ISTANBUL BILGI UNIVERSITY

INSTITUTE OF SOCIAL SCIENCES

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EXPLORING EFFECTIVENESS OF 8 WEEKS MODIFIED MINDFULNESS BASED STRESS REDUCTION (MBSR) PROGRAM ON MINDFULNESS, PERCEIVED STRESS, PSYCHOLOGICAL CAPITAL, RUMINATION AND PSYCHOLOGICAL FLEXIBILITY, MODERATED BY PERSONALITY TRAITS

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8 Haftalık Modifiye Edilmiş Bilinçli Farkındalık Temelli Stres Azaltma (MBSR) Programının Bilinçli Farkındalık, Algılanan Stres, Psikolojik Sermaye, Ruminasyon ve Psikolojik Esneklik Üzerindeki Etkililiğinin ve Kişilik Özelliklerinin Düzenleyici Rolünün Araştırılması

Exploring Effectiveness of 8 Weeks Modified Mindfulness Based Stress Reduction (MBSR) Program on Mindfulness, Perceived Stress, Psychological Capital, Rumination and Psychological Flexibility, Moderated by Personality Traits

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FOREWORD

I had my first mindfulness meditation experience in February 2015 which was refreshingly extraordinary, an eureka moment in my personal history. For all my life, I had been prone to mental restlessness. I did a twenty minutes body scan mediation practice in a winter afternoon, and in that moment, I felt a deep connection to my body and senses that I have never felt before, In those 20 minutes my mind was clear, I felt peaceful. The constant chatter in my head was silenced for a while and I truly experienced what is said to be *here and now*, a concept I used to think was a romanticized and overrated phenomenon. Yet, listening to an easy to follow set of instructions and just paying intentional attention to my immediate experience, the restless noise in my mind was diminished and I experienced a new level of calmness, composure, and tranquility. How could this happen? Would it be possible to have more of it? Is it possible for me to ease my 35 years long self-inflicted suffering due to constant thoughts in my mind? I had questions.

After that afternoon, I followed my curiosity. For the past five years, I have been practicing, studying, and teaching mindfulness. It is my personal belief and hope that in a near future, mindfulness will not only become a mainstream tool for therapeutic treatment of mental disorders, but also an important approach in preventive psychological health care for a more compassionate society. With this regard, I wanted to do my master's research in this field, and I am happy to be able to make a modest contribution to the scientific study of mindfulness.

ENOUGH

Enough.
These few words are enough.
If not these words, this breath.
If not this breath, this sitting here.
This opening to the life
we have refused
again and again
until now.
Until now.

David Whyte (1990)

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LIST OF ABBREVIATIONS

AAQ	Acceptance and Action Questionnaire
AAQ-II	Acceptance and Action Questionnaire Version II
ACT	Acceptance and Commitment Therapy
B5KT-50-Tr	Big 5 Personality Traits Big Five Personality Questionnaire
CAS	Cognitive Attentional Syndrome
CFT	Compassion Focused Therapy
CMT	Compassionate Mind Training
DBT	Dialectical Behavior Therapy
FFMQ	Five Facet Mindfulness Questionnaire
MBA	Mindfulness Based Approach
MBCL	Mindfulness Based Compassionate Living
MBCP	Mindfulness-Based Childbirth and Parenting
MBCT - C	Mindfulness Based Cognitive Therapy for Cancer
MBCT - L	Mindfulness Based Cognitive Therapy for Life
MBCT	Mindfulness Based Cognitive Therapy
MBI	Mindfulness Based Intervention
MBIP	Mindfulness Based Intervention Program
MBP	Mindfulness Based Program
MBSR	Mindfulness Based Stress Reduction
MCT	Metacognitive Therapy
MiSP	Mindfulness in Schools Project
m-MBSR	Modified Mindfulness Based Stress Reduction
MSC	Mindful Self Compassion
PCQ	Psychological Capital Questionnaire
PSS	Perceived Stress Scale
PsyCap	Psychological Capital

RFT	Relational Frame Theory
RTSQ-SF	Ruminative Thought Style Questionnaire Short Form
SIYLI	Search Inside Yourself Leadership Institute

ABSTRACT

The aim of this study was to investigate the effectiveness of an 8-week modified Mindfulness Based Stress Reduction (MBSR) program and empirically demonstrate how mindfulness training would increase mindfulness, alleviate psychological distress and promote positive psychological affect, whilst exploring moderation role of personality traits. A modified version of the MBSR program was designed for a non-clinical population and delivered to participants (N=59) who are working adults. The result of the pretest – posttest analysis indicated that following the intervention, mindfulness, psychological capital, and psychological flexibility significantly increased, while perceived stress and rumination significantly decreased. Effect sizes included large, medium and small effects, mindfulness being the most strongly affected (d=.86), followed by rumination (d=.56), perceived stress (d=.55), psychological flexibility (d=.41) and psychological capital (d=.21). A positive correlation between mindfulness and openness trait, and a negative one between mindfulness and neuroticism trait was observed in line with the previous literature. Moderation analysis revealed that introverts as compared extroverts, and highly open participants as compared those who are less open, benefited from the training the most in terms of an increase in psychological capital and decrease in ruminative thinking, respectively. Overall, this study is in line with similar studies on the empirical results of the mindfulness training programs in the international literature. Additionally, by providing a moderation analysis using specific personality traits, this study extends the literature on factors of individual differences that influence the success of mindfulness trainings.

ÖZET

Bu araştırma 8 haftalık modifiye edilmiş Mindfulness (Bilinçli Farkındalık) Temelli Stres Azaltma (MBSR) programının bilinçli farkındalığı arttırma, psikolojik sıkıntıyı hafifletme ve olumlu psikolojik etkiyi desteklemedeki etkililiğini ampirik olarak göstermek ve kişilik özelliklerinin bu program üzerindeki düzenleyici rolünü incelemek amacıyla hazırlanmıştır. Araştırmanın örneklemini yapılan duyuruya olumlu cevap vermiş ve çalışma hayatı olan genel popülasyondan katılımcılar oluşturmaktadır (N = 59). Ön test – son test analiz sonuçlarına göre müdahale programı sonrası bilinçli farkındalık, psikolojik sermaye ve psikolojik esnekliğin anlamlı düzeyde yükseldiği, algılanan stres ve ruminasyonun anlamlı düzeyde azaldığı gözlemlendi. Etki büyüklükleri arasında büyük, orta ve küçük etkiler yer alırken, en çok etkilenen bilinçli farkındalık (d=.86), ardından ruminasyon (d=.56), algılanan stres (d=.55), psikolojik esneklik (d=.41) ve psikolojik sermaye (d=.21) olarak belirlendi. Ayrıca literatüre uyumlu olarak bilinçli farkındalık ve deneyime açıklık kişilik özelliği arasında pozitif, bilinçli farkındalık ve nevrotiklik kişilik özelliği arasında negatif yönde korelasyon bulundu. Moderasyon analizi, dışadönüklerle karşılaştırıldığında içe dönüklerin ve deneyime daha az açık olanlara kıyasla deneyime daha açık olan katılımcıların psikolojik sermayede artış ve ruminatif düşüncede azalma bakımından müdahale programından daha çok yaranlandığını ortaya koydu. Çalışmanın sonuçları uluslararası literatürdeki bilinçli farkındalık eğitim programlarının ampirik sonuçları üzerine olan benzer çalışmalar ile paraleldir. Ayrıca, bu çalışma kişilik özellikleri moderasyon analizi sunarak bilinçli farkındalık eğitimlerinin başarısını etkileyen bireysel farklılıklara dair literatürü genişletmektedir.

CHAPTER I

INTRODUCTION

1.1 Overview

Mindfulness has been a popular concept in the recent years. Originally a 2,600 years old Buddhist notion (Brown & Ryan, 2003; Dunne, 2011), today, modernized applications of mindfulness practice find place in almost all areas of life; in the fields of psychotherapy, chronic pain management, cancer care, grief intervention, stress management, wellbeing, personal effectiveness, leadership training, education, interpersonal relations, child birth and parenting, justice system, politics, community care and sports performance. There is an extensive selection of mindfulness-based programs that are offered, ranging from 8 weeks in-class group intervention programs to couple of hours long seminars, mobile applications that offer bite-size teachings as short as 10 minutes, guided recordings of many kinds, video in demand programs, distance learning or seclusive retreats, presented by a trained therapists or a teachers, or as a self-help programs, to suit any type of demand. Publication on mindfulness is extensive, there are more than 30,000 search results on Amazon about mindfulness that range from academic text books to self hep books, magazines dedicated to mindfulness and meditation can be found even in supermarket aisles, news, articles, white papers appear in the press every day. According to the National Health Statistic Report, 18 million people in United States meditate, (Clarke, Black et al. 2015), and in the UK, 26% of British adults reported that they practice meditation, and 14% does it regularly (Halliwell, Mental Health Foundation Report, 2010). Mindfulness is presented as a panacea for a wide range of problems by eager marketeers, and it is estimated to be over a one-billion-dollar industry in the United States alone.

Along with the extensive application in the field, the scientific research on mindfulness has also been growing. As depicted in the figure down below, which is taken from the website of American Mindfulness Research Association, there is a substantial growth in the scientific research on mindfulness.

