5: Randomized controlled trials of Acceptance and Commitment Therapy (ACT) on depression and anxiety symptoms.

Study	N	Type participant	Duration of treatment session	Control groups	Main outcome
Zettle & Hayes, 1986	18	Depressed patients	12 weeks	CT (12)	ACT > CT: reductions in depression & believability of thoughts
Zettle & Rains, 1989 as cited in Keng, Smoski, & Robins, 2011.	31	Depressed patients	12 weeks	CCT (10)	ACT=CCT=PCT: reduction in depression; ACT=CCT = PCT: reduction in dysfunctional Attitudes
Hayes et al., 2004	124	Polysubstance-abusing Opiate Addicts	16 weeks	MM (38)	ACT=ITSF>MM: reductions in opiate & drug use (at follow up); ACT=ITSF=MM: reduction in distress & improvement in adjustment
Lappalainen et al., 2007	28	Outpatients (mixed symptoms/ diagnoses)	10 sessions	CBT (14)	ACT>CBT: reduced depression, improved social functioning
Forman, Herbert, Moitra, Yeomans, & Geller, 2007	99	Outpatients (mixed symptoms/ diagnoses)	16 sessions	CT (44)	ACT=CT: reductions in depression & anxiety, improvements in quality of life, life satisfaction, & general functioning

CT = Cognitive Therapy; CBT = Cognitive Behavioural Therapy; CCT = Complete Cognitive Therapy; ITSF = Intensive Twelve Step Facilitation Therapy Plus Methodone Maintenance; MM = Methodone Maintenance Alone; PCT = Partial Cognitive Therapy.

In summary, mindfulness-based interventions in the Western context have been investigated in meta-analyses, randomised controlled trials, and numerous research studies, which have been included in this review. The findings from these studies suggest that mindfulness-based interventions are effective in reducing a wide range of psychological distresses in non-clinical and clinical populations. However, there are some limitations. First, while the meta-analyses in this review included a number of randomised controlled trials, there were also a number of studies that compared mindfulness-based interventions to a no-treatment control or placebo condition. Therefore, it is possible that the treatment groups reported improvements in psychological outcomes due to reasons other than the specific mindfulness training that they received. Second, although the meta-analyses in this review indicated the efficacy of mindfulness-based interventions in reducing psychological distress, mindfulness, itself, was only measured in 45% of all studies (Khoury, Lecomte, & Fortin, 2013). Finally, the majority of research on mindfulness relies on clinical

interventions to determine its effectiveness. The understanding of the mechanisms that account for its effectiveness is still unclear.

Cognitive Behavioural Therapy (CBT) is the most common psychotherapy used for mood and anxiety disorders as it has the largest evidence base. CBT is practiced in both individual and group formats (Arch, Ayers, Baker, Almklov, Dean, & Craske, 2013). Therefore, CBT is the gold standard against which the efficacy of alternative interventions is assessed. This includes existing mindfulness-based interventions. In recent years, a number of research studies have attempted to compare mindfulness-based interventions with CBT.

Table 3.6. A comparison of the effectiveness of Cognitive Behavioural Therapy and mindfulness-based interventions

Study	Type participant	Main outcome
RCT of MBSR VS Group CBT (Arch, Ayers, Baker, Almklov, Dean and Craske, 2013)	Heterogeneous anxiety disorders	CBT=MBSR: reduce anxiety disorders. CBT was more effective at reducing anxious arousal, whereas MBSR may be more effective at reducing worry and comorbid disorders
RCT of ACT VS CBT (Arch, Eifert, Davies, Vilardaga, Rose and Craske, 2012)	Mixed Anxiety Disorders	CBT=ACT: Overall improvement was similar between ACT and CBT in anxiety symptoms
RCT of MBSR VS CBT (Koszycki et. al, 2007)	Generalised Social anxiety disorder	CBT=MBSR: Overall improvement was similar between CBT and MBSR in mood, functionality and quality of life
RCT of ACT VS CBT (Forman, Herbert, Moitra, Yeomans, Geller, 2007)	Depression	CBT=ACT: improve in depression, anxiety, functioning difficulties, and life satisfaction
RCT of MBCT VS Group CBT (Manicavasagar, Perich, & Parker, 2012)	Non-melancholic depression	CBT=MBCT: improve in depression and anxiety scores. No significant difference found between two conditions
RCT of mindfulness meditation (MM) VS CBT (Zautra et. al 2008)	Rheumatoid Arthritis patients with depression	CBT= (MM): improve in coping efficacy and negative and positive affect
RCT of MBCT VS group CBT (Piet et al., 2010)	Social Phobia	CBT =MBCT: reduce in anxiety symptoms

ACT= Acceptance and Commitment Therapy, CBT= Cognitive Behavioural Therapy, MBSR= Mindfulness-based Stress Reduction, MBCT= Mindfulness-based Cognitive Therapy, MM=Mindfulness Meditation

Table 3.6 shows the comparison between the effectiveness of mindfulness-based interventions and CBT. Table 3.6 shows that overall, CBT is effective in reducing psychological

distress and that CBT and mindfulness-based interventions have a similar efficacy. It is important to note that the efficacy of these therapies is assessed under difficult experimental circumstances. Firstly, the majority of these studies were conducted in clinical treatment settings. Most of the studies in Table 3.6 included particularly complex patients with more than one diagnosis. Therefore, the attrition rates were high because subjects were not always compliant or reliable. Secondly, most of the studies had a small number of participants which affected the statistical effect size. Thirdly, some of the studies were challenged by the limited availability of participants in a treatment setting, which is a common research problem. Given that the CBT is the gold standard of treatment, administrative biases and individual biases drive patients to be assigned to the CBT condition. In specific instances, however, mindfulness-based interventions may have been more appropriate. This leads to difficulties in conducting randomization. Usually, a compromise is achieved by conducting a weighted randomization. Fourthly, in some studies, the duration of the different treatments was not equal as they had different protocols. Fifthly, most of the studies did not have a passive control condition. Hence, it is difficult to differentiate between the improvements that result from the treatment and the improvement that result from the passage of time. Finally, mindfulness-based interventions (e.g., MBCT, DBT, and ACT) always include cognitive strategies that assist individuals to control the occurrence of negative thoughts. CBT also includes a cognitive component that is designed to control the occurrence of negative thoughts. Thus, the respective cognitive components of mindfulness based interventions and CBT are similar. When comparing these two types of therapy, it is possible their efficacy in several studies is due to a similarity in the cognitive components, despite the fact that there are multiple components in each type of therapy.

Some psychologists critique that CBT does not provide the long-lasting effects that clients seek (Roemer & Orsillo, 2002). Although the findings show that the efficacy of CBT is not significantly different from the efficacy of mindfulness-based interventions, mindfulness psychotherapies in modern psychology are not fully developed yet (Rosch, 2007). Nonetheless, this review shows that existing mindfulness-based interventions have a very similar efficacy to CBT, with neither treatment displaying any substantive superiority over the other. Mindfulness-based interventions have become an alternative therapy, despite having any compelling evidence to recommend them over CBT. Although existing mindfulness-based interventions have a similar efficacy to CBT, it should be noted that existing mindfulness-based interventions have adopted mindfulness techniques without the insight of the Eastern mindfulness tradition (Baer & Krietemeyer, 2006). The effectiveness of existing mindfulness-based interventions could be increased by deliberately focusing on the development of insight into the three characteristics of existence (Grabovac, Lau, & Willett, 2011). Therefore, there is a need to build on the success of existing mindfulness-based interventions by adding insight and understanding of the three

characteristics of existence into the practice of mindfulness. This integration could result in a new, inclusive mindfulness psychotherapy that promotes well-being and reduces distress.

Mindfulness, well-being, and positive psychology

Within the past few decades, there has been a surge of interest in the investigation of mindfulness as a psychological construct and form of clinical intervention. In a recent review (Keng, Smoski, & Robins, 2011), 56 randomized controlled trials of four major mindfulness-based interventions showed their effectiveness in improving a wide range of psychological distresses. These findings, thus far, suggest that mindfulness training can provide significant benefits in addressing psychological difficulties. However, these mindfulness-based interventions have primarily focused on the treatment of mental difficulties. There is an important distinction between reducing negative factors and enhancing positive factors. Although it is not possible to entirely separate positive and negative factors, positive psychology aims to move beyond the temporary suppression of negative thoughts and feelings. There is a genuine aim to move beyond this approach and to create long-lasting positive change. The PMP in the current study aims to achieve positive changes through the practice of mindfulness and Buddhist insight.

Seligman (2002) posited that from the 21st century, the practice of psychology would extend beyond addressing psychological difficulties, and would include the enhancement of human strengths. Research studies have begun to emerge on the benefits of mindfulness in positive psychology. Shapiro, Carlson, Astin, and Freedman (2006) suggested that the practice of mindfulness could enhance well-being and positive psychological outcomes, by allowing practitioners to develop a deeper awareness of insight into oneself and other external phenomena. This experience is called self-liberation, which occurs when one becomes free of thoughts, emotions, and suffering, and is able to attain long-lasting well-being (Bhikkhu, 2001). Brown and Ryan (2003) mentioned that mindfulness is positively related to a large array of beneficial outcomes, including positive affect, life satisfaction, autonomy, self-esteem, emotional regulation, self-compassion, psychological well-being, agreeableness, extraversion, openness, and conscientiousness.

Shapiro, Schwartz, and Santerre (2002) claimed that mindfulness is related to twelve positive qualities, which include non-judgment, non-striving, acceptance, patience, trust, openness, letting go, gentleness, generosity, empathy, gratitude, and loving kindness.

Table 3.7: Mindfulness and Twelve positive qualities (Shapiro, Schwartz, & Santerre, 2002)

Quality	Definition
Non-judgement	Impartial witnessing, observing the present, moment by moment without evaluation and without categorization
Non-striving:	Non-goal-orientated, remaining unattached to outcomes or achievements, not forcing things
Acceptance:	Open to seeing and acknowledging things as they are in the present moment, acceptance does not mean passivity or resignation, rather a clearer understanding of the present so one can respond more effectively
Patience	Allowing things to unfold in their own time, bringing patience to ourselves, to others, and to the present moment
Trust	Trusting oneself, one's body, intuition, emotions, as well as trusting that life is unfolding as it is supposed to
Openness	Seeing things as if for the first time, creating possibility by paying attention to all feedback in the present moment
Letting go	Nonattachment, not holding on to thoughts, feelings, experiences; however, letting go does not mean suppressing
Gentleness:	Characterised by a soft, considerate, and tender quality; however, not passive, undisciplined, or indulgent
Generosity	Giving in the present moment within a context of love and compassion, without attachment to gain or thought of return
Empathy	The quality of feeling and understanding another person's situation in the present moment –their perspectives, emotions, actions (reactions)—and communicating this to the person
Gratitude	The quality of reverence, appreciating and being thankful for the present moment
Loving kindness	A quality embodying benevolence, compassion, and cherishing; a quality filled with forgiveness and unconditional love

In Buddhism, it is believed that mindfulness can promote psychological and personal development as well as attain "sukka". It is said that "sukka" is the state of lasting well-being (detail page 12-14) that is attained through the practice of mindfulness. Such a state emerges when the mind is liberated from mental imbalance or when the mind attains mental balance (e.g., conative, attentional, cognitive, and affective balances) (Wallace & Shapiro, 2006). Consequently, one can develop wisdom or insight into the true nature of oneself and the world. This process is necessary in the practice of mindfulness as it is a foundation which allows one to be aware of the constructs in nature and their own mental processes, to cultivate non attachment to mental constructs (Sahdra, Shaver, & Brown, 2009), and to be compassionate (Neff, 2003). Finally, one can change their perspective of the self and of nature because they are impermanent (Olendzki, 2011). Insight

reduces attachments and diminishes avoidance. The mind becomes stable within reality. Consequently, a state of sukka, or long lasting inner happiness, emerges.

A number of correlation studies have reported a positive association between mindfulness and positive psychological outcomes. For instance, a meta-analysis examining the relationships between mindfulness and personality traits from 29 studies, showed significant positive correlations between mindfulness and positive affect ($r = 0.34$, $p < .005$), conscientiousness ($r = 0.32$, $p < .005$), and agreeableness ($r = 0.22$, $p < .005$). However, these results are based on a relatively small number of studies (Giluk, 2009). Hollis-Walker and Colosimo (2011) conducted a cross-sectional and mediation analysis using data from 123 undergraduate students. Their findings indicated significant positive correlations between mindfulness and conscientiousness ($r = 0.46$, $p < .001$), extraversion ($r = 0.42$, $p < .001$), agreeableness ($r = 0.36$, $p < .001$), openness ($r = 0.35$, $p < .001$), subjective well-being ($r = 0.75$, $p < .001$), and self-compassion ($r = 0.69$, $p < .001$). Furthermore, a mediation analysis was conducted to explore the relationship between mindfulness, subjective well-being, and self-compassion. The mediation analysis showed that mindfulness significantly predicted self-compassion ($\beta = 0.69$, $p < .001$) and subjective well-being ($\beta = 0.75$, $p < .001$). Moreover, mindfulness is partially linked to subjective well-being through self-compassion ($z = 4.92$, $p < .001$). Another correlational study conducted by Brown and Ryan (2003), which used undergraduate students, showed significant positive correlations between mindfulness and self-esteem ($r = 0.39$, $p < .001$), pleasant affect ($r = 0.35$, $p < .001$), and subscales of eudaimonic well-being ($r = 0.31$- 0.43, $p < .001$). However, these findings are based on correlational studies. Therefore, the interpretation of these results should be cautious and cannot prove causation.

Research studies provide evidence that supports the effectiveness of mindfulness in positive psychology. For example, Jain et al. (2007) conducted a randomised controlled trial with 81 full time students who were experiencing a considerable amount of distress. Students were randomly allocated to MBSR, relaxation training, or a waitlist control condition. Hierarchical linear modelling revealed that both the MBSR and relaxation training groups experienced a significant increase in positive mood state over time. The effect size for the MBSR group was above medium ($d = .71$). Nyklíček and Kuijpers (2008) conducted a randomised controlled trial with adult subjects who were randomly allocated to MBSR or a wait-list control group. A repeated measures multiple analysis of variance showed that compared to the control group, the MBSR group had elevations of positive effect ($p = .006$). However, this finding showed that positive psychological outcomes in participants were less sensitive to change than measures of psychological distress.

Carmody and Baer (2008) investigated the relationships between the home practice of mindfulness, psychological symptoms, and psychological well-being, in a study of 174 adults during a MBSR program. When comparing pre-assessment and post-assessment, significant

improvements in several measures of well-being were identified. For example, non-judgement (t= 8.70, p <.001; d = 0.86) acting with awareness (t= 7.60, p <.001; d = 0.58), and well-being (t= 9.77, p <.001; d = 0.77). Moreover, a mediation analysis showed that the duration of meditation practice was a significant predictor of well-being (r = 0.42, F = 24.14, p < .001) and increased mindfulness (r = .42, F = 21.95, p < .001). An increase in mindfulness was also a significant predictor of well-being (r = .49, F = 45.95, p < .001). However, when practice duration and increase in mindfulness were entered simultaneously as predictors of well-being, the relationship between practice duration and well-being remained significant. However, the drop in the regression coefficient from 0.42 to 0.25 was significant (t = 3.87, p < .001). This finding suggests that although increases in mindfulness contribute to improvements in well-being, other variables that are not included in the model may also contribute to increased well-being.

Based on the review, a number of correlational studies have shown a positive association between mindfulness and positive psychological outcomes. Currently, MBSR is the main mindfulness-based psychotherapy, with well-established research evidence, that has been adopted for use in the development of well-being. However, MBSR was developed for the main purpose of reducing distress. Thus, the structure of the MBSR program in enhancing well-being is unclear. Although MBSR is able to improve well-being, the mechanisms of change appear to indirectly reduce the burden of distress.

As mentioned by Slade (2010), a new approach to promoting well-being, that is different from the treatments of psychological distress, is required. Given that the existing mindfulness programs are well-established, it is this author's contention to develop a new mindfulness-based psychotherapy for enhancing well-being and reducing distress. The aim of this psychotherapy is to build on the current knowledge of existing mindfulness-based programs and combine this with rich Buddhist teachings. The new mindfulness-based psychotherapy could provide internationalization and benefit both the Eastern and Western populations. Finally, the current study attempts to elucidate the mechanisms of change that result from mindfulness. Several studies have shown that mindfulness involves cognitive and emotional processes. In the next section, an overview of the association between mindfulness and cognitive and emotional processes is provided.

Mindfulness: Mechanisms of Change in Relation to Cognition and Emotion

In the previous review, we can see that mindfulness has received a considerable amount of attention. The majority of the research has focused on clinical studies, which have aimed to evaluate the efficacy of mindfulness-based interventions. The research findings have produced promising data that suggests mindfulness-based interventions are effective in the treatment of psychological and physical symptoms. However, it is highly desirable and necessary to understand the

mechanisms involved in this process. It is important to understand what is occurring and why it is occurring. This next section offers a conceptualization of a potential mindfulness mechanism, by using support from relevant research.

Mindfulness and cognitive processes: A theoretical framework and empirical studies

The following extract is a typical instruction in mindfulness practice in Western mindfulness interventions; "Focus your entire attention on breathing in and out. Try to sustain your attention there without distraction or judgment. If you get distracted, calmly return your attention to your breath and start again" (Smith & Novak, 2003 as cited in Cullen, 2011). It is clear from the extract that mindfulness involves a cognitive process. The individual sustains attention, makes observations from moment to moment, and chooses to be non-judgemental. Shapiro, Carlson, Astin and Freedman (2006) proposed the Theory of Reperceiving, which posits a mechanism of action underlying the effectiveness of mindfulness. According to the Theory of Reperceiving, during mindfulness, a person is able to disengage from the contents of their conscious thoughts instead of ruminating. This cognitive process is called "reperceiving". Simply stated, reperceiving allows one to deeply experience each event of the mind and body without becoming attached (Shapiro, Carlson, Astin, & Freedman, 2006). The process of reperceiving may be viewed as "deautomatization", which is the undoing of automatic processes that control perception and cognition (Deikman, 1982; Safran & Segal, 1990 as cited in Shapiro, Carlson, Astin, & Freedman, 2006). Shapiro, Carlson, Astin and Freedman (2006) explained that through the process of reperceiving, individuals are enabled to experience psychological detachment, perceive things or situations subjectively, and become emotionally objective. As a result, individuals perceive themselves as being apart from events rather than being at the centre of events. This process can lead to an insight into the true nature of existence (Olendzki, 2011), as well as the impermanent and fleeting nature of all phenomenon (Shapiro, Carlson, Astin, & Freedman, 2006; Bhikkhu, 2001; Payutto, 1998). Ultimately, one could reduce the intensity of their experience.

Grabovac, Lau, and Willett (2011) proposed a Buddhist Psychological Model (BPM) which explains how mindfulness relates to higher cognitive process (or insight), such as the three characteristics of existence (or insight mindfulness). BPM describes mindfulness as attention regulation and that promotes insight into the three characteristics of existence. According to BPM, when interacting with the world individuals experience a continuous stream of conscious thought as a result of rapid series of perceptions and mental concepts forming and passing away. Such perception falls into one of three categories: pleasant, unpleasant or neutral. Habitually, these perceptions rapidly lead to changes in thoughts, emotions, and actions, in order to pursue pleasant perception and to avoid unpleasant perception. This process leads to endless suffering. However

with mindfulness and concentration, individuals become calm and aware of habitual reactions to these cognitive processes. Individuals then begin to understand their habitual reactions of mental activities associating with the three characteristics of existence, as they realise that chasing after pleasure or trying to avoid unpleasant leads to endless sufferings and cannot bring any lasting sense of contentment (impermanence). Fleeting mental formations and perceptions are simply mental or sensory events rather than aspects of self (non-self attachment). Consequently, such realisation allows individuals to experience pleasant, unpleasant or neutral perceptions without the accompanying thoughts, emotions, and actions that cause someone to attempt to pursue pleasant perception and to avoid unpleasant perception. Therefore, suffering is not experienced.

Jain et al. (2007) conducted a randomized controlled trial to investigate the effects of MBSR on rumination and distress. A sample of 81 medical and nursing students was randomly allocated into the MBSR group, relaxation group, or control group. A Hierarchical Linear Model revealed that both the MBSR group and relaxation group experienced a significant decrease in distress and rumination over time, compared to the control group (p <.005). When comparing the MSBR group to the control group, the effect size for distress was large (d = 1.36) and the effect size for rumination was medium (d = 0.57). Moreover, the findings showed that rumination partially mediated the effects of MBSR on distress (standardized β = .28, p < .005).

Shapiro, Oman Thoresen, Plante, and Flinders (2008) conducted a randomised controlled trial with 47 full time students. The students were randomly allocated into the MBSR group, Easwaran Passage Meditation (EPM) group or waitlist control group. A Hierarchical Linear Model revealed that both the MBSR group and EPM group experienced a significant increase in mindfulness. The effect size for the pooled variance of MBSR and EPM was large (d =1.00). The findings indicated that the increase in mindfulness in the MBSR and EPM groups was significantly greater than the increase in the control group. The findings also showed that the mindfulness mediated reductions in stress (r = -0.32, p <.001) and rumination (r = -0.27, p < .001).

Borders, Earleywine, and Jajodia (2010) conducted Structural Equation Modelling (SEM) to understand the associations between mindfulness, rumination, hostility, and anger. A group of 464 undergraduate students were required to complete self-report questionnaires. The findings indicated that the relationships between mindfulness, anger, and hostility are partially mediated by lower levels of ruminative thinking. However, this study had some methodological limitations. Firstly, given that the study was cross-sectional, the statistical tests of mediation cannot elucidate causal relationships between the variables. Moreover, it is possible that low aggressive tendencies cause individuals to engage in high levels of mindfulness and low levels of rumination.

In clinical settings, the use of mindfulness could be considered for the treatment of Attention Deficit Hyperactivity Disorder (ADHD). ADHD is a complex behavioural disorder which is

influenced by multiple genetic and environmental factors. The symptoms of ADHD include cognitive deficits in executive functioning such as attention, working memory, and inhibition (Seidman, 2006). Zylowska et al. (2007) conducted a pilot study on the effectiveness of an 8-week mindfulness program for ADHD, with 32 adult and adolescent participants. The participants were required to complete a series of self-report measures, including the ADHD Rating Scale IV, neurocognitive task performance, and Attention Network Test (ANT). The findings showed that 78% of participants reported a significant reduction in all of their ADHD symptoms, while 30% of participants reported a significant reduction in at least 30% of their ADHD symptoms. Overall, participants' scores on the self-report measures suggested significant improvements. This study, however, was limited by its lack of a control group. It is possible that the observed changes were due to factors other than the intervention, such as the passage of time, other clinical interventions, or individual differences (e.g., IQ).

Research studies within cognitive psychology have also investigated the association between mindfulness and various cognitive processes. These cognitive processes include memory, attention, and executive functions. Studies have used cognitive tasks such as the Stroop Test and tests of executive functions to examine this association. Moore and Malinowski (2009) investigated the association between meditation, self-reported mindfulness, and cognitive flexibility, as well as other attentional functions. The study compared a group of highly experienced meditators with a control group of novice mediators. The participants were evaluated using measures of Stroop interference and "d2-concentration". The findings showed that attentional performance and cognitive flexibility were positively correlated to meditation practice and levels of mindfulness. Experienced meditators performed significantly better on all measures of attention (e.g., Stroop interference) than novice meditators. Furthermore, self-reported levels of mindfulness were significantly higher for experienced meditators than novice meditators. The correlations between mindfulness and all of the attention measures were of moderate to high strengths. These results suggest that mindfulness is positively associated with attentional functions and cognitive flexibility. Mindfulness is also associated with improvements in cognitive performance. However, these conclusions are premature because a cross-sectional design study without the experimental manipulation of meditation, cannot conclusively demonstrate causality. Furthermore, the cross-sectional findings may have been affected by a self-selection bias. This study cannot rule out the possibility that the experienced meditators possessed better cognitive and attentional abilities, for reasons that are independent of their engagement with meditation. It is possible that individuals with developed cognitive and attentional abilities found meditation to be rewarding and thus, remained engaged. On the other hand, individuals with less developed cognitive and attentional abilities may have disengaged.

In conclusion, based on current research studies, there seems to be a clear association between mindfulness and improved cognitive performance. A number of studies have suggested that mindfulness provides several benefits over other measures of cognition. However, there is a need for future research to investigate the mechanisms underlying the association between mindfulness and cognitive processes. The current thesis aims to further explore the association between mindfulness and cognitive processes.

Mindfulness and emotional processes: A theoretical framework and evidence studies

Emotion is a reflex process which includes feelings and physical reactions that are elicited by personally significant stimuli in different situations. The main emotions are fear, sadness, anger, disgust, and happiness (Williams, 2010). Emotion is defined as a bio-behavioural system that is comprised of four core components, including a subjective experience (e.g., fear), a physiological reaction (e.g., heart rate), an expressive component (e.g., facial expression), and a behavioural response (e.g., freezing) (Watson & Vaidya, 2003). Emotion plays a critical role in the occurrence of psychopathology. In the Diagnostic and Statistical Manual of Mental Disorders, difficulties or deficits in emotional regulation is identified as a symptom in more than half of the Axis I disorders and all of the Axis II disorders (American Psychiatric Association, 2013). In positive psychology, a healthy emotion (i.e., affective balance), which includes emotional regulation, is one of the most important ingredients in well-being (Wallace & Shapiro, 2006).

Research has shown that mindfulness has a significant, negative association with affective imbalance, particularly difficulties in emotional regulation (Gratz & Roemer, 2004). Furthermore, mindfulness has a significant, positive association with affective balance, including happiness, empathetic joy, and compassion (Wallace & Shapiro, 2006). When one has attained an understanding of the three characteristics of existence through mindfulness the practice of mindfulness can lead to kindness, compassion, empathetic joy, and equanimity, (Payutto, 1998).

Is it possible to explain the association between mindfulness, emotional balance, and flexibility? Wallace and Shapiro (2006) posited that affective balance and flexibility are natural outcomes of the cultivation of mindfulness (e.g. conative, attentional, and cognitive balances; for details, see page 16-19). Shapiro, Carlson, Astin, and Freedman (2006) attempted to explain the internal mental process that occurs during the practice of mindfulness, which leads to emotional flexibility. They suggest that during the experience of mindfulness, an awareness of emotions spontaneously develops through interacting with the environment. By paying attention, or being in the present moment while maintaining non-judgement, one can decrease the intensity of an emotion that is experienced. This mental process is called “reperceiving experience”. Through reperceiving experience, individuals learn that their emotions are not overwhelming or frightening, and that

emotional suppression is not required (Shapiro, Carlson, Astin, & Freedman, 2006). According to the Buddhist Psychological Model (BPM), Grabovac, Lua and Willett (2011) propose that during the practice of mindfulness individuals can observe their emotion as an affect-neutral object which will lead to no concomitant feelings of attachment or aversive. Consequently, they react to situations dispassionately and with a greater freedom of choice. Garland, Gaylord and Fredrickson (2011) also described the relationship between mindfulness and emotional regulation as the process of mindful emotion regulation, which is identified as "positive reappraisal". During the practice of mindfulness, stressful events are reconstrued as beneficial (e.g., thinking that one will learn something from a difficult situation), meaningful, or benign (Holzel, Lazar, Gard, Schuman-Olivier, Vago, & Ott, 2011). As a result, one is able to observe their own experience more deeply and not be overwhelmed by emotions or thoughts. It is believed, that individuals can use adaptive emotional regulation strategies (e.g. reappraisal) to independently deal with their own stressful situations (Chambers, Gullone & Allen, 2009).

Empirical studies have investigated the relationship between mindfulness and emotional regulation. Hill and Updegraff (2012) conducted a correlational study examining the relationships between mindfulness tendencies, difficulties in emotional regulation, and emotional lability, with 96 undergraduate students. The findings showed a negative association between mindfulness and emotional lability (r = -0.38, p <.005) and emotional regulation (r = -0.58, p <.005). Furthermore, a mediation analysis was conducted to understand the relationship between mindfulness, difficulties in emotional regulation, and emotional lability. The findings showed that difficulties in emotional regulation mediated the relationship between mindfulness and emotional lability (Hill & Updegraff, 2012).

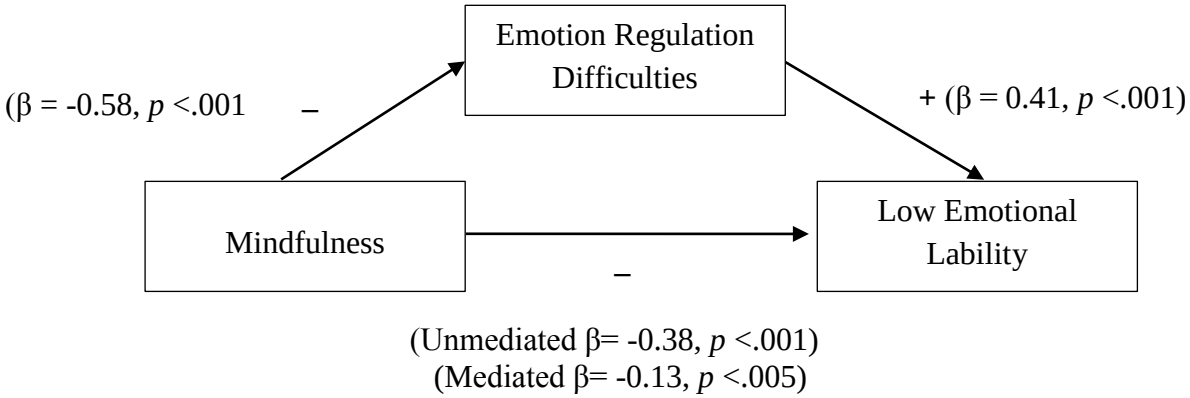

Figure 3.4. The relationship between mindfulness and emotional lability is mediated by emotional regulation difficulties.

Recently, a meta-analysis of 29 studies, including cross-sectional and longitudinal designs, showed a significant positive correlation between mindfulness and positive affect ($r = 0.34$, $p < .005$). The meta-analysis also showed a significant negative correlation between mindfulness and negative affect ($r = -0.34$, $p < .005$). However, the findings from the meta-analysis are based on a relatively small number of studies (Giluk, 2009). Research has shown that in clinical settings, mindfulness is effective in improving emotional regulation in patients with depression or anxiety. For example, 14 patients diagnosed with Social Anxiety Disorder (SAD) participated in a standard MBSR program (Goldin & Gross, 2010). Patients were analysed with neuroimaging (i.e., functional MRI) before and after the program. The findings showed that patients who completed the MBSR program experienced improvements in anxiety and depressive symptoms, as well as improvements in self-esteem. During the breath-focused attention task, participants showed decreased negative emotional experiences, reduced activity in the right dorsal amygdala (the right dorsal amygdala actives in response to negative emotions and self-doubt), and increased activity in brain regions that are involved in directing attention. These results suggest that MBSR training in patients with SAD will help to reduce emotional reactivity and enhance emotional regulation (Goldin & Gross, 2010). However, a limitation of this study is the lack of a control group, which makes it harder to draw a strong conclusion about the relationship between mindfulness and emotional regulation.

Research studies have also found that mindfulness training reduces psychological distress and improves psychological adjustment in medical, psychiatric, and non-clinical patients. In one study, fifty-six adults were randomly assigned to the MBSR group, which was an 8-week mindfulness training program, or the wait-list control group (WL). The results showed that patients in the MBSR program reported a significant increase in mindfulness ($d = 1.12$, $p < .005$) and self-compassion ($d = 0.84$, $p < .005$). Moreover, patients who completed the MBSR program reported a significant decrease in worry ($d = 0.56$, $p < .005$) and difficulties in emotional regulation ($d = 0.72$, $p < .005$). A limitation of this study is that the MBSR group was compared to a no-treatment control condition, rather than an active treatment or placebo condition. Therefore, it is possible that the treatment group experienced psychological improvements due to reasons other than the specific mindfulness training. Such external or confounding variables may be associated with any kind of intervention or more particularly, a group-based intervention. It is possible that some patients benefit from any kind of attention, regardless of the specific intention of that intervention (Robin, Keng, Ekblad, & Brantley, 2012). Overall, there is substantial evidence to suggest that mindfulness enhances positive emotional processes and reduces negative emotions.

In conclusion, there is a need to understand the mechanisms involved in the association between mindfulness and cognitive and emotional processes. A number of studies have shown that mindfulness is clearly associated with cognitive and emotional processes. However, the majority of

studies that were included in this review were conducted with Western populations. There is a need to understand the association between mindfulness and cognitive and emotional processes in Eastern cultures, where the concept of mindfulness was originated. An understanding of the mechanisms involved in the association between mindfulness and cognitive and emotional processes is required for further research.

In summary, the literature review in this chapter offers an overview of mindfulness in the Western context and from a Buddhist perspective. It is clear that there are several studies showing an association between mindfulness, distress, and well-being. When considering mindfulness, Western mindfulness-based psychotherapies have tended to focus on the treatment of psychological distress. As such, mindfulness has been integrated into different forms of psychotherapy for the main purpose of ameliorating negative outcomes. However, these mindfulness-based interventions do not aim to improve psychological well-being, unlike the current practice of CBT. Also, it is not clear whether mindfulness is mediating the observed changes since similar changes can be obtained with CBT, which does not include a mindfulness component. It is suggested that Western mindfulness-based psychotherapies are not yet fully developed, as mindfulness is administered as an isolated skill set without the inclusion of rich Buddhist teachings.

Recently, Western psychology has begun to shift the practice of mindfulness towards positive psychology. At present, more research studies are needed to better understand the effectiveness of using mindfulness to promote well-being. MBSR is the only mindfulness-based program that has been used to promote well-being. However, the MBSR program was originally designed to reduce stress. Therefore, the positive outcomes in well-being that are observed in MBSR are considered to be side effects of stress reduction. Clearly, the use of mindfulness-based psychotherapies to promote positive psychology is limited.

Mindfulness in the Eastern perspective is centred on the concept of long-lasting happiness. The conceptualization of mindfulness from the Eastern perspective provides a structure for the practice of mindfulness through the four foundations of mindfulness (Satipatthana), as well as the direction to attain long-lasting well-being through an understanding of the three characteristics of existence. It is believed that the three characteristics of existence together with the four foundations of mindfulness provide an essential framework for the practice of mindfulness for enhancing well-being (Payutto, 1998; Bhikkhu, 2001; Grabovac, Lau, & Willett, 2011).

There is a need for more research to examine the effects of mindfulness on well-being, and to examine how the concept of insight (e.g. Buddhist teachings), which is of central importance to well-being from an Eastern perspective, can be incorporated in to existing mindfulness interventions. Research studies on existing mindfulness-based interventions have not clearly elucidated the mechanisms by which the practice of mindfulness improves well-being, and future

research should examine this issue more closely. Further research is also necessary for psychology as a discipline, as the field of psychology needs an inclusive therapeutic intervention that directly promotes well-being and reduces distress, rather than interventions that only focus on alleviating psychopathology.