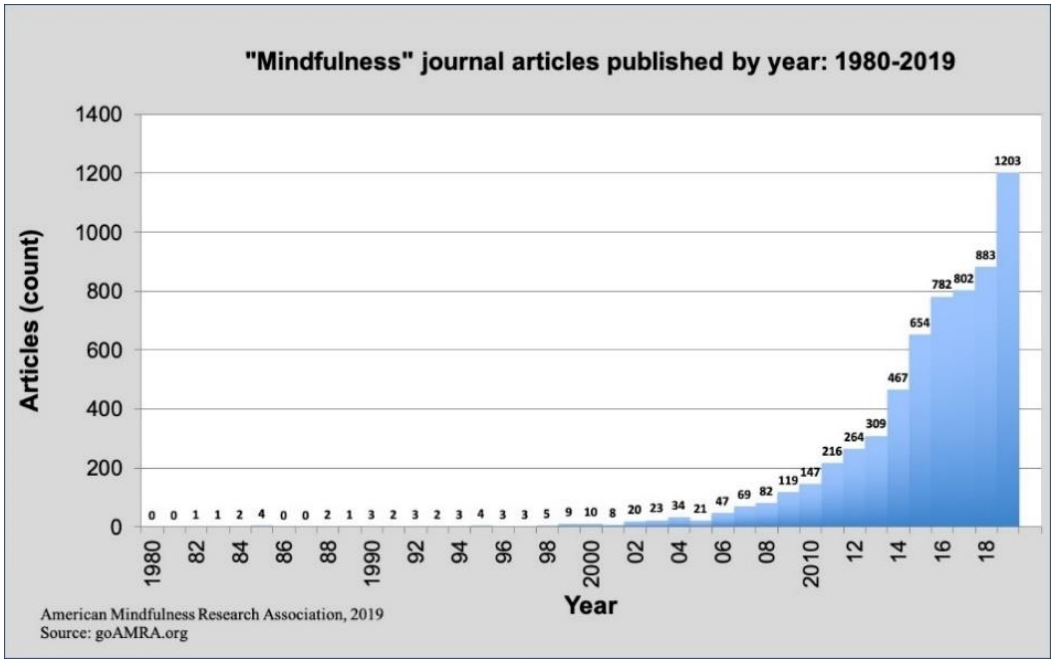


Figure 1.1. *Mindfulness Journal Articles Published by Year*

A quick survey of the literature shows that mindfulness meditation is found to be strongly correlated with psychological wellbeing (coping with depression, anxiety, stress), empathy and resiliency, as well as increased task performance, attention span and memory improvement (Hyland et al., 2015; Brown & Ryan, 2003). Among other benefits of mindfulness, the most common are; self-regulation (Glomb et al., 2012), emotional regulation (Chambers, Gullone, & Allen, 2009), getting out of mindless autopilot mood and disengaging from cognitive schemas (Shapiro, Astin, & Freedman, 2006), enhanced cognitive capacities (Jha et al., 2010), decreased anxiety (Shapiro, Brown, & Biegel, 2007), decreased psychological distress (Shonin et al., 2013) and

increased psychological flexibility (Hayes & Strosahl, et al., 2004). Although there are concerns regarding possible harm that meditation may cause, these concerns are relevant for any potent instrument, and when empirically supported programs are delivered by competent teachers to the carefully assessed participants, benefits of mindfulness-based programs are salient (Baer et al., 2019).

Most of the research in the area is in the field of clinical psychology, and research on mindfulness for general health and specifically for employee wellbeing is emerging. A meta-analysis that looked over 20 intervention trials, 10 controlled, 7 uncontrolled and 3 quasi studies, total sample size of 1,542 people, concluded that mindfulness-based intervention has medium size statistically significant effect on physical and mental health. Conclusion also stated that mindfulness may help with problems of both clinical and non-clinical nature (Grossman et al., 2004).

There are currently many training offerings in Turkey, both for individuals and also for work place, to boost physical and psychological wellbeing and also as a preventive measure to avoid psychological distress, increase attention, enhance performance, regulate emotions, promote creativity and cultivate a positive organizational climate. In line with the previous research and current popularity of the subject, a research on the effectiveness of mindfulness training in Turkish context is missing in the literature. A study on mindfulness intervention would present empirical evidence on effectiveness of this approach for alleviating psychological distress and promoting general wellbeing for non-clinical populations in Turkish context too.

1.2 Purpose of this study

Purpose of this study is to look at effectiveness of an 8-week Mindfulness Based Intervention (MBI) among Turkish urban workforce population. Using a quantitative

method, the researcher aims to explore whether mindfulness training would increase mindfulness levels of the participants whilst decreasing psychological distress and elevating positive affect. The study focuses on the most common psychological distress factors such as stress and rumination, and positive affect, namely psychological capital, and psychological flexibility.

The study will also look at the role of personality traits as moderators of the relationship between mindfulness training and the outcomes. Research in the field of individual differences suggests that some people may be more dispositional to benefit from mindfulness intervention. A meta-analysis from 32 samples in 29 studies showed that neuroticism and conscientiousness are both negatively correlated with mindfulness, whereas openness is positively correlated with mindfulness (Giluk, 2009). Baer et al. (2006) also "predicted and observed a positive correlation between mindfulness and openness, and an inverse relationship with neuroticism". The current study aims to explore and demonstrate empirical evidence on the relationship of mindfulness and personality traits in line with the previous research.

Since there are various programs on mindfulness that are available to general population, the program that will be offered for the scope of this study will be based on the MBSR program, developed by Jon Kabat-Zinn in 1979 (Kabat-Zinn, 1990), which sets the *golden standard* in the field and it has been studied extensively in the literature. The program will also carry elements from Mindfulness Based Cognitive Therapy (MBCT), Mindful Self Compassion (MSC) and Compassionate Mind Training (CMT) programs, to serve the specific needs of the population at hand, whilst it aims to demonstrate that a modified MBSR program (m-MBSR) is still effective as long as it carries the necessary characteristics of a mindfulness-based program.

CHAPTER II

LITERATURE REVIEW

2.1 Mindfulness

2.1.1 Operational Definition for Mindfulness

Defining mindfulness is not a straightforward task. First, the word *mindfulness* may be used to describe more than one thing; "a psychological trait, the practice of cultivating mindfulness (e.g., mindfulness meditation), a mode or state of awareness, or a psychological process" (Germer, Siegel, & Fulton, 2005). As a psychological concept it has both trait and state like qualities (Hülsheger et al., 2013). Since the word is used interchangeably to describe more than one construct, it is important to define mindfulness through a concrete specific operational definition before any attempt on empirical evidence.

According to its Buddhist roots, mindfulness is "being conscious of what one is doing, having a clear sense of one's mental state and bodily feelings, which is about acknowledging impermanence of body, feeling and mind" " (Shonin, Van Gordon & Singh, 2015). Zen master Thich Nhat Hahn says mindfulness is "keeping one's consciousness alive to the present reality" (Hahn, 1976). Founder of the MBSR program, Jon Kabat-Zinn defines mindfulness as "process of bringing a certain quality of attention to moment-by-moment experience" (1990). A similar description is made by Williams, Teasdale and Segal, stating that "mindfulness is the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to things as they are" (2002). An alternative definition is

"mindfulness is a kind of nonelaborative, nonjudgmental, present-centered awareness in which each thought, feeling, or sensation that arises in the attentional field is acknowledged and accepted as it is" (Shapiro & Schwartz, 1998). Another alternative can also be "a state of psychological freedom that occurs when attention remains quiet and limber, without attachment to any particular point of view" (Martin, 1997).

Based on these descriptions it can be concluded that mindfulness offers a nonbiased, perspective-less state of mind, overriding the schemas and constructs of the mind and therefore 'mindful people' have a heightened awareness of their body and mind, clarity of thoughts, sensations, and emotions, and a certain unreactive pattern of behavior to things that happen to them and around them (Keng et al., 2011; Brown et al., 2007). Research also suggests supports this explanation. It is suggested that prolonged mindfulness practice enhances working memory capacity (Roeser et al., 2013), increases cognitive flexibility, the ability to perceive multiple perspectives or thoughts (Bishop et al., 2004), provides an improved mental and emotional flexibility when dealing with problems (Good & Lyddy, 2015), increases self-regulation (Glomb et al., 2011; Hülsheger & Schewe, 2011), and provides a sense of mastery on urges and behaviors (Glomb et al., 2011).

In the article "Mindfulness: A Proposed Operational Definition" Bishop et al. suggests a conclusive operational definition for mindfulness (2004). After studying the previous literature and works of other scholars in the field, Bishop and friends suggest a two-component model for mindfulness, which can be summarized as "self-regulated attention along with, an open, curious, and accepting orientation towards experience."

2.1.1.1 Self-Regulated Attention:

Attention is the cognitive behavioral process of noticing the environmental information. It can be voluntary, like paying attention to learn a task, or involuntary, like noticing the fire alarm. According to Bishop and colleagues, mindfulness begins with using the process of attention to "observe and attend to the changing field of thoughts, feelings, and sensations from moment to moment, by regulating the focus of attention." (2004) In mindfulness context, this would be what is said *to be here and now*, being fully present with all that is happening around us, as well as inside of us. Self-regulated attention requires the ability to switch between various events, all happening at the same time, for example noticing the sensation of breathing, a thought, or a feeling that arises in the moment, and therefore would involve training the switching ability of attention.

Another aspect of attention self-regulation is the "nonelaborative awareness of thoughts, feelings, and sensations as they arise." (Bishop, 2004). Normally, people have a tendency to acknowledge the stimuli, and the innate experiences that accompany the stimuli as *positive* or *negative* (Frijda, 1988). However, in a mindfulness practice people would be invited to notice the tendency to categorize these experiences as positive or negative, or sometimes as *wanted* or *not wanted*, as it is referred in a mindfulness class. This would often be described as "being an impartial observant of your own experience", meaning "not getting tangled up in our own experience by elaborating on its origins, implications, and associations, but being able to observe and notice all mind and body events as they are, with a direct experience" (Teasdale, Segal, Williams, 1995).

As the descriptions above suggest, mindfulness is about being aware of whatever is present. A common misunderstanding about mindfulness is that it means

getting rid of thoughts, emptying the mind, suppressing the emotions, or ignoring body sensations. On the contrary, mindfulness would not try to get rid of any mind or body happening but would consider all of it as object of observation. Once noticed and acknowledged, attention would be deliberately directed back to breath or any other choice of anchor point, preventing further elaboration. Since attention has limited capacity (Schneider & Shiffrin, 1977), stopping secondary elaboration of cognitive processes opens up more space for information related to current experience, creating a wider perspective without the filter of our beliefs, assumptions, expectations, and desires (Bishop, 2004). In this two component model of mindfulness, mindfulness is considered to be a metacognitive skill, "cognition about one's cognition" (Flavell, 1979), involving "self-regulation of attention, attention switching, and the inhibition of elaborative processing" (2004).

2.1.1.2 Orientation to Experience

Orientation to experience is an important component of mindfulness and without this specific orientation, mindfulness training would merely be an attention training. The orientation to experience is commonly known as the *mindful attitudes* which define the specific quality of the behavior towards what is noticed through attention. This quality of behavior is key to 'being mindful' (Kabat-Zinn, 2013). According to Kabat-Zinn there are seven mindful attitudes, which serve as the pillars of mindful presence, which are *non-judgment, patience, beginner's mind, trust, non-striving, acceptance*, and *letting go* which can be cultivated through mindfulness training. He also names *compassion, generosity, gratitude, forgiveness, kindness, empathic joy* and *equanimity* as the other qualities which arise from deepening the practice of mindfulness (Kabat-Zinn, 2013). *Compassion* has a special place in the mindfulness curriculum and is defined by Kabat-Zinn; "mindfulness eventually is a

radical act of self-compassion". Kabat-Zinn explains this, by saying that compassion is the fabric in which the curriculum is conveyed through, and that there is an implicit teaching of compassion within the curriculum. Compassion will be described in more detail in the following chapters. Figure 2.2 describes the teaching of attitudes in relation to the mindfulness curriculum as described by Kabat-Zinn (2013).

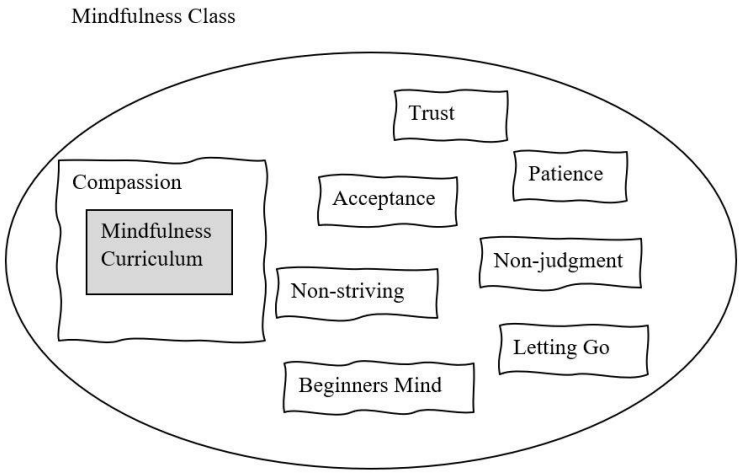


Figure 2.1. *Attitudes in a Mindfulness Class*

In line with Kabat-Zinn's attitudes, in the two-component model, Bishop and colleagues state that the orientation to present moment experience that is adopted and cultivated in a mindfulness practise can be defined as *curiosity*, *acceptance*, and *experiential openness* (2004).

Orientation begins with *curiosity*, which is twofold:

(1) when the mind wanders off, which it typically does, carrying the commitment of curiosity and coming back to the direct experience instead of being drifted,

(2) being curious about whatever arises in the moment, thoughts, feelings, sensations, and urges, and observing what is here.

The person who is engaged in the mindfulness meditation is not trying to create a specific type of experience, like relaxation, instead, is just curiously observing what is here now. By this way, the person engages in *acceptance*, which is defined as "being experientially open to the reality of the present moment" (Roemer & Orsillo, 2002). Acceptance also means realizing to have an expectance for things to be in a certain way, and letting go of this expectance by allowing current thoughts, feelings, and sensations to be as they are (Hayes, Strosahl, & Wilson, 1999), which is an active process of facing whatever is there with an openness, which leads to the third component, *experiential openness* (Bishop et al., 2004). *Figure 2.3* below elaborates and recaps the model of .

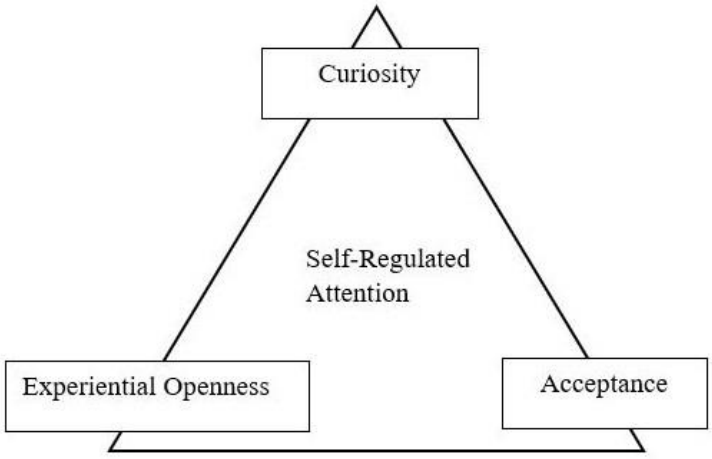


Figure 2.2. *Operational Definition of Mindfulness*

2.1.2 Origins of Mindfulness Based Psychology

The concepts and practices described in the field of mindfulness has been part of many schools of thought, such as and not limited to Stoicism in the ancient Greece and Sufism in Islam (Murgula & Diaz, 2015; Mirdal, 2010), however, it is Buddhism that have studied the concept and the practices of mindfulness extensively. Therefore, before looking into the mechanisms of mindfulness interventions, we should look at the historical Buddhist roots of the concept to understand present-day mindfulness-based psychology.

Western travelers and scholars who have travelled to the east and learned about mindfulness have introduced this concept to the western world. The original Buddhist text of *Satipaṭṭhāna Sutta* is one of the historically oldest documents that describes the concept of mindfulness, and it serves as the foundational text in the field. *Sati* in Pali language, one of the two languages that most Buddhist texts are written in, the other being Sanskrit, means 'mindfulness' and *paṭṭhāna* may mean 'foundation', 'presence' or 'establishment', and finally the word *sutta* means 'discourse', consolidating one possible meaning of *Satipaṭṭhāna Sutta* as "Discourse on the Foundation (Establishment) of Mindfulness" (Thera, 2005).

According to Satipaṭṭhāna Sutta, the goal of practicing mindfulness is to attain *nibbana* in Pali, more widely known as *nirvāṇa* as in Sanskrit. *Nirvāṇa* means liberation from the repeated rebirth in *saṃsāra,* literal translation being the *world* or *wandering,* or in more metaphysical context, *repeated cycle of birth and death* that is considered to cause suffering by its very nature, because suffering is an inevitable part of human condition since humans age, get sick, have ill will and die, which cause suffering. The term *nirvāṇa* is often translated as *enlightenment* in to English, and popularly considered as a spiritual state, however, the literal translation of the word

nirvāṇa is *awakening,* and in a more naturalistic context, it may mean *to be informed about the nature of the mind*, thus ending the cycle of *saṃsāra*. In this context, 'attaining nirvāṇa' may not mean attaining a supernatural, spiritual or a metaphysical state, but simply a calm presence, free from the inner conflict that causes psychological suffering that arises from the nature of our minds, which is an inevitable result of being human and being alive, often referred as the human condition (Collins 1998; Wright, 2017).

Siddhārtha Gautama, who was a historical figure born in present-day Nepal, and was commonly known as the Buddha after supposedly attaining nirvāṇa himself, explains this concept of inevitable psychological suffering that arises from being human, in the foundational doctrine of Buddhism, "The Four Noble Truths" as;

(1) in life there is suffering (*dukkha* in Sanksrit) and it is inevitable,
(2) the origin of suffering is "craving" which is wanting things to be in a certain way,
(3) there is a way to end suffering while living,
(4) and following the Eightfold Path (a set of practices that Buddha recommends, mindfulness meditation being one) serves as a formula to end the suffering (Teasdale & Chaskalson, 2011)

The Sanskrit word dukkha is commonly translated as suffering, but other translations include *pain, unsatisfactoriness, grief, misery, distress, worry, sorrow, unhappiness,* and *stress* (Tyson & Pongruengphant, 2007). It is important to understand Jon Kabat-Zinn's, the innovator of the modern-day mindfulness, understanding of dukkha to understand how he introduced mindfulness into the mainstream psychology through the Mindfulness Based Stress Reduction (MBSR) program since formation of the MBSR was pivotal in shaping the general

understanding of mindfulness and its applications today because Kabat-Zinn's 8 weeks course, MBSR was designed as a remedy for dukkha (Wilson, 2014). Kabat-Zinn says in his own words:

> "I want to make a connection between the words *stress* in English and our general concept of it in this society, and the Buddhist concept of *dukkha*". (Rapaport et al., 1998).