In response to these limitations, the current study has developed the Positive Mindfulness Program (PMP), which integrates the practice of mindfulness with Buddhist teachings. In order for this program to become universally available, it is necessary to consider cultural differences and such questions like: "Will this only work in a predominantly Buddhist culture, such as Thailand?" and "can the results be replicated in a non-Buddhist environment, such as Australia?" The current study also aims to investigate the mechanisms of action that underlie the PMP. The findings of this study will contribute to the overall body of knowledge, as well as improve our understanding of mindfulness and Buddhist teachings in Western psychology, by applying the scientific method. Moreover, the PMP may be developed into a program that directly promotes well-being and reduces distress.

CHAPTER FOUR

Positive Mindfulness Program

Based on extensive literature, it is undeniable that existing mindfulness-based interventions are effective at reducing psychological distress and associating with well-being. However, mindfulness-based interventions in Western cultures, which lack the input of Eastern philosophies, are limited in their ability to enhance well-being. The practice of mindfulness in the Western context has a tendency to ignore the rich Buddhist philosophies from which mindfulness emerged. It is hypothesised that mindfulness combined with Buddhist-insight would promote long lasting well-being and reduce distress.

Approximately 2,500 years ago, Siddhārtha Gautama, who was later known as Buddha, reached enlightenment while practicing mindfulness, which led to the understanding of the three characteristics of existence. However, the importance of these insights is largely overlooked in Western mindfulness-based psychotherapies. It is clear from the well-established research evidence that mindfulness is effective when it is administered as a set of skills and activities. To build on the existing literature on mindfulness, the current study developed the Positive Mindfulness Program (PMP), which integrates both mindfulness and insight. The primary focus of the PMP is to promote well-being. The PMP also aims to relieve psychological distress. It is important to note that the PMP is not intended to be a religious program, nor is it intended to convert individuals to Buddhism. Rather, the PMP is a secular program with a broad applicability across cultures. Thus, the current study examines the efficacy of the PMP program within two cultural contexts: Thailand, which has a prominent Buddhist culture, and Australia, which has a small but growing Buddhist culture. It is the author's intention to continue to refine the PMP and make it available for practitioners.

Positive Mindfulness Program (PMP) and Theoretical Framework

The Positive Mindfulness Program (PMP) was developed by combining the practice of mindfulness activities with the understanding of the three characteristics of existence. The PMP is based on the Buddhist view of "sukka" or inner happiness. Sukka is a state of joy and serenity that results from the understanding of pervasive states of suffering, impermanence, and non-self-attachment.

PMP theoretical framework. The PMP aims to promote eudaimonic well-being through the practice of mindfulness-based activities and the understanding of the three characteristics of existence. The program is based on Buddhist teachings (Payutto, 1998; Bhikkhu, 2001) and attempts to incorporate Buddhist ideas and modern psychology (Wallace and Shapiro, 2006;

Grabovac, Lau, and Willett, 2011). The combination of mindfulness-based activities and explicit teaching about the three characteristics of existence should enhance the effects of the PMP, and the PMP is composed of two main components: the experiential-based mindfulness component and the insight-based component. The experiential-based mindfulness component consists of a variety of mindfulness activities. Satipatthana was used as the structure and direction for developing mindfulness activities. For the insight-based component, all teaching was adapted from Buddhist teachings to improve understanding of the three characteristics of existence. The structure of PMP is developed based on the notion that mindfulness and insight could be developed simultaneously (Payutto, 1998).

Experiential-based mindfulness component. The experiential-based mindfulness component is based on the Buddhist concept of "Satipatthana". Satipatthana provides a useful framework for the practice of mindfulness by establishing mindfulness skills in four components: mindfulness of the body, mindfulness of perceptions or feelings, mindfulness of mental formations or thoughts, and mindfulness of natural phenomena. In experiential-based mindfulness, individuals practice a series of experiential exercises that facilitate a focus on the present moment. The exercises also encourage individuals to embrace the experience without judgement. The PMP includes several mindfulness exercises, which were derived from different sources. For example, the body scan, raisin exercise, and breathing exercise, were adapted from the MBSR and MBCT programs (Baer & Krietemeyer, 2006). Furthermore, several exercises were adapted from Ānāpānasati meditation (Bhikkhu, 2001), which is mindfulness with breathing during short and long breath exercises. Other exercises were adapted from Buddhist meditation exercises by Thich Nhat Hanh, including mindful walking (Anh-Huong & Hanh, 2006) and mindfulness in daily life. Finally, some activities from the MBSR and MBCT programs were redesigned by the researcher with new components, and were subsequently used in the PMP. For example, impermanence was added to the raisin exercise and the three perceptions were added to the body scan exercise. An original exercise called the "loving kindness exercise" was developed by the researcher for the current study. This exercise relates to the concepts of interconnectedness and compassion. Exercises with audiovisual media were also used in this program, including "passage of life", a classical song composed by a Japanese composer (Takahashi; Kitaro, 2012) and "Tedtalk: Nature, Beauty and Gratitude" by Louie Schwartzberg (Schwartzberg, 2012). PMP is developed for novice mindfulness practitioners. Mindfulness, as developed in the PMP does not refer to mindfulness in Jhana state (page 14), but rather to paying attention to the moment-by-moment experience and non-judgement (Kabat-Zinn, 2003).

Insight-based mindfulness component. The insight-based mindfulness component is composed of a series of exercises and explanations, which help participants to obtain an insight

regarding the three characteristics of existence. The three characteristics of existence include sufferings (i.e., Dukkha), impermanence (i.e., Anniccata), and absence of self (i.e., Anatata). Moreover, the concepts of interconnectedness and compassion are included in the PMP. It is claimed that an understanding of the three characteristics of existence can lead to a reduction in rumination, difficulties in emotional regulation, clinging behaviours, and controlling behaviours. As a result, an understanding of the three characteristics of existence leads to greater emotional tranquillity and a positive attitude. Insight, as developed in the PMP, does not refer to a direct and experiential understanding, but rather to a conceptual understanding into the three characteristics of existence (Grabovac, Lau, & Willett, 2011; Dorjee, 2010).

Model of Positive Mindfulness Program

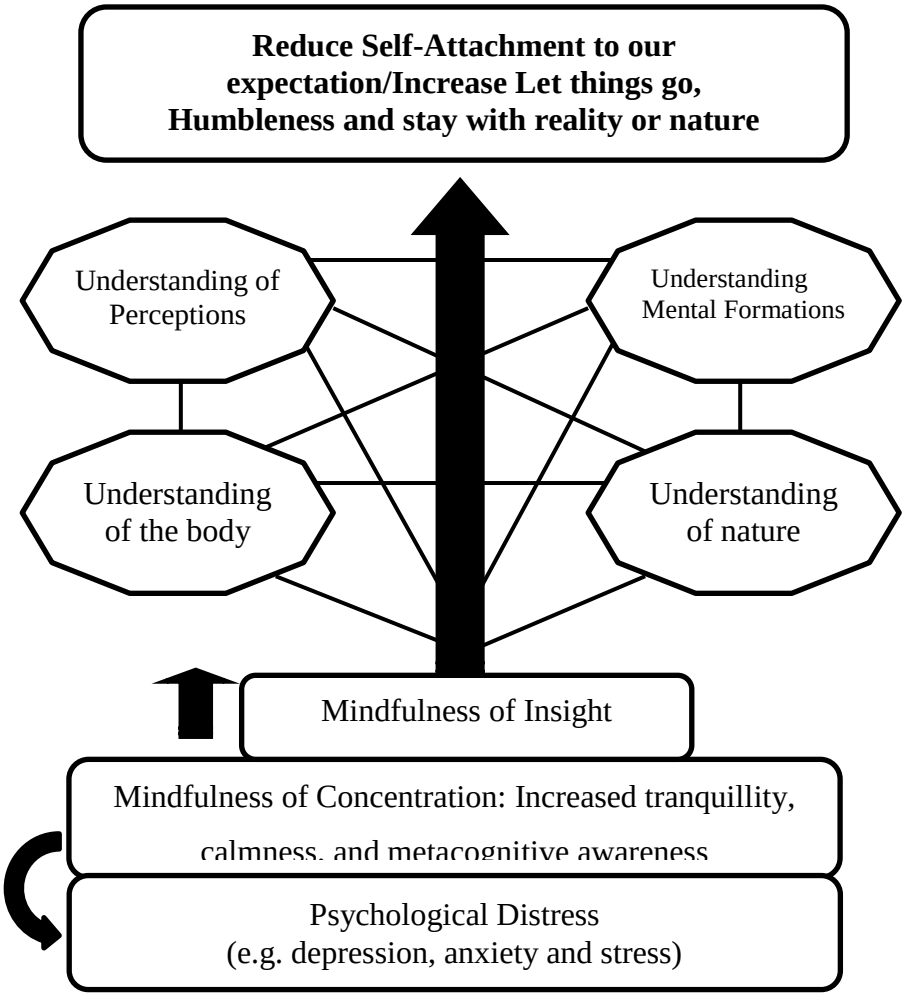

Figure 4.1. Mechanisms of the Positive Mindfulness Program (PMP), by Jarukasemthawee, in preparation.

In Figure 4.1, a conceptual model of the Positive Mindfulness Program is presented. This model is presented as a framework for understanding how the PMP is intended to assist

participants. In responses to psychological distress, mindfulness of concentration is required. This is achieved through the mindfulness exercises in the program. It is hypothesized that the successful practice of mindfulness of concentration leads to tranquillity and calmness. Tranquillity and calmness together with an understanding of the three characteristics of existence allows one to interact with others and the environment without bias. As a result, one can experience and attain an insight of the interconnectedness and impermanence of the body, perceptions, mental formations, and nature. These four understandings (i.e., the body, perceptions, mental formations, and nature) work together to promote non-attachment to our expectations so that one learns to let things go and remain humble. This adjustment in attitude can promote long-lasting well-being and reduce psychological distress. This process can be achieved through participation in the eight sessions of the PMP. The PMP consists of eight sessions as described below.

Session one: Mindfulness and happiness. Session one aims to develop an understanding of the association between mindfulness and happiness. Firstly, the definition of inner happiness is introduced. Inner happiness in the PMP program is conceptualised as a deep sense of flourishing that arises from an exceptionally healthy mind, a definition that is consistent with Seligman, (2002). Inner happiness is the result of being in the present moment. That is, one stays with reality without seeking change or an increase in the feeling of contentedness. In addition, external happiness is defined as temporary positive feelings that derive from the five body sensations of sight, sound, touch, smell, and taste. The positive feelings that arise from these five sensations are described as pleasurable activities, which rely on external factors such as people, place, and time, which cannot be controlled. Consequently, external happiness cannot produce enduring positive feelings. Secondly, the definitions of mindfulness and mindlessness are introduced. Mindfulness is a mental state that relates to being in the present moment and being open to new experiences, without good or bad judgment. Mindfulness in the PMP aims to create authentic happiness that results from an understanding of suffering, the body, our feelings, thoughts, and nature, so that individuals can harmoniously live with reality. Mindlessness, on the other hand, is when the mind is caught up with the future or the past. In the PMP, analogies are used to depict the characteristics of mindlessness. For example, the state of mindlessness or an untamed mind can be viewed as an endless smoke evaporating from incense or an untamed monkey that cannot stay still and makes its owner tired. Finally, important information regarding the practice of mindfulness (e.g., posture, eye movement, time, and location) is introduced. In session one, individuals practice the mindfulness of breath and discuss their experiences and difficulties with the exercise. Homework assignments are also explained.

Session two: Mindfulness of concentration. Session two aims to explain the importance and benefits of mindfulness concentration and the application of mindfulness in daily life. This

session introduces mindfulness activities such as raisin exercise, mindful walking, and body scan. Individuals are encouraged to discuss their experiences and difficulties with the exercises. Mindfulness of concentration is introduced as the key ingredient in inner happiness and psychological well-being. The importance of concentration is explained in relation to three main components. The first component is purity of the mind, which suggests that in a state of mindfulness, the mind fixates on an object of attention (e.g., breathe, raisin, or a part of the body). As a result, the stream of awareness and thoughts is constrained and there is no opportunity for rumination or imagination to occur, thus causing the mind to wander. The second component is freedom, which suggests that when the mind is purified, one is free to react to situations without biases based on past experiences or future thoughts. The third component is wisdom, which suggests that when the mind is free from past experiences or future thoughts, one is able to react to situations wisely rather than based on emotions. In this session, mindfulness in daily life is introduced using concepts from the book "The Miracle of Mindfulness" (Hanh, 1987). Homework assignments are also explained.

Session three: Mindfulness and suffering. In session three, individuals are introduced to the concept of suffering, causes of suffering, concept of impermanence, and association between suffering and mindfulness. The loving kindness exercise is introduced as a key feature of this session. The concepts of suffering and impermanence are derived from the Buddhist teaching of the three characteristics of existence. Suffering is defined as the basic difficulty and dissatisfaction that results from both physical and mental experiences. It occurs when one experiences sickness, pain, aging, or death. Physical and psychological suffering results from natural changes that are inevitable. Specifically, physical suffering is the result of the impermanence of the human body, as well as the laws of nature which no one can avoid. Self-compassion and compassion towards others is emphasised in this session because everyone is subject to impermanence. Resisting this law can lead to psychological suffering.

In session three, psychological suffering is emphasised and categorized into three types: when we separate from someone or something that we like or love, when we experience the desire or longing for someone or something but we do not obtain the subject of this desire, and when we encounter someone or something that we dislike. The next part of session three involves an explanation of the deepest causes of psychological suffering, including the ego, the self, expectations. Individuals are taught that mindfulness is a tool that helps one to realize that psychological suffering is the result of one's own expectations. The loving kindness exercise is presented to individuals who directly experience this exercise. Experiences and difficulties with the exercise are discussed and homework assignments are explained.

Session four: Mindfulness of the body. The aim of session four is to explain the connection between the body, impermanence, and mindfulness, and how to use mindfulness to calm the body. The conceptualisation of mindfulness of the body is derived from the Buddhist teaching of "Kayanupassana" in *"*Satipatthana*"* (detailed page 32). Short and long breath exercises are introduced as the main activities in session four, which allow individuals to directly experience the association between bodily sensations and long and short breathing.

In session four, individuals are taught that the human body is composed of natural components that are constantly changing. Without mindfulness, individuals attempt to manage these changes both consciously and unconsciously because they believe that the changes are abnormal. For example, when individuals experience a headache, they are not mindful of the fact that it is a natural process that occurs when the body changes. Instead, they are annoyed with the headache and attempt to get rid of it as soon as possible. This leads to psychological suffering. With mindfulness, on the other hand, individuals are able to recognize and accept these changes. Mindfulness helps one to become flexible and calmly deal with the headache. Additionally, in session four, the relationship between the breath, the body, and the mind is introduced. Although it is impossible to control changes in the body, such as a headache, it is possible to indirectly calm the body through mindfulness. The long breath exercise is introduced in session four to calm the body and experience calmness and tranquility.

Later in session four, an Eastern proverb is used to explain the interruption of psychological suffering which results from physical suffering: "when ordinary people become ill, they have to endure both physical and psychological sufferings, as if they are hit by two arrows" (Bhikkhu, 2001). Physical suffering results from illness, whereas psychological suffering results from the fear of illness. Thus, for a wise man who is ill, his discomfort is only due to the illness. That is, only one arrow can strike him. The practice of long and short breath exercises is assigned as homework.

Table 4.1. The Positive Mindfulness Program: eight-week program curriculum.

Session/Title	Objective	Experiential-based component	Insight-based component
1. Mindfulness and Happiness	➢ Understanding the definition of mindfulness ➢ Understanding the connection of mindfulness and internal happiness ➢ Learning important information related to the practice of mindfulness such as a good posture	**Introduction and mindfulness of concentration** ➢ Mindfulness of the breath	➢ Definition of mindfulness ➢ Definition of inner happiness ➢ Nature of the mind
2. Mindfulness of Concentration	➢ Understanding the importance of concentration ➢ Understanding the connection between mindfulness and personal development ➢ Applying mindfulness in daily life ➢ Developing concentration	**Mindfulness of concentration** ➢ Sultana exercise ➢ Body Scan ➢ Mindful Walking ➢ Mindfulness in daily life (a case of mindfulness eating and dish washing)	➢ Mindfulness and Mindlessness ➢ Three main reasons for developing concentration; 1) Purity of mind, 2) Freedom of mind, and 3) Wisdom of mind
3. Mindfulness and Suffering	➢ Understanding suffering; deepest root of suffering ➢ Developing concentration ➢ Developing self-compassion and compassion toward others	**Mindfulness of concentration** ➢ Five-Minute Hearing Exercise ➢ Loving kindness exercise	➢ Understand physical and psychological suffering ➢ Deepest root of suffering (Self-Attachment and) ➢ Compassion

Table 4.1. The Positive Mindfulness Program: eight-week program curriculum *(Continued)*

Session/Title	Objective	Experiential-based component	Insight-based component
4. Mindfulness of the body	➢ Understanding the body as composed of natural components ➢ Understanding and experience relationship between breath and body ➢ Calming the body by mindfulness (Mindfulness of the body)	**Mindfulness of concentration and mindfulness of the body** ➢ *A sultana and impermanence* ➢ *Long breath exercise* ➢ *Short breath exercise*	➢ The body, suffering and impermanence
5. Mindfulness of perceptions or feelings	➢ Understanding perceptions or feelings as the pure process. ➢ Understanding and experience relationship between the breath, body and perceptions or feelings ➢ Coping with negative feelings (Mindfulness of the perceptions or feelings)	**Mindfulness of concentration and mindfulness of perceptions and feelings** ➢ Body Scan and three perceptions ➢ Mindfulness with breathing (Short connect to long breath exercise)	➢ The pure process (Interconnectedness of the body and perceptions or feelings) ➢ Impermanence ➢ Interconnectedness
6. Mindfulness of mental formations and thoughts	➢ Understanding mental formations or thoughts as the impure process. ➢ Understanding and experience relationship between the breath, body, perceptions or feelings, and mental formations or thoughts ➢ Coping with negative thoughts (Mindfulness of mental formations or thoughts)	**Mindfulness of concentration and mindfulness of mental formation and thoughts** ➢ Mindfulness with breathing (Short connect to long breath exercise	➢ The impure process (Interconnectedness of the body, perceptions or feelings, and mental formations and thoughts) ➢ Impermanence ➢ Interconnectedness

Table 4.1. The Positive Mindfulness Program: eight-week program curriculum *(Continued)*

Session/Title	Objective	Experiential-based component	Insight-based component
7. Mindfulness of the nature or interconnectedness	➢ Understanding life as interconnectedness ➢ Understanding mindfulness of the nature or interconnectedness ➢ Developing and experience of inner happiness	**Mindfulness of concentration and mindfulness of nature and interconnectedness** ➢ Passage of life (Mindful Listening) ➢ Tedtalk; Nature, Beauty and Gratitude by Louie Schwartzberg (Mindful watching)	➢ Impermanence ➢ Interconnectedness ➢ Non-self-attachment ➢ Inner happiness
8. The integration of mindfulness into daily life	➢ Maintaining inner happiness ➢ Understanding current suffering ➢ Relapse prevention of unnecessary suffering	**Mindfulness of concentration and integration of all** ➢ Passage of life (Mindful Listening) ➢ Loving kindness exercise	➢ Unnecessary sufferings ➢ Integration of sufferings, impermanence, non-self-attachment, interconnectedness and compassion

Session five: Mindfulness of perception. Session five aims to introduce the concept of interconnectedness between the body and perception. The pure process is presented, with body scan of the three perceptions as the main mindfulness exercise in this session. The main content is adapted from "Vedananupassana", or mindfulness of feelings and perceptions, in the Buddhist teaching of "Satipatthana". Participants are introduced to the three perceptions (detailed page 28): pleasant, unpleasant, and uncertain perceptions regarding visual images. These three perceptions are presented as the part of mindfulness and the pure process (detail page 34) which arises naturally, as a result of organs and consciousness, when we interact with the world. In session five, mindfulness activities such as the body scan with the three perceptions, are presented to promote awareness and non-judgement of the perceptions that may arise. Experiences and difficulties with the exercise are discussed and homework assignments are explained.

Session six: Mindfulness of mental formations and thoughts. In session six, individuals experience the interconnectedness between the body, perceptions, and mental formations or thoughts as the impure process. The content of mindfulness of mental formations and thoughts is adapted from "Cittanupassana" in the Buddhist teaching of "Satipatthana" (detailed page 33). Firstly, individuals are encouraged to identify current difficulties that are related to the 11 irrational thoughts as detailed by Albert Ellis (Madigan & Bollenbach, 1986). Next, the session presents the three mental formations: desire, hatred, and ignorance. Individuals are taught that the 11 irrational thoughts are originally derived from the three mental formations (i.e., desire, hatred, and ignorance), which are generated during the impure process (detailed page 35). Finally, the impact of mental formations on feelings and actions is discussed. In this session, mindfulness activities, such as the body scan with the three perceptions, are presented to promote awareness and non-judgement of the pure and impure process that may arise. Experiences and difficulties with the exercise are discussed and homework assignments are explained.

Session seven: Mindfulness of nature or interconnectedness. The main content in session seven is adapted from "Dhammanupassana*"* in the Buddhist teaching of "Satipatthana" (detailed page 32). In this session, the concept of interconnectedness in nature is introduced in order to develop an attitude of acceptance and non-self-attachment. Using their own experiences, both positive and negative, individuals learn that several factors underlie their experiences. With positive experiences, individuals are encouraged to feel appreciative because there are various factors that underlie positive experiences, and not all of them can be controlled. For negative experiences, individuals are encouraged to accept the experience and remain humble, as there are countless underlying factors. In this session, mindfulness activities, such as the "Passage of life" (Takahashi; Kitaro, 2012) and "Tedtalk: Nature, Beauty and Gratitude" (Schwartzberg, 2012) are used to

promote the concept of interconnectedness in nature. Experiences and difficulties with the exercise are discussed and homework assignments are explained.

Session eight: The integration of mindfulness into daily life. The aim of session eight is to teach individuals how to integrate mindfulness, with the concepts of suffering, impermanence, non-self-attachment, and interconnectedness, into daily life in order to enhance psychological well-being and reduce psychological distress. In this session, the Buddhist teaching of "Nobel Eightfold Path" is adapted as the basis for mindfulness and to prevent or reduce any unnecessary suffering. A summary of the previous sessions is provided, as well as a final practice of mindfulness activities. Experiences and difficulties with the program are discussed.

A number of mindfulness exercises are used in the PMP, which are derived from a variety of sources. The selected exercises are explained below.

Body scan. Individuals are asked to sit comfortably in a chair or to lie down on the floor, with their eyes closed. They are instructed to sequentially focus their attention on parts of their body such as their arms, legs, shoulders, or chest. Each body part becomes an object of concentration. Participants are encouraged to take notice of their sensations while they experience the present moment, openness, and non-judgement. If they notice aches, pains, or tenseness in their body parts, they are encouraged to acknowledge that feeling without self-criticism or self-judgement.

Raisin exercise. In this exercise, individuals receive a raisin on their palm. Firstly, participants are asked to look at it carefully while experiencing the present moment, with openness, curiosity, and non-judgement. They are then instructed to take notice of the raisin's texture by touching it. Next, they are encouraged to pay attention to their sense of smell when they move the raisin close to their nose. Finally, they slowly put the raisin in their mouth, taking notice of the taste and texture. They are encouraged to observe the sensations and movement of the mouth while chewing and swallowing the raisin.

Raisin exercise and impermanence. The current study modified the raisin exercise by combing it with the concept of impermanence. In this exercise, participants receive a raisin on their palm. Firstly, participants are asked to look at it carefully while experiencing the present moment, with openness, curiosity, and non-judgement. Then, they are instructed to take notice of the raisin's texture by touching. Next, they are encouraged to pay attention to their sense of smell when they move the raisin close to their nose. To incorporate the component of impermanence, participants are asked to look at the raisin carefully while experiencing the present moment, with openness, curiosity, and non-judgement. They are then asked to pay attention to the raisin over time and consider the changes in the raisin as time goes by. For example, they are asked to imagine what the raisin will be like after it is left in a room for 3 days, 7 days, and 10 years. Finally, they slowly put

the raisin in their mouth, taking notice of the taste and texture. They are encouraged to observe the sensations and movement of the mouth while chewing and swallowing the raisin. They are also encouraged to take notice of the change in taste and how it applies to the concept of impermanence.

Long breath exercise. Participants sit on a chair or cushion in a comfortable posture. They are instructed to keep their breathing last as long as possible, while still feeling comfortable. They are encouraged to contemplate the long breath and take notice of their feelings toward their long breath. This exercise aims to promote an understanding of the experience of changing physical sensations, feelings, and thoughts, in relation to the long breath. The concepts of impermanence and interconnectedness are explained during the exercise.

Short breath exercise. Individuals sit on a chair or cushion in a comfortable posture. They are instructed to make their breathing short and fast. They are encouraged to contemplate the short breath and take notice of their feelings toward their short breath. This exercise aims to promote an understanding of the experience of changes in the body, physical sensations, feelings, and thoughts, in relation to the short breath. The concepts of impermanence and interconnectedness are explained during the exercise.

Passage of life. Individuals are asked to listen to a song called "Passage of Life" by Kitaro (Takahashi; Kitaro, 2012). They are encouraged to contemplate the tone, pitch, and volume of the song. In this exercise, individuals are encouraged to take notice of the song in relation to the fluctuations in their feelings and bodily sensations.

Body scan with the three perceptions. The current study modified the body scan exercise by combining it with the three perceptions, including pleasant, unpleasant, and unknown. In this exercise, individuals are asked to sit comfortably in a chair or to lie down on the floor with their eyes closed. They are instructed to sequentially focus their attention on parts of their body such as their arms, legs, shoulders, or chest. Each body part becomes an object of concentration. Individuals are encouraged to take notice of their perceptions while paying attention to each body part. While experiencing the present moment with openness, curiosity, and non-judgement, they are encouraged to acknowledge the three perceptions by saying "now I am having a pleasant, unpleasant, or unknown feeling". If participants' minds begin to wander, they are encouraged to take notice of the content of their thoughts in relation to the three perceptions and return their attention to a part of their body.

Drawing from existing mindfulness programs, the PMP was designed to provide mindfulness skills which develop concentration and a conceptual understanding of the three characteristics of existence. The PMP is made up of both experiential and insight components. When the two components are combined, it is expected that the PMP will promote mindfulness and well-being, as well as reduce distress. The PMP differs from existing mindfulness-based

interventions in two important, inter-connected ways. First, the primary focus of the PMP is to promote psychological well-being rather than reduce psychological distress. In existing mindfulness-based interventions, mindfulness is mainly used to promote stress tolerance. In contrast, the mindfulness activities in the PMP are not only used to promote stress tolerance, but also concentration. The mindfulness activities in the PMP were designed according to the Buddhist teaching of "the four foundations of Satipatthana", which include mindfulness of the body, feelings, thoughts, and nature. The PMP is designed for novice mindfulness practitioners, and so does not refer to mindfulness in Jhana state (see 14 for further details). The focus of the program is on paying attention, focusing on moment by moment experiences, and non-judgement (Kabat-Zinn, 2003) and concentration (Bhikkhu, 2001). It is believed that concentration is a foundation for insight and the understanding of the three characteristics of existence.

Unlike existing mindfulness-based interventions, the PMP is a mindfulness-based psychotherapy that includes an insight component regarding the understanding of the three characteristics of existence. The understanding of the three characteristics of existence is taught during insight-based activities which aim to enhance mental flexibility. It is believed that mental flexibility arises with a reduction in self-focus. Mental flexibility is most prominent when individuals accept situations and direct their internal perspectives towards themselves and the world, instead of attempting to control external situations. It is hypothesized that the conceptual understanding of the three characteristics of existence in PMP can provide participants with skills to accept suffering and attain well-being (i.e., inner happiness), since it reinforces the interconnectedness of human-beings. On the other hand, existing mindfulness-based therapies promote acceptance of current problems. The insight component is essentially the innovative element in the PMP. However, it can also be viewed as the cognitive component, since it promotes cognitive and emotional flexibility. It is hypothesized that the insight component together with mindfulness component can promote eudaimonic well-being.

Finally, the PMP was developed as a psychological intervention that is suitable for adults. As such, the PMP offers the opportunity to expand our understanding of research and generate new ideas for both research and therapy. It should be noted that the PMP was not designed as a religious program and does not seek to prove Buddhist teaching or convert individuals to Buddhism.

According to Van de Vijver (2013), the process of internationalization (i.e., making a program that is appropriate for people from many different countries and cultures) is essential for new psychological theories. The PMP is an innovative psychotherapy which combines the understanding of the three characteristics of existence with existing mindfulness programs. In order to allow the program to be used across different cultures, the current thesis aims to follow three key

stages developed by Berry, Poortinga, Segal, and Dasen, 2002; Van de Vijiver (2013). The first stage is to transport and test the effectiveness of the PMP in a Buddhist culture. The second stage is to document any psychological differences by testing the PMP in a different culture. Thus, this thesis aims to explore the psychological differences between an Eastern and Western cultural context. The third stage is to integrate the findings from the first two stages, in order to examine any cross-cultural differences and similarities.

This thesis contains a total of three studies. Study one is a randomised controlled trial of the PMP in participants from Thailand. Study one aims to explore the effectiveness of the PMP in improving psychological well-being and reducing psychological distress in Thai participants. Study two aims to examine the effectiveness of the PMP in improving psychological well-being and reducing psychological distress in Australians. The aim of study two is to replicate the effectiveness of the PMP in a culture where Buddhist teaching is uncommon. Finally, study three attempts to understand the mechanisms underlying the effects of the PMP on psychological well-being and psychological distress in two different cultures. A comparison of the mechanisms involved in the two populations will be made and similarities and differences will be clarified.

CHAPTER FIVE

Study One: A Randomised Controlled Trial of the Positive Mindfulness Program (PMP) in Thai Participants

Rationale

In the last few decades, Western psychotherapies have attempted to incorporate mindfulness concepts into psychological interventions that aim to reduce psychological distress. Examples of these interventions include Mindfulness-Based Stress Reduction (MBRS) (Kabat-Zinn, 2003), Mindfulness-Based Cognitive Therapy (MBCT) (Segal, Williams, & Teasdale, 2002), Dialectical Behavior Therapy (DBT) (Linehan, 1993), and Acceptance and Commitment Therapy (ACT) (Hayes, Strosahl, & Wilson, 1999). The majority of these interventions demonstrate the beneficial effects of mindfulness in reducing psychological distress. However, few studies have investigated the benefits of mindfulness-based interventions in enhancing well-being.

The Buddhist concept of mindfulness differs from the Western concept of mindfulness in a number of ways (Keng, Smoski, & Robins, 2011). The Buddhist concept of mindfulness is more complex than the Western concept because it incorporates insight of the three characteristics of existence, interconnectedness, and compassion (Rosch, 2007). The combination of practice and insight is referred to as "insight mindfulness" (Marlatt et al, 2004). The inclusion of insight into mindfulness practice is neglected in contemporary psychology. Furthermore, there is a lack of research on the benefits of mindfulness, in particular, the intrinsic importance of Buddhist understandings. It is hypothesised that mindfulness combined with Buddhist understandings will promote long lasting well-being and reduce distress.

Due to the lack of Buddhist understandings in existing mindfulness-based interventions, the Positive Mindfulness Program (PMP) was developed to promote well-being and reduce distress, and to build on existing Western, mindfulness-based programs. This study examines the effectiveness of the PMP in Thai students. It also investigates the point during the program that is associated with the greatest improvements and whether the effects of the program are stable over time.

The majority of the Thai population is familiar with the concept of the three characteristics of existence (Buddhist understandings), since approximately 94% of the population is Buddhist (National Statistic Office of Thailand, 2010). In Thailand, Buddhism is considered to be the national religion and hence, has a significant influence on the minds, characteristics, way of life, health, and mental health of Thai people (Disayavanish & Disayavanish, 2007). For example, a significant number of Thai males serve as a Buddhist monk for at least a few days to a few months

during their adolescence. While the proportion is smaller, a number of Thai girls also serve as Buddhist nuns once in their lifetime (Assanangkornchai, Conigrave, & Saunders, 2002). Although the majority of Thai individuals are Buddhist, only a fraction of them (i.e., twenty-one percent) formally practice meditation (Christopher, Charoensuk, Gilbert, Neary, & Pearce, 2009). The practice of mindfulness in Thailand is embedded within a specific religio-cultural context and is coupled with the systematic teaching of Buddhist philosophy. For instance, mindfulness in the Thai Buddhist tradition holds that "sati" the state of recollection, remembrance, non-fading, and non-forgetting, is essential to understand the interconnected nature of phenomenon and the natural processes of life (Payutto, 1998).

A number of studies in Thailand have shown that meditation is associated with improved well-being. In a pre-post intervention study with 385 Thai university students, comparing meditators who practice anapanasati (i.e., meditation of breathing) to non-meditators, meditators showed significantly higher scores of mindfulness than non-meditators, d = 0.30-0.59. Moreover, meditators reported significantly higher scores on self-esteem than non-mediators, d = .31 (Bloom, 2008). In a quasi-experimental study with 52 Thai men (aged 20-25), comparing a six-week meditation retreat program to a control condition, results showed a significant reduction in serum cortisol for the meditation group (i.e., a measure of stress) after the six weeks ($p < .001$) compared to baseline. The results showed no significant change in serum cortisol for the control group. Moreover, at the six-week follow-up, the meditation group showed a significant decrease in heart rate compared to baseline and 6 weeks measure, $p = .001$. There was no significant change in the control group. Furthermore, Sudsuang, Chentanez, and Veluvan (1990) reported that Thai college students trained in dhammakaya (i.e., calmness and insight meditation), experienced a significant reduction in serum cortisol levels, blood pressure, and pulse rate. These studies provide evidence to support the positive effects of mindfulness. However, a limitation of the four research studies discussed is that they did not apply psychological measures and RCT's in their methodologies. In the current study, a RCT with a waitlist control group was used to examine the effectiveness of the PMP on well-being and distress.

Research Aims and Hypotheses

The current study aims to examine the effectiveness of the PMP in improving well-being and reducing distress in a Thai population. A systematic replication of this study will be conducted in Australia so that the findings from the two studies can be compared. This is important given that mindfulness in psychotherapy requires an understanding of the cultural context from which it originated (Christopher, Charoensuk, Gilbert, & Neary, 2009). The following hypotheses were proposed.

Hypothesis 1: The PMP will improve well-being and reduce psychological distress in Thai participants.