Mindfulness was introduced to western world in the 19th century and by the time Kabat-Zinn developed the MBSR program there were already many teachers who have been teaching mindfulness (Rapaport et al., 1998). There were also books such as *Zen Buddhism and Psychoanalysis* by Erich Fromm (1960), and *Psychotherapy East and West* by Alan Watts (1961) that introduced eastern philosophy and mindfulness to mainstream psychology. However, it was Kabat-Zinn's 'secularization' of the concept by cutting the obvious ties with Buddhism, which made mindfulness more palatable to wider circles, and attractive to academicians and scientists to consider mindfulness as a possible form of treating psychological distress. Kabat-Zinn explains the link between Buddhism and mindfulness as such:

> "I did not shy away from explicitly stating its Buddhist origins, however, from the beginning of MBSR, I bent over backward to structure it and find ways to speak about it that avoided as much as possible the risk of it being seen as Buddhist, 'New Age', Eastern Mysticism, or just plain 'flakey.' To my mind this was a constant and serious risk that would have undermined our attempts to present it as commonsensical, evidence-based, and ordinary, and ultimately a legitimate element of mainstream medical care." (Kabat-Zinn, 2011).

The main technique of treatment in mindfulness practice is meditation. Meditation is a broad term, and it refers to a "family of self-regulation practices that focus on training attention and awareness in order to bring mental processes under greater voluntary control and thereby foster general mental wellbeing and development and/or specific capacities such as calm, clarity, and concentration" (Walsh & Shapiro, 2006). There are various kinds of meditation (Ospina, Bond et al., 2008), mindfulness meditation being one. In Satipaṭṭhāna Sutta, it is described that in order to ease suffering, one must be aware of, train and calm the feelings, sensations and thoughts and the reactions of the mind in response to these, and that the method of training is meditation. There are two types of meditation; concentration meditation (*samatha*) which is for calming the mind, and the other technique is insight mediation (*vipassana*) for understanding and gaining insight into the mind. These two types of mediation form the basis of present-day mindfulness applications.

Buddha discloses the following practices in The Eightfold Path which are total of 8 recommendations that are categorized in three parts, wisdom (*paññā)*, mind training *(samadhi),* and *ethics* (*sila*) to end earthly suffering, in other words psychological distress:

Wisdom; achieved by Insight (vipassana) meditation

(1) right view
(2) right intention

Mind training; achieved by Concentration (samatha) meditation

(3) right effort
(4) right mindfulness
(5) right meditation

Ethics; achieve by moral behavior in everyday actions

(6) right speech

(7) right action

(8) right means of livelihood (Huxter, 2015)

The MBSR program also emphasizes the practices of insight and concentration meditations, without the ethical context (*sila*) attached to it, which is something Kabat-Zinn is criticized for. While some thinks that explicit ethics training is needed for effective delivery of any type of mindfulness training, some argues that ethics is already implicit in even secular MBIs. Nevertheless, Kabat-Zinn takes a stance against the critiques, saying that to place the program on a scientific basis there had to be changes to be made. In his own words he had written:

> "The intention and approach behind MBSR were never meant to exploit, fragment, or decontextualize the dharma, but rather to recontextualize it within the frameworks of science, medicine (including psychiatry and psychology), and healthcare so that it would be maximally useful to people who could not hear it or enter into it through the more traditional dharma gates, whether they were doctors or medical patients, hospital administrators, or insurance companies." (Kabat-Zinn, 2011).

In conclusion, Kabat-Zinn with no formal training in psychology, but being a Doctor of Medicine, a scientist and an academic, he applied scientific method to mindfulness and has formed the basis of evidence-based mindfulness psychology as we know today. His vision and efforts in recontextualizing mindfulness meditation have started a whole new wave in the mind-body holistic approach to human psyche. Today mindfulness-based practices can be learned by individuals from all kinds of

backgrounds, and anybody can benefit from the approach without any attachments to any religious or philosophical teaching (Wright, Day & Howells, 2009). Present day mindfulness researchers are studying and linking the wisdom of this ancient human practice with significant clinical findings in psychology, medicine, and neuroscience.

2.1.3 Mechanisms and Evidence for Mindfulness Based Interventions

By practicing mindfulness and honing attention in a certain way as described in insight and concentration meditation techniques, feelings, senses, emotions, and thoughts are brought into awareness in a certain unbiased and unreactive pattern, which is assumed to alleviate distress and promoting positive affect.

The skills that are learned in a mindfulness class begin with "approaching one's experience with an orientation of curiosity and acceptance, which sets the stage for intensive self-observation" (Bishop et al., 2004). Since mindfulness is as a process of "exploratory awareness that involves observing the ever-changing nature of the personal experience", the participant makes an intentional effort to observe and gain a greater understanding of the nature of his or her own thoughts and feelings, whatever arises in the stream of consciousness in the present moment. As sensations, feelings and thoughts arise, discriminating between different elements of experience, such as realizing that a sensation is different than a feeling, or a thought is different than a sensation is one of the objects of the practice. In a way, the body and the mind are a laboratory for self-observation, and the practitioners are invited to be curious about their experience rather than being rigid and dutiful in order to practice 'right'. Therefor an important part of mindfulness training involves experiential psychoeducation on the mechanism of cognitive processes.

Once learned, practicing mindfulness is easy and convenient. Despite the popular images such as fancy meditation accessories, postures and settings, one does not need any of these to practice mindfulness. Mindfulness meditations and practices can be practiced anywhere, for any duration of time, with no special gear needed, making it easily accessible to practice at work, during commute, and in break times.

Development of mindfulness over a prolonged practice would result in greater capacity to recognize the complex nature of emotional states that are linked to body sensations and thoughts, increasing emotional awareness. Similarly, with prolonged exercise of curiosity and acceptance through mindfulness, it is expected that the cognitive and behavioral schemas decrease, and "dispositional openness increase, a trait that is characterized by curiosity and receptivity to new experiences" (Costa & McCrae, 1987). When perception about self and the world are assessed through a non-judgmental and observative state of mind, a state of *meta-cognition* is thought to be achieved (Jankowski & Holas, 2014), and when meta cognitive insight is available, there is a greater capacity to see relationships between thoughts, feelings and actions and realize the patterns of behavior, developing insight to a person's psyche, to the unique construct of it causes, meanings, and motives (Segal, Williams, & Teasdale, 2002). Finally, another result of metacognitive insight may also be a change in perspective on the self (Lazar, Hölzel et al. 2011; Grecucci, Pappaianni et al. 2015).

Further benefit of prolonged practice, and perhaps one of the most beneficial ones, is acquiring an attitude of acceptance towards painful or unpleasant thoughts and feelings (Hayes et al., 1999). Through awareness, "emotional distress would be experienced as less unpleasant and threatening, since the context of acceptance changes their subjective meaning" (Bishop et al., 2004). Additionally, since negative and positive emotion regulation predicts negative and positive emotional reactions, respectively, this plays an important role in resilience and subjective wellbeing (Ng &

Diener, 2009). Assessing and responding to emotions with awareness, enabling the person to regulate emotions without pushing them away or getting tangled up in them, is one of the skills learned through practice of mindfulness. Taking a more mindful stance towards one's experiences and emotions may be helpful in enhancing emotion regulation and limiting reactivity (Linehan, Bohus, & Lynch, 2007). A meta-analysis on literature in this field also suggests that mindfulness is correlated with more positive emotional tone (Eberth & Sedlemeier, 2012).

In line with the theoretical underpinnings described above, research suggests that mindfulness decreases emotional reactivity (Arch & Craske, 2006), stabilizes attention and decreases negative mind wandering (Mrazek, Smallwood & Schooler, 2012), decreases the emotions of fear, anger and worry (Robins et al., 2012), reduces stress (Ciesa & Serretti, 2009) and provides better recovery from work related strain (Hülsheger et al., 2015). Additionally, mindfulness is not only associated with alleviation of psychological distress, but also elevation of positive affect. Research suggests that mindfulness is correlated with higher levels of positive affect (Keng et al., 2011), daily experiences of positive emotions (Fredrickson et al., 2008), more hopeful attitudes (Malinowski and Lim, 2015), lower cynicism (Taylor & Millear, 2016), and overall happiness (Killingsworth, 2010).

Research tools in this area does not only involve self-report scales or observation, but also using technology such as functional magnetic resonance imaging and electroencephalography. Findings with these methods suggest that "meditation appears to reflect changes in anterior cingulate cortex and dorsolateral prefrontal areas,", "shrinking of the amygdala", and "increase in hippocampus". These suggest that people who engage in meditation may have better attention and emotional regulation, and that meditation may protect preservation of white and grey matter" (Cahn & Polich, 2006; Chiesa, Brambilla, Serretti, 2011; Lazar, Hölzel, et al., 2011).