1a: From pre intervention, to post intervention, participants will show an improvement in their levels of well-being and distress.

1b: From pre intervention to post intervention, participants will show a greater improvement in their levels of well-being and distress relative to the waitlist control condition.

Hypothesis 2: The PMP will improve mindfulness, rumination, difficulties in emotional regulation, and the conceptual understanding of the three characteristics of existence in Thai participants.

2a: From pre intervention, to post intervention, participants will show an improvement in their levels of mindfulness, rumination, difficulties in emotional regulation, and the conceptual understanding of the three characteristics of existence.

2b: From pre intervention, to post intervention, participants will show an improvement in their levels of mindfulness, rumination, difficulties in emotional regulation, and the conceptual understanding of the three characteristics of existence relative to the waitlist control condition.

Hypothesis 3: The PMP program will show a stable improvement in their levels of well-being, mindfulness, rumination, difficulties in emotional regulation and the conceptual understanding of the three characteristics of existence in Thai participants.

Method

Participants and Recruitment

The participants were 141 (101 female, 40 male) full-time, undergraduate Thai students from Chulalongkorn University in Bangkok, Thailand. Participants were randomly recruited during January 2012, through brief classroom presentations and on-campus flyers, seeking people who wished to participate in a free mindfulness program. Participants were eligible for inclusion in the study if they had not previously received treatment for a severe psychotic disorder (for example, they had not been prescribed anti-psychotic medications in the past six months).

The CONSORT diagram for this study is illustrated in Figure 5.1. Of the 141 participants that completed the pre-assessment, 70 were assigned to the PMP and 71 were assigned to the waitlist control condition. For the total sample, the mean age of participants was 20.45 years (*SD* = 1.19). Of the 141 participants, 57 (40.40%) were studying health science, 37 (26.20%) were studying engineering or science, 30 (21.30%) were studying social science or economics, and 17 (12.10%) were studying arts. The PMP group consisted of 22 (31.40%) males and 48 (68.60%) females. The mean age of participants in the PMP group was 20.56 years (*SD*=1.29). Furthermore, the PMP group was made up of 37.10 % of health science students (e.g., medicine, dentistry, and

pharmacy), 27.10% of engineering and pure science students, 22.90% of social science students (e.g., political science and economics), and 12.90% of arts and humanities students. The waitlist control condition consisted of 18 (25.40%) males and 53 (74.60%) females. The mean age of participants in the waitlist control condition was 20.34 years (*SD*=1.09). Furthermore, the waitlist control condition was made up of 43.70 % of health science students, 25.40% of engineering and pure science students, 19.70% of social science students, and 11.30% of arts and humanities students.

In this study, there were four assessment periods in the PMP condition: pre-intervention, mid-intervention (two weeks after the program commenced), post-intervention (four weeks after the program concludes), and six-week follow-up intervention. Furthermore, there were two assessment periods in the control condition: pre-intervention and post-intervention (four weeks after the program concludes). Overall, 44 (31.21%) participants did not complete all questionnaires as required by their conditions. For the PMP condition, 18 (25.72%) participants did not complete at least one assessment period. For the control condition, 26 (36.62%) participants did not complete the post-intervention assessment.

In the PMP condition, 14 (20%) participants dropped out and did not complete measures required at the mid-intervention assessment. Four (5.70%) participants did not complete assessments required at the post-intervention assessment and dropped out before the completion of the PMP. However these four participants were still identified as PMP completers as they attended the PMP at least six out of eight sessions. This is consistent with Shapiro, Astin, Bishop, and Cordava (2005), who reported that six out of eight sessions is the minimum required to acquire the core knowledge and skills for mindfulness training.

In the current study there were 101 participants who completed the study (56 from the PMP and 45 from the waitlist control group). A total of 56 participants were identified as PMP completers. For the waitlist control group, a total of 45 participants completed the pre and post measures. A total of 40 participants (14 from the PMP and 26 from the waitlist control group) dropped out before the completion of the study. The most common reasons for dropping out were time commitments, family emergencies, and loss of interest in the study. It should be noted that no participants reported adverse events as a result of participating in the study.

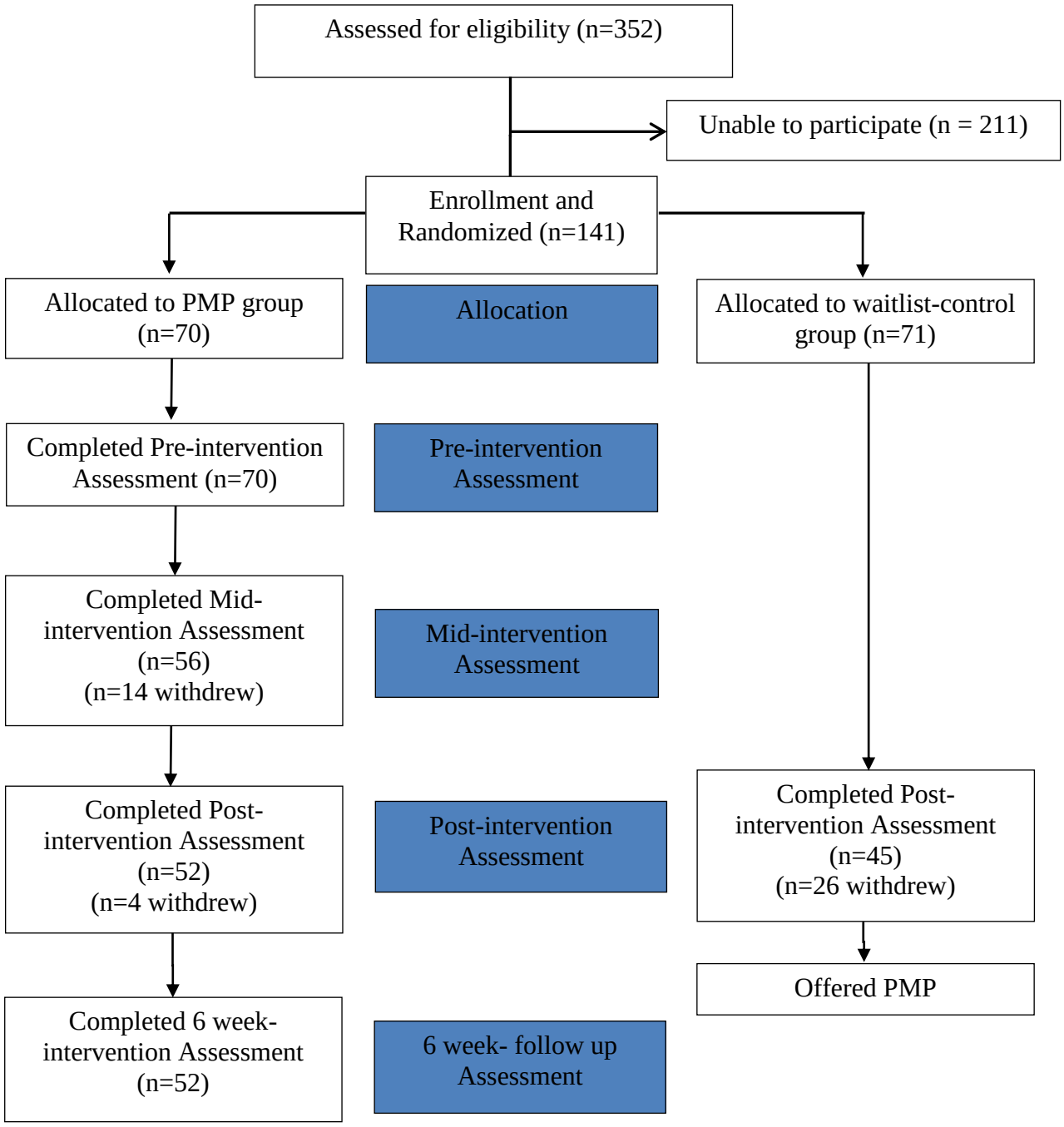

Figure 5.1 **CONSORT** diagram of the phases in study one, including enrolment, allocation, pre assessment, mid assessment, post assessment, and the 6 week follow up assessment.

Measures

The measures on the questionnaire assessed well-being, distress, mindfulness, rumination, difficulties in emotional regulation, and the conceptual understanding of the three characteristics of existence. All of the measures were translated into Thai following an in-scale translation procedure proposed by Brislin (1970). For this procedure, two bilinguals in English and Thai were employed. One bilingual translated the questionnaire from the original language (English) to the target

language (Thai), while the second bilingual independently translated the questionnaire from Thai back to English. The questionnaire translation process was complete when the committees agreed that the two versions provided the same meaning.

Eudaimonic Well-Being Scale. The Eudaimonic Well-Being Scale (EWB) (Waterman et al., 2010) is a 21-item self-report scale assessing well-being across six constructs: self-discovery, perceived development of one's best potentials, a sense of purpose and meaning in life, investment of significant effort in pursuit of excellence, intense involvement in activities, and enjoyment of activities as personally expressive. The scale provides a total well-being score, which was used in the current study. Sample items include "I find I get intensely involved in many of the things I do each day" and "I believe I know what I was meant to do in life". Each item is rated on a five-point Likert scale ranging from 0 *(*strongly disagree) to 4 (strongly agree). The scale has demonstrated good internal consistency ($\alpha = 0.85$). In this study, the EWB was administered to participants at pre assessment, mid assessment, post assessment, and the six-week follow up assessment.

Freiburg Mindfulness Inventory. The Freiburg Mindfulness Inventory (FMI) (Walach, Buchheld, Buttenmuller, Kleinknecht, & Schmidt, 2006) is a 14-item self-report scale assessing mindfulness across four constructs: present-moment dis-identifying attention, non-judgemental, non-evaluative attitude towards self and others, openness to negative mind states, and process-oriented insight understanding. The scale provides a total mindfulness score, which was used in the current study. Sample items include "I am open to the experience of the present moment" and "I see my mistakes and difficulties without judging them". Each item is rated on a four-point scale ranging from 1 (rarely) to 4 (almost always). The scale has demonstrated good internal consistency ($\alpha = 0.86$). In this study, the FMI was administered at pre assessment, mid assessment, post assessment, and the six-week follow up assessment.

The Three Characteristics of Existence. The three characteristics of existence is a 32-item self-report, purpose-built measure assessing one's conceptual understanding and familiarity of the Buddhist teaching of the three characteristics of existence (ie., suffering, impermanence, and non-self attachment). This measure is divided into two subscales: The conceptual understanding of the three characteristics of existence (U3CE) (see Table 5.1) and familiarity of the three characteristics of existence (F3CE). The items for this scale were chosen and adapted from pooled items in the Buddhist Coping Scale (BCOPE; Phillips, Cheng, Pargament, Oemig, Colvin, Abarr, Dunn, & Reed, 2009), and nonattachment scale (Sahdra, Shaver, & Brown, 2010). Three psychologists with long- term experience in Buddhist psychology evaluated each of the items from the scale. A total of 16 items were chosen for the reflection of the three characteristics of existence (i.e., suffering, impermanence, and non-self-attachment) and interconnectedness. Sample items include "All living creatures are inherent with suffering" and "All things are not permanent and change is happen to all

things". Each item on the conceptual understanding of the three characteristics of existence subscale (U3CE) is rated on a 5-point scale ranging from 1 (very untrue of what I experience) to 5 (very true of what I experience). This scale was administered at pre assessment, mid assessment, post assessment, and the six-week follow up assessment. The scale has demonstrated good internal consistency ($\alpha = 0.90$). Furthermore, each item on the familiarity of the three characteristics of existence subscale (F3CE) is rated on a 5-point scale ranging from 1 (completely unfamiliar*)* to 5 (completely familiar). This scale provides a total score, which was only used for the pre assessment. The scale has demonstrated good internal consistency ($\alpha = 0.88$).

The Purpose of this questionnaire is to understand how much the following statements reflect your experience in your daily life. Please answer as honestly and spontaneously as possible. There are neither "right" nor "wrong" answers or "good" or "bad" responses. Please use the scale below and indicate how much the statements reflect your experience in your daily life.

very untrue of what I experience 1 2 3 4 5 very true of what I experience

1. I must suffer for my past action.
2. I remind myself that all is impermanent.
3. I recall that what is "me" is really a delusion.
4. I consider how everything is connected.
5. I try to keep in mind that the cause of my suffering is attachment.
6. I remember things won't last long.
7. I remind myself that there no "I".
8. I remind myself the concept of inter-being.
9. No living creature can escape suffering
10. I recognize that all things change
11. I try not to get caught up in "Who I am".
12. I recognized we are all interconnected and go through many of the same situations.
13. Ignorance (the lack of understanding) is a cause of suffering.
14. With or without noticing, change constantly occurs to everything.
15. Attachment to a concrete sense of self is based on misunderstanding.
16. I consider how I am related to everything

Table 5.1. The Questionnaire for Conceptual Understanding of the Three Characteristics of Existence (U3CE)

Rumination Subscale of the Rumination-Reflection Questionnaire. The Rumination Subscale of the Rumination-Reflection Questionnaire (RRQ) (Deyo, Wilson, Ong, & Koopman, 2009) is a 12-item self-report scale assessing rumination. The scale provides a total score, which was used at pre assessment, mid assessment, post assessment, and the six-week follow up assessment. Sample items include "Sometimes it is hard for me to shut off thoughts about myself" and "I often reflect on episodes in my life that I should no longer concern myself with". Each item is rated on a five-point scale ranging from 1 (strongly disagree*)* to 5 (strongly agree). The scale has demonstrated good internal consistency (α =0.86).

Difficulties in Emotion Regulation Scale. The Difficulties in Emotion Regulation Scale (DERs) (Gratz & Roemer, 2004) is a 36-item self-report scale assessing difficulties in emotion regulation across six dimensions: non-acceptance of emotional response, difficulties engaging in goal-directed behaviour, impulse control difficulties, lack of emotional awareness, limited access to emotional regulation strategies, and lack of emotional clarity. The DERs provides a total score, which was used at pre assessment, mid assessment, post assessment, and the six week-follow up assessment. Sample items include "I have difficulty making sense out of my feeling" and "When I am upset, I become angry with myself for feeling that way". Each item is rated on a five-point scale ranging from 1 (almost never 0-10%) to 5 (almost always 91-100%). The scale has demonstrated good internal consistency (α =.93).

The Depression, Anxiety, and Stress Scale: Thai version. The Thai version of the Depression, Anxiety, and Stress Scale (DASS*;* Lovibond & Lovibond, 1995) is a 42 item self-report measure of distress. It has three subscales that measure depression, anxiety, and stress, and include 14 items each. Participants are required to rate their experience of symptoms in the past two weeks on a four-point rating scale ranging from 0 (did not apply to me at all*)* to 3 (applied to me very much, or most of the time). The scale demonstrated high internal consistency for depression (α = 0.91), anxiety (α =.84), and stress (α =.90) (Lovibond & Lovibond, 1995). The DASS was used at pre assessment and post assessment.

Design and Procedure

The study adopted a 2 x 4 non-factorial mixed design. The between-subjects factor had two levels (PMP versus control condition), whereas the within-subjects factor had four levels in the intervention condition (pre, mid, post, and follow-up-intervention assessments) and two levels in the control condition (pre and post intervention assessments). The dependent variables were well-being, psychological distress, mindfulness, rumination, difficulties in emotional regulation, and the conceptual understanding of the three characteristics of existence.

A randomized controlled trial (RCT) was used to test for changes in well-being and distress (depression, anxiety, and stress) via changes in mindfulness, rumination, difficulties in emotional regulation and the conceptual understanding of the three characteristics of existence. There were four assessment periods in the PMP condition: pre-intervention, mid-intervention (two weeks after the program commenced), post-intervention (four weeks after the program concludes), and six-week follow-up intervention. Furthermore, there were two assessment periods in the control condition: pre-intervention and post-intervention (four weeks after the program concludes). All assessments were completed with by paper and pencil.

First, participants were screened for their eligibility to participate in the study. After consenting to the study, participants were completed pre-assessments and randomly assigned to either the PMP or the waitlist control condition. In the PMP, participants were randomly divided into seven groups with 10-15 members in each group. Participants attended two, two-hour sessions each week for four consecutive weeks. The PMP and data collection was conducted at the Faculty of Psychology at Chulalongkorn University, Bangkok, Thailand. The researcher led all groups in the intervention process, according to the standardized program set out in the PMP facilitator's manual.

Intervention group. The Positive Mindfulness Program (PMP) was designed and delivered by the principle investigator (Somboon Jarukasemthawee). This program aims to enhance well-being and reduce distress by integrating concepts from Eastern philosophies (e.g., the understanding of the three characteristics of existence) into mindfulness activities (further details of this program are described in chapter four (page 66). The PMP was delivered in eight, two-hour sessions. Participants were allocated into groups of 10-15 members and attended two sessions each week for four consecutive weeks. In the PMP program, participants were provided with DVD recordings of instructions for mindfulness activities, as well as a workbook of the PMP, including homework assignments.

Control group. Participants in the waitlist-control group completed a set of questionnaires at pre assessment and post assessment, at the same time as the PMP group. At the conclusion of the study, participants were offered the opportunity to complete the PMP.

Data Analysis

Preliminary analyses were conducted to assess the success of randomization using a chi-squared test of independence by gender. A series of repeated measures two- way factorial ANOVAs of condition (PMP versus control) by time (pre assessment versus post-assessment), were conducted to compare the effects of the PMP group and control group at each time point. A repeated measure ANOVA was conducted separately for well-being, distress (i.e., depression, anxiety, and stress), mindfulness, conceptual understanding of the three characteristics of existence, rumination, and difficulties in emotional regulation. Treatment effects were estimated for the intervention group using Cohen's *d*.

A series of two-level multi-level models (MLM) were conducted to understand the trajectory of change in outcomes across the pre-intervention, to mid-intervention, to post-intervention, and to 6-weel follow-up assessment for PMP condition. A two-level multi-level model, with time at level 1 and individuals at level 2, was used to model the trajectory of change across time. There is no a scientific consensus among experts about how many data time points

needed to obtain the reliable estimate the curvilinear effects. In this study, PMP's participants were assessed at four time points (pre assessment, mid assessment, post assessment, and 6-week follow-up assessment) to allow for estimation of curvilinear effects. MLwiN (Rasbash, Steele, Browne, & Goldstein, 2012) was used to conduct these analyses. Each model was centred at pre-intervention, so that the intercept reflected pre-intervention and the model yielded an estimate of a linear slope across time, as well as an estimate of curvilinear change. Given that the primary focus of this study was well-being, mindfulness, rumination and difficulties in emotional regulation, and the conceptual understanding of the three characteristics of existence, the variables of well-being, mindfulness, the conceptual understanding of the three characteristics of existence, rumination, and difficulties in emotional regulation were modelled using a MLM. The equation that was used in the analyses is provided below

$$DV_{ij} = \beta_{0ij}\text{constant}_{ij} + \beta_{1i}\text{time}_{ij} + \beta_{2}\text{time.time}_{ij} + \mu_i + e_{ij}$$

In the equation, the term DV_{ij} is the dependent variable in each model (i.e., well-being). The equation has two subscripts $_{ij}$. Subscript $_i$ represents the time of assessment and subscripts $_j$ represents an individual. The term β_{0ij} constant represents the intercept of the dependent variable. The term β_{1i} time $_{ij}$ represents the linear change in the dependent variable over four time points (pre assessment, mid assessment, post assessment, and 6-week follow up assessment). The term β_2 Time.time$_{ij}$ represents the curvilinear change in the dependent variable across assessments. The term μ_i represents error at the individual level, whereas the term e_{ij} represents error at the time level. The equation is the unconditional growth model, with time (repeated-measures variable for assessment time points; 0, 1, 2, 3,) clustered within individuals.

Results

Assumption Testing

All variables were tested for the assumptions of normality. The score of well-being, mindfulness, the conceptual understanding of three characteristics of existence, rumination and difficulties in emotional regulation met the assumptions of normality, such that skewness values were within acceptable limits (<2) and kurtosis cut-offs were within acceptable limits (<4) (Boos & Hughes-Oliver, 2000). However, descriptive statistics suggested slight positive skewness for depression, anxiety and stress. According to Tabachnick and Fidell (2007), in a large sample, significant skewness often does not deviate enough from normality to make a substantive difference in the analysis. Therefore, all datasets were retained and used in further analysis.

Analysis of Randomization

In order to test for differences between the PMP group and waitlist control group at pre intervention, a chi-squared test of independence was conducted for the categorical variable of gender. Furthermore, a series of independent samples *t*-tests were conducted for the continuous variables of age and each of the key outcome measures. These analyses were conducted to confirm the success of randomization, as well as test for possible covariates. Gender was not significantly different between the two conditions, $\chi^2 = 0.64$, *d.f.* =1, $p = .424$. The means, standard deviations, and *t*-test statistics for age and pre-test baseline measurements are presented in Table 5.2.

Age did not vary between the two groups. Furthermore, a series of independent samples *t*-tests revealed that there were no significant differences between the PMP group and waitlist control group on baseline measures of well-being, mindfulness, rumination, difficulties in emotional regulation, and familiarity of the three characteristics of existence. However, the waitlist control group reported significantly higher ratings of mindfulness and the conceptual understanding the three characteristics compared to the PMP group at baseline assessment.

Variables	PMP Group (*n*=70)		Control Group (*n*=71)		*t*-test	Effect Size *d*
	Mean	SD	Mean	SD		
Age	20.56	1.29	20.34	1.08	1.09	
Well-being (EWB)	55.01	10.82	57.18	8.33	1.34	
Mindfulness (FMI)	38.97	6.32	41.31	5.29	2.38*	0.40
Rumination (RRQ)	39.51	9.57	37.52	8.82	1.29	
Difficulties in Emotional Regulation (DERS)	85.47	24.11	81.25	18.77	1.16	
Conceptual Understanding the three Characteristics of Existence (U3CE)	54.61	8.72	58.48	9.72	2.48*	0.42
Familiarity of the three Characteristics of Existence (F3CE)	64.07	6.79	63.52	8.10	0.43	
Psychological Distress -Depression	10.63	7.79	9.37	6.56	1.04	
-Anxiety	13.09	7.06	11.45	6.00	1.48	
-Stress	14.77	8.64	16.45	6.64	1.30	

Table 5.2: Means, standard deviations, and *t*-test statistics for age and pre-test baseline measurements for the Positive Mindfulness Program and the control group.
Note: *$p < .005$, ** $p < .001$.

It should be noted, that the observed differences between groups at baseline are opposite to the anticipated group differences at mid-assessment, post-assessment, and six-week follow-up assessment. Thus, these preliminary findings do not compromise interpretations, but instead make the test conservative.

Analysis of Treatment Effect

Participants' values from pre, mid, post and 6 week follow up assessments were imputed for the missing values at post assessment using an iterative Maximum Likelihood Estimation procedure (EM). For the control condition, the data from 45 participants who completed pre and post assessments were used. Table 5.3 provides the means and standard deviations for the PMP group and waitlist control group at pre assessment and post assessment. The table also includes the results from the repeated measures 2x2 analysis of variance.

A 2 x 2 ANOVA was used to analyse participants' well-being scores at each time point across conditions. The findings revealed a significant main effect of time and significant interaction effect of time by group. Follow up analyses showed that scores for the PMP group from pre assessment to post assessment improved significantly over time, F (1, 55) = 61.45, p < .001, d = 0.63, while scores for the waitlist control group did not differ over time, F (1, 44) = 0.95, p = .331.

A 2 x 2 ANOVA was used to analyse participants' mindfulness scores at each time point across conditions. The findings revealed a significant main effect of time and significant interaction effect of time by group. Follow up tests of simple effects showed that mindfulness scores for the PMP group significantly increased over time, F (1, 55) = 70.93, p < .001, d = 0.51, while scores for the waitlist control group did not change over time, F (1, 44) = 2.30, p = .132.

A 2 x 2 ANOVA was used to analyse participants' conceptual understanding of the three characteristics of existence scores at each time point across conditions. The findings revealed a significant main effect of time and significant interaction effect of time by group. Follow up tests of simple effects showed that scores for the PMP group significantly increased from pre assessment to post assessment, F (1, 55) = 92.38, p < .001, d = 0.77, while scores for the waitlist control group did not change over time, F (1, 44) = 0.45, p = .500.

A 2 x 2 ANOVA was used to analyse participants' rumination scores at each time point across conditions. The findings revealed a significant main effect of time, significant main effect of group, and significant interaction effect of time by group. Follow up tests of simple effects showed that rumination scores for the PMP group significantly decreased over time, F (1, 55) = 110.11, p < .001, d = 1.53, while scores for the waitlist control group did not change over time, F (1, 44) = 1.08, p = .301.

A 2 x 2 ANOVA was used to analyse participants' difficulties in emotional regulation scores at each time point across conditions. The findings revealed a significant main effect of time and significant interaction effect of time by group. Follow up tests of simple effects showed that scores for the PMP group significantly decreased over time, F (1, 55) = 111.05, p < .001, d = 0.77, while scores for the waitlist control group did not change over time, F (1, 44) = 0.28, p = .596.

A 2 x 2 ANOVA was used to analyse participants' depression scores at each time point across conditions. The findings revealed a significant main effect of time and significant interaction effect of time by group. Follow up tests of simple effects showed that depression scores for the PMP group significantly decreased from baseline to post assessment, F (1, 55) = 34.74, $p < .001$, $d = 0.43$, while scores for the waitlist control group did not change over time, F (1, 44) = 2.57, $p = .112$.

A 2 x 2 ANOVA was used to analyse participants' anxiety scores at each time point across conditions. The findings revealed a significant main effect of time and significant interaction effect of time by group. Follow up tests of simple effects showed that anxiety scores for the PMP group significantly decreased from baseline to post assessment, F (1, 55) = 27.30, $p < .001$, $d = 0.41$, while scores for the waitlist control group did not change over time, F (1, 44) = 0.01, $p = .915$.

A 2 x 2 ANOVA was used to analyse participants' stress scores at each time point across conditions. The findings revealed a significant main effect of time, $d = 0.47$. However, the findings revealed no significant main effect of group and no significant interaction effect of time by group. Therefore, overall stress scores decreased from baseline to post assessment. For the control group, there was a significant correlation between pre assessment scores and post assessment scores, $r = 0.36$, $p < .005$, while the PMP group had a significant correlation, $r = 0.60$, $p < .001$.

A series of 2x2 ANOVAs of group condition (PMP versus control) by time (pre versus post assessment) were also conducted for treatment effects by dropping all missing data (listwise deletion). Results using imputed values were the same as results of tests when missing data were excluded.

Variables	Preassessment		Postassessment		Effect						Cohen *d*
					Group		Time		Group X Time		
	PMP (n=56) Mean (*SD*)	Control (n=45) Mean (*SD*)	PMP (n=56) Mean (*SD*)	Control (n=45) Mean (*SD*)	F	*p*	F	*p*	F	*p*	
Well-being	54.48 (11.45)	55.71 (7.44)	61.68 (8.76)	56.71 (7.00)	1.26	.264	35.52	.001	20.30	.001	0.63
Mindfulness	40.44 (6.88)	40.44 (4.81)	44.17 (4.54)	41.56 (5.59)	0.17	.686	45.59	.001	20.17	.001	0.51
Conceptual Understanding the three Characteristics of Existence	54.50 (9.07)	58.78 (10.66)	65.86 (7.16)	59.67 (8.82)	0.381	.538	47.85	.001	34.97	.001	0.77
Rumination	39.95 (10.07)	37.96 (8.67)	27.08 (6.10)	36.53 (6.28)	8.08	.005	60.51	.001	38.81	.001	1.53
Difficulties in Emotional Regulation	86.93 (25.29)	81.09 (19.52)	67.57 (15.27)	80.00 (16.88)	0.79	.376	55.20	.001	44.07	.001	0.77
Depression	11.43 (8.19)	10.17 (6.42)	5.94 (4.59)	8.51 (7.04)	0.34	.563	26.29	.001	7.51	.001	0.43
Anxiety	13.41 (7.44)	12.02 (6.64)	9.51 (6.06)	12.11 (6.50)	0.25	.621	11.61	.001	12.72	.001	0.41
Stress	14.95 (9.49)	16.49 (7.14)	9.34 (6.06)	12.76 (8.21)	3.40	.068	32.91	.001	1.32	.253	-

Table 5.3: Means, Standard Deviations, and 2 x 2 ANOVA results for outcome variables for the Positive Mindfulness Program and the control group

Effect Sizes

To examine the effect sizes for the PMP group, Cohen's *d* was calculated to compare post assessment scores and pooled standard deviations between the PMP group and waitlist control group, on measures of well-being, mindfulness, the conceptual understanding of the three characteristics of existence, rumination, difficulties in emotional regulation, depression, anxiety, and stress. Cohen's guidelines for interpreting effect sizes are presented in Table 5.4. According to table 5.4, the effect sizes for the PMP group on measures of well-being, mindfulness, the conceptual understanding of the three characteristics of existence, and difficulties in emotional regulation, were medium to large. In addition, the PMP group showed a large effect size in reducing rumination. The effect sizes for depression and anxiety were small to medium.

Variables	Cohen's *d* of PMP Group	
	Cohen's *d* Effect Size	Interpretation
Well-being (EWB)	0.63	Medium
Mindfulness (FMI)	0.51	Medium
Conceptual Understanding the three Characteristics of Existence (U3CE)	0.77	Medium-Large
Rumination (RRQ)	1.53	Large
Difficulties in Emotional Regulations (DERs)	0.77	Medium-Large
Depression	0.43	Small- Medium
Anxiety	0.41	Small- Medium

Table 5.4: Cohen's *d* effect size and interpretation for outcome variables for the Positive Mindfulness Program

Longitudinal Study

Given that MLM can account for cases with missing values, the current study used MLM to observe the trajectory of change across time. Subsequently, all available data of PMP participants (N=70; 56 PMP completers and 14 dropouts) were included in this analysis. Finally, separate unconditional linear growth models were used for the measures of well-being, mindfulness, conceptual understanding of the three characteristics of existence, rumination, and difficulties in emotional regulation.

Dependent variables (N=70)	Intercept Coefficient (se)	Slope			Curvilinear		
		Fixed $\chi(1)^2$	Random $\chi(1)^2$	Coefficient (se)	Fixed $\chi(1)^2$	Random $\chi(1)^2$	Coefficient (se)
Well-being (EWB)	55.07 (1.30)	48.01**	7.99**	4.85 (1.15)	4.46*	1.72	-0.725 (0.37)
Mindfulness (FMI)	38.88 (0.74)	71.71**	4.86*	3.52 (0.80)	5.10*	8.72**	-0.49 (0.25)
Conceptual Understanding the three Characteristics of Existence (U3CE)	54.19 (1.04)	76.78**	7.40**	6.81 (1.15)	8.44**	0.00	-1.07 (0.36)
Rumination (RRQ)	39.81 (1.15)	73.62**	9.83**	-9.36 (1.27)	23.73**	4.24*	1.88 (0.37)
Difficulties in Emotional Regulation (DERS)	86.02 (2.85)	82.22**	30.78**	-10.48 (2.01)	3.15	0.07	1.09 (0.63)

Table 5.5: Unconditional Growth Model, Fixed, Random, and Curvilinear effects for outcome variables with four time points for the Positive Mindfulness Program. *Note: *p* < .05, ** *p* < .01

Table 5.5 provides the findings from the MLM for each dependent variable. For well-being (EWB), an initial variance component analysis showed significant variability at the time and individual levels of the model. At the individual level, the ICC = 0.63. The intercept for well-being, over four time assessments was 55.02. Well-being scores significantly increased across time at growth rate *b* = 2.67, p<.001. A random effect and the curvilinear effect were significant.

For mindfulness (FMI), an initial variance component analysis showed significant variability at the time and individual levels of the model. At the individual level, the ICC = 0.46. The intercept for mindfulness, over four time assessments was 38.88. Mindfulness scores significantly increased across time at growth rate *b* = 2.08, p<.001. A random effect and the curvilinear effect were significant.

The next model examined the conceptual understanding of the three characteristics of existence, an initial variance component analysis showed significant variability at the time and individual levels of the model. At the individual level, the ICC = 0.46. The intercept for the conceptual understanding of the three characteristics of existence, over four time assessments was 54.19. The conceptual understanding of the three characteristics of existence scores significantly increased across time at growth rate *b* = 3.69, p<.001. A random effect and the curvilinear effect were significant.

For rumination (RRQ), an initial variance component analysis showed significant variability at the time and individual levels of the model. At the individual level, the ICC = 0.36. The intercept for rumination, over four time assessments was 39.81. Rumination scores significantly reduced

across time at growth rate *b*= -3.84, *p* < .001. A random effect and the curvilinear effect were significant.

Finally the model of difficulties in emotional regulation (DERs), an initial variance component analysis showed significant variability at the time and individual levels of the model. At the individual level, the ICC = .55. The intercept for difficulties in emotional regulation, over four time assessments was 86.02. Difficulties in emotional regulation scores significantly reduced across time at growth rate *b*= -7.30, *p* < .001. A random effect was significant. However there was no a significant curvilinear effect were significant.

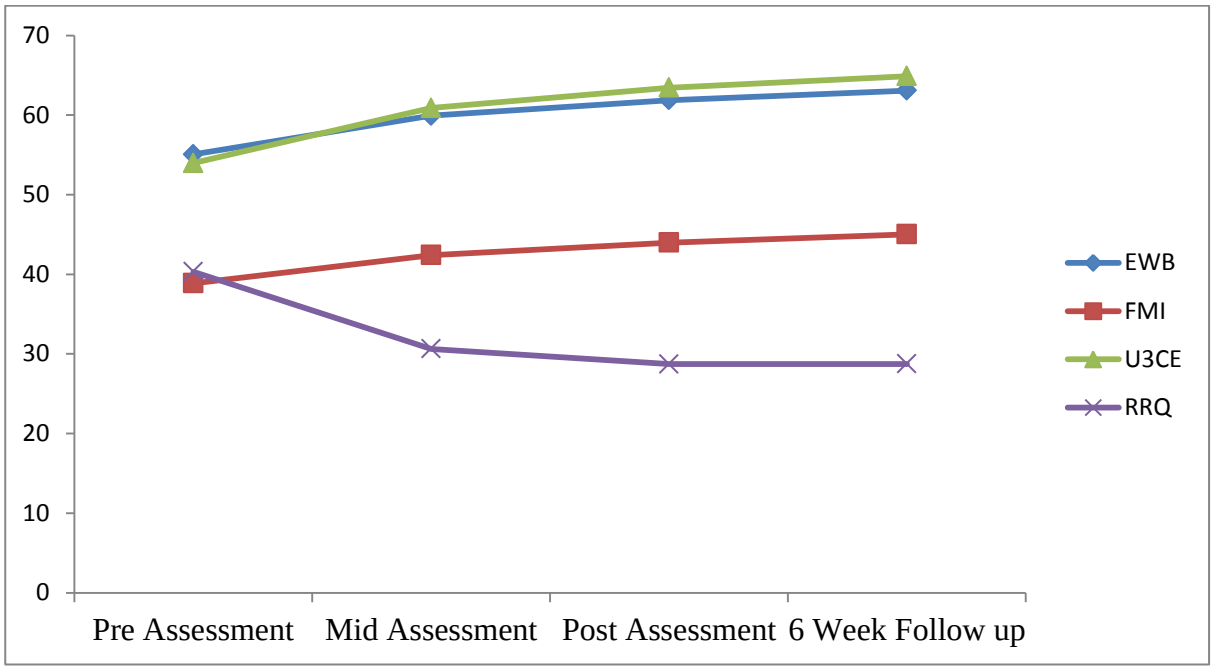

Figure 5.2 Plots the estimates of outcome variables across time of assessments based on the Multi-Level Model (MLM). EWB = Well-being, FMI = Mindfulness, U3CE= the Conceptual Understanding of the three characteristics of existence, and RRQ = Rumination.

Figure 5.2 plots the estimates of well-being, mindfulness, the conceptual understanding of the three characteristics of existence, and rumination, at each time of assessment based on the MLM models. As shown, scores of well-being, mindfulness, the conceptual understanding of the three characteristics of existence, and rumination improved most rapidly across the first half of intervention, and showed some smaller changes in the second half of intervention, and then gains were maintained across the 6 week follow up assessment. Findings showed that the trajectories decelerated, and the deceleration did not drop to the point of a decline. The estimated level of functioning at follow-up assessments remained much higher than at pre-intervention assessments.

A series of repeated measure *t*- tests comparing all psychological outcomes at pre-intervention versus at 6-week follow-up assessments was also conducted. Findings demonstrated no

significant differences on scores of any psychological outcomes between post-intervention assessments versus at 6-week follow-up assessments. However, there were significant differences on scores of all psychological outcomes at pre-intervention assessment versus at 6-week follow-up assessment.

Compliance and Attrition Analysis

A series of 2x2 ANOVA of condition (PMP versus control) by attrition (drop-out versus non-drop out) were conducted for attrition analyses using the pre intervention assessment for all variables. Table 5.6 presents the means, standard deviations, and results of these analyses. The findings revealed there were no significant main effects of condition, attrition or interaction effects on scores of well-being, rumination, difficulties in emotional regulation, depression, anxiety and stress. There was a significant main effect of condition on mindfulness F (1, 137) = 5.87, $p < .005$, but there was no a significant of main effect of attrition and a significant interaction effect of condition by attrition. The findings also indicated that there was a significant main effect of condition on the conceptual understanding of the three characteristics of existence F (1, 137) = 6.13, $p < .005$, but there was no significant of main effect of attrition and no significant interaction effect.

Participants who dropped out tended to have higher baseline scores on measures of mindfulness and the conceptual understanding of the three characteristics of existence scores. This suggests that they may have been less motivated to participate in the group program because of its perceived lack of relevance. A two-way chi-squared test was conducted for comparing the dropout rate between the two conditions (PMP versus control). Results showed that the dropout rate was not significantly different between the two conditions, $\chi^2 = 0.12$, $d.f. = 1$, $p = .204$. The dropout rate for the PMP condition was 18 (25.71%) and for the control condition was 26 (36.62%).

Variables	Attrition				Effect					
	Drop-out (n= 40)		Non-Drop out (n= 101)		Condition		Attrition		Condition X Attrition	
	PMP (n=14) Mean (*SD*)	Control (n=26) Mean (*SD*)	PMP (n=56) Mean (*SD*)	Control (n=45) Mean (*SD*)	F	*p*	F	*p*	F	*p*
Well-being	54.00 (10.56)	59.73 (9.29)	55.37 (10.98)	55.71 (7.44)	2.95	.088	0.56	.454	2.32	.130
Mindfulness	39.17 (4.37)	42.81 (5.83)	38.90 (6.91)	40.44 (4.81)	5.87	.017	1.51	.222	0.97	.328
Conceptual Understanding the three Characteristics of Existence	53.17 (8.13)	57.96 (8.01)	55.12 (8.93)	58.78 (10.66)	6.13	.014	0.66	.420	0.11	.741
Rumination	40.44 (9.89)	36.77 (9.19)	39.19 (9.54)	37.95 (8.66)	2.08	.151	0.00	.985	0.51	.475
Difficulties in Emotional Regulation	86.06 (24.82)	81.54 (17.75)	85.27 (24.11)	81.09 (19.52)	1.18	.279	0.02	.877	0.00	.966
Depression	10.67 (6.87)	7.96 (6.68)	10.62 (7.28)	10.18 (6.14)	1.40	.238	0.67	.416	0.73	.394
Anxiety	13.83 (6.87)	10.46 (4.65)	12.83 (7.18)	12.02 (6.64)	2.99	.086	0.06	.819	1.13	.290
Stress	16.44 (7.41)	16.39 (5.79)	14.19 (9.02)	16.49 (7.14)	0.62	.433	0.57	.451	0.69	.408

Table 5.6: Means, Standard Deviations, and 2 x 2 ANOVA results for outcome variables for the Group conditions and Attrition.

Discussion

The aim of this study was to examine the effectiveness of the PMP, which attempts to integrate traditional concepts of mindfulness from Buddhist theories with Western concept of psychological health. The PMP aims to improve well-being and reduce distress through changes in mindfulness, rumination, difficulties in emotional regulation, and the conceptual understanding of the three characteristics of existence.

A randomised controlled trial was conducted to compare changes in well-being, distress (i.e., depression, anxiety, and stress), rumination, and difficulties in emotional regulation, and the conceptual understanding of the three characteristics of existence, in the PMP group relative to the waitlist control group. The study was conducted within a Thai cultural context, in which the concept of the three characteristics of existence is familiar.

The principle research hypotheses of this study are listed below.

Hypothesis 1: The PMP program will improve well-being and reduce distress in Thai participants.

Hypothesis 2: The PMP program will improve mindfulness, rumination, difficulties in emotional regulation and the conceptual understanding of the three characteristics of existence in Thai participants.

Hypothesis 3: The PMP program will show a stable improvement in their levels of well-being, mindfulness, rumination, difficulties in emotional regulation and the conceptual understanding of the three characteristics of existence in Thai participants.

The results from this study indicate that, overall, participants in the PMP experienced a significant increase in their self-reported levels of well-being, mindfulness, the conceptual understanding of the three characteristics of existence, rumination, and difficulties in emotional regulation, compared to the waitlist control group. Moreover, the treatment effects of the PMP of well-being, mindfulness, the conceptual understanding of the three characteristics of existence, and rumination improved most rapidly across the first half of intervention, and showed some smaller changes in the second half of intervention, and then gains were maintained across the 6 week follow up assessment. The findings showed that the effectiveness of PMP is promising and contrasts with the more common observation of temporal decay in many types of treatment effects. These findings are consistent with a number of existing mindfulness interventions showed excellent maintenance of effect over time (Jain et al., (2007). Additionally, participants in the PMP group reported significantly lower levels of depression, anxiety, and stress, compared to the waitlist control group.

The current study is the first of its kind to investigate the effects of the PMP on well-being and distress in relation to mindfulness, rumination, difficulties in emotional regulation and and the

understanding of the three characteristics of existence. Furthermore, this is the first study to demonstrate the effectiveness of the PMP in increasing well-being (d =0.63) and reducing depression (d = 0.43), anxiety (d = 0.41), and stress. The results are consistent with previous studies, which have shown that mindfulness training leads to improvements in well-being and distress. For example, Nyklíček and Kuijpers (2008) conducted a randomised controlled trial with adult participants who were randomly allocated into the MBSR group or waitlist control group. The findings showed that MBSR increased positive affect (d = 0.73). Furthermore, Hoftmann, Sawyer, Ashley and Oh (2010), conducted a meta-analysis of 39 studies with clinical populations (e.g., anxiety disorders, depression, cancer, and diabetes). The results showed that mindfulness-based psychotherapies were moderately effective at improving depression (Hedges' g = 0.59), and anxiety (Hedges' g = 0.63). The results from the current study reflect the successful nature and use of the PMP at enhancing well-being and reducing distress.

The current study demonstrated the effectiveness of the PMP at improving the conceptual understanding of three characteristics of existence (d = 0.77), which is an important component in creating insight into mindfulness practice. The observed increase in the conceptual understanding of the three characteristics of existence is likely to be related to the insight training component of the program, which aims to promote understanding of suffering, impermanence, non-self attachment, and interconnectedness.

For the PMP, the findings revealed improvements in mindfulness, rumination, and difficulties in emotional regulation. The results showed that participants in the PMP experienced a significant increase in their self-reported levels of mindfulness (d =0.51), compared to the waitlist control group. The current finding is consistent with previous studies, which have shown that mindfulness training leads to improvements in mindfulness, attention, and self-regulation. For example, Shapiro, Brown, Thoresen, and Plante (2011) conducted a randomised controlled trial with undergraduate students who were assigned to either the MBSR group or control group. The results showed that for the MBSR group, mindfulness training improved scores of mindfulness (d = 0.47) compared to the control group. The observed improvements in mindfulness in the current study, may be due to the development of attentional self-regulation through mindfulness exercises. The results demonstrate that mindfulness is a trainable skill that can be cultivated through mindfulness intervention programs. The findings also confirm that the PMP is capable of achieving the gains of mindfulness. The results also indicate that the PMP can reduce rumination (d = 1.53). This finding is consistent with previous studies, which have shown that mindfulness training can reduce rumination. For example, Jain et al., (2007) conducted a randomised controlled trail with university students, and found that MBSR improved scores of rumination (d = 0.57) compared to a control group. The results of this study support the purpose of the PMP which aims to help

participants develop a non-judgmental attitude, as well as increase their moment by moment awareness. The effectiveness of the PMP supports the claim made by Shapiro, Carlson, Astin, and Freedman (2006), who suggest that mindfulness can assist people to avoid being immersed in their own thoughts and to become aware of their own perceptions about situations.

The results from the current study showed that the PMP improved participants 'difficulties in emotional regulation (d = 0.77). On the other hand, the control group maintained the same level of difficulties in emotional regulation. The results are consistent with previous studies, which have shown that mindfulness training leads to reduced difficulties in emotional regulation. For example, Robin, Keng, Ekblad, and Brantley (2012) conducted a randomised controlled trial with adults and found that participants in the MBSR condition reported improvements in emotional regulation (d = 0.69), compared to the control condition. It is possible that participants in the PMP learn to observe and accept their emotions, rather than re-acting to them or trying to avoid them.

Limitations

A key limitation of this study is that participants were all undergraduate students from a university in Thailand. Thus, the results are not generalisable to adolescents or older populations as they have different expectations, socioeconomic standings, and life styles. A second limitation is that the study utilised paper and pencil self-reports to measure psychological functioning and distress. It is possible that participants did not respond truthfully, as a result of social desirability bias. Future studies may overcome this limitation by including physiological or behavioural measurements of psychological functioning and distress.

The current study compared the effects of the PMP to a no treatment control group, rather than an active treatment or placebo condition. Therefore, it is possible that the treatment group reported improvements in psychological functioning as a result of non-specific factors associated with being in an intervention of any kind or specifically, a group intervention. In future studies, the control group should include an active component, such as a group discussion about Buddhist teachings without mindfulness training. Furthermore, given that the majority of Thai participants were familiar with the Buddhist teachings used in the PMP, it is unclear whether the observed improvements in psychological functioning will also be present in participants who are not as familiar with Buddhist teachings. These questions will be examined in Chapter Six.

Another limitation of the study is that the intervention may have been similar to a refresher course for some participants who have prior experience with mindfulness. As a result, the intervention effects may be largely dependent on an individual's prior knowledge of Buddhist concepts and mindfulness, as well as their ability to independently apply this knowledge to their lives. In future studies, the PMP should be conducted with participants who have different

demographic characteristics: particularly, with individuals who are not familiar with Buddhist teachings.

Although the results show that the PMP improves distress, the majority of participants included in the study did not have a significant level of psychological dysfunction. This is because all participants were screened, and those with clinical levels of distress were excluded from the study. The use of the PMP for individuals with severe psychopathologies should be considered in future studies.

Finally, although the PMP is a manualized intervention, a single principle investigator ran all of the PMP groups. As a result, it is unclear whether the findings reflect his enthusiasm for the program. The author aims to make the PMP available to all health professionals and researchers who can also assess its efficacy.

Strengths and Future Directions

Despite these limitations, the current study had several strengths. A significant strength of the study is that the PMP is a novel mindfulness-based intervention which consists of two major components: experiential and insight. The insight component of the PMP is an innovative element which is explicitly focused and integrated into mindfulness training. Further research should involve the development of a measurement tool to measure progress in the attainment of insight. This data could then be used to evaluate not just the conceptual understanding of the three characteristics of existence, but also the level of experiential understanding of the three characteristics of existence.

Another strength of the study is that it included a 6-week follow-up assessment after already collecting data from four times points. The follow-up assessment demonstrates that the improvements in psychological outcomes were maintained six weeks after the completion of the intervention. Some researchers express reservations about the reliability of estimating curvilinear components of a trajectory from four waves of data, so it would be good to replicate the findings from this study with more data points.

The study used multiple psychological assessments, all of which were positively associated with well-being and negatively associated with distress. However, several questions remain regarding the mechanisms of change that underlie the observed associations, this point is addressed in detail in Chapter Seven. Although the results of the current study illustrate the benefits of the PMP in improving well-being and reducing distress, it is important that similar results are replicated in samples with different characteristics, such as older adults. This will help to attest the global benefits of the PMP.

Additionally, in order to make the PMP international, future studies should explore the effectiveness of the PMP in different cultures where Buddhist teachings are not inherent (for further details see Chapter Six). The main purpose of this study was to examine the effectiveness of the PMP at enhancing well-being and reducing distress. However, the current study also used advanced statistics to attest improvements in well-being to changes in the conceptual understanding of the three characteristics of existence and mindfulness, rumination, and difficulties in emotional regulation.

The findings demonstrate that the PMP was beneficial in reducing distress. Future studies should address this expansion, as well as explore the use of other research methodologies, such as a growth curve analysis. Finally, future research should test the effectiveness of the PMP in individuals with distress and clinical populations.

CHAPTER SIX

Study Two: The Effectiveness of the Positive Mindfulness Program (PMP) of People in Australia

Rationale

In Western psychology, the application of mindfulness meditation as a form of behavioral intervention for treating psychological problems became prominent or influential though the work of Kabat-Zinn. Kabat-Zinn explored the use of mindfulness meditation in treating patients with chronic pain (Kabat-Zinn, 1982) using a program that is now known as Mindfulness-Based Stress Reduction (MBSR). Since then, mindfulness has been incorporated into several psychotherapies, including Mindfulness-based Cognitive Therapy (MBCT) (Segal, Williams, & Teasdale, 2003), Dialectical Behavior Therapy (DBT) (Linehan, 1993), and Acceptance and Commitment Therapy (ACT) (Hayes, Strosahl, & Wilson, 2004). Although mindfulness-based interventions are beneficial in reducing psychological distress (e.g. depression, anxiety, and personality disorders), they do not explicitly focus on the development of insight, which has been identified in Buddhist contexts as being key to the attainment of long lasting well-being (Rosch, 2007).

Given the limitations of existing mindfulness-based interventions, the Positive Mindfulness Program (PMP) was developed with the integration of insight (i.e., the understanding of the three characteristics of existence, a Buddhist teaching) into a formal psychological intervention that aims to enhance well-being and reduce psychological distress. In study one; the PMP was conducted within a Thai culture, in which the concept of mindfulness and Buddhism is already familiar. Study one compared participants in the PMP to participants in the waitlist control group using a randomized controlled trial with undergraduate students. The findings revealed that the PMP was effective at improving well-being (d = 0.63) and reducing psychological distress (depression, d = 0.43, anxiety, d = 0.41, and stress, d = 0.47), by improving the conceptual understanding of the three characteristics of existence (d = 0.77), mindfulness (d = 0.51), rumination, d = 1.53, and difficulties in emotional regulation, d = 0.77).

The Positive Mindfulness Program (PMP) is an innovative and a research-based intervention based on Buddhist philosophies. It includes a series of mindfulness activities. The effectiveness of the PMP in Western cultures, where individuals are expected to have less familiarity with the three characteristics of existence, is still uncertain. According to Christopher, Charoensuk, Gilbert, Neary, and Pearce (2009), the Eastern and Western conceptualizations of mindfulness have important differences. Mindfulness in the Eastern culture, particularly in Thailand, has a long tradition and was developed with a religio-cultural focus. On the other hand, mindfulness in the

Western culture has no significant tradition and was solely developed with a psychology-based focus. These differences are reflected in the application of mindfulness in Eastern and Western societies, as well as in the outcomes of the interventions. It is believed that if the PMP can regularly engage individuals in mindfulness activities, and if these activities fit their values, strengths, and interests, then the prospect of experiencing happiness will be significantly enhanced.

In study one; the PMP was administered to Thai participants in order to examine its effectiveness at improving well-being and reducing distress. A systematic replication of study one was conducted in Australia so that the results from the two different cultures could be compared. In this study, participants in Australia were first introduced to the PMP because the notions and traditions of mindfulness are not native to Australia. The effects of the PMP on well-being and distress, in relation to mindfulness, rumination, difficulties in emotional regulation and the conceptual understanding of the three characteristics of existence, were examined. The observed changes from pre assessment to post assessment will be used as a benchmark for the introduction of the PMP into the wider Western community. A control group was not incorporated into this study because the aim is to establish whether the results from study one are generalizable to a Western context. Such a comparison and analysis can provide a better understanding of mindfulness in psychotherapy when it is conducted within different cultures.

Research Aims and Hypotheses

The current study aims to examine the effectiveness of the PMP in improving well-being and reducing distress in an Australian population. The results from this study will be compared to a previous trial of the PMP that was conducted with a Thai population.

The following hypotheses were tested.

Hypothesis 1: The PMP will improve psychological well-being and reduce psychological distress in Australian participants.

Hypothesis 2: The PMP will enhance mindfulness, rumination, difficulties in emotional regulation and the conceptual understanding of the three characteristics of existence in Australian participants.

Hypothesis 3: From pre intervention, to mid intervention, to post intervention, and to six week follow up, participants will show a greater improvement in their levels of well-being, mindfulness, rumination, difficulties in emotional regulation, depression, anxiety, and stress.

Method

Participants and Recruitment

The participants were 96 (29 male, 67 female) students, staff members, and residents, from Brisbane, Australia. Participants were randomly recruited during September through to October 2012, through brief classroom presentations, on-campus flyers, the University of Queensland electronic newsletter, and the internet website, seeking people who wished to participate in a free mindfulness program. Participants were eligible for inclusion in the study if they had not previously received treatment for a severe psychotic disorder (for example, they had not been prescribed anti-psychotic medications in the past six months). Participation in the study was dependent on participants' commitment to complete the pre-program, mid-program, post-program, and six-week follow-up program questionnaires. Participants were also required to commit to two sessions a week for four weeks.

The CONSORT diagram for this study is illustrated in Figure 6.1. The mean age of participants was 38.19 years (*SD* = 11.92), with an age range of 18 to 65. Of the 96 participants, 67 (69.80%) were full-time workers (e.g., teacher, doctor, lecturer, researcher, and engineer) and 29 (30.20%) were full-time students. Participants included 66 Australian citizens (68.80%) and 30 non-Australian citizens (31.30 %). A total of 50 (52.10%) participants reported that they did not receive psychological help, 13 (13.50%) participants reported that they currently saw a counsellor, psychologist, or psychiatrist, mainly for depression and anxiety disorders, and 33 (34.40 %) participants reported that they had seen a mental health professional in the past 6 months.

A total of 15 participants dropped out before the completion of the study. The most common reasons for dropping out were a loss of interest and time commitments. It should be noted that no participants reported adverse events as a result of participating in the study. Shapiro, Astin, Bishop, and Cordova (2005), six out of eight sessions constitute the minimum training that is necessary to acquire core knowledge and skills. Using this criterion, 81 participants completed the PMP. Of the 81 participants who were identified as a PMP completer, six (7.40%) participants failed to complete mid intervention assessments, 11 (13.58%) failed to complete assessments required at the post intervention assessment. 33 (40.74%) failed to complete assessment required at the 6 week follow-up assessment.

Of the 81 participants who completed the study, 56 were female (69.14%) and 25 were male (30.86%). These participants' mean age was 37.73 (*SD* =12.13), with an age range of 18 to 65. The participants included 55 Australian citizens (67.90 %) and 26 non-Australian citizens (32.10%). A total of 41 (50.60%) participants reported that they did not receive psychological professional help, 11 (13.60%) participants reported that they currently saw a counsellor, psychologist, or psychiatrist,

mainly for depression and anxiety disorders, and 29 (35.80 %) participants reported that they had seen a mental health professional in the past 6 months.

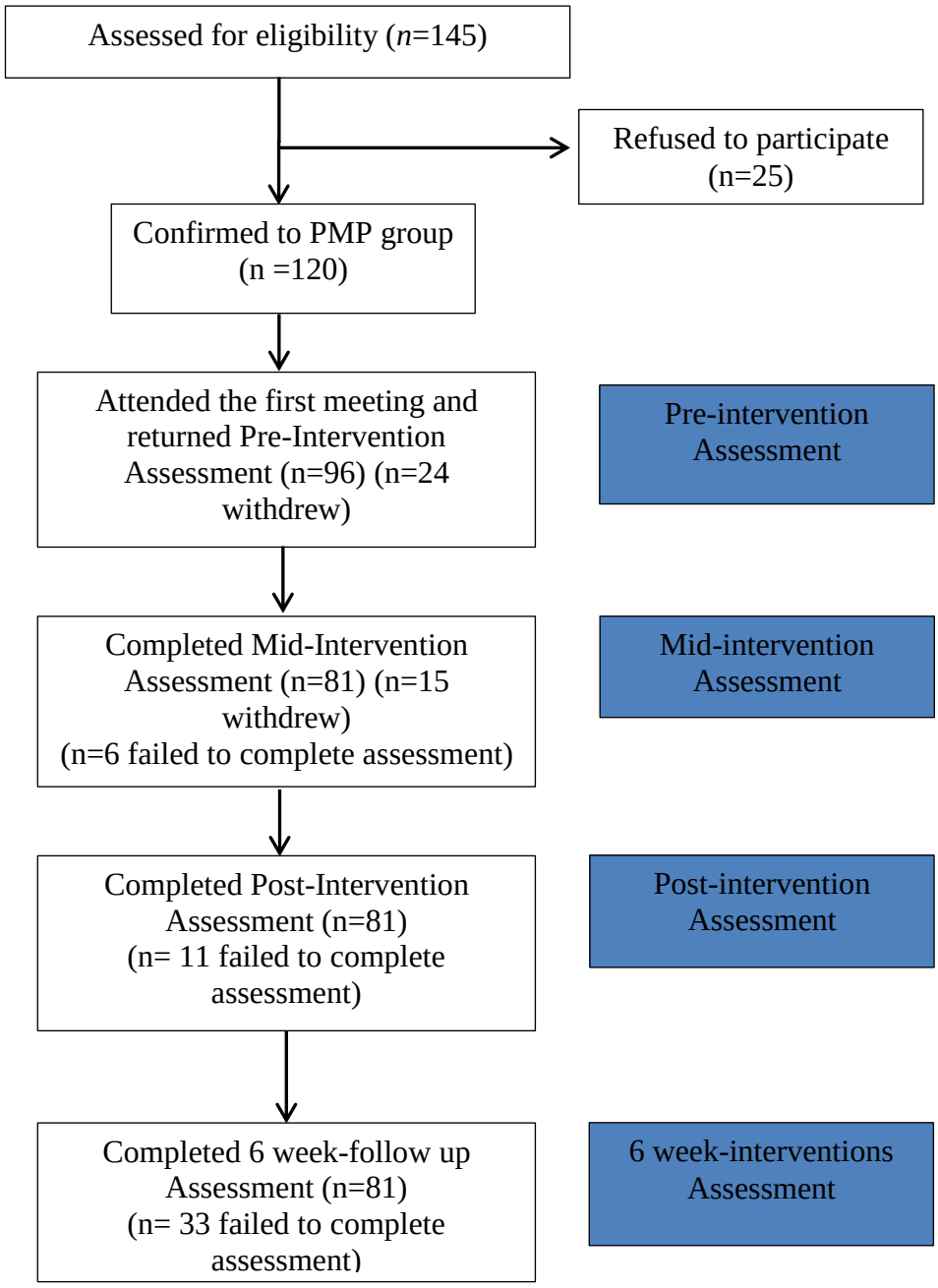

Figure 6.1: Flow diagram of the phases in study two, including enrolment, allocation, pre assessment, mid assessment, post assessment, and the 6 week follow up assessment

Measures

The measures on the questionnaires assessed well-being, distress (i.e., depression, anxiety, and stress), mindfulness, rumination, difficulties in emotional regulation and, the three characteristics of existence.

Eudaimonic Well-Being Scale. The Eudaimonic Well-Being Scale (EWB) (Waterman et al., 2010) is a 21-item self-report scale assessing well-being across six constructs: self-discovery,

perceived development of one's best potentials, a sense of purpose and meaning in life, investment of significant effort in pursuit of excellence, intense involvement in activities, and enjoyment of activities as personally expressive. The scale provides a total well-being score, which was used in the current study. Sample items include "I find I get intensely involved in many of the things I do each day" and "I believe I know what I was meant to do in life". Each item is rated on a five-point Likert scale ranging from 0 *(*strongly disagree) to 4 (strongly agree). The scale has demonstrated good internal consistency ($\alpha = 0.85$). In this study, the EWB was administered to participants at pre assessment, mid assessment, post assessment, and the six-week follow up assessment.

Freiburg Mindfulness Inventory. The Freiburg Mindfulness Inventory (FMI) (Walach, Buchheld, Buttenmuller, Kleinknecht, & Schmidt, 2006) is a 14-item self-report scale assessing mindfulness across four constructs: present-moment dis-identifying attention, non-judgemental, non-evaluative attitude towards self and others, openness to negative mind states, and process-oriented insight understanding. The scale provides a total mindfulness score, which was used in the current study. Sample items include "I am open to the experience of the present moment" and "I see my mistakes and difficulties without judging them". Each item is rated on a four-point scale ranging from 1 (rarely) to 4 (almost always). The scale has demonstrated good internal consistency ($\alpha = 0.86$). In this study, the FMI was administered at pre assessment, mid assessment, post assessment, and the six-week follow up assessment.

The Three Characteristics of Existence. The three characteristics of existence is a 32-item self-report, purpose-built measure assessing one's conceptual understanding and familiarity of the Buddhist teaching of the three characteristics of existence (ie., suffering, impermanence, and non-self attachment). This measure is divided into two subscales: The conceptual understanding of the three characteristics of existence (U3CE) (see Table 5.1) and familiarity of the three characteristics of existence (F3CE). The items for this scale were chosen and adapted from pooled items in the Buddhist Coping Scale (BCOPE; Phillips, Cheng, Pargament, Oemig, Colvin, Abarr, Dunn, & Reed, 2009), and nonattachment scale (Sahdra, Shaver, & Brown, 2010). Three psychologists with long- term experience in Buddhist psychology evaluated each of the items from the scale. A total of 16 items were chosen for the reflection of the three characteristics of existence (i.e., suffering, impermanence, and non-self-attachment). Sample items include "All living creatures are inherent with suffering" and "All things are not permanent and change is happen to all things". Each item on the conceptual understanding of the three characteristics of existence subscale (U3CE) is rated on a 5-point scale ranging from 1 (very untrue of what I experience) to 5 (very true of what I experience). This scale was administered at pre assessment, mid assessment, post assessment, and the six-week follow up assessment. The scale has demonstrated good internal consistency ($\alpha = 0.84$). Furthermore, each item on the familiarity of the three characteristics of existence subscale

(F3CE) is rated on a 5-point scale ranging from 1 (completely unfamiliar*)* to 5 (completely familiar). This scale provides a total score, which was only used for the pre assessment. The scale has demonstrated good internal consistency ($\alpha = 0.88$).

Rumination Subscale of the Rumination-Reflection Questionnaire. The Rumination Subscale of the Rumination-Reflection Questionnaire (RRQ) (Deyo, Wilson, Ong, & Koopman, 2009) is a 12-item self-report scale assessing rumination. The scale provides a total score, which was used at pre assessment, mid assessment, post assessment, and the six-week follow up assessment. Sample items include "Sometimes it is hard for me to shut off thoughts about myself" and "I often reflect on episodes in my life that I should no longer concern myself with". Each item is rated on a five-point scale ranging from 1 (strongly disagree*)* to 5 (strongly agree). The scale has demonstrated good internal consistency ($\alpha = 0.86$).

Difficulties in Emotion Regulation Scale. The Difficulties in Emotion Regulation Scale (DERs) (Gratz & Roemer, 2004) is a 36-item self-report scale assessing difficulties in emotion regulation across six dimensions: non-acceptance of emotional response, difficulties engaging in goal-directed behaviour, impulse control difficulties, lack of emotional awareness, limited access to emotional regulation strategies, and lack of emotional clarity. The DERs provides a total score, which was used at pre assessment, mid assessment, post assessment, and the six week-follow up assessment. Sample items include "I have difficulty making sense out of my feeling" and "When I am upset, I become angry with myself for feeling that way". Each item is rated on a five-point scale ranging from 1 (almost never 0-10%) to 5 (almost always 91-100%). The scale has demonstrated good internal consistency ($\alpha = .93$).

The Depression, Anxiety, and Stress Scale: Depression, Anxiety, and Stress Scale (DASS*;* Lovibond & Lovibond, 1995) is a 42 item self-report measure of distress. It has three subscales that measure depression, anxiety, and stress, and include 14 items each. Participants are required to rate their experience of symptoms in the past two weeks on a four-point rating scale ranging from 0 (did not apply to me at all*)* to 3 (applied to me very much, or most of the time). The scale demonstrated high internal consistency for depression ($\alpha = 0.91$), anxiety ($\alpha = .84$), and stress ($\alpha = .90$) (Lovibond & Lovibond, 1995). The DASS was used at pre assessment, mid assessment, post assessment, and the six-week follow up assessment.

Design and Procedure

Participants were assessed at four time points in order to compare changes in well-being, distress (depression, anxiety, and stress), the conceptual understanding of the three characteristics of existence, and mindfulness, rumination, and difficulties in emotional regulation across six weeks. The four assessment periods are pre assessment, mid assessment (two weeks after the program

commenced), post assessment (8 weeks after the program concludes), and the six-week follow-up assessment after the intervention.

First, participants were screened for their eligibility to participate in the study. After providing informed consent, participants were contacted via email to complete the pre-intervention assessment. In the PMP, participants were divided into seven groups with 10 to 15 members in each group. Participants attended two, two-hour sessions each week for four consecutive weeks. The PMP was conducted within classrooms as the School of Psychology at The University of Queensland, Australia. The researcher led all groups in the intervention process, according to the standardized program set out in the PMP facilitator's manual. All measures were completed with pencil and paper.

The Positive Mindfulness Program (PMP). The PMP was designed and delivered by the principle investigator (Somboon Jarukasemthawee). This program aims to enhance well-being and reduce distress by integrating concepts from Eastern philosophies (e.g., the understanding of the three characteristics of existence) into mindfulness activities (further details of this program are described in chapter four (page 66). The PMP was delivered in eight, two-hour sessions. Participants were allocated into groups of 10-15 members and attended two sessions each week for four consecutive weeks. In the PMP program, participants were provided with DVD recordings of instructions for mindfulness activities, as well as a workbook of the PMP, including homework assignments.

Data Analysis

A two level Multi-level Model (MLM) was conducted to model the trajectory of change over time, using time at level 1 and individuals formed level 2. The participants were assessed at four time points: pre assessment, mid assessment, post assessment, and six week follow-up assessment) which allows for estimation of the curvilinear effects. MLwiN (Rasbash, Steele, Browne and Goldstein, 2012) was used to conduct these analyses. Each model was cantered at pre-intervention, so the intercept reflected pre-intervention and the model yields an estimate of linear slope across time, and an estimate of curvilinear change. As the primary focus of this study was well-being, distress (depression, anxiety and stress), conceptual understanding of the three characteristics of existence, mindfulness, rumination, difficulties in emotional regulation, therefore, well-being, depression, anxiety and stress, conceptual understanding of the three characteristics of existence, mindfulness, rumination, difficulties in emotional regulation were modelled using MLM. The equation used in the analyses was as follows

$$DV_{ij} = \beta_{0ij}constant_{ij} + \beta_{1i}time_{ij} + \beta_{2}time.time_{ij} + \mu_i + e_{ij}$$

In the equation, the term DV_{ij} is the dependent variable in each model (i.e., well-being). The equation has two subscripts $_{ij}$. Subscript $_i$ represents the time of assessment and subscripts $_j$ represents an individual. The term β_{0ij} constant represents the intercept of the dependent variable. The term β_{1i} time $_{ij}$ represents the linear change in the dependent variable over four time points (pre assessment, mid assessment, post assessment, and 6-week follow up assessment). The term β_2 Time.time$_{ij}$ represents the curvilinear change in the dependent variable across assessments. The term μ_i represents error at the individual level, whereas the term e_{ij} represents error at the time level. The equation is the unconditional growth model, with time (repeated-measures variable for assessment time points; 0, 1, 2, 3,) clustered within individuals.

Hedges' *g* was used to compare pre assessment scores to post assessment scores and to calculate the pooled standard deviations for psychological well-being, mindfulness, the conceptual understanding the three characteristics of existence, rumination, difficulties in emotional regulation, depression, anxiety, and stress.

Results

All variables were tested for the assumptions of normality. The score of well-being, mindfulness, the conceptual understanding of three characteristics of existence, rumination and difficulties in emotional regulation met the assumptions of normality, such that skewness values were within acceptable limits (<2) and kurtosis cut-offs were within acceptable limits (<4) (Boos & Hughes-Oliver, 2000). However, descriptive statistics suggested slight positive skewness for depression, anxiety and stress. According to Tabachnick and Fidell (2007), in a large sample, significant skewness often does not deviate enough from normality to make a substantive difference in the analysis. Therefore, all datasets were retained and used in further analysis.

Table 6.1 indicates that participants who attended the PMP, reported higher scores on measures of well-being, mindfulness, and the conceptual understanding of the three characteristics of existence, at post assessment compared to pre assessment. Participants also reported lower stress scores at post assessment compared to pre assessment. In addition, participants showed the greatest improvement in measures of rumination, difficulties in emotional regulation, depression, and anxiety, at the six-week follow-up assessment.