As a final note, mindfulness training has also a direct effect on the body through the peripheral nervous system. “The purpose of mindfulness meditation *is not* relaxation” is a statement often repeated by mindfulness teachers to the disappointment of mindfulness students. However, whilst meditating majority of the people slow their breathing down even if there is no explicit direction to do so. In one study, both the experienced and novice meditators reported to have slower respiration rates compared to controls at rest and during the meditation (Ahani et al., 2014). When breathing slowly, ‘rest-digest-relax’ part of our nervous system, namely the parasympathetic nervous system is engaged, as opposed to sympathetic nervous system (Jerath et al., 2006). Engaging in parasympathetic nervous system slows the heart rate, regulates the blood pressure, improves sleep and digestion, and normalizes the stress hormones (Benson, Beary & Carol, 1974). In conclusion, mindfulness is thought to have direct effects on the physical body, and it is thought to reduce stress reactions of a person through various neurobiological mechanisms. (Creswell & Lindsay, 2014).

In summary, mindfulness research indicates that the mechanism of mindfulness meditation works through the following elements;

(1) attention regulation,
(2) body and mind awareness, ability to realize and differentiate sensations, thoughts, feelings, moods
(3) distancing from thoughts a process known as ‘cognitive defusion’
(4) a gained insight into one’s psyche
(5) emotion regulation
(6) change in perspective on the self
(7) soothing of the nervous system
(8) possible change in the physical structure of the brain

2.1.4 Characteristics of Mindfulness Interventions

Interest in mindfulness resulted in a rapid increase in types of programs that are offered in the field. However, to be effective, the programs should pass the integrity check and comply with the evidence-based mindfulness protocols. To define the qualities of mindfulness programs and mindfulness teaching, Crane et al. (2017) suggest that *the warp and the weft* metaphor is an appropriate one to understand what makes a mindfulness program effective. "In weaving, the term *warp* defines the fixed thread, and the term *weft* defines the transverse thread that makes each tapestry unique, giving it's texture and color" (Crane et al., 2017). Just like with the warp and weft analogy, a mindfulness-based program should have certain fixed qualities that are unique to the essence of mindfulness, and specific customization and variations that are unique to the context and the population. Therefore, in order to successfully adapt a mindfulness-based program to a unique population, the program creator should keep in mind the specific characteristics of the participants, and also the context in which the program material will be taught, whilst "being loyal to the essential, constant, and integral parts of a mindfulness-based program" (Crane et al., 2017).

The essential and integral parts of an MBP is described as;

(1) being based on contemplative traditions, science, and the major disciplines of medicine, psychology, and education,
(2) follows a model of human experience which is designed to target the causes of human distress,
(3) has a present moment focus,
(4) supports the development of greater attentional, emotional and behavioral self-regulation, as well as positive qualities such as compassion and wisdom,

(5) engages the participant in a sustained intensive training in mindfulness meditation practice and provides an experiential inquiry-based learning process, (Crane et al., 2017).

It should be noted that evidence based positive research results that reflect the effectiveness of mindfulness programs originate from first or second-generation teachers. These teachers were either contemporaries of Kabat-Zinn or other teachers that come from Buddhist tradition, or people who have learned directly from them. Since we are now moving into a new phase in mindfulness teaching, it is crucial that the program curriculums are well designed, adhering to the principles of mindfulness protocol, in order to successfully deliver evidence-based effective mindfulness programs (Crane, Kuyken, Williams, 2012).

Apart from the program qualities, another important aspect of the effective mindfulness-based intervention is teacher competence. In order to deliver an beneficial program, the teacher is expected to;

(1) have competencies for effective delivery of the MBP,
(2) have capacity to embody the qualities and attitudes of mindfulness within the teaching,
(3) has undertaken appropriate training and commits to ongoing good practice,
(4) is part of participatory learning process with the participants, patients, and clients (Crane et al., 2017).

Jon Kabat-Zinn states that “the quality of MBSR as an intervention is only as good as the MBSR instructor and his or her understanding of what is required to deliver a truly mindfulness-based program.” (Kabat-Zinn, 2011), a point that is important to

reflect on. Mindfulness interventions are not considered therapy on their own, but may be used as part of therapy, and technically mindfulness interventions may be classified as experiential interventions integrated into psychoeducation. Although it is *not therapy* but often it is said to have *therapeutic effects*, which creates an important emphasis on teaching integrity. Just like the psychotherapist plays the utmost important role in the effectiveness of a treatment psychotherapeutically, the personal competence and teaching integrity plays the most important role in deliverance of the mindfulness curriculum.

Therefor well-rounded mindfulness teachers are assessed in 6 domains and are expected to;

(1) have mastery in the coverage, pacing, and organization of each session, adherence to the curriculum but also appropriate level of flexibility in adherence,
(2) have relational skills which is described as having compassion, warmth, curiosity and respect for the participants, authenticity in forming connections,
(3) embody mindfulness, with a present moment focus and responsiveness, calm and alert with the attitudinal foundations of mindfulness,
(4) have competency in guiding the mindfulness practices, using spacious and invitational language,
(5) convey the course themes through interactive inquiry-based dialogue, and,
(6) create a learning container for the whole group meeting in common humanity (Crane, Kuyken, Rothwell, Williams, 2010)

In conclusion, mindfulness is a new area of development and adherence to the standards in the field is important to maintain the reliability of the programs and the effectiveness of the treatment.

2.2 Mindfulness Based Interventions

Currently there are many mindfulness-based programs that are offered for a diverse variety of conditions to various audiences, both clinical and non-clinical in nature. Almost all mindfulness-based group programs are a derivative of the original Mindfulness Based Stress Reduction (MBSR), first designed and delivered in 1979-80. Programs that are utilized in the scope of this study, MBSR, Mindfulness Based Cognitive Therapy (MBCT), and mindfulness-based compassion programs and their derivatives are discussed in detail in the next sections.

2.2.1 Mindfulness Based Stress Reduction (MBSR)

As discussed in the previous sections, Jon Kabat-Zinn's personal history with Buddhism plays an important role in the development of the MBSR program. Although Kabat-Zinn no longer identifies himself as a Buddhist (Kabat-Zinn, 2010, Interview with Danny Fisher), it was due to his encounters with the Buddhist teachings that inspired him to develop the MBSR program. Today, the MBSR program is offered by many universities, medical centers, hospitals, and health maintenance organizations for coping with stress, pain, and anxiety, and is estimated to have reached over 25,000 people.

When Kabat-Zinn was a PhD student at the Massachusetts Institute of Technology (MIT) between the years of 1964 – 1971, he was also a Zen Buddhism student attending the teachings of Philipp Kapleau, Thich Nhat Hanh and other Buddhist teachers. In 1976, when he started working for University of Massachusetts he was also maintaining his private Buddhist practices, and also taking on new roles such as being the founding member of the Cambridge Zen Center and teaching at the Insight Meditation Society. His idea of taking this ancient Buddhist practice out of religious and philosophical context and applying it to distresses of the mundane life was shaped after a vision he had during a silent retreat. Shortly after, in 1979, he started the Stress Reduction Clinic and the Center for Mindfulness in Medicine, Health Care, and Society at the University of Massachusetts Medical School (UMass CFM),where he was still working as a professor, and delivered the MBSR program first for chronic pain management, and later for stress management (Kabat-Zinn, 1990; Kabat-Zinn, 2003). The core aim of the MBSR program is to reduce stress reactivity to one's experiences, focusing on the habituated reactions to stressors and realizing *skillful* and *unskillful* ways of responding to difficulties. Skillful ways are described as adaptive behaviors towards alleviating immediate and future distress, whereas unskillful ways are described as dysfunctional behaviors that create more distress (Kabat-Zinn, 2013).

MBSR program is an eclectic program delivered in a group setting, typically 6 – 20 people, although groups as big as 40 people are not unusual, depending on the teacher's experience. Both educational and therapeutic in nature, it offers meditation skills training, contemplative practices, physical movement in yoga poses, psychoeducation on the nature of the human mind and distress, inquiry based Socratic dialogue, poem and story reading for reflection, and group support all tailored into 2.5 – 3 hours long sessions that are offered once a week for 8 weeks. An additional 6 -7 hours long Silent Practice Day typically takes place in the 6^{th} week. In addition to the

in-class training, participants undertake daily at home meditation and other daily life practices, such as journaling and some other informal meditative exercises that require them to invest around 50 – 90 minutes daily. Jon Kabat-Zinn gives a detailed curriculum of the program in his book Full Catastrophe Living, published first in 1990, and revised later in 2013. The curriculum has been updated couple of times, published and circulated by UMass CFM. Currently the most up to date curriculum version is the Mindfulness-Based Stress Reduction (MBSR) Authorized Curriculum Guide 2017, revised and edited by Saki Santorelli, Florence Meleo-Meyer, and Lynn Koerbel, under the supervision of Jon Kabat-Zinn.