Variables	Assessment			
	Pre (N=96) *Mean (SD)*	Mid (N=75) *Mean (SD)*	Post (N=70) *Mean (SD)*	6 week Follow up (N=56) *Mean (SD)*
Well-being	52.35 (9.34)	55.08 (6.78)	59.90 (9.05)	59.44 (8.89)
Mindfulness	32.22 (7.56)	36.89 (6.21)	42.10 (6.29)	41.21 (6.41)
Conceptual Understanding the three Characteristics of Existence	52.32 (9.14)	58.96 (7.97)	65.07 (7.08)	64.08 (7.61)
Rumination	44.23 (9.37)	37.25 (8.92)	33.09 (9.48)	32.44 (7.87)
Difficulties in Emotional Regulation	92.83 (23.24)	76.15 (18.85)	65.99 (17.13)	64.67 (13.20)
Depression	8.55 (7.75)	5.00 (5.24)	3.24 (5.19)	3.17 (3.81)
Anxiety	5.92 (5.38)	3.83 (4.44)	2.47 (3.08)	2.00 (2.72)
Stress	14.08 (8.84)	9.96 (7.04)	6.71 (5.76)	6.95 (5.27)

Table 6.1: Means and Standard Deviations for Pre, Mid, Post and Six week follow up assessment for outcome variables.

Analysis of Treatment Effects and Longitudinal study: Unconditional Linear Growth Model

Given that Multi-level Model (MLM) can account for cases with missing values, the current study used MLM to observe the trajectory of change across time. Subsequently, all available data (N=96; 81 PMP completers and 15 dropouts) were included in this analysis. Finally, separate unconditional linear growth models were used for the measures of well-being, mindfulness, conceptual understanding of the three characteristics of existence, rumination, difficulties in emotional regulation, depression, anxiety, and stress.

Table 6.2 provides the findings from the MLM for each dependent variable. For all eight dependent measures, the initial variances indicated significant variability at the time level and individual level. At the individual level, the intra-class correlations (ICC) indicate greater variability than at the time level. All measures showed a linear change across the course of the intervention. All outcomes also showed a negative curvilinear effect. A random effect of time also emerged, indicating significant variability between individuals in the mean slope of the outcomes across time.

For well-being (EWB), an initial variance component analysis showed significant variability at the time and individual levels of the model. At the individual level, the ICC = 0.50. The intercept for well-being, over four time assessments was 52.05. Well-being scores significantly increased across time at growth rate $b = 2.68$, $p<.001$. A random effect and the curvilinear effect were significant.

Variables (N=96)	Intercept Coefficient (se)	Slope			Curvilinear		
		Fixed $\chi(1)^2$	Random $\chi(1)^2$	Coefficient (se)	Fixed $\chi(1)^2$	Random $\chi(1)^2$	Coefficient (se)
Well-being (EWB)	52.05 (0.90)	58.25**	13.68**	4.65 (0.91)	5.75*	0.00	-0.74 (0.30)
Mindfulness (FMI)	31.98 (0.78)	119.64**	10.59**	7.13 (0.81)	30.60**	8.78**	1.35 (0.23)
Conceptual Understanding the three Characteristics of Existence (U3CE)	52.12 (0.92)	135.70**	1.47	9.62 (1.08)	31.84**	12.46**	-1.81 (0.33)
Rumination (RRQ)	44.27 (0.94)	106.92**	1.46	-8.43 (1.61)	23.85**	15.80**	1.61 (0.35)
Difficulties in Emotional Regulation (DERS)	92.94 (2.34)	111.10**	13.46**	-20.37 (2.49)	23.61**	17.04**	3.82 (0.72)
Depression	8.50 (0.78)	43.97**	28.93**	-4.35 (0.92)	11.33**	20.44**	0.88 (0.26)
Anxiety	5.92 (0.55)	56.95**	33.99**	-2.35 (0.57)	5.87*	30.87**	0.37 (0.16)
Stress	14.13 (0.89)	65.23**	15.29**	-5.38 (1.12)	15.19**	39.19**	1.03 (0.32)

Table 6.2. Unconditional Growth Model, Fixed, Random and Curvilinear effects for outcome variables. *Note:* *$p < .05$, ** $p < .01$.

For mindfulness (FMI), an initial variance component analysis showed significant variability at the time and individual levels of the model. At the individual level, the ICC = 0.34. The intercept for mindfulness, over four time assessments was 31.98. Mindfulness scores significantly increased across time at growth rate $b = 3.46$, p<.001. A random effect and the curvilinear effect were significant.

The next model examined the conceptual understanding of the three characteristics of existence, an initial variance component analysis showed significant variability at the time and individual levels of the model. At the individual level, the ICC = 0.30. The intercept for the conceptual understanding of the three characteristics of existence, over four time assessments was 52.13. The conceptual understanding of the three characteristics of existence scores significantly increased across time at growth rate $b = 4.58$, p<.001. A random effect and the curvilinear effect were significant.

For rumination (RRQ), an initial variance component analysis showed significant variability at the time and individual levels of the model. At the individual level, the ICC = 0.46. The intercept for rumination, over four time assessments was 44.27. Rumination scores significantly reduced across time at growth rate b= -3.94, $p < .001$. A random effect and the curvilinear effect were significant.

For, the model of difficulties in emotional regulation (DERs), an initial variance component analysis showed significant variability at the time and individual levels of the model. At the individual level, the ICC = .36. The intercept for difficulties in emotional regulation, over four time assessments was 92.94. Difficulties in emotional regulation scores significantly reduced across time at growth rate b= -9.58, p < .001. A random effect and the curvilinear effect were found significant.

For depression, an initial variance component analysis showed significant variability at the time and individual levels of the model. At the individual level, the ICC = .35. The intercept for depression, over four time assessments was 8.50. Depression scores significantly reduced across time at growth rate b= -1.85, p < .001. A random effect and the curvilinear effect were found significant.

The next model examined anxiety, an initial variance component analysis showed significant variability at the time and individual levels of the model. At the individual level, the ICC = 0.50. The intercept for anxiety, over four time assessments was 5.92. Anxiety scores significantly increased across time at growth rate b = -1.26, p<.001. A random effect and the curvilinear effect were significant.

Finally, the model of stress was examined. An initial variance component analysis showed significant variability at the time and individual levels of the model. At the individual level, the ICC = 0.39. The intercept for stress, over four time assessments was 14.13. Stress scores significantly increased across time at growth rate b = -2.51, p<.001. A random effect and the curvilinear effect were significant.

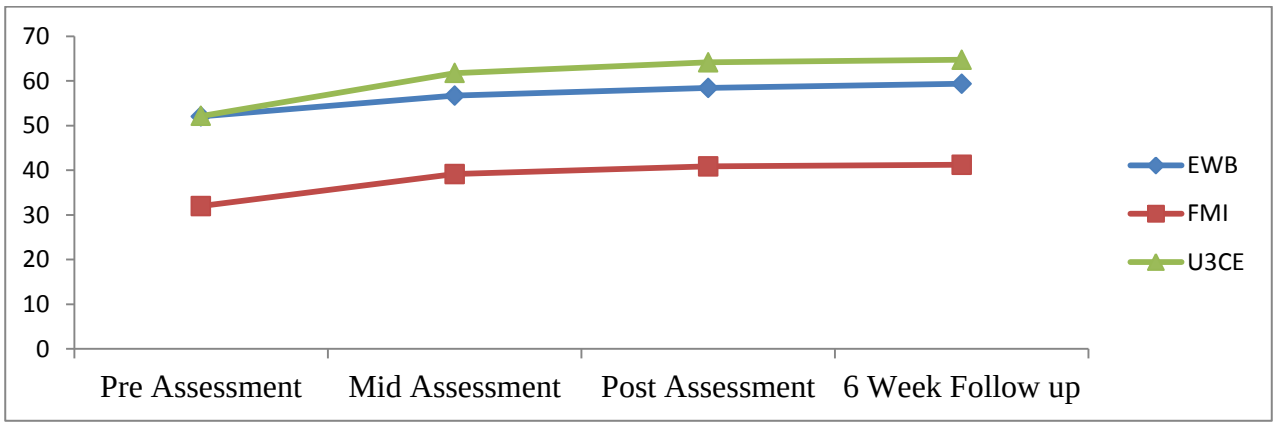

Figure 6.2 plots the estimates of positive psychological outcomes across time of assessments based on the Multi-level Model (MLM). EWB = Well-being, FMI = Mindfulness, and U3CE= the Conceptual Understanding of the three characteristics of existence.

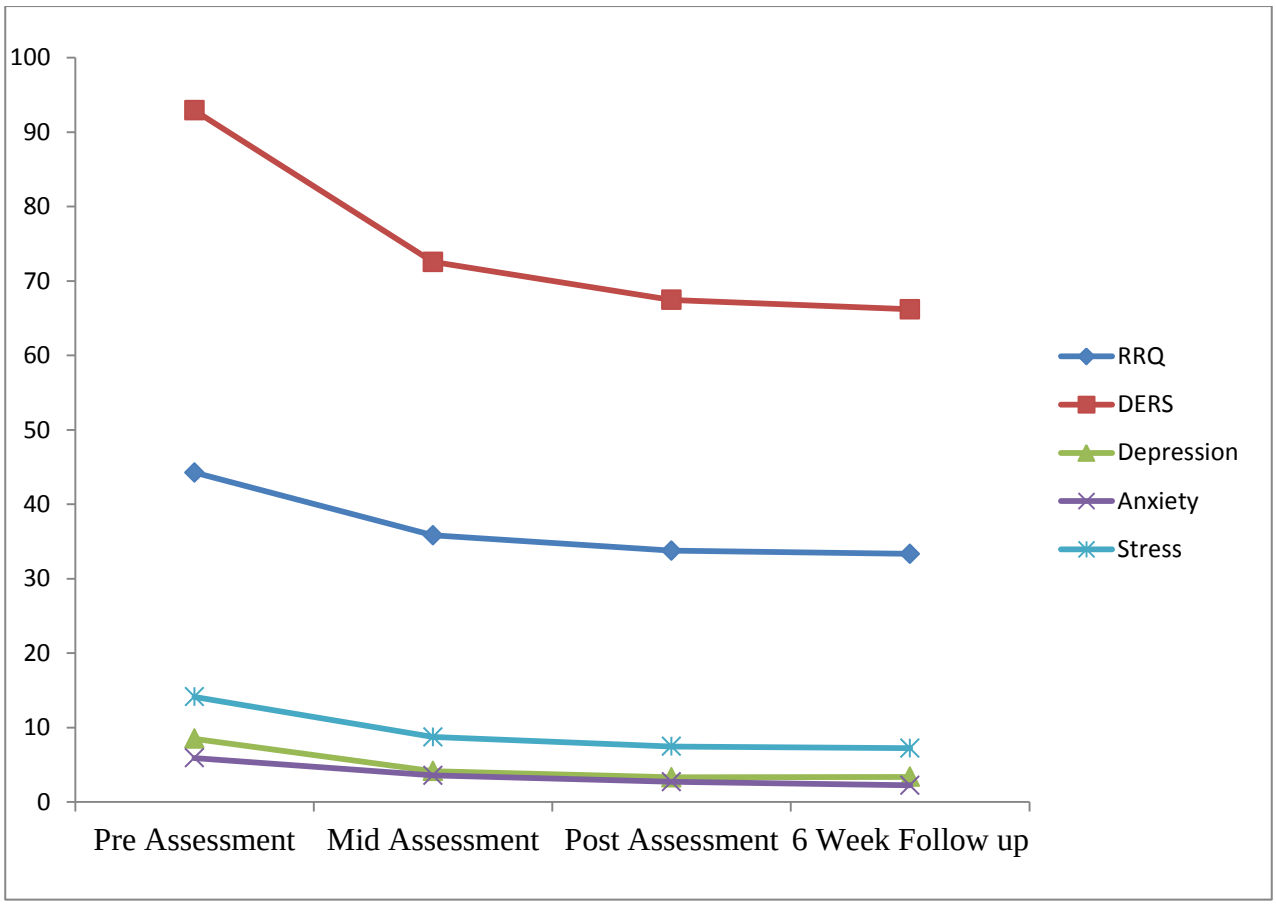

Figure 6.3 plots the estimates of negative psychological outcomes across time of assessments based on the Multi-level Model (MLM). RRQ = Rumination, DERS = Difficulties in emotional regulation.

Figure 6.2 and 6.3 plot the estimates of well-being, mindfulness, the conceptual understanding of the three characteristics of existence, rumination, difficulties in emotional regulation, depression, anxiety and stress at each time of assessment based on the MLM models. Scores improved most rapidly during the first half of intervention but showed some smaller changes in the second half of intervention, and then gains were maintained across the 6 week-follow up assessment. Finding showed that the trajectories decelerated, but the deceleration did not drop to the point of a decline. The estimated level of functioning at follow-up assessments remained much higher than at pre-intervention assessments.

A series of repeated measure *t*-tests comparing all psychological outcomes at pre-intervention versus at 6-week follow-up assessments demonstrated no significant differences on scores of any psychological outcomes between post-intervention assessments versus at 6 week follow-up assessments. However there were significant differences on scores of all psychological outcomes at pre-intervention assessments versus at 6 week follow-up assessments.

Effect size estimates. To calculate the effect sizes for the PMP, Hedges' *g* was used to compare pre and post assessment scores and pooled standard deviations on measures of well-being,

mindfulness, the conceptual understanding of the three characteristics of existence, rumination, difficulties in emotional regulation, depression, anxiety, and stress. In this analysis, data from 81 participants that completed the PMP were used, however, 11 (13.58%) participants failed to complete the post intervention assessment. Participants' values from pre, mid, post, and 6 week follow up assessments were imputed for the missing values at post assessment using an iterative Maximum Likelihood Estimation procedure (EM).

Variables	PMP (n=81)			
	Pre-test *Mean (SD)*	Post-test *Mean (SD)*	Hedges's effect size	Interpretation
Well-being	51.90 (8.89)	59.62 (8.65)	0.88	Large
Mindfulness	31.85 (6.46)	42.26 (5.95)	1.67	Large
Conceptual Understanding of the three characteristics of existence	51.78 (8.39)	65.05 (6.73)	1.74	Large
Rumination	44.30 (9.40)	33.15 (9.04)	1.20	Large
Difficulties in emotional regulation	93.00 (21.80)	66.51 (16.37)	1.37	Large
Depression	8.30 (7.23)	3.31 (4.89)	0.81	Large
Anxiety	5.69 (5.39)	2.53 (3.01)	0.72	Medium to Large
Stress	14.09 (8.25)	6.76 (5.54)	1.04	Large

Table 6.3: Means, Standard Deviations, Hedges' *g* effect size and interpretation for the Positive Mindfulness Program

Compliance, Attrition Analysis and Assumption Testing

Of the 96 participants, 21 (21.88%) did not complete mid intervention assessment, 26 (27.08%) did not complete post intervention assessment, and 48 (50.00%) did not complete 6 week follow up assessment. Eighty-one out of 96 were identified as a PMP completer as they attended at least six sessions from eight sessions. Independent samples *t*-tests were conducted for attrition analyses to compare dropouts (15) and completers (81) on pre assessment outcome measures. Table 6.4 indicated that there were no significant differences between dropouts and non-dropouts on all outcome measures. However, the findings need to be interpreted with cautions due to the small sample size.

Variables	Dropouts (N=15)		Completers (N=81)		*t*-value
	Mean	*SD*	*Mean*	*SD*	
Age	40.67	10.76	37.73	12.13	.383
Well-being	54.80	11.48	51.90	8.89	.272
Mindfulness	34.20	12.00	31.85	6.46	.472
Rumination	43.87	9.53	44.30	9.40	.871
Difficulties in emotional regulation	91.93	30.79	93.00	21.80	.871
Conceptual Understanding of the three characteristics of existence	55.27	12.40	51.78	8.39	.310
Familiarity of the three characteristics of existence	50.60	15.72	50.63	12.00	.985
Depression	9.93	10.32	8.30	7.23	.456
Anxiety	7.13	5.37	5.69	5.39	.351
Stress	14.07	11.91	14.09	8.25	.994

Table 6.4: Means, Standard Deviations and *t*-tests for outcome variables for dropouts and non-dropouts

Discussion

The aim of this study was to examine the effectiveness of the PMP program, which revisits the origins of mindfulness by incorporating Eastern philosophies into the practice of mindfulness. The PMP aims to improve well-being and reduce distress through changes in mindfulness, rumination, difficulties in emotional regulation and the conceptual understanding of the three characteristics of existence (Payutto, 1998).

The study was conducted with participants from an Australian cultural context, in which the concept of the three characteristics of existence is unfamiliar. Participants were assessed at four different time points in order to assess the progression of well-being and distress (i.e., depression, anxiety, and stress) in relation to the conceptual understanding of the three characteristics of existence, mindfulness, rumination, and difficulties in emotional regulation.

The principle research hypotheses of this study were

Hypothesis 1: The PMP will improve well-being and reduce psychological distress in Australian participants.

Hypothesis 2: The PMP will enhance mindfulness, rumination, difficulties in emotional regulation and the conceptual understanding of the three characteristics of existence in Australian participants.

Hypothesis 3: From pre intervention, to mid intervention, to post intervention, and to six week follow up, participants will show a greater improvement in their levels of well-being, mindfulness, rumination, difficulties in emotional regulation, depression, anxiety, and stress.

The results from this study indicate that, overall, participants in the PMP experienced a significant increase in their self-reported levels of well-being, mindfulness, the conceptual understanding of the three characteristics of existence, rumination, and difficulties in emotional regulation after participating in the PMP. Participants also experienced a significant reduction in measures of distress from pre assessment to post. The PMP led to large improvement in participants' reported positive functioning and negative emotional symptoms during the first half of the intervention, while smaller improvements were reported in the second half of the intervention. Gains were maintained at six week follow up. These patterns of improvement were similar to those identified in Study One.

This study showed that the PMP had a large effect size for scores of well-being (Hedges'g =0.88), and medium to large effect size for scores of depression, anxiety, and stress (depression, Hedges'g =0.81, anxiety; Hedges'g =0.72, and stress Hedges'g =1.04). These results were similar to Study One, which showed that the PMP led to improved Thai participants' scores of well-being and distress outcomes (depression, anxiety, and stress). Therefore, the results from this study reflect the success of the PMP at enhancing well-being and reducing distress, independent of cultural context.

The findings also showed that the PMP increased the conceptual understanding of the three characteristics of existence, with a large effect size (Hedges'g =1.74). The observed increase in the conceptual understanding of the three characteristics of existence may be the result of the insight component, which aims to promote the conceptual understanding of suffering, impermanence, non-self attachment, and interconnectedness. This finding is consistence with study one, which showed that the PMP led to an increase in the conceptual understanding of the three characteristics of existence (d = 0.77) in Thai participants. Therefore, these results suggest that although the three characteristics of existence originally developed in the Buddhist culture, people in Australia may benefit from its teachings.

The PMP was associated with significant improvements in mindfulness, rumination, difficulties in emotional regulation and the conceptual understanding of the three characteristics of existence. The results in this study showed that participants who completed the PMP experienced a significant increase in self-reported levels of mindfulness (Hedges'g =1.67). This finding is consistent with study one, which showed that Thai participants who completed the PMP experienced significantly greater levels of mindfulness (d = 0.51) compared to the waitlist control group. The observed increase in mindfulness may be the result of the experiential component, in which participants directly experience mindfulness through a number of mindfulness activities. The results also indicate that the PMP reduced rumination (Hedges'g =1.20). This finding is consistent with study one, which showed that the PMP reduced rumination (d =1.53) in Thai participants who

completed the program, while there was no significant change in the control group. Based on these findings, it is suggested that one can attain cognitive flexibility through mindfulness training (Shapiro, Carlson, Astin, and Freedman (2006).

The results from the current study also showed that the PMP improved participants' difficulties in emotional regulation (Hedges'g =1.37). This finding is consistent with study one, which showed that the PMP reduced difficulties in emotional regulation (d = 0.77), compared to the waitlist control group. It is possible that participants in the PMP learn to observe their emotions and understand the fluctuating nature of their emotions. As a result, participants learn to accept their emotions rather than suppress them in a maladaptive way.

Limitations.

A key limitation of this study is the level of evidence that was achieved through the research methodology. This study entails the development of a new mindfulness-based program and hence, is a novel study in the field of mindfulness research. Thus, there is a need for a randomised control trial (RCT), which includes a control group and participant randomisation, in order to examine the effectiveness of the PMP. Given that participants in this study are self-select into the PMP, a stress-management intervention, their motivation could result in better on distress-related measures. Therefore, the interpretation of results from the current study should be interpreted with caution. Moreover, it has been suggested in the literature that mindfulness is a new and upcoming topic in Western psychology. While the PMP is an innovative program, it is unlikely that it is free from the novelty effect. Future studies should aim to replicate the effectiveness of the PMP and compare it to a control condition.

Another limitation is that the study only utilized paper and pencil self-reports, instead of including physiological or behavioural measurements. This is a limitation in several psychological studies. The main concern associated with self-report is that participants may not respond truthfully, accurately, or consistently. Participants may also be influenced by a social desirability bias, in which they respond to questions in a manner that they believe will be viewed favourably. Future studies may overcome this limitation by including physiological or behavioural measurements.

Although the PMP is a manualized intervention, a single investigator ran all the PMP groups in an attempt to standardise the delivery process. However, variability in the delivery may have been encountered depending on the charisma, personality, or style of the presenter. Thus, it is unclear whether the findings reflect the investigators enthusiasm for the program or the treatment itself. In order to examine the reliability of the PMP, future studies should aim to include different investigators and compare the results. This would be helpful in demonstrating the uniformity of results and reliability of the PMP.

Although the results show that the PMP was associated with reductions in psychological distress over time, the majority of participants in the study did not meet criteria for a psychological diagnosis. The use of the PMP for individuals with severe psychopathologies has not yet been investigated. Before the PMP can be used as a therapy for clinical participants, future research needs to examine the effectiveness of the PMP in clinical populations. Finally, although the PMP did not display temporal decay at the six-week follow-up assessment, six weeks is a short period of time. Therefore, more longitudinal follow-up assessments would need to be performed in order to verify the permanence of the observed changes.

Strengths and future directions

Despite these limitations, the current study had several strengths. First, the PMP is an innovative psychotherapy that was developed to enhance well-being and reduce distress, by addressing the limitations in existing mindfulness-based interventions. The inclusion of Buddhist teachings in the PMP, which are the foundation of mindfulness in Eastern countries, is a specific positive improvement. Second, the current study is the first of its kind to examine the effectiveness of the PMP in a Western culture, specifically Australia. Third, the promising results of the PMP were supported by the use of multiple psychological assessments. All outcome measures were positively associated with well-being and negatively associated with distress. These findings suggest that Western cultures benefit from the integration of mindfulness and Buddhist teaching.

Future research should examine how mindfulness-based interventions that includes Eastern philosophies could be used with different cultural groups and age groups. This study suggests that the program can be used across at least two cultures. Further research should involve cultures outside the Asia-Pacific region and with different age groups. This will help to determine which cultures will benefit most from this program.

Finally, the study showed that the PMP improved positive psychological outcomes and reduced negative psychological outcomes. Although several questions remain regarding the mechanisms involved in this process, future investigations may assist in elucidating these mechanisms.

CHAPTER SEVEN

Potential mechanisms of action underlying the Effects of the Positive Mindfulness Program on Well-being and Distress

Rationale

The Positive Mindfulness Program (PMP) was developed in response to the perceived lack of Buddhist insight in existing mindfulness-based interventions. The PMP builds on the efficacy of existing mindfulness-based psychotherapies by enhancing well-being and reducing distress. A core feature of the PMP is the shift in focus away from psychological distress to well-being. Study One and Study Two provide evidence that the PMP is effective in enhancing well-being and reducing distress in Thai and Australian participants. Improvements in well-being and distress were also associated with an increase in self-reported conceptual understanding of the three characteristics of existence (Payutto, 1998).

Christopher, Charoensuk, Gilbert, Neary, and Pearce (2009) reported that there are important differences between Eastern mindfulness and Western mindfulness. Mindfulness in the Eastern culture, especially in Thailand, has a long tradition that was systematically developed with a religio-cultural context focus. On the other hand, mindfulness in the Western culture was developed with a psychology-based focus. These cultural differences are reflected in the perception and application of mindfulness in Eastern and Western societies. For example, in the Eastern culture, the practice of mindfulness is primarily used for the development of deep insight in order to enhance well-being and self-liberation (Shapiro, Schwartz, & Santerre, 2002). On the other hand, the Western application of mindfulness tends to focus on reducing psychological distress (Baer & Krietemeyer, 2006).

There is a growing consensus that individuals from different cultures value or define positive psychological outcomes, such as happiness, differently. For example, happiness in the American or European culture is generally related to independence and autonomy of the self (Uchida & Kitayama, 2009). Conversely, happiness in Asian cultures is related to the interdependence of the self, such that individuals are inherently connected with others and the environment (Markus & Kitayama, 1991). In terms of unhappiness, American and Japanese cultures both experience unhappiness as a result of personal failure or social disruption. However, these two cultures deal with unhappiness differently. While Americans tend to display externalizing behaviours such as anger and aggression, Japanese individuals tend to show transcendental reappraisal through avoidance (e.g., avoid reality) and self-improvement (Uchida & Kitayama &, 2009). These findings highlight cultural differences in the experience of happiness and unhappiness.

The PMP is effective at enhancing well-being and reducing distress in both Thai population (Study One) and people in Australia (Study Two). However, the mechanisms underlying the effects of the PMP on well-being and distress is unclear. Therefore, this study aims to answer the following questions: "How does the PMP work?" and "What is the role of mindfulness and the understanding of the three characteristics of existence in the observed changes?" The current study aims to compare the effect of the PMP on well-being and distress between Thai and Australian participants. This study also aims to examine the mechanisms underlying the effects of the PMP on well-being and distress within the Thai Buddhist-Eastern context and the Australian-Western context. It is believed that the findings from this study will elucidate the relationship between the PMP, well-being, distress, mindfulness, rumination, difficulties in emotional regulation, and the understanding of the three characteristics of existence. An analysis of the potential mechanisms underlying the effects of the PMP on well-being and distress was conducted. The analysis was conducted to determine if there are any differences between the effects of the PMP on well-being and the effects of the PMP on distress.

The theoretical model of mechanisms underlying the PMP. Well-being can be cultivated by addressing mindfulness, rumination, and difficulties in emotional regulation (Jain et al., 2007; Nyklíček & Kuijpers, 2008; Moore & Malinowski; Wallace & Shapiro; 2006) Wallace and Shapiro's conceptual framework of well-being (Wallace & Shapiro; 2006) and the Buddhist Psychological Model (Grabovac, Lau, and Willett, 2011; Payutto, 1998; Bhikkhu, 2001) proposes that insight in the three characteristics of existence associating with mindfulness and has been shown to promote well-being and reduce distress. The insight in the present study was measured assessing the conceptual understanding of the three characteristics of existence. Consequently, the theoretical model of well-being (figure 7.1) was developed.

It is important to note, that the theoretical model in this study was developed for novice mindfulness practitioners who experience some level of distress and are at the early stages of their practise. Keyes (2005) has posited that well-being and distress are not reciprocal opposites, and that the absence of mental illness does not necessarily imply the presence of well-being. However, in order to obtain an optimal level of well-being, the practice of mindfulness should also address distress. Therefore, the theoretical model of distress (depression, anxiety and stress) is expected to share similar mechanisms to the theoretical model of well-being. Moreover, it expected that negative psychological reactions, including rumination and difficulties in emotional regulation, will act as mediators in the model. This is because evidence has shown that rumination and difficulties in emotional regulation are strongly associated with mindfulness, states of well-being, and distress.

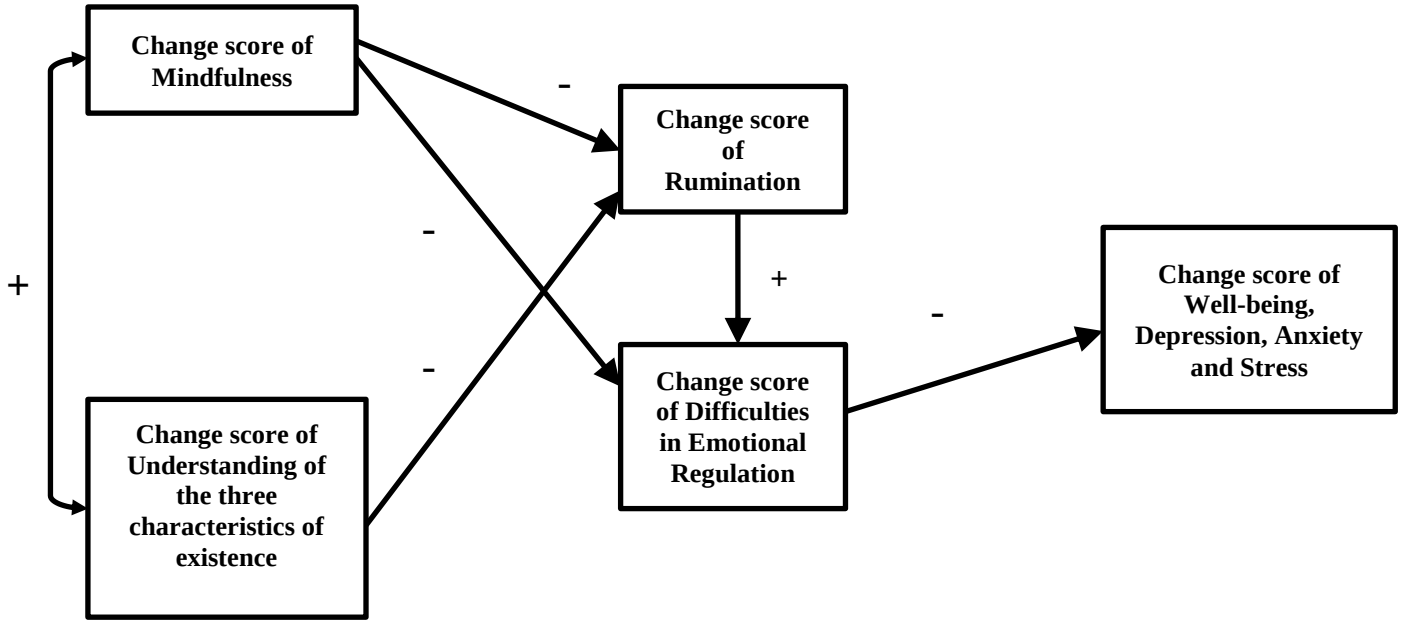

Figure 7.1: Theoretical Model of Mechanisms underlying the Positive Mindfulness Program's effect on well-being, depression, anxiety, and stress

According to Figure 7.1, mindfulness is positively associated with the conceptual understanding of the three characteristics of existence and is negatively associated with rumination. Mindfulness is also directly and negatively associated with difficulties in emotional regulation, whereas the conceptual understanding of the three characteristics of existence is indirectly associated with difficulties in emotional regulation. As described by Payutto (1998), mindfulness or the state of the present moment and non-judgement, is a platform for the understanding of the three characteristics of existence. Such understanding of the three characteristics of existence should thereby reinforce greater levels of mindfulness (Germer, 2005). The relationship between mindfulness and the understanding of the three characteristics of existence is best described as bi-directional. This notion is supported by Payutto (1998) who posited that mindfulness and the understanding of the three characteristics of existence could be developed simultaneously.

Given the associations between mindfulness, rumination, and difficulties in emotional regulation, there is substantial evidence to corroborate the alleged inverse association between mindfulness and rumination (Deyo, Willson, Ong, & Koopman, 2009). The model also shows the expected negative association between mindfulness and difficulties in emotional regulation (Hill & Updegraff, 2012). The negative association between mindfulness and difficulties in emotional regulation may be explained by the possibility that mindfulness enables higher cognitive process. Mindfulness in this study was described as paying attention on purpose, in the present moment, and nonjudgmentally, to the unfolding of experience moment to moment (Kabat-Zinn, 1990). When

interacting with the world, with mindfulness, the mind and body experience a pure process. The mind becomes absorbed, still, unwavering and aware of their perception. As a result, mental processes are generated without bias thoughts or emotion (Payutto, 1998). Such experience prevents an individual from being immersed in negative thoughts and rumination (Shapiro, Carlson, Astin, & Freedman, 2006; Grabovac, Mark, & Willett, 2011). This may allow individuals to observe and be aware if their own emotions, rather respond to situations emotionally and automatically (LeDoux & Bemorad, 1997).

In Figure 7.1, the conceptual understanding of the three characteristics of existence has a direct negative association with rumination. It is possible that the conceptual understanding of the three characteristics of existence is a cognitive information process that occurs consciously. This understandings may allow individuals to become aware that their thoughts, feelings and experience are impermanent. Also, individuals may become aware that they are suffering from their desires or attempts to control or prolong situations that they desire. Simultaneously, individuals may become aware that they are not at the centre of the world. This conscious process may assist individuals to reflect on the issues that cause rumination and reduce the occurrence of rumination and therefore reduce rumination. The understanding of the three characteristics of existence may be used as a cognitive re-appraisal strategy, which provides individuals with an alternative schema to deal with unpleasant situations and to perceive the world realistically. This is consistent with Payutto's explanation (1998) that the understanding of the three characteristics of existence helps individuals to change their attitude towards the self, others, and the world. However, given that the conceptual understanding of the three characteristics of existence is a higher cognitive process, it is expected that there will be no direct association between the conceptual understanding of the three characteristics of existence and difficulties in emotional regulation. As shown in Figure 7.1, mindfulness in conjunction with the conceptual understanding of the three characteristics of existence is negatively associated with rumination and difficulties in emotional regulation. If the model is correct, rumination will also have a direct effect on difficulties in emotional regulation. As mentioned by Wallace and Shapiro (2006), improved emotional regulation, is a natural outcome of mindfulness, rumination, and the understanding of the three characteristics of existence (Payutto, 1998). At the final outcome of the model, it is expected that well-being and distress will be associated with difficulties in emotional regulation. However, as shown in the model, it is expected that there will be no direct effect of rumination on well-being or distress. The model was developed based on the concept of the cognitive theoretical model, in which an increase in pleasant affect and a decrease in unpleasant affect is due to cognitive mechanisms that initiate well-being and reduce distress (Beck, 2002).

Research Aims and Hypotheses

The PMP was developed as a mindfulness-based psychotherapy that reintegrates insight into the practice of mindfulness training. The findings from Study One (chapter 5) and Study Two (chapter 6) showed that the PMP was effective at enhancing well-being and reducing distress in Thai and Australian populations. However, Christopher, Charoensuk, Gilbert, Neary, and Pearce (2009) reported that there are important differences between Eastern mindfulness and Western mindfulness. Therefore, it is possible that there are cultural differences when it comes to the effects of the PMP on individuals, as well as the mechanisms underlying those effects. The current study aims to compare the effects of the PMP on well-being and distress between Thai and Australian individuals. This study also aims to understand the mechanisms underlying the effects of the PMP on well-being and distress. Specifically, what is the role of the understanding of the three characteristics of existence in the association between mindfulness and psychological outcomes?

Hypothesis 1. The effects of the PMP from pre intervention assessment to post intervention assessment will differ between Thai participants and Australian participants.

Hypothesis 2. For both Thai and Australian participants, improvements in mindfulness, rumination, difficulties in emotional regulation, and the conceptual understanding of the three characteristics of existence, will account for the improvements in well-being and distress.

Hypothesis 3. There will be structural variance in the underlying mechanisms of the PMP between Thai participants and Australian participants.

Methods

Participants

Participants were 137 individuals who completed the PMP (i.e., a minimum of six sessions) in Thailand (started January 2012) or Australia (started September and November 2012). Consistent with Shapiro, Astin, Bishop, and Cordova (2005), six out of eight sessions is considered to be the minimum training necessary in order to acquire adequate core knowledge and skills. A total of 56 participants (36 females and 20 males, M = 20.68 years of age, $S.D.$ =1.35) completed the PMP in Thailand and 81 participants (56 females and 25 males, M = 37.73 years of age, $S.D.$ =12.13) completed the PMP in Australia.

Measures

The outcome measures assessed well-being, distress (i.e., depression, anxiety, and stress), the conceptual understanding of the three characteristics of existence, mindfulness, rumination, and difficulties in emotional regulation.

For Thai participants, the Thai version of Depression, Anxiety and Stress Scale (Lovibond & Lovibond, 2004) was used and other outcome measures were translated from English into Thai following a translation procedure proposed by Brislin (1970). In this procedure, two bilinguals are employed: one bilingual translates the original questionnaire (English) to the target language (Thai), while the second bilingual independently translates the scale from Thai back to English. Once the committee (two thirds native English psychologists) agrees that the two English versions provide the same meaning, the translation procedure is completed.

Eudaimonic Well-Being Scale. The Eudaimonic Well-Being Scale (EWB) (Waterman et al., 2010) is 21-item self-report scale assessing well-being across six constructs: self-discovery, perceived development of one's best potentials, a sense of purpose and meaning in life, investment of significant effort in pursuit of excellence, intense involvement in activities, and enjoyment of activities as personally expressive. The scale provides a total well-being score, which was used in the current study. Sample items include "I find I get intensely involved in many of the things I do each day" and "I believe I know what I was meant to do in life". Each item is rated on a five-point Likert scale ranging from 0 *(*strongly disagree) to 4 (strongly agree). The scale has demonstrated good internal consistency ($\alpha = 0.85$).

Freiburg Mindfulness Inventory. The Freiburg Mindfulness Inventory (FMI) (Walach, Buchheld, Buttenmuller, Kleinknecht, & Schmidt, 2006) is 14-item self-port scale assessing mindfulness across four constructs: present-moment dis-identifying attention, non-judgemental, non-evaluative attitude towards self and others, openness to negative mind states, and process-oriented insight understanding. The scale provides a total mindfulness score, which was used in the current study. Sample items include "I am open to the experience of the present moment" and "I see my mistakes and difficulties without judging them". Each item is rated on a four-point scale ranging from 1 (rarely) to 4 (almost always). The scale has demonstrated good internal consistency ($\alpha = 0.86$).

The Three Characteristics of Existence. The three characteristics of existence is a 16-item self-report, purpose-built measure assessing one's conceptual understanding of the Buddhist teaching of the three characteristics of existence (ie., suffering, impermanence, and non-self attachment) and interconnectedness (see Table 5.1) The items for this scale were chosen and adapted from pooled items in the Buddhist Coping Scale (BCOPE; Phillips, Cheng, Pargament, Oemig, Colvin, Abarr, Dunn, & Reed, 2009), and nonattachment scale (Sahdra, Shaver, & Brown, 2010). Three psychologists with long- term experience in Buddhist psychology evaluated each of the items from the scale. A total of 16 items were chosen and adapted for the reflection of the three characteristics of existence (i.e., suffering, impermanence, and non-self-attachment) and interconnectedness. Sample items include "All living creatures are inherent with suffering" and "All

things are not permanent and change is happen to all things". Each item on the conceptual understanding of the three characteristics of existence subscale (U3CE) is rated on a 5-point scale ranging from 1 (very untrue of what I experience) to 5 (very true of what I experience). The scale has demonstrated good internal consistency (α = 0.88-0.90).

Rumination Subscale of the Rumination-Reflection Questionnaire. The Rumination Subscale of the Rumination-Reflection Questionnaire (RRQ) (Deyo, Wilson, Ong, & Koopman, 2009) is 12-item self-report scale assessing rumination. Sample items include "Sometimes it is hard for me to shut off thoughts about myself" and "I often reflect on episodes in my life that I should no longer concern myself with". Each item is rated on a five-point scale ranging from 1 (strongly disagree*)* to 5 (strongly agree). The scale has demonstrated good internal consistency (α =0.86).

Difficulties in Emotion Regulation Scale. The Difficulties in Emotion Regulation Scale (DERs) (Gratz & Roemer, 2004) is 36-item self-report scale assessing difficulties in emotion regulation across six dimensions: non-acceptance of emotional response, difficulties engaging in goal-directed behaviour, impulse control difficulties, lack of emotional awareness, limited access to emotional regulation strategies, and lack of emotional clarity. Sample items include "I have difficulty making sense out of my feeling" and "When I am upset, I become angry with myself for feeling that way". Each item is rated on a five-point scale ranging from 1 (almost never 0-10%) to 5 (almost always 91-100%). The scale has demonstrated good internal consistency (α =.93).

The Depression, Anxiety, and Stress Scale: The Depression, Anxiety, and Stress Scale (DASS*;* Lovibond & Lovibond, 1995) is a 42 item self-report measure of distress. It has three subscales that measure depression, anxiety, and stress, and include 14 items each. Participants are required to rate their experience of symptoms in the past two weeks on a four-point rating scale ranging from 0 (did not apply to me at all*)* to 3 (applied to me very much, or most of the time). The scale demonstrated high internal consistency for depression (α = 0.91), anxiety (α =.84), and stress (α =.90) (Lovibond & Lovibond, 1995).

Research Design, Procedure, and Data Analysis

The data from Study 1 and Study 2 was used for data analysis in the present study. A series of repeated 2-way ANOVA's of condition (Thai participants and Australian participants) by time (pre-intervention and post-intervention), were conducted to compare the effects of the PMP between Thai participants and Australian participants. These analyses were performed separately for well-being, distress (i.e., depression, anxiety, and stress), mindfulness, the conceptual understanding of the three characteristics of existence, rumination, and difficulties in emotional regulation.

The difference in scores between pre-assessment and post-assessment was used to conduct a path analysis using the IBM Analysis of Moment Structures (AMOS) software package, version 21 (Arbuckle, 2012). According to Rogasa and Willett (1983), the difference in scores is an accurate and useful measure of changes in an individual, even in situations where the reliability is low. Therefore, the difference in scores from pre-assessment to post-assessment for each individual was selected for analysis in the present study. It is important to note that the mechanisms of change involved in the PMP entail the short-term changes. As outlined in Chapter 4, the PMP was designed based on Eastern mindfulness principles. Based on these principles, the first four sessions of the PMP are designed to promote concentration, the present moment, and a non-judgemental experience, through the practice of mindfulness. The remaining four sessions aim to develop insight using mindfulness skills. With this structure, it is expected that the effects of the PMP will cumulate across the eight sessions. In order to fully understand the benefits of the PMP, the difference in scores between pre-assessment and post-assessment are used to understand the changes in well-being and distress across time. Improvements in mindfulness, rumination, difficulties in emotional regulation, and the conceptual understanding of the three characteristics of existence, were observed.

In path analysis, the relationships among variables are tested by comparing a theoretical model to an independence model, in which the variables are unrelated. If the chi-square value in the independence model is significant, the variables are related. Ideally, the chi-square value in the theoretical model should be non-significant, suggesting that the model adequately describes the relationships among the variables. However, the chi-square test of fit is highly sensitive to sample size. For example, trivial differences between the sample size and the estimated population covariance can result in a significant chi-square (Tabachnick & Fidell, 2001). Therefore, a range of fit indices has been developed in order to evaluate the fit of the model, independent of sample size. The commonly used and accepted fit indices are the Tucker Lewis Index (TLI), the Comparative Fit Index (CFI), and the Root Mean Square Error of Approximation (RMSEA). The RMSEA measures the lack of fit and should ideally be below 0.6, although a value below 0.8 is considered acceptable. The TLI and CFI should be over 0.95 to indicate an excellent fit, but a value over 0.90 is conventionally deemed as acceptable (Hu & Bentler, 1999). In order to investigate whether the structure of the best fit model was invariant across different cultural contexts (Thai and Australian), a path analysis of constrained and unconstrained models was conducted. The path analysis produced a multiple group model that compares Thai and Australian PMP participants.

Results

Assumptions Testing

In this study, the data from 137 individuals who attended a minimum of six sessions of eight from Study 1 and Study Two were used as they were identified as a PMP completer. A total of 56 participants completed the PMP in Thailand and 81 participants completed the PMP in Australia. However, a total of four (7.14%) Thai participants and 11 (13.58%) Australian participants failed to complete the post intervention assessment after the PMP. As in this study, change scores between pre and post intervention assessments were used. In order to maximise statistical power, missing responses were separately imputed into an iterative maximum likelihood estimation procedure (EM) with 25 iterations using participants' values from pre, mid, post and 6 week follow up assessments to impute the missing values at post assessment. Subsequent data analyses were conducted using the imputed dataset of all variables.

The assumptions of normality were assessed by examining the histograms and skewness and kurtosis values for all change scores between pre-assessment and post-assessment. The change scores of well-being, mindfulness, the conceptual understanding of three characteristics of existence, rumination and difficulties in emotional regulation met the assumptions of normality, such that skewness values were within acceptable limits (<2) and kurtosis cut-offs were within acceptable limits (<4) (Boos & Hughes-Oliver, 2000). Descriptive statistics suggested slight positive skewness for change scores of depression, anxiety and stress. According to Tabachnick and Fidell (2007), in a large sample, significant skewness often does not deviate enough from normality to make a substantive difference in the analysis. Therefore, all datasets were retained and used in further analysis.

Hypothesis Testing

A 2 x 2 ANOVA was conducted to examine whether the effects of the PMP was different according to the country the study was conducted in

Table 7.1 presents the means, standard deviations, and repeated ANOVA results for Thai and Australian participants at pre and post assessments. A 2 x 2 ANOVA revealed significant main effects of time on all outcome measures. This suggests that regardless of culture, the PMP significantly improved all outcome measures from pre assessment to post assessment. This includes well-being, F (1, 135) = 93.98, p < .001, d = 0.80, mindfulness, F (1, 135) = 182.22, p < .001, d = 1.40, the conceptual understanding of the three characteristic of existence, F (1, 135) = 251.43, p < .001, d = 1.60, rumination, F (1, 135) = 182.25, p < .001 , d = 1.36, difficulties in emotional regulation, F (1, 135) = 184.57, p < .001 , d = 1.20, depression, F (1, 135) = 57.14, p < .001, d =

0.84, anxiety, F (1, 135) = 57.44, p < .001, d = 0.59, and stress, F (1, 135) = 72.92, p < .001, d = 0.91.

When examining the main effect of condition, significant differences were noted on measures of mindfulness, F (1, 135) = 26.12, p < .001, d = 0.77, rumination, F (1, 135) = 18.04, p < .001, d = 0.17, depression, F (1, 135) = 9.09, p < .005, d = 0.07, and anxiety, F (1, 135) = 75.92, p < .001, d = 0.15. Specifically, Thai participants were higher in terms of mindfulness, depression, anxiety, and lower in rumination than their people in Australia counterparts. Furthermore, the interaction between time and condition was significant for mindfulness scores, F (1, 135) = 14.68, p < .001. Follow- up tests of simple effects showed that while all participants improved following the PMP, this was more pronounced for Australian participants.

Variables	Preassessment		Postassessment		Effect						Change Score (Posttest-Pretest)	
	Thai (n=56) Mean (*SD*)	Australian (n=81) Mean (*SD*)	Thai (n=56) Mean (*SD*)	Australian (n=81) Mean (*SD*)	Country		Time		Country X Time		Thai (n=56) Mean (*SD*)	Australian (n=81) Mean (*SD*)
					F	*p*	F	*p*	F	*P*		
Well-being	54.48 (11.45)	51.90 (8.89)	61.68 (8.76)	59.62 (8.65)	2.83	.010	93.98	.001	0.37	.847	7.19 (8.45)	7.72 (9.32)
Mindfulness	38.64 (6.88)	31.85 (6.46)	44.17 (4.54)	42.26 (5.95)	26.12	.001	182.22	.001	14.68	.001	5.53 (5.45)	10.41 (7.17)
Conceptual Understanding of the three characteristics of existence	54.50 (9.07)	51.78 (8.39)	65.86 (7.16)	65.05 (6.73)	2.72	.101	251.43	.001	1.17	.282	11.36 (9.50)	13.27 (8.20)
Rumination	39.95 (10.07)	44.30 (9.39)	27.08 (6.10)	33.15 (9.04)	18.04	.001	182.26	.001	1.73	.191	-12.86 (10.98)	-11.14 (8.95)
Difficulties in emotional Regulation	86.93 (25.29)	93.00 (21.80)	67.57 (15.27)	66.51 (16.37)	0.833	.363	184.57	.001	3.89	.051	-19.36 (16.23)	-26.50 (20.84)
Depression	11.43 (8.19)	8.30 (7.23)	5.94 (4.59)	3.31 (4.89)	9.09	.003	57.14	.001	0.40	.531	-5.49 (7.37)	-4.99 (7.70)
Anxiety	13.41 (7.44)	5.69 (5.39)	9.51 (6.06)	2.53 (3.01)	75.92	.001	57.44	.001	0.83	.363	-3.90 (5.49)	-3.17 (4.61)
Stress	14.95 (9.49)	14.09 (8.25)	9.34 (6.06)	6.76 (5.54)	1.87	.174	72.92	.001	0.75	.387	-5.60 (7.63)	-7.33 (7.77)

Table 7.1: Means, Standard Deviations, and 2 x 2 ANOVA results for outcome variables for Thais and people in Australia who completed the Positive Mindfulness Program

Table 7.2 presents the correlations for the difference scores from pre assessment to post assessment, for all outcome measures using pooled data for both Thai and Australian samples. Consistent with Hypothesis 2, difference scores in well-being were positively correlated to both positive variables (i.e., mindfulness and conceptual understanding of the three characteristics of existence) and negatively correlated to all negative variables (i.e., rumination, difficulties in emotional regulation, depression, anxiety, and stress). Specifically, distress measures (i.e., depression, anxiety, and stress) were positively correlated to all negative variables (i.e., rumination and difficulties in emotional regulation) and negatively correlated to all positive variables (i.e., mindfulness and conceptual understanding of three characteristics of existence)

Variables	C-EWB	C-FMI	C-U3CE	C-RRQ	C-DERS	C-DEP	C-ANX
C-EWB							
C-FMI	.39**						
C-U3CE	.20*	.35**					
C-RRQ	-.32**	-.44**	-.33*				
C-DERS	-.44**	-.67**	-.32**	.54**			
C-DEP	-.42**	-.47**	-.35**	.52**	.58**		
C-ANX	-.23**	-.19*	-.20*	.32**	.39**	.53**	
C-STR	-.35**	-.50**	-.25**	.47**	.64**	.70**	.54**

Table 7.2: Correlations between the change scores from pre and post intervention assessment for outcome variables using for the whole samples (Thai and Australian participants). C-EWB= change score of well-being, C-FMI= change score of mindfulness, C-U3CE= change score of the conceptual understanding of the three characteristics of existence, C-RRQ= change score of rumination, C-DERS= change score of difficulties in emotional regulation, C-DEP= change score of depression, C-ANX= change score of anxiety, and C-STR= change score of stress. Magnitude of correlations: > 0.5 = large; 0.3-0.5 = moderate; 0.1-0.3 = small

Well-being was negatively correlated to difficulties in emotional regulation and rumination, with moderate effects. Additionally, well-being was positively correlated to mindfulness and the conceptual understanding of the three characteristics of existence, with moderate and small effect sizes, respectively. The difference score for depression was positively correlated with rumination and difficulties in emotional regulation, with large effects, and was negatively correlated to mindfulness and the conceptual understanding of the three characteristics of existence, with

medium effects. The correlation analysis indicated that anxiety was positively related to rumination and difficulties in emotional regulation, with medium effects. However, anxiety showed a negative correlation with mindfulness and the conceptual understanding of the three characteristics of existence, with small effects. For stress, there was a large positive correlation between stress and difficulties emotional regulation. For rumination, there was a moderate, negative correlation between stress and mindfulness, as well as stress and the conceptual understanding of the three characteristics of existence, with large and small effects, respectively. For mindfulness, there was a negative correlation between mindfulness and difficulties in emotional regulation, with a large effect. Mindfulness was also negatively correlated with rumination, with a moderate effect. Moreover, mindfulness is negatively correlated with anxiety, with a small effect. However, mindfulness showed a positive correlation with the conceptual understanding of the three characteristics of existence, with a moderate effect. The conceptual understanding of the three characteristics of existence showed a negative correlation with rumination and difficulties in emotional regulation, with moderate effects. For rumination, table 7.2 showed that rumination has a positive correlation with difficulties in emotional regulation, with a large effect.

The Mechanisms of Action Underlying the Effects of the Positive Mindfulness Program on Well-Being and Distress (Depression, Anxiety, and Stress).

A path analysis was used to answer the second research hypothesis that improvements in mindfulness, rumination, difficulties in emotional regulation, and the conceptual understanding of the three characteristics of existence, will account for the improvements in well-being and distress. The difference scores for well-being, depression, anxiety, mindfulness, the conceptual understanding of the three characteristics of existence, rumination, and difficulties in emotional regulation, in Thai and Australian participants, were used to conducted a path analysis using the IBM Analysis of Moment Structures (IBM-AMOS) software package, version 21 (Arbuckle, 2012).

A path analysis was also used to answer the third research hypothesis, that there will be structural variance in the mechanisms of action underlying the effects of the PMP between Thai and Australian participants. A path analysis of constrained and unconstrained models of well-being, depression, anxiety, and stress, was conducted to create a multiple group model comparing Thai and Australian PMP completers. Using the same model (see Figure 7.1) a total of four path analyses were tested: well-being, depression, anxiety, and stress.

Mechanism of Action Underlying the Effects of the Positive Mindfulness Program on Well-Being

For Thai and Australian PMP completers, the change scores from pre assessment to post assessment, for well-being, mindfulness, the conceptual understanding of the three characteristics of existence, rumination, and difficulties in emotional regulation, were used to conduct a path analysis of well-being (see Figure 7.1).

The constrained model fit the data acceptably well χ^2 (8, N_{Thais} = 56, $N_{\text{Australians}}$ = 81) = 16.56, p = 0.04, TLI = 0.89; CFI = 0.96, RMSEA = 0.08. The unconstrained model, which allowed coefficients to vary across Thai and Australian participants, did not improve model fit, χ^2 (5, N_{Thais} = 56, $N_{\text{Australians}}$ = 81) = 2.42, p = .789. The models' standardised regression coefficients and squared multiple correlations are present in Figure 7.2. All the predicted pathways were significant and in the expected direction.

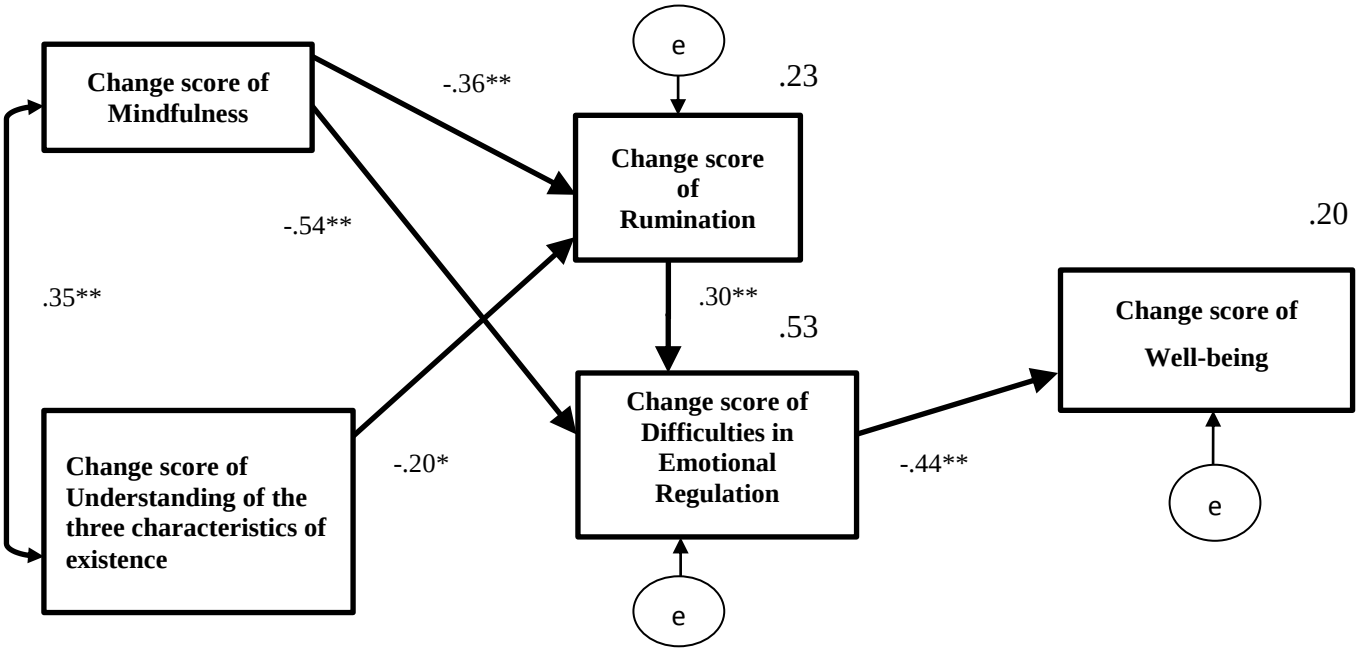

Figure 7.2. The unconstrained model of Well-being

Mechanism of Action Underlying the Effects of the Positive Mindfulness Program on Depression

For Thai and Australian PMP completers, the difference scores from pre assessment to post assessment, for depression, mindfulness, the conceptual understanding of the three characteristics of existence, rumination, and difficulties in emotional regulation, were used to conduct a path analysis of depression (see Figure 7.1). The theoretical, unconstrained model of depression was tested. The model did not fit, χ^2 (8, N_{Thais} = 56, $N_{\text{Australians}}$ = 81) = 27.22, p < 0.01, TLI = 0.81; CFI = 0.92,

RMSEA = .133. Post hoc modifications of the model were made based on research studies that show an association between rumination and depression. Payutto (1998) reported that the understanding of the three characteristics of existence reduces psychological distress. The understanding of the three characteristics of existence is a cognitive process and could be viewed as a foundation for a new schema that assists the individuals to understand themselves, others and the world from new perspectives. It is hypothesized that rumination and the conceptual understanding of the three characteristics of existence should have direct association with depression, as depression can be conceptualized as the product of negative cognitive processes and beliefs.

Consequently, direct paths from rumination to depression, and from the conceptual understanding of the three characteristics of existence to depression, were added into the model (see Figure 7.3). The modified, constrained model of depression was then tested. The constrained model fit the data well, χ^2 (4, N_{Thais} = 56, $N_{\text{Australians}}$ = 81) = 5.79, p = 0.22, TLI = 0.96; CFI = 0.99, RMSEA = 0.06. The unconstrained model, which allowed the coefficients to vary across Thai and Australian participants, did not improve model fit, χ^2 (7, N_{Thais} = 56, $N_{\text{Australians}}$ = 81) = 12.77, p = .078. The models' standardised regression coefficients and squared multiple correlations are presented in Figure 7.3 All the predicted pathways were significant.

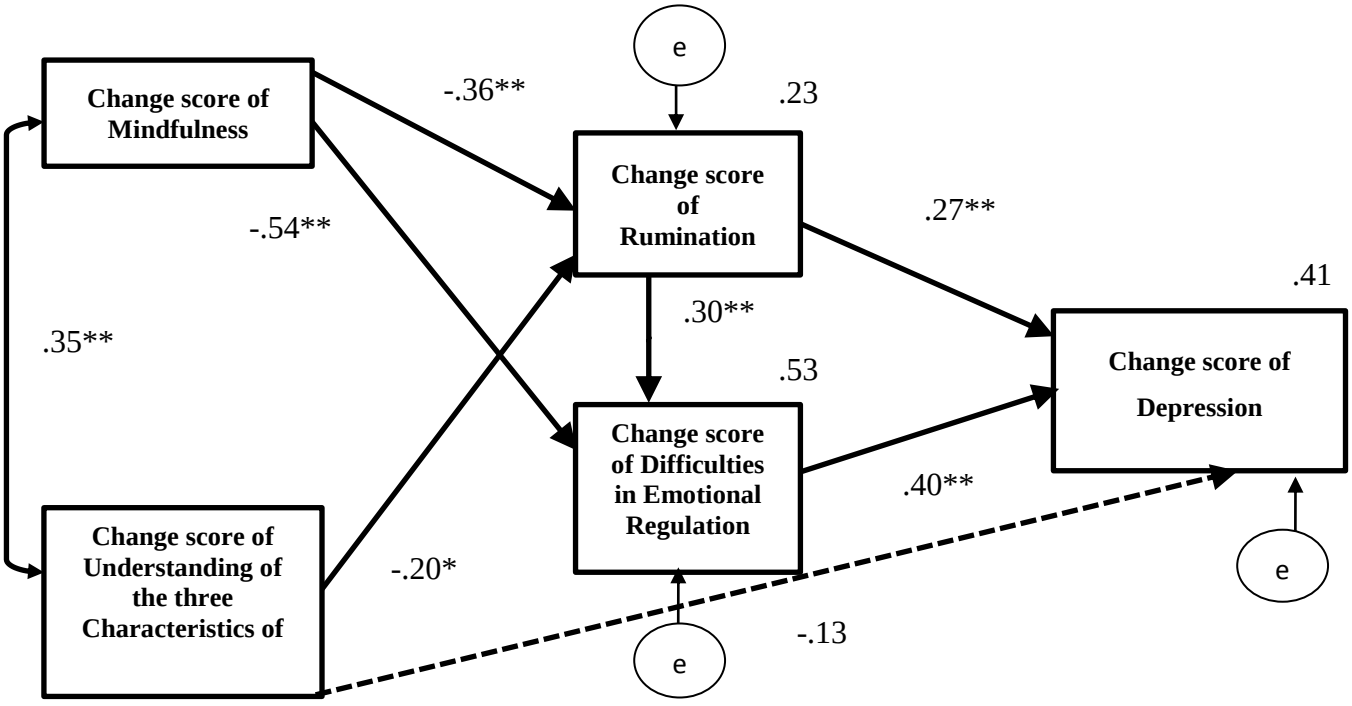

Figure 7.3: The modified model of Depression

Mechanism of Action Underlying the Effects of the Positive Mindfulness Program on Anxiety

For Thai and Australian PMP completers, the difference scores from pre assessment to post assessment, for anxiety, mindfulness, the conceptual understanding of the three characteristics of existence, rumination, and difficulties in emotional regulation, were used to conduct a path analysis of anxiety (see Figure 7.1). The constrained model fit the data acceptably well, χ^2 (8, N_{Thais} = 56, $N_{Australians}$ = 81) = 8.19, p = .042, TLI = 1.00; CFI = 1.00, RMSEA = 0.01 (Figure 7.1). The unconstrained model, which allowed the coefficients to vary across Thai and Australian participants, did not improve model fit, χ^2 (5, N_{Thais} = 56, $N_{Australians}$ = 81) = 8.917, p = .112. The models' standardised regression coefficients and squared multiple correlations are present in Figure 7.4 All the predicted pathways were significant and in the expected direction.

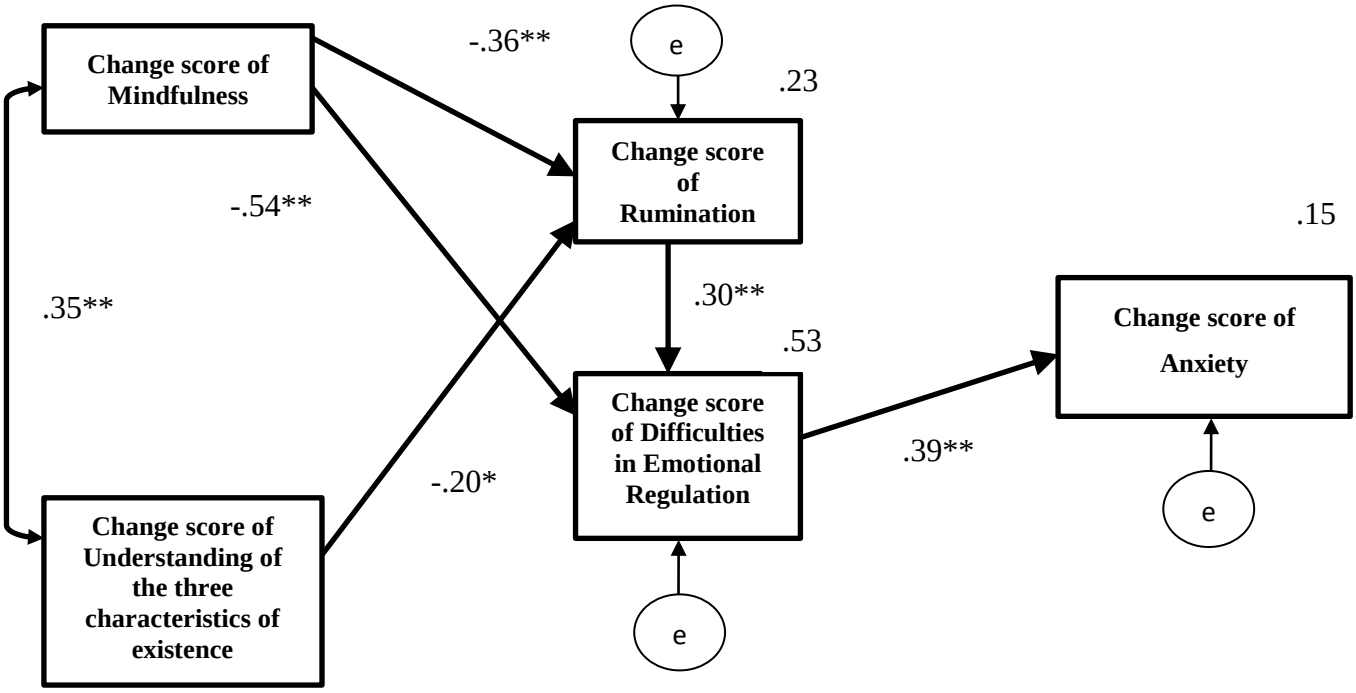

Figure 7.4: The unconstrained model of Anxiety

Mechanism of Action Underlying the Effects of the Positive Mindfulness Program on Stress

For Thai and Australian PMP completers, the difference scores from pre assessment to post assessment, for stress, mindfulness, the conceptual understanding of the three characteristics of existence, rumination, and difficulties in emotional regulation, were used to conduct a path analysis of stress (see Figure 7.1). The constrained model fit the data acceptably well, χ^2 (8, N_{Thais} = 56, $N_{Australians}$ = 81) = 15.82, p = 0.05, TLI = 0.92; CFI = 0.97, RMSEA = 0.08 (Figure 7.5). The unconstrained model, which allowed the coefficients to vary across Thai and Australian

participants, did not improve model fit, χ^2 (5, N_{Thais} = 56, $N_{\text{Australians}}$ = 81) = 4.75, p = .447. The models' standardised regression coefficients and squared multiple correlations are present in Figure 7.5. All the predicted pathways were significant and in the expected direction.

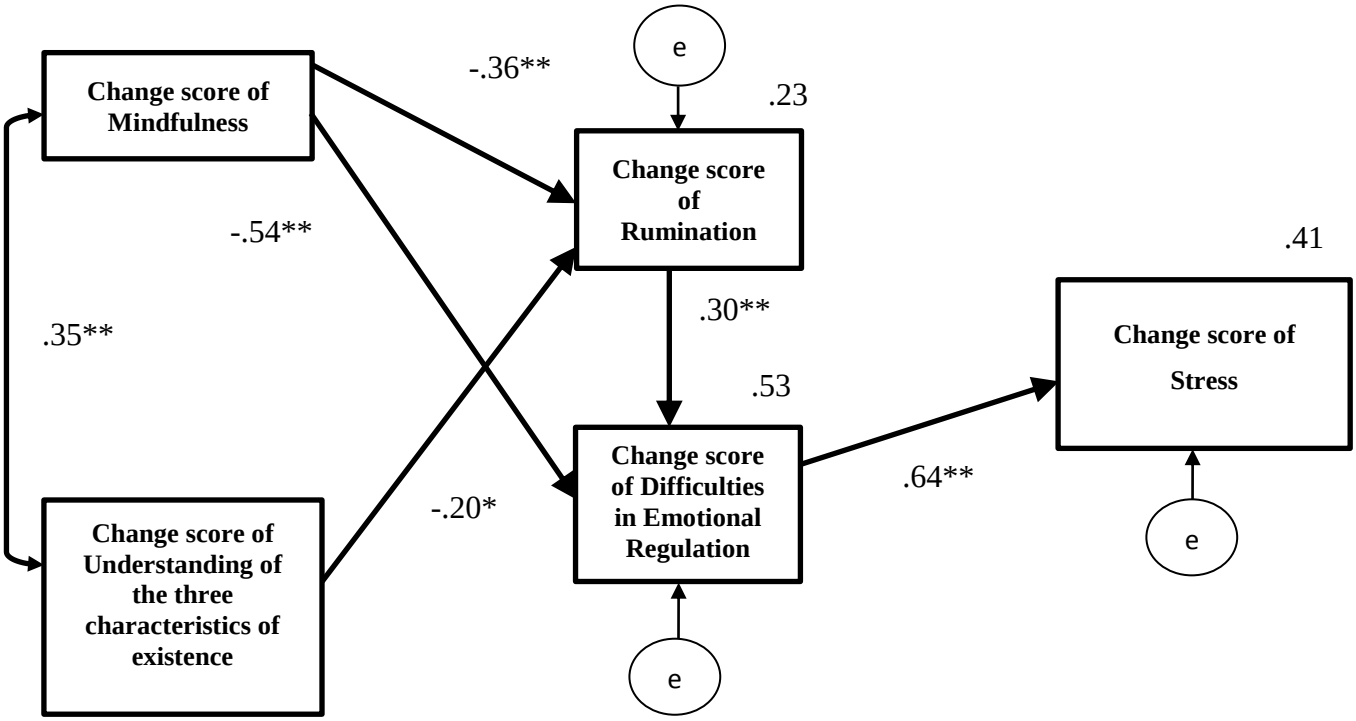

Figure 7.5: The Unconstrained model of Stress

Missing Data Analysis

The participants were 166 who attended the PMP in Thailand and Australia. A total of 70 participants attended the PMP in Thailand and 96 participants attended the PMP in Australia. There were four assessment periods (pre, mid, post and 6 week follow up assessments) for those who attended the PMP. However, in this study, change scores between pre and post intervention assessments of well-being, mindfulness, the conceptual understanding of the three characteristics of existence, rumination, difficulties in emotional regulation, depression, anxiety and stress were used. A total of 18 (25.71 %) of Thai PMP participants and 14 (14.58%) Australian PMP completers failed to complete post intervention assessment

For attrition analysis, Independent samples *t*-test were conducted using data from the pre intervention assessment to compare scores of participants (n=134) who completed measures and participants (n=32) who failed to complete post intervention assessment measures. The attrition analysis revealed that there were no significant differences between the two groups.