Another important features of the MBSR program is the experiential learning environment, in which the group leader would create a non-didactic atmosphere where the key elements of mindfulness are 'conveyed rather than taught' (Crane & Kuyken, 2012). This puts a great emphasis on the competence and quality of the teaching, and requires an in dept training, typically over a 1 – 3 years for a person to become an MBSR teacher. Although there is not an official guideline on the qualifications for being an MBSR teacher, typically the bare minimum requirement is that an MBSR teacher should receive 150 – 250 hours of training and additional supervision. Additionally, teachers should have at least 5 – 10 days silent retreat experience before teaching a mindfulness group and are expected to practice mindfulness personally for at least 6 months to 1 year prior to starting mindfulness teacher training. The most important qualification of an MBSR teacher is that she or he would be expected to *embody* the concept of mindfulness personally within the class, expressing attention and gentle orientation towards the present moment experience in all engagements with the group (Crane & Kuyken, 2010).

MBSR is used as a 'template' for designing other mindfulness-based interventions and there are many other programs, designed for a variety of clinical and

non-clinical settings based on the MBSR. Some noteworthy mentions are Mindfulness-Based Eating Awareness Training (Kristeller & Wolever, 2010), Mindfulness-Based Relapse Prevention (Bowen et al., 2009), BREATHE in Reconciliation, a trauma sensitive MBSR for communities affected by violence, Mindfulness-Based Trauma Recovery for Refugees in Israel (University of Haifa), Mindfulness-Based Childbirth and Parenting (Hughes, Williams, Bardacke et al., 2009), Mindfulness-Based Mind Fitness Training for military personnel and civilians that serve in high stress environments (Stanley et al., 2011), Eline Snel Method for Children (2013), Mindfulness in Schools (MiSP) Project with a specific curriculum designed for children aged 7 to 11 (Paws .b curriculum), and for children aged 11 to 18 (.be curriculum), and Koru Program designed for university students.

2.2.2 Mindfulness Based Cognitive Therapy (MBCT)

Mindfulness Based Cognitive Therapy (MBCT), originally designed for treatment of relapsing depression, is an 8-week mindfulness-based group intervention that combines the MBSR program with an underpinning of psychological framework from cognitive behavioral therapy (CBT), as conceptualized and applied by Beck, (Segal, Williams & Teasdale, 2002). Compared to MBSR, MBCT classes are shorter, approximately 2 hours, instead of yoga, mindful movement is introduced, and there are additional curriculum elements of CBT exercises. Also, MBCT classes are typically smaller groups, 6 to 15 people.

The core aim of the MBCT program is to increase psychological resilience by being aware of and changing one's relationship with the 'cognitive reactivity', which is defined as "the tendency to reach to small changes in mood with large changes in negative thinking", therefore there is an explicit focus on the role of cognitive patterns

in creating and maintaining distress within the curriculum (Segal, Williams, and Teasdale, 2002). MBCT is a unique intervention, a cross between psychoeducation and therapy, and may ultimately be categorized as a therapy, however unlike traditional therapies instead of trying to "fix problems" the emphasis is on letting things to be as they are. This notion of 'letting things *to be* instead of *fixing* them', often referred as *being mode* versus *doing mode* in a MBCT class, allows MBCT to have a softer stance, with more self-compassion and flexibility as opposed to traditional CBT (Crane, 2017).

As scientist and clinicians working in the field of psychology, Mark Williams, John Teasdale and Zindel Segal were not particularly interested in mindfulness to begin with. They were working on possible theoretical frameworks for a maintenance therapy for depression relapse. They started to share ideas with each other as early as 1989, and after investigating various theories, models and applications including MBSR, they have decided to add an *attention training* component to the standard CBT. Eventually, they "discarded the 'therapy' framework all together and adopted a more mindfulness-based approach. Later, they decided to "integrate core cognitive therapy principles with sustained mindfulness practice" finalizing the MBCT protocol as we know today (Segal, Williams & Teasdale, 2002).

MBCT was specifically designed for depression relapse and the research suggest that MBCT is an effective way to prevent relapse of depression with patients with 3 or more previous episodes (Ma & Teasdale, 2004). A meta-analysis that included six randomized controlled trials with a total of 593 participants also confirmed this finding, additionally, it was concluded that MBCT was at least as effective as maintenance antidepressant medication for people who had 3 or more episodes (Piet, 2011). However current research shows that MBCT may be an

effective treatment not for depression only, but for other anxiety as well (Hofmann et al. 2010; Evans, 2016).

MBCT is a versatile program and its applications broadened since its introduction. Currently MBCT is adapted for a wide range of clinical and non-clinical contexts, since MBCT is considered not only clinically effective, but also cost-effective, for both treatment and prevention of psychological distress. Adaptations of MBCT include medically unexplained symptoms, social anxiety, bipolar disorder, combat related post-traumatic stress disorder, epilepsy, insomnia, couple therapy and such (Eisendrath, 2016). Some specific program adaptions of MBCT are, MBCT – L (Life), designed for non-clinical settings with a more focus on resilience and positive psychology, MBCT – C, Cancer for Care of Cancer patients, survivors and care givers, (Bartley, 2011), Finding Peace in Frantic World program (Williams & Penman, 2011) a self-help program which is sometimes referred as 'MBCT light'.

There is an extensive research on applications of MBCT in the field and it is sometimes considered as an *updated version* of MBSR by practicing teachers in the field, a curriculum that is firmly rooted in evidence-based science.

2.2.3 Mindfulness-Based Compassion Programs

Compassion focused mindfulness interventions are a derivative of the MBSR program with an explicit teaching emphasis on self-compassion. Programs in this category are Compassionate Mind Training (CMT) by Paul Gilbert (2006), Mindful Self Compassion (MSC) by Chris Germer and Kristen Neff (2013), and Mindfulness Based Compassionate Living (MBCL) by Erik van den Brink and Frits Koster (2015).

The core aim of these programs is to cultivate compassion as a method of alleviating psychological distress.

To understand programs in this category, we would need to look into the Buddhist origins of the notion of compassion and its relation to mindfulness. In Buddhist psychology, *karuṇā* (compassion) together with mindfulness are referred as *two wings of a bird*, stating that these two concepts are inseparable, and are to be practiced together. Kabat-Zinn says: "Mindfulness without heartfulness is not mindfulness.", and to be practicing mindfulness, it must be done with kindness and compassion (Kabat-Zinn, 2013). This is also important for understanding criticisms towards practicing mindfulness alone, without the ethical principles, as discussed in the earlier chapters. Practicing mindfulness with an intention of kindness and compassion may make up for the missing component of ethics that some people think secular mindfulness trainings lack, which would help to cultivate *right* type of mindfulness.

In Buddhist teachings, compassion is one of the four noble virtues (the others are *mettā*; loving kindness, active good will towards others, *mudita*; is sympathetic joy, and *upekkha*; is the non-reactive, non-partial balanced state towards all beings). Compassion is considered an immeasurably valuable quality because it is believed that since the ultimate purpose of life is *annihilation of self* through reaching nirvana, which ends the repeated cycle of suffering, not causing more suffering, is not only an important ethical consideration, but also necessary to break free from the repeated cycle of suffering. Compassion is thought to be antidote for suffering and Buddhists engage in various practices such as veganism, or *ahimsa*, nonviolence, because they see these practices as direct ways to cultivate compassion in everyday life. Practices like *Mettā,* which is a special form of concentration meditation, in which phrases of good will and kindness such as *"May you be well, may you be happy, may your*

suffering ease" are extended to all beings. *Tonglen,* another practice of compassion where the meditator concentrates on the metaphorical image of breathing in suffering and breathing out joy to reduce distress of living beings, are common mental practices.

Looking from a more naturalistic perspective, just like practicing veganism to avoid causing physical suffering, engaging in practices not to cause more psychological suffering, or to work actively towards easing of suffering of self and of others, is not only an important ethical consideration, but also a prerequisite to mental wellness. According to many researchers, including Dr. Paul Gilbert, the founder of Compassion Focus Therapy (CFT) and Compassionate Mind Training (CMT) the origins of compassion have deep roots in our evolutionary history and in particular, the evolution of attachment behavior and mammalian care giving system of soothing and nurturance. Therefore, compassion and self-compassion are strongly associated with health and wellbeing and can be taught and used to treat psychological distress (Gilbert 2010; Irons, 2014; Gerhardt, 2009).

Gilbert says compassion involves a genuine motivation to act with the purpose of *ending suffering*. Self-compassion scholars Kristen Neff and Christopher Germer state that self-compassion as "extending compassion to self, just like you would do to a good friend", and that it involves "self-kindness versus self-judgment, common humanity versus isolation, and mindfulness versus overidentification" (2013). Compassion requires an understanding of the fragile and imperfect nature of the human condition, sensitivity to suffering, a desire to alleviate it, and a wisdom to choose the right actions to remedy suffering, which are notions in line with the Buddhist understanding of the human condition.

As can be concluded from the definitions, programs that teach compassion, focus on strategies that offer validation, warmth, acceptance, feelings of reassurance

and safeness (Gilbert, 2006; Gilbert 2009; Germer, 2009). One can argue that compassion is fundamental to any type of psychological intervention, be it a therapeutic or educational one, such an intervention can succeed only if there is validation and acceptance. However in mindfulness based compassion programs there is an *explicit* emphasis on teaching the individual to get in touch with his or her *compassionate self*, a quality thought to be present in all human beings, to alleviate psychological distress, especially self-criticism and feelings of shame and inadequacy (Gilbert, 2009).