Discussion

The current study produced several important findings. Both Thai and Australian participants experienced significant improvements in their well-being, mindfulness, rumination, and difficulties in emotional regulation. Participants also experienced significant reductions in depression, anxiety, and stress. Also, participants increased their understanding of the three characteristics of existence was attained through participation in the PMP. Overall, the effects of the PMP on these outcomes were constant for Thai and Australian participants. However, findings indicated that Australian participants experienced a greater improvement in mindfulness compared to Thai participants.

The findings in this study help to elucidate the mechanisms of action underlying the effects of the PMP on well-being and distress. Based on the findings, it is suggested that improvements in rumination and difficulties in emotional regulation mediate the relationship between mindfulness and the conceptual understanding of the three characteristics of existence, well-being, and distress. Moreover, no cultural differences were observed in the mediation process between Thai and Australian participants. The results also indicated that the PMP increased well-being and reduced distress both in Thai and Australian participants. This finding is consistent with previous studies, which have found that mindfulness interventions, such as the MBSR, increase well-being and reduce distress (Jain et al., 2007; Nyklíček & Kuijpers, 2008). The results suggest that there are a number of methods to cultivate mindfulness in order to enhance well-being and reduce distress. This is one of the first studies to demonstrate cross-cultural repeatability of results from mindfulness training. In the present study, the effects of mindfulness were compared between those who are strongly influenced by Buddhist teachings (Thai) and those who are substantially less influenced (Australian). Regardless of the cultural differences, both Thai and Australian participants benefited from mindfulness training. Recently, researchers and clinicians have made mindfulness-based interventions (e.g., MBSR, MBCT, DBT and ACT) available to Western populations that are not familiar with Buddhist teachings. They have done this by adopting mindfulness meditation practices that are independent of from Buddhist teachings. Most importantly, this study showed that Australian participants, who were expected to be less familiar with Buddhist teachings, benefited from the PMP to a similar extent as Thai participants who were expected to be familiar with Buddhist teachings. Given that the PMP attempts to reintegrate Buddhist teachings into mindfulness training, it was suspected that the cultural familiarity and acceptance of Buddhist philosophy might influence the results of the program. Somewhat unexpectedly, the findings indicated there was a greater absolute increase in mindfulness scores for Australian participants. However, these results should be interpreted cautiously because mindfulness training is a new and frequently discussed

topic in Western psychology. The PMP is an innovative program and it is unlikely that it is free from the novelty effect. Future studies should aim to replicate the benefits of the PMP, especially in Western societies where Buddhist ideas are less familiar.

The findings from this study also contribute to the body of knowledge on the mechanisms of action underlying the effects of mindfulness training on well-being and distress. The findings showed that the same mechanisms of action were responsible for the effects of the PMP on increased well-being and reduced anxiety and stress. However, the mechanism of action underlying the effects of the PMP effects on depression was unique.

For the mechanism of action underlying the effects of the PMP effects on well-being, depression, anxiety, and stress, mindfulness was positively correlated with the conceptual understanding of the three characteristics of existence. An increase in mindfulness was directly associated with a reduction in rumination and difficulties in emotional regulation. The conceptual understanding of the three characteristics of existence was directly associated with a reduction in rumination. Furthermore, rumination and difficulties in emotional regulation mediated the relationship between mindfulness and the three characteristics of existence, as well as mindfulness and the final outcome measures, which are well-being, anxiety, and stress.

In addition to the pathway indicated above, the mechanism of action underlying the effects of the PMP on depression is different to the mechanism of actions underlying the effects of the PMP on well-being, anxiety, and stress. The findings revealed a direct association between the conceptual understanding of the three characteristics of existence and depression. Rumination is also directly associated with depression. It should be noted that the theoretical model did not predict these associations.

The findings from this study support previous research, which shows that the association between the MBSR program and reduced distress is partially mediated by reduced rumination (Jain et al., 2007). This is the first study to attempt to understand the role of the understanding of the three characteristics of existence in the relationship between mindfulness training and well-being and distress. The findings showed that for both Thai and Australian participants, an increase in the conceptual understanding of the three characteristics of existence was associated with increased mindfulness, reduced rumination, and reduced depression. This finding supports the significance of the understanding of the three characteristics of existence in reinforcing mindfulness. These findings are consistent with traditional Buddhist teachings, which highlight the importance of the understanding of the three characteristics of existence in mindfulness-based interventions may be valuable for therapy; however, the design of this study does not enable the direct testing of the variables in the PMP. In this thesis, improvements in well-being appear to be associated with changes in mindfulness, rumination, and difficulties in emotional regulation, which is consistent

with previous studies (Jain et al., 2007; Nyklíček & Kuijpers, 2008; Moore & Malinowski; Wallace & Shapiro; 2006) as well as the conceptual framework of mental balances (Wallace & Shapiro, 2006). The findings also showed there was trend in the predicted direction for change in the conceptual understanding of the three characteristics of existence to predict decline in depression. These findings have opened a new arena for the role of the understanding of the three characteristics of existence, or Buddhist teachings, in mindfulness-based interventions for both research and therapy.

One of the most important aspects of this study is the investigation of the mechanisms of action underlying the effects of mindfulness training on the enhancement of well-being and reduction of distress, with respect to cultural origins. To date, no existing research study has addressed this aspect. The findings from this study found no cultural differences, between Thai and Australian participants, in the mechanisms of action underlying the effects of the PMP on well-being and distress. Based on the findings, it appears that both Thai and Australian participants share the same complex relationship between the mechanisms of action involved in mindfulness training and the improved outcome measures. Overall, the results in this study are promising. The consistency in findings across two cultures implies that the PMP may be internationalised. However, the current study is the first study to have compared two different cultures (Thai and Australian participants). In order to demonstrate universal applicability, significant repeatability would need to be demonstrated in future studies to confirm the pattern of results and ascertain cross cultural differences.

Mechanisms of Action Underlying the Effects of the Positive Mindfulness Program on Well-being, Anxiety, and Stress.

The findings support the theoretical model of the PMP, which posits that the PMP promotes well-being and reduces distress by improving mindfulness, rumination, difficulties in emotional regulation, and the conceptual understanding of the three characteristics of existence. The mechanisms of action underlying the effects of the PMP on well-being, anxiety, and stress, share the same complex relationship with mindfulness, rumination, difficulties in emotional regulation, and conceptual understanding of the three characteristics of existence. The mechanisms of action underlying the effects of the PMP on well-being, anxiety, and stress, are explained below.

The development of mindfulness skills. Mindfulness promotes a state of non-judgement and being in the present moment. Subsequently, mindfulness can prevent individuals from immersing themselves in thoughts and feelings. This is because when mindfulness is maintained; attention is not diverted by judgements, thoughts, or emotional biases (Shapiro, Carlson, Astin, & Freedman, 2006). Mindfulness states have been shown to be associated with a reduction in

rumination and difficulties in emotional regulation (Jain et al., 2007; Nyklíček & Kuijpers, 2008; Moore & Malinowski, 2009).This is consistent with the findings from the current study, which showed that an increase in mindfulness was directly associated with a reduction in rumination and difficulties in emotional regulation. Research shows that mindfulness prevents anxiety, arousal, and biased interpretations of stressors as harmful (Moore & Malinowski, 2009; Goldin & Gross, 2010). Mindfulness also plays a key role in the foundation for the understanding of the three characteristics of existence (Payutto, 1998; Germer, 2005). This is consistent with the theoretical model and findings from the current study, which suggests that mindfulness covariates with the conceptual understanding of the three characteristics of existence. When a state of mindfulness is maintained in the present moment with non-judgment, individuals experience a reduction in negative or positive past experiences and future desires or expectations. Consequently, individuals are able to contemplate their thoughts, emotions, and experiences, without the influence of biases. Hence, their contemplation is more likely to be based on reality. This contemplation is associated with the understanding of the three characteristics of existence and explains the association between mindfulness and the conceptual understanding of the three characteristics of existence. The findings from the current study help to highlight the significance of the understanding of the three characteristics of existence in reinforcing mindfulness (Germer, 2005; Payutto, 1998)

The understanding of the three characteristics of existence. The understanding of the three characteristics of existence is an essential component of the PMP. The aim of the PMP is to enhance the practice of mindfulness with the focus of enhancing participants' conceptual understanding of the three characteristics of existence. The PMP utilises a variety of activities to achieve this. Specifically, concepts relating to suffering, impermanence, and non-self attachment, as well as interconnectedness and compassion are emphasized throughout all sessions. The findings of the current research show that an improvement in the conceptual understanding of the three characteristics of existence was directly associated with a reduction in rumination. This development in the conceptual understanding of the three characteristics of existence may be due to a cognitive process that allows participants to become aware that their thoughts, feelings, and experiences, are impermanent. The cognitive process results from an interconnected web of an infinite number of causal factors.

An increase in the conceptual understanding of the three characteristics of existence may undercut the tendency to resist natural phenomenon that cannot be fully understood. Questions that start with "why" (e.g why this happened to me) are often triggers for rumination. The practice of mindfulness leads to the understanding of suffering, impermanence, non-self-attachment, interconnectedness, and compassion, which supports higher cognitive processes or a process of normalization. Thus, the understanding of the three characteristics of existence may provide a

normalizing perspective. For instance, negative events may be viewed through the concepts of suffering and impermanence, to the extent that suffering and impermanence are universal, unavoidable, and therefore, must be endured. Thus, the understanding of the three characteristics of existence may lead to the reappraisal of stressful situations as a challenge rather than a threat. This process should assist individuals to redirect their self-focus to the contemplation of external factors, rather than personal factors, and allow individuals to deal with rumination effectively without resistance. Based on the cognitive-emotional model of anxiety and stress (Beck, 2002), the enhancement of the understanding of the three characteristics of existence reduces self-focused attention, which is the key cause of anxiety symptoms. When rumination is reduced, emotions and thoughts that arise from external stimuli are free from bias. As a result, individuals are less controlled by their emotion, which leads to an increase in awareness that facilitates the regulation of emotions. This is consistent with the results from the current study, which showed that a reduction in rumination was directly associated with a reduction in difficulties in emotional regulation. The understanding of the three characteristics of existence may help to enhance the acceptance of anxiety without avoidance behaviours, which have been identified as the key maintaining factors in anxiety and stress (Barlow, 1991 as cited in Koster, Crombez, Verschuere, Van Damme & Wiersema, 2006).

According to Wallace and Shapiro (2006), difficulties in emotional regulation can be improved by the improvement of mindfulness and rumination. The findings from the current study support the notion that a reduction in difficulties in emotional regulation is associated with a reduction in rumination and an improvement in mindfulness. To summarise, the mechanisms underlying the effects of the PMP on well-being, anxiety, and stress, are consistent with previous studies (Jain et al., 2007; Nyklíček & Kuijpers, 2008) as well as Wallace and Shapiro's (2006) conceptual framework of mental balances.

Mechanisms of Action Underlying the Effects of the Positive Mindfulness Program on Sub-Clinical Depression

The current study did not examine patients who had a diagnosis of clinical depression or major depressive disorder. However, depression was measured as a proxy for sadness or unhappiness. Hence, in the current study, sub-clinical depression was measured as a form of distress and should not be associated with clinically diagnosed depression. The findings in the current study reveal a different mechanism of action underlying the effects of the PMP on depression compared with the effects of the PMP on well-being, anxiety, and stress. There was trend in direct association between change in the conceptual understanding of the three characteristics of existence and

depression. The reduction in rumination was also directly associated with a reduction in depression. The mechanisms of action underlying the effects of the PMP on depression are explained below.

The development of mindfulness promotes a state of non-judgement and being in the present moment, which is similar to the model of well-being, anxiety, and stress (Figure 7.1). The cognitive process of depression vulnerability theory (Beck, 2002) explains the role of mindfulness in reduced depression. When individuals practice mindfulness, the state of being in the present moment assists individuals to become aware of their dysfunctional attitudes towards themselves, the world, and the future. This awareness may assist individuals to reduce negative interpretations and to prevent the activation of dysfunctional attitudes. Based on this model, rumination is lessened when individuals become aware of their dysfunctional attitudes. Furthermore, it can result in the reduction of difficulties in emotional regulation. The findings from the current study showed that an increase in mindfulness was directly associated with a reduction in rumination and difficulties in emotional regulation, as shown in the relationship model (Figure 7.3).

The dual process model of cognitive vulnerability to depression may also explain the effects of mindfulness on depression (Beevers, 2005). Based on this model, depression results from two information-processing modes: association processing, an automatic and unconscious mode, and reflective processing, a conscious and rational processing mode. The practice of mindfulness expands and maintains concentration. The pure mindfulness process or the process of reperceiving, helps to enhance awareness and acknowledges the associative processing mode, which is stimulated by an individuals' interaction with the world. Mindfulness helps to enhance the awareness of perceptions that can develop rapidly. This awareness then leads to the acknowledgement of the associative process. As a result, individuals with depressive symptoms can prevent their negatively biased self-reference. The results in the current study found that mindfulness was associated with the conceptual understanding of the three characteristics of existence (i.e., suffering, impermanence, and non self-attachment). This association may be explained by reduced biases. That is, when individuals maintain their concentration in the present moment and with non-judgment, they may reduce biases (i.e., negative/positive past experiences or future desires or expectations). Consequently, individuals are able to contemplate their thoughts, emotions, and experiences, without being influenced by biases. Hence, their contemplation is more likely to be based on reality, which is connected to the understanding of the three characteristics of existence (Payutto, 1998; Germer, 2005)

The current study also showed that the role of the conceptual understanding of the three characteristics of existence in depression is different from the model of well-being, anxiety, and stress. There was trend in direct association between change in the conceptual understanding of the three characteristics of existence and depression. The reduction in rumination was also directly

associated with a reduction in depression. This may be explained by the fact that depression is a mood disorder which mainly involves negative thoughts. A main focus of the PMP is to enhance the understanding of the three characteristics of existence, which can help to modify a person's attitudes. This should have a positive impact on the cognitive processes involved in individuals' attitudes towards the self, others, and the world. Based on Beck's cognitive process of depression vulnerability (Beck 2002), the understanding of the three characteristics of existence is as a foundation for a new schema that assists individuals to understand themselves, others, and the world from a new perspective. This process helps to enhance cognitive flexibility when individuals experience challenging situations. For instance, the recognition of impermanence can help individuals to recognize that their experiences can happen to anyone and that all phenomena are controlled by the laws of nature. Individuals can acknowledge that everything is impermanent and interconnected. This realisation helps to reduce the activation of negative schemas that are narrow and inflexible. Additionally, this process helps to reduce negative biases when perceiving oneself, the world, and the future.

The reflective processing mode in the dual process model of cognitive vulnerability to depression can also help to explain the association between the conceptual understanding of the three characteristics of existence and reduced depression (Beevers, 2005). Although initially the mindfulness skills are directly associated with the associative processing, the associative processing occurs during the state of non-judgement and the present moment. The reflective processing model is a secondary process that produces a series of thoughts that help to explain their experiences. Individuals who are prone to depression generally apply a series of negative thoughts to their experiences. This application of negative thoughts to experiences is linked to dysphoria, low mood, and negative emotion.

The PMP focuses on increasing the conceptual understanding of the three characteristics of existence, which proposes a new set of thoughts that help to explain various phenomena. The alternative explanations interrupt the reflective process and prevent the onset of negative thoughts that lead to dysphoria, low mood, and negative emotion. In the current study, the conceptual understanding of the three characteristics of existence was directly associated with a reduction in rumination (see figure 7.3), which is an important psychopathology feature of depression. It is possible that the reduction in rumination is due to the cognitive processes involved in the conceptual understanding of the three characteristics of existence. Specifically, these cognitive processes enable individuals to develop new perspectives of themselves, others, and the world, which gradually become a basis for personality development.

Limitations and Suggestion for Future Research

The current study produced several important findings. However, there are some limitations that need to be addressed. A common limitation in psychological studies is the use of self- report data, which is susceptible to social desirability bias and common-method variance. Given that the current study relied on self-report measures, it is susceptible to this form of bias. Future studies should aim to expand the data collection beyond self-report measures by using other methods, such as behavioural assessments (e.g., self-monitoring of cognition and emotion through thought- and mood-diaries).

Although a standardised manual was developed to conduct the PMP intervention, the present study employed a single principle investigator to run all of the PMP groups in Thailand and Australia. Therefore, it is unclear whether the findings have been influenced by the investigators enthusiasm for the program. Future studies need to investigate whether other investigators are able to conduct the PMP and achieve similar results. Ideally, a validation study of the PMP would utilise several group leaders, which would overcome the specific limitation of the current study.

The studies in this thesis included a randomised controlled trial (RCT) involving the intervention condition with a waitlist control condition, and an effectiveness trial with no control condition. In order to confirm the effectiveness of the PMP, RCTs with active control conditions (which could included other mindfulness-based program such as MBSR or other positive psychology interventions such as gratitude activities or relaxation techniques), should be conducted.

The current study successfully demonstrated the mechanisms of action underlying the effects of the PMP on well-being and distress in Thai and Australian participants. However, it is important to acknowledge the variations between the two samples. In particular, the Thai sample mainly consisted of undergraduate students with a mean age of 20.68. On the other hand, the Australian sample was less homogeneous and consisted of university and community participants, with a combined mean age of 37.73. Another limitation is that participants were recruited from universities and tended to have a good education with a good income. Thus, it is not clear whether the results are generalisable to other populations, such as small communities or individuals with a low socio-economic status.

With regards to attrition, the dropout rate in the current study is similar to previous studies (Shapiro, Astin, Bishop, & Cordova, 2005; Ledesma & Kumano, 2009). It was also found that there were no significant differences between dropouts and non-dropouts on psychological measures and no adverse events were reported. Future studies should aim to investigate the reasons for attrition in order to establish the appropriateness of the study design and content.

Although this study involved multiple measurements over time, the because the statistics included structural equation model, antecedent, mediating, and outcome variables were all

constructed from assessments conducted at the same time points, rendering the design similar in some ways to a cross-sectional design. Therefore, it is not possible to make conclusions about how variables change over time in relation to one another. Future studies should aim to address this limitation in order to clarify the causal linkage between mindfulness and well-being. The PMP was designed with two main components: the experiential-based mindfulness component and the insight-based component. Although the PMP integrates the three characteristics of existence into mindfulness training to enhance well-being and reduce distress, more research is needed to directly test the effective ingredients in the PMP. It is not yet appropriate to make absolute conclusions about the role of the understanding of the three characteristics of existence in mindfulness activities. Future studies should aim to compare the PMP with existing mindfulness programs, such as MBSR or the PMP without the understanding of the three characteristics of existence, in order to understand and test the efficacy of the PMP. Finally, the current study examined the reduction of negative variables, including rumination and difficulties in emotional regulation, as the underlying mechanisms involved in the association between the PMP and psychological outcome measures. Future studies should investigate mechanisms that help to enhance well-being and reduce distress through the enhancement of positive psychological variables.

CHAPTER EIGHT

General Discussion

This chapter provides a summary of the major findings from the three empirical studies. The implications of the PMP, in relation to theory and practice, are discussed.

Summary of Major Findings

Study one. Study one conducted a randomized controlled trial with Thai participants. As predicted, the results demonstrated that relative to a control condition, the PMP produced significant positive effects on measures of well-being, distress (i.e., depression, anxiety, and stress), mindfulness, rumination, difficulties in emotional regulation, and the conceptual understanding of the three characteristics of existence. There were no changes found in the control condition. The results also showed that treatment effects were stable across all measures at the six-week follow-up assessment.

Study two. In study two, the effectiveness of the PMP at improving well-being and reducing distress, in Australian participants, was investigated. The results showed that the PMP significantly increased well-being, mindfulness, and the conceptual understanding of the three characteristics of existence, as well as significantly reduced rumination, difficulties in emotional regulation, and typical distress (i.e., depression, anxiety and stress). The analysis also showed that treatment effects were stable across all measures at the six-week follow-up assessment.

Study three. The results from study three showed that both Thai and Australian participants experienced significant improvements in their well-being, mindfulness, rumination, difficulties in emotional regulation, and conceptual understanding of the three characteristics of existence. Overall, the effects of the PMP on these measures were constant between Thai participants and Australian participants. The findings from this study helped to elucidate the mechanisms of action underlying the effects of the PMP on well-being and distress. It is suggested that reduced rumination and enhanced emotional regulation mediate the relationship between mindfulness and the conceptual understanding of the three characteristics of existence, as well as mindfulness and the outcomes of improved well-being and reduced distress. Moreover, no differences were found between Thai and Australian participants in the underlying mechanisms of the PMP.

The Positive Mindfulness Program as a new mindfulness-based psychotherapy

Should the Positive Mindfulness Program be Recommended as a New Mindfulness-Based Psychotherapy?

PMP vs. existing mindfulness programs. The PMP was developed based on existing mindfulness programs and integrates the understanding of the three characteristics of existence into mindfulness activities. The PMP differs from existing mindfulness-based interventions (e.g., MBSR, MBCT, DBT and ACT) in two important, inter-connected ways. Firstly, the PMP was designed to promote well-being as well as reduce distress. In existing mindfulness-based interventions, mindfulness is primarily used to promote stress tolerance. The PMP does not only promote stress tolerance, but also promotes concentration as a foundation for the understanding and experience of the three characteristics of existence. Secondly, unlike existing mindfulness-based interventions, the PMP focuses on the development of an understanding of the three characteristics of existence through insight and program activities.

In order to merit further application and research of the PMP, an attempt has been made to compare the benefits of the PMP to existing mindfulness-based programs. The effectiveness of the PMP at improving well-being and reducing distress in a non-clinical population was determined. Mindfulness Based Stress Reduction (MBSR) is the main existing mindfulness-based program that had been tested for its effectiveness in improving well-being within a non-clinical population.

Table 8.1 lists all the MBSR studies that were conducted with participants from the United States and Netherland. It includes published, peer reviewed research studies (between 2003 and 2008), that assessed well-being, mindfulness, rumination, emotional regulation, and distress, and provides effect sizes. Table 8.1 was developed for the purpose of a literature comparison and is not suitable for a statistical analysis.

Previous studies of Mindfulness-Based Stress Reduction (MBSR)				The Positive Mindfulness Program	
Study (year)	Existing Mindfulness Program	Type of participants (N)	Measurement(s) Effect Size	Australian (N=81) Hedges's g	Thais (N=56) Cohen-*d*
Rosenzweig et al. (2003)	MBSR	Medical students (N=302; Pre-Post Measures)	Reduces in tension anxiety (*d* = 0.23) Increases in vigor activity (*d* = 0.25)	Well-being (*g* = 0.88) Mindfulness (*g* = 1.61) Rumination (*g* = 1.20) Difficulties in emotional regulation (*g* = 1.37) DASS (*g* = 0.72-1.04)	Well-being (*d* = 0.63) Mindfulness (*d* = 0.51) Rumination (*d* = 1.53) Difficulties in emotional regulation (*d* = 0.77) DASS: (*d* = 0.41-0.47)
Williams et al. (2001 as cited in Gross man et al. 2004)	MBSR	Volunteers (N=103; with placebo)	Reduces in global psychological distress (*d* = 0.56)		
Shapiro et al. (1998 as cited in Gross man et al. 2004)	MBSR	Premedical and medical students (N=73; with WL)	Reduces in psychological distress (*d* = 0.62)		
Jain et al. (2007)	MBSR	College students (N=83; with WL)	Reduces in psychological distress (*d* = 1.36) Increases in positive states of mind (*d* = 0.71) Reduces in rumination (*d* = 0.57)		
Carmody & Baer (2008)	MBSR	Community adults (N=174; Pre-Post Measures)	Increases in mindfulness (multi-subscales; *d* = 0.47-1.02) Increases in psychological well-being (*d* = 0.77) Reduces in depression (*d* = 0.45) Reduces in anxiety (*d* = 0.44)		
Nyklíček & Kuijpers (2008)	MBSR	Community adults (N=59; with WL)	Reduces in perceived stress (*d* = 0.57) Reduces in negative affect (*d* = 0.36) Increases in positive affect(*d* = 0.73) Increases in general mindfulness (*d* = 0.73)		
Oman et al., (2008)	MBSR+ Eight Point Program	College students (N=29; with WL)	Reduces in stress (*d* = 0.45) Reduces in rumination (*d* = 0.34)		

Table 8.1: A comparison of the effect size of Mindfulness-Bases Stress Reduction and the Positive Mindfulness Program

Based on the results from Table 8.1, the PMP should enhance well-being and mindfulness, as well as improve negative psychological outcomes in Thai and Australian participants. The effect sizes for the PMP are comparable to previous MBSR studies with non-clinical samples. However, the current study is not an experimental study; hence it is not appropriate to make a formal statistical comparison. The comparisons made between the PMP and MSBR must be interpreted with caution because there are limitations in the PMP research. The most important limitation is that the comparison was based on two initial studies of the PMP compared to well established research on MBSR. Moreover, the effect sizes reported in this review were derived from different populations, programs, questionnaires, measures, and leaders. For example, study one of the PMP utilised Hedges's *g* because it was calculated from pre to post data. However, all of the MBSR studies in Table 8.1 utilised Coden *d* to measure the effect size.

The results from this comparison indicate that the PMP is worthy of further investigation. The PMP was developed with two broad components: the experiential component and the insight component. It is believed that incorporating insight into mindfulness training maximises the benefits of mindfulness because it targets cognitive processes. However, despite the promising findings of the PMP, the current study did not test for the specific effects of the insight component. Future studies of the PMP should aim to individually examine the effects of the respective components. The PMP should also be directly compared with MBSR in future studies in order to test the efficacies of these respective programs.

PMP vs. positive psychology interventions. The main focus of positive psychology interventions (PPI) is to use positive behaviours to promote well-being and positive psychological outcomes. Some examples include gratitude activities, positive writing, and good behaviour. Although a meta-analysis of positive psychology interventions showed the potential for promoting positive psychological outcomes (Sin and Lyubomirsky, 2009), a large body of evidence suggests that gratitude is strongly related to all aspects of well-being. (Wood, Froh, & Geraghty, 2010). As such, a comparison was made between the PMP and gratitude studies. This comparison was made to understand the effectiveness of the PMP for further application and research.

Table 8.2 includes gratitude studies that used gratitude activities with a non-clinical population and assessed positive and negative psychological outcomes. It is important to note that Table 8.2 was developed for the purpose of a literature comparison and is not suitable for a statistical meta-analysis.

Overall, Table 8.2 shows that the PMP enhances well-being, increases positive psychological outcomes, and reduces negative psychological outcomes, in Thai and Australian participants. The effect sizes for the PMP with Thai and Australian samples are comparable to gratitude activity studies. However, the current study is not an experimental study, and hence it is

not appropriate to make a formal statistical comparison. The comparisons made between the PMP and gratitude studies must be interpreted with caution because of the limitations in the PMP research. The effect sizes reported in this review were derived from different populations, programs, questionnaires, measures, and leaders.

Both the PMP and the positive psychology interventions have a number of weaknesses. The PMP failed to use a scientific control condition (i.e. a non-active or placebo condition). Therefore, it is possible that the observed improvements were due to reasons other than the actual positive intervention.

The PMP has comparable effect sizes with gratitude studies. These results can be attributed to the design of the PMP. The PMP was designed to include both positive behavioural and cognitive components. Moreover, the PMP was based on a group therapy design. Therefore, the participants may have benefitted from the mindfulness and insight activities while interacting with the therapist and other group members. The importance of the therapeutic alliance cannot be ignored. There are also significant benefits of the feedback process in the group format.

Gratitude interventions, which primarily involve small, self-administered positive behavioural activities, are easy, convenient, and time efficient. The findings showed that gratitude interventions improve positive and negative psychological outcomes with short term benefits. Although the PMP has comparable effect sizes with gratitude interventions, it is important to note that the PMP is more time consuming, requires greater time commitment from participants and the facilitator, and in many ways, is not convenient to deliver. It should be noted that gratitude activities are not equivalent to other positive psychology interventions and many of these activities are not included in the review. Future studies should aim to compare the effectiveness of the PMP with gratitude activities an active control group.

				Australian (N=81) Hedges's g	Thais (N=56) Cohen-*d*
Emmon and McCullough (study1; 2003)	A list of five things for which to be grateful (10 weeks)	College students (N=132; with placebo conditions)	Increases in overall life satisfaction (*d* = 0.30-0.36) Increases in positive affect (*d* = 0.19-0.23) Reduces in negative affect (*d* = 0.19-0.23)	Well-being (*g* = 0.88) Mindfulness (*g* = 1.61) Conceptual Understanding of the three characteristics of existence (*g* = 1.74) Rumination (*g* = 1.20) Difficulties in emotional regulation (*g* = 1.37) DASS (*g* = 0.72-1.04)	Well-being (*d* = 0.63) Mindfulness (*d* = 0.51) Conceptual Understanding of the three characteristics of existence (*d* = 0.77) Rumination (*d* = 1.53) Difficulties in emotional regulation (*d* = 0.77) DASS: (*d* = 0.41-0.47)
Emmon and McCullough (study2; 2003)	A list of five things for which to be grateful (2 weeks)	College students (N=101; with a placebo condition)	Increases in overall life satisfaction (*d* = 0.30-36) Reduces in negative affect (*d* = 0.10)		
Sheldon and Lyubomirsky (2006)	Write about things to be grateful (4 weeks)	College students (N= 46; with a placebo condition)	Non significant increases in positive affect(*d* = 0.34) Non significant decreases in negative affect(*d* = 0.40)		
Seligman et al. (2005)	Writing a gratitude letter (1week)	Middle-aged adults (N=150; with a placebo condition)	Increases in happiness at 1 month $\lambda = 0.49$ Decreases in depression at 1 month $\lambda = 0.36$		
Froh et al. (2008)	Gratitude diary (2 weeks)	Adolescents (N=156; with a placebo condition)	Increases in school satisfaction (*d* = 0.34)		
Geraghty et al. (2010)	Gratitude diary (2 weeks)	Community samples (N=80; with a placebo condition	Decreases in worry (*d* = 0.11)		

Table 8.2: A comparison of the effect size of Positive Psychology Interventions and the Positive Mindfulness Program

Theoretical and Practical Implications

PMP and mindfulness. Similar to other mindfulness-based psychotherapies, the PMP was developed to promote a state of non-judgement and being in the present moment. These states can be viewed as the "mental process of reperceiving" (Shapiro, Carlson, Astin, & Freedman, 2006). Reperceiving prevents one from being immersed in thoughts and feelings. The mental process of reperceiving is akin to the pure process in Buddhism. In the pure process, mindfulness is used to concentrate and focus on a single object. It is possible that the undue influence of past experiences or future expectations can be eliminated. Mindfulness essentially assists individuals to reduce their relationship with their thoughts and feelings. Instead of being an entity that is influenced by thoughts and feelings, the individual becomes an entity that observes the happenstance of these phenomena. This can be viewed as "the primary implication of mindfulness". The benefits of the PMP in increasing mindfulness have been demonstrated and validated in the current study, which showed improved performances in both Thai and Australian samples. Moreover, increased mindfulness was associated with reduced rumination and difficulties in emotional regulation.

In addition to these benefits, mindfulness was utilized in the current study to cultivate and enhance the conceptual understanding of the three characteristics of existence. This can be viewed as "the secondary implication of mindfulness". Existing mindfulness based-interventions mainly use mindfulness activities to promote a readiness to accept thoughts and feelings. The utilisation of mindfulness ends at this point and thus, the abbreviation does not permit individuals to fully benefit from mindfulness (Rosch, 2007). Mindfulness ameliorates negative thoughts and emotions and in the long-term, changes one's perception towards the self, others, and the world. This is consistent with the understanding of the three characteristics of existence (Payutto, 1998; Germer, 2005; Olenski, 2005a). The current findings provide support for the association between mindfulness and the understanding of the three characteristics of existence. The study showed that mindfulness and the conceptual understanding of the three characteristics of existence reinforce each other. An implication of these findings is that mindfulness may be applied in therapy with individuals who have high levels of negative thoughts, rumination, or chaotic emotions. Clinicians may introduce mindfulness as a strategy to assist patients to become aware of their tangled thoughts and emotions. The introduction may be performed through mindfulness activities (see Chapter 4). It is recommended that the development of mindfulness does not terminate prematurely. Future studies should explore the additional uses of mindfulness in relation to the understanding of the three characteristics of existence.

PMP and the understanding of the three characteristics of existence. The PMP was designed to build on the efficacy of existing mindfulness-based psychotherapies by integrating the

understanding of the three characteristics of existence. In addition, eastern philosophies that underlie the practice of mindfulness were incorporated. The incorporation of eastern philosophies helps to introduce key psychological elements that may produce long-term psychological well-being and an understanding of the three characteristics of existence. The findings in the current study showed that the PMP promotes the conceptual understanding of the three characteristics of existence. Moreover, the conceptual understanding of the three characteristics of existence was associated with enhanced well-being and reduced rumination and depression.

The PMP helps to enhance the comprehension of the understanding of the three characteristics of existence (i.e., suffering, impermanence, non-self attachment, interconnectedness, and compassion*)* through psycho-education and experience relation to mindfulness activities. It is believed that the understanding of the three characteristics of existence can help change one's perspective towards themself, others, and the world (Payutto, 1998). Thus, an increase in the understanding of the three characteristics of existence may be viewed as the development of an alternative schema for individuals because it helps one to interact with the world in a new manner. This type of schema is more adaptive and less likely to activate maladaptive thoughts, emotions, or behaviours. For example, a man may feel sad if he fails to develop a relationship with a woman he is interested in. However, with the understanding of the three characteristics of existence, he may realise that there are an infinite number of variables relating to this situation based on the "interconnectedness" of the universe. Despite his sadness, he may feel less resistant and accept the situation. He may also realise that his sadness arose because he failed to acknowledge "non-self-attachment", such that he expected to develop a relationship with the woman. Finally, he may realise that his sadness will fade away because it is "impermanent". He is less likely to suffer or blame himself or the woman, because he has developed "compassion towards himself and others". Therefore, the understanding of the three characteristics of existence may protect him from a maladaptive schema that activates negative thoughts, such as "I am no good" (self-schema), "people are not trustable" (schema about others), and "the world is cruel" (schema about the world). The findings from the current study showed that an increase in the conceptual understanding of the three characteristics of existence was associated with a reduction in rumination (i.e., cognitive imbalance) and depression.