Mindfulness based compassion is a newer area of mindfulness studies, however, scientific evidence is emerging in this area too. It is suggested that engaging in compassion cultivating practices can influence neurophysiological systems (Davidson 2003; Lutz 2008). A study on the systematic review on compassion and mental health that included samples from 14 studies found a large effect size for the relationship between compassion and psychopathology, stating that "compassion is an important explanatory variable in understanding mental health and resilience" (MacBeth & Gumley, 2011). Another study is done by Neff and Germer to research the effectiveness of MSC program and the results indicated the MSC program was effective in increasing mindfulness, self-compassion, and wellbeing (2012).

Mindfulness based compassion programs are 8 weeks, sessions approximately are 2.5 hours long and are delivered in group settings like the MBSR and MBCT programs. In addition to the mindfulness exercises and meditations, compassion classes include compassionate imagery and other self-compassion cultivating exercises to get in touch with the self-soothing and self-validating part of the self.

2.2.4 Mindfulness Based Approaches in Individual Psychotherapy

Mindfulness has long been a part of 'third wave' cognitive-behavioral therapies, which are based on awareness and acceptance. Instead of changing the content of our thoughts or feelings like in the earlier version of CBT therapies, the third wave CBT therapies focus on changing our relationship with our internal mental events. Third wave CBT therapies that utilize mindfulness are Acceptance and Commitment Therapy (ACT) (Hayes, Strosahl et al. 1999) and Dialectic Behavior Therapy (DBT) (Linehan, Heard et al. 1993), and Metacognitive Therapy (MCT) (Wells, 2011). The main differences of these therapies are "mindfulness methods, acceptance-based procedures, decentering and recentering approach, cognitive defusion, and psychological flexibility processes" (Hayes and Hoffman, 2017).

Dialectical Behavior Therapy (DBT) was originally designed to target highly suicidal individuals (Linehan, 1991). The treatment is an adaptation of behavioral therapy focusing on teaching clients effective problem-solving strategies along with acceptance, hence forming the dialectical nature of the therapy. The problem-solving strategies were adapted from the behavioral therapy and acceptance component of the therapy was adapted from Client Centered Therapy of Carl Rogers (1946) and also from Zen contemplative practices, adapted from the work of Ellen Langer (1989) and Thich Nhat Hanh (1976). Adapting Zen meditation to DBT was particularly challenging because of prejudice towards meditation at that time, and also because of the complex nature of the individuals that are targeted with this treatment. Since awareness meditation requires being aware of the *entire experience*, including displeasing ones, individuals who were avoidant of displeasing emotions and inner sensations have struggled with acceptance. As a result, four behavioral skills modules are designed and taught, which are mindfulness, emotion regulation, interpersonal effectiveness, and distress tolerance (Lynch & Bronner, 2006; Robins, 2002) to carry

out effective treatment. DBT is carried out in one to one and also in group settings, complementing one another.

Similar to the DBT, the aim of Acceptance and Commitment Therapy (ACT) is not eliminating difficult feelings, rather "to be present with what life brings us and to move toward valued behavior" (Hayes et al., 2012). ACT is an intervention approach that uses language as a tool of treatment, which is based on the Relational Frame Theory (RFT: Barnes-Holmes, & Roche, 2001). The earlier form of this intervention approach was known as *comprehensive distancing*, "influenced by Beck's emphasis on the importance of clients being able to 'distance' themselves from their thoughts, emotions and beliefs" (Zettle & Hayes, 2011). Whilst trying to apply this earlier version of the therapy, it was observed that the clients' problems persisted because in an attempt to control difficult situations, feelings and thoughts, clients were trying to 'escape' from them, a process known as *experiential avoidance*. Hayes argues that much of the human suffering is due to experiential avoidance (Hayes and Melancon, 1989), and in order to undercut the process of experiential avoidance, clients are invited to open up to unpleasant thoughts and feelings, and learn not to react to them. Mindfulness in ACT is used as a strategy to open up to present moment experience and be aware of the thoughts, sensations, and feelings without trying to escape from them.

Metacognitive Therapy (MCT) is another third wave therapy that use mindfulness elements as a tool for therapeutic purposes. Based on information processing model theorized by Wells and Matthews (1996), MCT has a transdiagnostic model, however, is commonly used for anxiety, depression, and obsessive-compulsive disorder. MCT formulates that pathology is caused by *cognitive attentional syndrome* (CAS) which is a pattern of extensive thinking. MCT aims at reducing CAS, by making the client be aware of his or her own thoughts, and the fact that these thoughts

may not always be true, thus, by this realization of this fact, it is possible to alter metacognitive beliefs which cause anxiety, worry, rumination and fixated attention. MCT uses attentional training and detached mindfulness which is described as taking a disengaged perspective on your own thinking processes, abstaining from further elaboration, interpretation, and reaction to them. This mechanism is central in mindfulness practice, as explained in the previous sections.

Although not technically considered a third wave therapy, another therapy that utilizes mindfulness is Compassion Focused Therapy (CFT), founded by Paul Gilbert which utilizes a brings together evolutionary psychology, social and developmental psychology notions, neuroscience, and Buddhist psychology (Gilbert, 2009). CFT is a form of CBT therapy that specifically targets shame and self-criticism, which are often "rooted in histories of abuse, bullying, high expressed emotion in the family, neglect and/or lack of affection" (Kaufman 1989; Andrews 1998; Schore 1998). In his model, Gilbert talks of three affect regulation systems, which are threat, soothe and drive. With people who are suffering from shame and self-criticism, threat regulation system is overly active and the clients are highly critical of themselves, and as a result, coping strategies learned in therapy are not utilized effectively, creating even more self-attacking. Additionally, dealing with shame and criticism requires working with flashbacks loaded with uncomfortable emotions, requiring a certain level of ability to tolerate distress. Like it is in DBT and ACT, the qualities and tools that mindfulness offers, such as awareness to one's inner states, distress intolerance, and self-compassion are used as strategies too sooth and calm the threat system. This provides reassurance, safeness, and well-being, making it easier to deal with flashbacks of shameful trauma memories, and providing necessary safety and assurance to learn new strategies of coping.

2.3 Wellbeing at Work

Wellbeing is a broad term that relates to many constructs such as happiness, pleasure, energy, hopefulness, ambition, and self-realization (Seligman, 2002). In workplace psychology context, employee wellbeing can be described as the "overall quality of an employee's experience and functioning at work" (Van de Voorde et al., 2012) and it is an extensively researched area. It is well established in the literature that wellbeing of employees has both individual, social and economic consequences (Kersley et al., 2006; Peccei, 2004; Cox et al., 2005). Since wellbeing is correlated with individual success and eventually, organizational success (Doherty, 2010), promoting employee wellbeing benefits not only the individual, but also the company.

Physical factors such as ergonomic comfort and workload, social factors such as organizational climate and relationships, and various psychological factors contribute to employee wellbeing. Main psychological factors that contribute to employee wellbeing are conceptualized as job satisfaction (Warr, 1990; Warr & Clapperton, 2010), job commitment (Grant et al., 2007), job engagement and burnout (Cropanzano & Wright, 2001), job autonomy, and factors that are associated with mental resiliency of an individual such as stress coping mechanisms, emotional regulation, mental flexibility, and positive affect in face of adversities. In the scope of this study, the most frequent determinants of psychological distress that are correlated with mental resilience, which are stress and rumination, and positive contributors which are psychological capital and psychological flexibility are described and explained in relationship with mindfulness in the next sections.

2.3.1 Stress

Stress is "uncomfortable cognitive state resulting from exposure to a stressor that can result in psychological and physiological strain" (Hendrix et al., 1995). It is associated with a complex relationship between personal and external factors. Stress and wellbeing are often associated with each other in the literature (Skakon et al., 2011), and it is well established that stress is a precursor to many psychological dysfunctions, such as depression, burnout, aggression and anxiety.

Earlier definitions of stress would have an emphasis on the physical strain on the body, for instance Selye defines stress as "nonspecific response of the body to any demands made upon it" (1976), however, more recent definitions incorporate both physical and psychological strain, for instance Clarke & Watson considers stress to be "an internal state or reaction to anything we consciously or unconsciously perceive as a threat, either real or imagined" (1991), and the interaction between the person and the environment is taken into consideration (Robbins, 2001). This is an important paradigm shift, since instead of identifying and fixing the source of stressors, working on the capacity to respond to stress regardless of the stressor comes forward as a better strategy. Lazarus and Folkman's Cognitive Appraisal Model of Stress (1984) is significant in this area. In this model, it is argued that in order to *feel stressed,* an organism needs to go through two levels of cognitive appraisal; (1) Primary appraisal; Evaluating whether the current situation is a potential stressor, the interpretation of the stimulus: *"Is this dangerous for me?"* and (2) Secondary appraisal; If the answer is confirmatory at the first level, analysis of the available resources to cope with the stressor: *"Am I capable of taking care of this situation?*. An organism will only feel stressed if it evaluates that resources are insufficient to take care of the current situation that is assessed as being threatening.

Mechanism of mindfulness as discussed in detail in earlier sections fits very well into this model of transactional appraisal of stress. It may help with stress management at both levels of the two appraisal stages. At the first level, when faced with a potential stressors instead of acting out on *autopilot,* which is a common term in mindfulness terminology defining habituated responses that arise from cognitive schemas of implicit memory, mindfulness may help with better comprehension and assessment of the current situation because *mindful people* have a clearer assessment of the present moment (Keng et al., 2011). At the second level, if the person assesses that the current situation to be beyond his or her capacity of coping, because mindfulness uses acceptance and impermanence strategies to cope with difficult situations, it may help with acceptance and reduced reactivity (Glomb et al., 2011; Brown et al., 2007). This process supports previous research finding of "regardless of the external stressor, individual's personal resilience is a better determinant of the stress reactivity" (Hülsheger et al., 2013).