The understanding of the three characteristics of existence should be included in mindfulness-based interventions because it maximizes the use of Eastern philosophies that underlie the practice of mindfulness. By utilising mindfulness holistically and understanding the underlying principles, it may be possible to produce long-term benefits of mindfulness by enhancing well-being and reducing distress. Both research and therapeutic interventions may benefit from this implementation.

The Positive Mindfulness Program: A Mindfulness-Based Program for Multi-Cultures (The Researcher's Personal Experience)

Based on the findings from this thesis, the PMP successfully increased well-being and reduced distress, through changes in mindfulness, rumination, difficulties in emotional regulation, and the conceptual understanding of the three characteristics of existence, in Thai and Australian participants. Although the PMP has a manual for standardised delivery, there may be some variability in findings depending on the charisma, personality, or style of the presenter. In the current study, a principle investigator ran all of the PMP groups. The PMP was conducted with two different cultures which posed some challenges. A small commentary of these challenges may be useful for future studies.

Same expectations but driven from a different philosophy of life. All of the PMP completers, both Thai and Australian participants, followed the same goals and expectations while participating in the PMP. Specifically, they all aimed to enhance well-being and reduce distress. However, due to differences in cultural backgrounds, there was variability in participants' expectations.

Thai participants. Within the Thai-Buddhist culture, mindfulness is connected to Buddhist religious beliefs. Thus, many of the Thai individuals believe that the practice of mindfulness is not only for the purpose of attaining inner happiness, but also to promote their own virtue and do good deeds. Most Thai individuals are familiar with mindfulness and this was especially true of the Thai participants in the current study. It is important to note that the majority of Thai participants were young university students recruited from classes. Therefore, it was expected that they would be familiar with mindfulness as part of their educational setting in Thailand. However, their familiarity does not guarantee the regular practice of mindfulness. Consequently, most of the Thai participants requested to practice mindfulness successfully and regularly. Because of the religious connection, there were some questions regarding death. These questions were successfully answered by encouraging the participants to focus on the present moment. Their desire to practice mindfulness regularly and thoughts about life after death may reflect mindlessness as their thoughts are not focussed on the present moment. As already mentioned, all Thai participants were familiar with mindfulness before commencing the program. On occasion there was some resistance from Thai participants to complete mindfulness activities, as they were confident that they already knew the practice of mindfulness. As such, many of the participants expressed their boredom. In order to deal with this resistance, the researcher encouraged them to explore themselves and to consider whether they had fully paid attention to the practice of mindfulness. The researcher also encouraged Thai participants to explore past successful mindfulness experiences. Participants who regularly

practiced mindfulness were invited to have their own experience. This reduced resistance and motivated participants to engage in the PMP.

Australian participants. Within the Australian sample, it was clear that all participants aimed to enhance their well-being and reduce their distress by applying mindfulness into their daily life. Furthermore, there were no religious beliefs underlying their expectations. While the majority of Australian participants had not previously experienced mindfulness, there were some that had. It was found that providing a clear definition and description of the benefits of mindfulness was a good starting point. In session one, the PMP provided information regarding the benefits of mindfulness based on existing literature. Participants who had previously practiced mindfulness were invited to share their positive experiences. This personal level of engagement motivated participants to engage with the PMP. Basic information about the practice of mindfulness (e.g., posture and time) was also important for Australian participants, as the majority of them were new to mindfulness. It was also important to explain to participants the primary aim of the PMP, which was to promote inner happiness. Participants were taught that happiness arises from training the mind and the understanding of the three characteristics of existence, rather than external factors. This set realistic expectations in relation to the PMP. There were a few participants who expected to gain the benefits of mindfulness within one or two sessions. It was important to inform these participants that mindfulness is not a magic tool and can only produce long lasting benefits if practiced regularly. Finally, participants were given enough time to discuss their difficulties and experiences with the exercises in order to create a therapeutic group atmosphere.

Challenges with accepting ideas. The PMP incorporates ideas from a number of Eastern philosophies. The researcher found that there were some philosophical ideas that were difficult for participants to accept. For example, the definition of suffering was a contradictory topic for Australians. Several Australian participants expressed that they attended the PMP to seek happiness. In Eastern philosophy, suffering is considered to be unavoidable and inevitable and is accepted as a consequence of impermanence. A number of participants were disappointed with this belief. The therapist acknowledged the participants feelings and applied the normalisation process in group discussions to deal with this issue. It was important that the concepts of self-compassion and compassion towards others were explained immediately after the concept of suffering.

The researcher found that the concepts of self-compassion, compassion towards others, and interconnectedness, were the topics from which Thai and Australian participants gained the most benefit. It was important to encourage participants to use the concepts in their daily life. For example, individuals were encouraged to realise the interconnectedness underlying positive events and make the most of the time by being in the present moment. Conversely, individuals were encouraged to realise the interconnectedness underlying the impermanence of negative events.

Therapeutic Atmosphere. The PMP contains a number of mindfulness and insight activities which facilitate the development of mindfulness and the understanding of the three characteristics of existence. It is important to conduct the activities in a safe, therapeutic group atmosphere, rather than a learning atmosphere. Furthermore, it is important that participants have enough time to express their experiences and difficulties, as well as interact with the therapist and other group members. The therapist should also know how to deal with confidential information that may arise during the PMP. The PMP was primarily designed for the practice of mindfulness. Therefore, the therapist's judgment should be applied to reconcile these imperatives. The therapist should explain to participants that the PMP is not a religious program, but instead is a program that combines the practice of mindfulness with Eastern philosophies in order to promote well-being and reduce distress. The program was not designed for the discussion of religion or theology.

Therapist's personality and knowledge. The PMP is a mindfulness program that integrates Eastern philosophies into the practice of mindfulness. It is important for the PMP leader to have had direct experience with mindfulness. It is also important that the PMP leader can fathom the association between Eastern philosophy and the practice mindfulness. Furthermore, the leader should personify this harmony in daily life.

The perspective of Eastern or Buddhist mindfulness is a way of living. Therefore, it is not necessary for the PMP leader to be Buddhist or have an Eastern background. However, it is necessary that the leader has a substantial degree of insight into Buddhist teachings and eastern philosophies. The PMP was designed as a group therapeutic intervention and therefore requires a leader that possesses group therapy skills. Thus, it is a requirement that the PMP leader has a psychology degree with training in group therapy skills.

The PMP leader should be calm, warm, and able to conduct ethically and morally appropriate practice. Furthermore, it is important that they acknowledge unavoidable expectations and remain balanced in order to fulfil these expectations. It is acceptable for the therapist to share their mistakes in daily life and discuss how mindfulness has been personally beneficial. Essentially, the idea is to generate compassion because no individual is perfect and no individual can be mindful at all times. Participants are encouraged to learn from their mistakes.

As evidenced in this thesis, the PMP is an innovative mindfulness-based intervention that is effective at enhancing well-being and reducing distress in both Thai and Australian participants. The findings suggest that the PMP is worthy of further investigation in order to demonstrate the efficacy of the intervention. Moreover, this thesis demonstrates the mechanisms of action underlying the effects of the PMP on well-being and distress. The mechanisms of action have opened up a new arena of research into the understanding of the three characteristics of existence and Buddhist teaching in mindfulness training.

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APPENDIX A

Eudaimonic Well-being Questionnaire

This questionnaire contains a series of statements that refer to how you may feel things have been going in your life. Read each statement and decide the extent to which you agree or disagree with it. Try to respond to each statement according to **your own feelings about how things are actually going, rather than how you might wish them to be.** Please use the following scale when responding to each statement.

Strongly Disagree....0....1....2....3....4....Strongly Agree

Items	0	1	2	3	4
1. I find I get intensely involved in many of the things I do each day.	0	1	2	3	4
2. I believe I have discovered who I really am.	0	1	2	3	4
3. I think it would be ideal if things came easily to me in my life.	0	1	2	3	4
4. My life is centered around a set of core beliefs that give meaning to my life.	0	1	2	3	4
5. It is more important that I really enjoy what I do than that other people are impressed by it.	0	1	2	3	4
6. I believe I know what my best potentials are and I try to develop them whenever possible.	0	1	2	3	4
7. Other people usually know better what would be good for me to do than I know myself.	0	1	2	3	4
8. I feel best when I'm doing something worth investing a great deal of effort in.	0	1	2	3	4
9. I can say that I have found my purpose in life.	0	1	2	3	4
10. If I did not find what I was doing rewarding for me, I do not think I could continue doing it.	0	1	2	3	4

Items	0	1	2	3	4
11. As yet, I've not figured out what to do with my life.	0	1	2	3	4
12. I can't understand why some people want to work so hard on the things that they do.	0	1	2	3	4
13. I believe it is important to know how what I'm doing fits with purposes worth pursuing.	0	1	2	3	4
14. I usually know what I should do because some actions just feel right to me.	0	1	2	3	4
15. When I engage in activities that involve my best potentials, I have this sense of really being alive.	0	1	2	3	4
16. I am confused about what my talents really are.	0	1	2	3	4
17. I find a lot of the things I do are personally expressive for me.	0	1	2	3	4
18. It is important to me that I feel fulfilled by the activities that I engage in.	0	1	2	3	4
19. If something is really difficult, it probably isn't worth doing.	0	1	2	3	4
20. I find it hard to get really invested in the things that I do.	0	1	2	3	4
21. I believe I know what I was meant to do in life.	0	1	2	3	4

APPENDIX B

Freiburg Mindfulness Inventory

Please use the last 14 days as the time-frame to consider each item. Provide an answer for every statement as best you can. Please answer as honestly and spontaneously as possible. There are neither 'right' nor 'wrong' answers, nor 'good' or 'bad' responses. What is important to us is your own personal experience.

Rarely	**Occasionally**	**Fairly often**	**Almost always**
1	2	3	4

Items	1	2	3	4
1. I am open to the experience of the present moment.	1	2	3	4
2. I sense my body, whether eating, cooking, cleaning or talking.	1	2	3	4
3. When I notice an absence of mind, I gently return to the experience of the here and now.	1	2	3	4
4. I am able to appreciate myself.	1	2	3	4
5. I pay attention to what's behind my actions.	1	2	3	4
6. I see my mistakes and difficulties without judging them.	1	2	3	4
7. I feel connected to my experience in the here-and-now.	1	2	3	4
8. I accept unpleasant experiences.	1	2	3	4
9. I am friendly to myself when things go wrong.	1	2	3	4
10. I watch my feelings without getting lost in them.	1	2	3	4
11. In difficult situations, I can pause without immediately reacting.	1	2	3	4
12. I experience moments of inner peace and ease, even when things get hectic and stressful.	1	2	3	4
13. I am impatient with myself and with others.	1	2	3	4
14. I am able to smile when I notice how I sometimes make life difficult.	1	2	3	4

APPENDIX C

The Understanding of Three Characteristics of Existence Questionnaire

The Purpose of this questionnaire is to understand how much the following statements reflect your experience in your daily life. Please answer as honestly and spontaneously as possible. There are neither "right" nor "wrong" answers or "good" or "bad" responses. Please use the scale below and indicate how much the statements reflect your experience in your daily life.

very untrue of what I experience 1 2 3 4 5 very true of what I experience

Items	1	2	3	4	5
1. I understand that I must suffer for my past action	1	2	3	4	5
2. I try to keep in mind that the cause of my suffering is attachment	1	2	3	4	5
3. No living creature can escape suffering	1	2	3	4	5
4. Ignorance (the lack of understanding) is a cause of suffering	1	2	3	4	5
5. I remind myself that all is impermanent	1	2	3	4	5
6. I remember things won't last long	1	2	3	4	5
7. I recognize that all things change	1	2	3	4	5
8. With or without noticing, change constantly occurs to everything	1	2	3	4	5
9. I recall that what is " me" is really a delusion	1	2	3	4	5
10. I remind myself that there no "I"	1	2	3	4	5
11. I try not to get caught up in " Who I am"	1	2	3	4	5
12. Attachment to a concrete sense of self is based on misunderstanding	1	2	3	4	5
13. I consider how everything is connected	1	2	3	4	5
14. I remind myself the concept of inter-being	1	2	3	4	5
15. I recognized we are all interconnected and go through many of the same situations	1	2	3	4	5
16. I consider how I am related to everything	1	2	3	4	5

APPENDIX D

Rumination Subscale of Rumination-Reflection

Instructions:

Please indicate your level of agreement or disagreement by circling one of the scale categories to the right of each statement. Use the scale as shown below:

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Items	1	2	3	4	5
1. My attention is often focused on aspects of myself I wish I'd stop thinking about	1	2	3	4	5
2. I always seem to be "re-hashing" in my mind recent things I've said or done	1	2	3	4	5
3. Sometimes it is hard for me to shut off thoughts about myself	1	2	3	4	5
4. Long after an argument or disagreement is over with, my thoughts keep going back to what happened	1	2	3	4	5
5. I tend to "ruminate" or dwell over things that happen to me for a really long time afterward	1	2	3	4	5
6. I don't waste time re-thinking things that are over and done with	1	2	3	4	5
7. Often I'm playing back over in my mind how I acted in a past situation	1	2	3	4	5
8. I often find myself re-evaluating something I've done	1	2	3	4	5
9. I never ruminate or dwell on myself for very long	1	2	3	4	5
10. It is easy for me to put unwanted thoughts out of my mind	1	2	3	4	5
11. I often reflect on episodes in my life that I should no longer concern myself with	1	2	3	4	5
12. I spend a great deal of time thinking back over my embarrassing or disappointing moments	1	2	3	4	5

APPENDIX E

Difficulties in Emotional Regulation Scale

Please read each statement and circle a number 1, 2, 3, 4 or 5 that **indicates how much the statement applied to you *over the past week*.** There are no right or wrong answers.

Response categories:
1 = Almost never (0-10%)
2 = Sometimes (11-35%)
3 = About half the time (36-65%)
4 = Most of the time (66 – 90%)
5 = Almost always (91-100%)

Items	1	2	3	4	5
1. I am clear about my feelings.	1	2	3	4	5
2. I pay attention to how I feel	1	2	3	4	5
3. I experience my emotions as overwhelming and out of control.	1	2	3	4	5
4. I have no idea how I am feeling.	1	2	3	4	5
5. I have difficulty making sense out of my feelings.	1	2	3	4	5
6. I am attentive to my feelings.	1	2	3	4	5
7. I know exactly how I am feeling.	1	2	3	4	5
8. I care about what I am feeling.	1	2	3	4	5
9. I am confused about how I feel.	1	2	3	4	5
10. When I'm upset, I acknowledge my emotions.	1	2	3	4	5
11. When I'm upset, I become angry with myself for feeling that way.	1	2	3	4	5
12. When I'm upset, I become embarrassed for feeling that way.	1	2	3	4	5
13. When I'm upset, I have difficulty getting work done.	1	2	3	4	5
14. When I'm upset, I become out of control.	1	2	3	4	5
15. When I'm upset, I believe that I will remain that way for a long time.	1	2	3	4	5
16. When I'm upset, I believe that I'll end up feeling very depressed.	1	2	3	4	5
17. When I'm upset, I believe that my feelings are valid and important.	1	2	3	4	5
18. When I'm upset, I have difficulty focusing on other things.	1	2	3	4	5
19. When I'm upset, I feel out of control.	1	2	3	4	5
20. When I'm upset, I can still get things done.	1	2	3	4	5
21. When I'm upset, I feel ashamed with myself for feeling that way.	1	2	3	4	5

Response categories:
1 = Almost never (0-10%)
2 = Sometimes (11-35%)
3 = About half the time (36-65%)
4 = Most of the time (66 – 90%)
5 = Almost always (91-100%)

Items	1	2	3	4	5
22. When I'm upset, I know that I can find a way to eventually feel better.	1	2	3	4	5
23. When I'm upset, I feel like I am weak.	1	2	3	4	5
24. When I'm upset, I feel like I can remain in control of my behaviors.	1	2	3	4	5
25. When I'm upset, I feel guilty for feeling that way.	1	2	3	4	5
26. When I'm upset, I have difficulty concentrating.	1	2	3	4	5
27. When I'm upset, I have difficulty controlling my behaviors.	1	2	3	4	5
28. When I'm upset, I believe there is nothing I can do to make myself feel better.	1	2	3	4	5
29. When I'm upset, I become irritated with myself for feeling that way.	1	2	3	4	5
30. When I'm upset, I start to feel very bad about myself.	1	2	3	4	5
31. When I'm upset, I believe that wallowing in it is all I can do.	1	2	3	4	5
32. When I'm upset, I lose control over my behaviors.	1	2	3	4	5
33. When I'm upset, I have difficulty thinking about anything else.	1	2	3	4	5
34. When I'm upset, I take time to figure out what I'm really feeling.	1	2	3	4	5
35. When I'm upset, it takes me a long time to feel better.	1	2	3	4	5
36. When I'm upset, my emotions feel overwhelming.	1	2	3	4	5

APPENDIX F

Depression, Anxiety and Stress Scale

Please read each statement and circle a number 0, 1, 2 or 3 that indicates how much the statement applied to you *over the past week*. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:

0 Did not apply to me at all

1 Applied to me to some degree, or some of the time

2 Applied to me to a considerable degree, or a good part of time

3 Applied to me very much, or most of the time

1	I found myself getting upset by quite trivial things	0	1	2	3
2	I was aware of dryness of my mouth	0	1	2	3
3	I couldn't seem to experience any positive feeling at all	0	1	2	3
4	I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1	2	3
5	I just couldn't seem to get going	0	1	2	3
6	I tended to over-react to situations	0	1	2	3
7	I had a feeling of shakiness (eg, legs going to give way)	0	1	2	3
8	I found it difficult to relax	0	1	2	3
9	I found myself in situations that made me so anxious I was most relieved when they ended	0	1	2	3
10	I felt that I had nothing to look forward to	0	1	2	3
11	I found myself getting upset rather easily	0	1	2	3
12	I felt that I was using a lot of nervous energy	0	1	2	3
13	I felt sad and depressed	0	1	2	3
14	I found myself getting impatient when I was delayed in any way (eg, elevators, traffic lights, being kept waiting)	0	1	2	3
15	I had a feeling of faintness	0	1	2	3
16	I felt that I had lost interest in just about everything	0	1	2	3
17	I felt I wasn't worth much as a person	0	1	2	3
18	I felt that I was rather touchy	0	1	2	3
19	I perspired noticeably (eg, hands sweaty) in the absence of high temperatures or physical exertion	0	1	2	3
20	I felt scared without any good reason	0	1	2	3
21	I felt that life wasn't worthwhile	0	1	2	3
22	I found it hard to wind down	0	1	2	3

Reminder of rating scale:
0 Did not apply to me at all
1 Applied to me to some degree, or some of the time
2 Applied to me to a considerable degree, or a good part of time
3 Applied to me very much, or most of the time

23	I had difficulty in swallowing	0	1	2	3
24	I couldn't seem to get any enjoyment out of the things I did	0	1	2	3
25	I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat)	0	1	2	3
26	I felt down-hearted and blue	0	1	2	3
27	I found that I was very irritable	0	1	2	3
28	I felt I was close to panic	0	1	2	3
29	I found it hard to calm down after something upset me	0	1	2	3
30	I feared that I would be "thrown" by some trivial but unfamiliar task	0	1	2	3
31	I was unable to become enthusiastic about anything	0	1	2	3
32	I found it difficult to tolerate interruptions to what I was doing	0	1	2	3
33	I was in a state of nervous tension	0	1	2	3
34	I felt I was pretty worthless	0	1	2	3
35	I was intolerant of anything that kept me from getting on with what I was doing	0	1	2	3
36	I felt terrified	0	1	2	3
37	I could see nothing in the future to be hopeful about	0	1	2	3
38	I felt that life was meaningless	0	1	2	3
39	I found myself getting agitated	0	1	2	3
40	I was worried about situations in which I might panic and make a fool of myself	0	1	2	3
41	I experienced trembling (eg, in the hands)	0	1	2	3
42	I found it difficult to work up the initiative to do things	0	1	2	3

APPENDIX G

Well-being, Mindfulness, the Understanding of the Three Characteristics of Existence, Rumintaion, and Difficulties in Emotional Regulation

Unstandardised Regression Coefficients of Thai and Australian PMP completers

Unstandardised regression coefficients (estimates), standard errors, and p-values for Thai PMP completers and Australian PMP completers

Variables	Thai PMP Completers			Australian PMP Completers		
	Estimate	*SE*	*p-value*	*Estimate*	*SE*	*p-value*
Mindfulness → Rumination	-.820	0.24	.001	-.595	0.13	.001
Understanding of the three characteristics of existence→ Rumination	-.263	0.14	.056	-.183	0.11	.097
Mindfulness → Difficulties in emotional regulation	-.139	0.27	.001	-.155	0.29	.001
Rumination → Difficulties in emotional regulation	.697	0.13	.001	.509	0.23	.026
Difficulties in emotional regulation → well-being	-.255	0.06	.001	-.190	0.05	.001
Mindfulness←→ Understanding of the three characteristics of existence	11.55	7.02	.100	24.19	7.04	0.01

APPENDIX H

Depression, Mindfulness, the Understanding of the Three Characteristics of Existence, Rumintaion, and Difficulties in Emotional Regulation

Unstandardised Regression Coefficients of Thai and Australian PMP completers

Unstandardised regression coefficients (estimates), standard errors, and p-values for Thai PMP completers and Australian PMP completers

Variables	Thai PMP Completers			Australian PMP Completers		
	Estimate	*SE*	*p-value*	*Estimate*	*SE*	*p-value*
Mindfulness → Rumination	-.820	0.24	.001	-.595	0.13	.001
Understanding of the three characteristics of existence→ Rumination	-.263	0.14	.056	-.183	0.11	.097
Mindfulness → Difficulties in emotional regulation	-1.39	0.27	.001	-.155	0.29	.001
Rumination → Difficulties in emotional regulation	.697	0.13	.001	.509	0.23	.026
Difficulties in emotional regulation→ Depression	.316	0.05	.001	.134	0.04	.001
Understanding of the three characteristics of existence→Depression	-.245	0.07	.001	-.044	0.09	.063
Rumination → Depression	.030	0.08	.071	.276	0.09	.003
Mindfulness←→ Understanding of the three characteristics of existence	11.545	7.02	.100	24.19	7.04	.001

APPENDIX I

Anxiety, Mindfulness, the Understanding of the Three Characteristics of Existence, Rumintaion, and Difficulties in Emotional Regulation

Unstandardised Regression Coefficients of Thai and Australian PMP completers

Unstandardised regression coefficients (estimates), standard errors, and p-values for Thai PMP completers and Australian PMP completers

Variables	Thai PMP Completers			Australian PMP Completers		
	Estimate	*SE*	*p-value*	*Estimate*	*SE*	*p-value*
Mindfulness → Rumination	-.820	0.24	.001	-.595	0.13	.001
Understanding of the three characteristics of existence→ Rumination	-.263	0.14	.056	-.183	0.11	.097
Mindfulness → Difficulties in emotional regulation	-.139	0.27	.001	-.155	0.29	.001
Rumination → Difficulties in emotional regulation	.697	0.13	.001	.509	0.23	.026
Difficulties in emotional regulation → Anxiety	.193	0.04	0.01	.072	0.02	.002
Mindfulness←→ Understanding of the three characteristics of existence	11.55	7.02	0.10	24.19	7.04	.001

APPENDIX J

Stress, Mindfulness, the Understanding of the Three Characteristics of Existence, Rumintaion, and Difficulties in Emotional Regulation

Unstandardised Regression Coefficients of Thai and Australian PMP completers

Unstandardised regression coefficients (estimates), standard errors, and p-values for Thai PMP completers and Australian PMP completers

Variables	Thai PMP Completers			Australian PMP Completers		
	Estimate	*SE*	*p-value*	*Estimate*	*SE*	*p-value*
Mindfulness → Rumination	-.820	0.24	.001	-.595	0.13	.001
Understanding of the three characteristics of existence→ Rumination	-.263	0.14	.056	-.183	0.11	.097
Mindfulness → Difficulties in emotional regulation	-.139	0.27	.001	-.155	0.29	.001
Rumination → Difficulties in emotional regulation	.697	0.13	.001	.509	0.23	.026
Difficulties in emotional regulation → Stress	.326	0.05	0.01	.226	0.03	.001
Mindfulness←→ Understanding of the three characteristics of existence	11.55	7.02	0.10	24.19	7.04	.001

APPENDIX K

EXAMPLE OF WOOKBOOK FOR THE POSITIVE MINDFULNESS PROGRAM (SESSION 1)

Introduction

During Session 1, you will be introduced to the aims of the mindfulness group program and what the program involves. You will meet others and share some of your experiences about mindfulness exercises. Some time will also be spent discussing contents from the session.
By the end of Session 1, you should be able to:

- Understand the definition of mindfulness
- Understand the connection between mindfulness and internal happiness
- Know important information related to the practice of mindfulness such as a good posture
- Have a chance to practice mindfulness: Mindfulness of Breath
- Understand the importance of concentration

Setting basic group rules for the group

To make sure the group runs smoothly, we need to have a few simple rules

- Your group runs once a week on every .....
  between……and…….....
- Everyone needs to arrive on time and be ready to start by.....
  We will finish on time at.....
- Information about other group members is confidential and should not be discussed outside the group
- Group members should be supportive of one another
- Other:

…….....

……..

…….....

Getting to know each other Share some information about yourself with another group member

Getting to know each other

Group Member's name .....Positive characteristics…….....

……

Group Member's name .....Positive characteristics…….....

……

Group Member's name .....Positive characteristics…….....

……

 **What you would like to get out of the group sessions**

…….....

……...

……...

…….....

 **What is (are) your goal(s) in your life?**

……...

…….....

……...

…….....

 **How could those goals make you happy?**

…….....

……...

…….....

Share with the group (a) why you are participating in the mindfulness group, and (b) what you hope to get out of this experience

 **Mindfulness and Happiness**

Finding your happiness: Think of some occasions when you experienced happiness in the past two weeks. When, where, and with whom did you feel happy?

……....

…….....

……....

…….....

How long did this happiness last for you?

……

 **Group discussion about our recent happiness**

 **What is happiness?**

The word "happiness", writes Henri Bergson "is commonly used to designate something intricate and ambiguous. As a result, we so often confuse genuine happiness with merely seeking enjoyable emotion or pleasure. It is said that "pleasure or enjoyable emotion are only the shadow of happiness". Pleasure and enjoyable emotion are a direct result of pleasurable sensual experiences. The fleeting experience of pleasure is dependent upon circumstance, on a specific location or moment in time. It is unstable by nature, and the sensation it evokes soon becomes neutral or even unpleasant. Wealth, pleasures, ranks and power are all goals we spend most of our time pursuing as we believe they can give us lasting happiness. However, unfortunately they cannot.

"Happiness" in this program is different to this notion of pleasurable sensual and emotional experience. "Happiness" in this program can be defined as a deep sense of flourishing that arises from an exceptionally healthy mind. This is not a mere pleasurable feeling, a fleeting emotion, or a mood, but an optimal state of being. Happiness is also a way of interpreting the world, since while it may be difficult to change the world, it is always possible to change the way we look at it. Authentic happiness is not linked to an activity; it is a state of being, a profound emotional balance struck by a subtle understanding of how the mind functions. Ordinary pleasures are produced by contact with pleasant objects, an experience that ends when that contact is broken. "True" or "authentic" happiness is felt so long as we remain in harmony with our inner nature.

If you think that peace and happiness are somewhere else and you run after them, you will never arrive. It is only when you realise that peace and happiness are available here in the present moment that you will be able to relax.

In daily life, there is so much to do and so little time. You may feel pressured to run all the time. Just stop! Touch the ground of the present moment deeply, and you will touch real peace and joy.

(Hanh, 2006)

 **MINDFULNESS**

Mindfulness occurs every time when we pay attention to ourselves....When we slow down whatever we do...or whenever we are mindful to whatever coming to our perceptions. Mindfulness can help us appreciate who we are, the beauty of other people's smiles, the prettiness of other living things, the colours of a flower, the touch of the rain, the bight of sunshine. Mindfulness helps us to connect with the world so that we can feel that we are a part of all things that surround us. Mindfulness can help us see things the way they are and mindfulness can help us to live and be with them harmoniously. Mindfulness is the tool that brings genuine happiness. The happiness that we can create by ourselves without relying on another person or on other factors.

 **<u>Think of an event or incident related to each of the three words below</u>**:

1.1 Happy
Future……...

Past……...

1.2 Sad
Future…….....

Past……...

1.3 Angry
Future…….....

Past……...

When you were thinking about events or incidents that related to each of these words, how strongly did it impact on your feelings? (Please circle the number that reflects your experience)

0…….1…….2…….3…….4…….5…….6…….7…….8…….9…….10

No impact on me at all	Moderate impact	Severe impact

The explanation for the exercise

Above, when you were thinking about the incidents in the future or in the past, you were not mindful. You were not in the present moment. Your mind was likely captured by imaginations that were automatically generated. These imaginations reflect the bias from desires, anger, , or ignorance, which leads us to struggle with past or future experiences. As a result, you were not totally free. In other words, there was a mental burden in your mind, and your mind was not tamed at that time.

The untamed mind might be viewed as smoke evaporating from incense. The smoke goes on and on and could bring some discomfort (e.g., your eyes start burning or your nose gets stuffy). Sometimes we get struck in the unhappiness of past experiences that we cannot change, or fantasise about happiness in the future that has not happened yet. You can also view our untamed mind might as an untamed monkey. The monkey jumps around from one place to another.

Our untamed mind can take us to the most beautiful of places we dream of visiting. and It can also take us to our most painful experiences in the past, where we relieve the unpleasant feelings. When we get carried away with the future fantasies and dwell on the past unpleasantness, we are not in touch with the present reality.

It is time to practice mindfulness

Getting Started

With regard to the actual practice of mindfulness, it is first important to discuss physical preparation:

- **Where?**We should choose a place that is suitable and appropriate for our practice.
- We should select the best location available, knowing that we can never have a perfect situation. Try to find a place that is quiet and peaceful, where the conditions and weather are good and where there are no disturbances
- But when good conditions are not available, we do the best we can with what we have.
- Finally, we must be able to practice mindfulness even while sitting on the train travelling to somewhere.

What are your physical difficulties that might prevent you from practicing mindfulness?

…….....

……..

What are your solutions for overcoming these difficulties?

…….....

……..

- **When?**The time of practice is also important. When we are determined to practice earnestly, we need to choose the most suitable and appropriate time possible.
- However, if we cannot find a good time, we should accept whatever we can get. We do not have to be enslaved to a certain time of day.
- We should choose a time when there are no distractions or disturbances. When there is no time that is completely free of distractions, we use the best time available.

When do you think it would be the best time for you to practice mindfulness?

…….....

Reasons…….....

Optional times……..

The Sitting Posture.

- It is import to sit in a way that is both stable and secure, so that when the mind becomes semiconscious we will not fall over.
- We should be able to sit just like a pyramid. A pyramid cannot fall over because it has a very solid base and sides that rise up into a central pinnacle.
- The best way is to sit cross legged. Put your legs out in front of you, then pull the right foot up onto the left thigh and left foot up onto the right thigh
- If you have yet to try sitting this way, or are not even used to sitting on the floor, you may need some time to train the body to sit in such a posture. It is worth the effort. You can patiently, gradually train yourself to sit this way. Then you will never fall over
- It is also important to sit upright, with the vertebrae and spine in proper alignment, without any bends or curves.

Alternative options

- Sitting on a chair with both feet on the floor and legs uncrossed
- Some mindfulness activities, laying down is also an option but this has the disadvantage of making it easy to fall asleep so this posture should only be chosen if needed e.g. due to pain

The Hands

- The most comfortable placement is to let the hands fall onto the knees.
- Another way is to lay one hand on top of the other in the lap. This position maybe uncomfortable because the hands can become hot.
- Some people fold their hands in the lap with the thumbs touching in order to aid concentration

The Eyes

Practitioners often ask, Should we leave the eyes open or close them?

- Many people believe that they must close their eyes and that they cannot meditate with open eyes. If you are serious about what you are doing and have a sufficiently strong mind, it is not difficult to practice with the eyes left open.
- When we close our eyes, we tend to grow sleepy, so be careful about closing the eyes. Also, when the eyes are closed, they tend to become warm and dry. Mindfulness with the eyes open will help us to stay awake and will keep the eyes cool and comfortable.
- Furthermore, this will help the mind to be concentrated; it will aid the development of concentration
- Finally, as concentration gradually develops, the eyes will naturally close by themselves. The eyelids will relax and drop shut on their own.

Mindfulness of the breath

Date...../...../.....

Please rate your experience of TRANQUILITY during your mindfulness practice

0…….1…….2…….3…….4…….5…….6…….7…….8…….9…….10

No experience of tranquillity at all **Experienced tranquillity throughout**

Please rate your experience of CONCENTRATION during your mindfulness practice.

0…….1…….2…….3…….4…….5…….6…….7…….8…….9…….10

No experience of concentration at all **Experienced concentration throughout**

Discussion of the Exercise.

Who would like to comment on their experience?
What was new, what was maybe weird?
What was going through your mind?

Training our concentration

Mindfulness practice can help us to reduce psychological distresses and enhance psychological well-being. To do so, we need to develop "concentration" or reflective awareness by being mindful of our body and surrounding objects. Within mindfulness anything can be the focus of awareness and become a contemplating arena. Concentration brings about inner peace and calm in which our mind is pure and not contaminated from any bias. Such a pure mind not only brings about inner happiness but also allows us to see things as the way things are. It is a mean by which we understand the true nature of reality.

Being mindful may not be easy. However, with practice and commitment, it becomes easier

and more effective. With effective mindful concentration we can use our mind to understand sufferings, their causes, and the methods that lead to their cessation. As you will see, a tamed mind, developed through the practice of mindfulness, is for true happiness.

  Homework

Homework 1

1. Read the "Getting Started" session on Page.....5....
2. **Practice** Mindfulness of the breath for 15-30 minutes each day

Homewor**k Record: Mindfulness of Breath**

DATE	Place	Starting time	Finished time	Duration (in minutes)	Self-Report* Please identify your experience during practice mindfulness in terms of ***concentration*** From the scale of 0 to 10,	Self-Report* Please identify your experience during practice mindfulness in terms of ***tranquillity*** From the scale of 0 to 10,

Comments on your experience that you would like to share in the group

…….....

……..

…….....

……..