Occupational stress on the other hand is defined as stress that arises from work related context, and it has an inverse relationship with employee wellbeing (Bacon et al., 2010). Environmental, organizational, or individual variables may cause job related stress (Cook & Hunsaker, 2001). The common stressors at work are identified as lack of control, ambiguity, organizational change, high workload, workplace conflict, job insecurity, work-personal life imbalance and organizational politics. Additionally, social factors such as changes in the society, technological developments, economic conditions, and politics would as well contribute to occupational stress since these factors affect work life significantly (Podsakoff & Lepine, 2007). Since psychological well-being of a person cannot be compartmentalized, stress arousing from private life, like family and social relationships, physical or psychological illnesses, and views about self may also add to work related stress too. In conclusion, offering strategies to reduce stress regardless

of the origin, whether work related or not, would be beneficial for both personal and work life. Mindfulness may be an effective intervention tool for reducing stress reactivity regardless of the source, therefor it is a promising tool for work related stress as well.

2.3.2 Rumination

Rumination is defined as "a class of conscious thoughts that revolve around a common instrumental theme and that recur in the absence of immediate environmental demands requiring the thoughts" (Martin, & Tesser, 1996). As it can be concluded from the definition, rumination is thinking about non-present moment, where the thoughts are engaged in past or in the future, and it is repetitive. Since mindfulness is being aware of one's own mind patterns, promoting being here and now with both body and mind, rumination is in a way the *opposite of mindfulness*, because when the person is ruminating his awareness about his immediate surroundings and the present moment reality is diminished (Nolen-Hoeksema et al., 2008; Kabat-Zinn, 2003).

All people ruminate to a certain extent, but how often a person ruminates and the intensity of the rumination may vary from person to person depending on many factors such as recent life events, personality traits, current stressors, and available coping mechanisms (Nolen-Hoeksema & Davis, 1999). It is a well-established link that rumination is strongly associated with depression and depressive symptoms (Nolen-Hoeksema & Morrow, 1993),) and other negative affect such as anxiety, neuroticism, and poor mental health (Kirkegaard, 2006). There are indications that rumination makes a difference in our long-term memory, to further elaborate, telling ourselves the negative messages over and over, affects how we perceive ourselves and our lives, strengthening the negativity bias (Lyubomirsky et al., 1998). Mindfulness

training is an antidote for rumination, because as it teaches skills to entangle from our own thoughts, instead of getting caught up with thoughts, one can observe and distance himself or herself from one's own rumination. Mindfulness programs and especially the MBCT curriculum is focused on the negative thought content, and our relations with our own thoughts. Instead of trying to change the content of the thought or the amount of rumination, mindfulness strategies focus on observing and accepting them as they are (Segal, Williams, Teasdale 2002). In a mindfulness class, it would often be said that thoughts can be watched like clouds passing by, regardless of the amount of the clouds or how dark or heavy they are, the clear blue sky is still there, a metaphor for the mind, and the amount of the clouds or how dark they are is impermanent, since all clouds pass, no cloud stays forever.

Work-related rumination is a notion that should be discussed too. Work life is important to individuals and so it occupies the mind, and work related thoughts and rumination is hard for lots of people to disengage from (Sonnentag & Zijlstra, 2006; Cropley, Dijk, & Stanley, 2006; Rook & Zijlstra, 2006). Unwinding from work may be hard for various reasons, like reasons that create work related stress, but for whatever reason, work related rumination always results in the same consequence of missing out on the present moment experience. According to a survey by the Employment of Britain, data obtained from 3,000 workers showed that 70% of them found it difficult to 'switch-off' after work (Gallie et al., 1998), showing that work is cognitively demanding in non-work hours, too. On a final note, another concept related to rumination is *co-rumination,* which is revisiting problems and speculating on them with peers may contribute to emotional exhaustion, burnout and cynicism (Haggard, Robert & Rose, 2011).

Rumination may affect work performance. Research shows that ruminators may be poorer problem solvers because instead of focusing on *how* to solve the

problem, they tend to think on *why* the problem happened at the first place (Watkins & Baracaia, 2002). Additionally, ruminators judge their problems to be more difficult as compared to non-ruminators and are more likely to believe that they may be unable to solve them (Lyubomirsky et al., 1998).

2.3.3 Psychological Capital (PsyCap)

Psychological Capital is "an individual`s positive psychological state of development, characterized by four dimensions which are thought to be working synergistically. These four dimensions are;

(1) "having confidence (Self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks,
(2) making a positive attribution (Optimism) about succeeding now and in the future,
(3) persevering towards goals, and when necessary, redirecting paths to goals (Hope) in order to succeed, and
(4) when beset by problems and adversity, sustaining and bouncing back and even beyond (Resiliency) to attain success." (Luthans et al., 2004).

The model of psychological capital is a work psychology extension of the positive psychology movement pioneered by Seligman in the 1990s, focusing on living a more meaningful life by realization of one's full potential. Based on this notion of self-actualization, according to Luthans, the question of "Who am I?" is just as important as "What can I do?" and "Who do I know?" for creating value at work. Often an overlooked aspect, positive psychological capital of a person is just as

important as traditional capitals like assets and networks, therefor it provides a competitive advantage for both the individual and the organization. Although psychological capital is a theory originally explaining work engagement (Avey, Wernsing & Luthans, 2008) and self-realization at work (Luthans et al., 2004), there are findings that psychological capital may combat occupational stress (Avey, Luthans & Jensen, 2009), and that it is negatively corelated with job burnout (Demerouti et al., 2001), suggesting that it is not only a model for work engagement but may benefit wellbeing at work.

According to this theory, a person's psychological capital can be increased over time (Luthans et al., 2010). Since these facets that make the construct of psychological capital are trainable, and given the nature of the facets that make up the construct, one of the possible ways to develop psychological capital may be mindfulness. A study utilizing four samples of managers at various levels of the organization, CEOs/presidents/top (n = 205), middle (n = 183), and junior (n = 202) managers, as well as 107 entrepreneurs, looked into mediating role of mindfulness on psychological capital and mental well-being. It was found that mindfulness was "negatively related to various dysfunctional outcomes such as anxiety, depression, and negative affect, burnout, emotional exhaustion and cynicism" and the data suggested "psychological capital was mediating the effects of mindfulness on dysfunctional outcomes" (Roche & Luthans, 2014).

2.3.4 Psychological Flexibility

Psychological flexibility is a construct that arises from the Relational Frame Theory (RFT) which serves as the theoretical frame of Acceptance and Commitment Therapy (ACT) discussed in earlier chapters. Psychological flexibility is a higher

construct involving "acceptance, cognitive defusion, self-as-context, contact with the present moment, values, and committed action" (Hayes, et al., 2003), and it is thought to be "an important factor involved in psychological health and behavioral effectiveness" (Ruiz, 2010).

In the ACT model, distancing from thoughts is known as 'cognitive defusion' and the counter process is 'cognitive fusion'. When 'fused', a person acts on thoughts as though they are true, as opposed to seeing them as subjective mental events, which is a similar notion to the commonly used phrase of *"Thoughts are not facts."* in mindfulness classes. It is conceptualized that once 'fused', eventually the person believes whatever the mind tells him or her, increasing the perceived stress and perceived threat (Gillanders et al., 2014). Another consequence of the 'fused' state is *experiential avoidance*. Experiential avoidance is a person's tendency to try to get away from and avoid certain thoughts, memories, or feelings, mainly the ones that a person assesses to be painful and unwanted. This concept is shown to be an important etiological factor in a wide range of problems involving stress, anxiety, depression, worry and impulse control (Hayes et al., 1996). Experiential avoidance is the opposite state of being psychologically flexible, since people who are psychologically flexible would find it easier to stay with unwanted and painful thoughts, memories, or feelings. In a way, psychological flexibility is the ability to 'detangle' from the mental events of our own minds and as described in earlier sections, mindfulness mechanisms offer strategies to improve psychological flexibility.

Hayes also suggests that specifically in workplace context, psychological flexibility increases a worker's ability to learn, set goals, give, and receive feedback, hence, improving his or her productivity and quality of life (Hayes, 2006), making it an important construct to consider for employee wellbeing and effectiveness.

2.3.5 Mindfulness for Employee Wellbeing

Introducing mindfulness to workplace is not an easy task. Despite the obvious need for a more toxic-stress free, accepting, humanistic and compassionate work culture for obvious reasons, mindfulness is viewed too 'fluffy' for work. Google engineer Chade-Meng Tan wanted to introduce mindfulness as an internal initiative for employee wellbeing to his fellow Googlers and no one was interested. It was only after he changed the course name from Mindfulness to *Emotional Intelligence for Engineers* that engineers who often receive feedback at performance reviews such as *"being too rigid", "should improve people skills"* got interested in the course, and it became one of the most popular internal training courses of Google (Tan, 2018). After a successful spin off, Google's internal mindfulness course became a company of it is own, and today, Search Inside Yourself Leadership Institute (SIYLI) and the program with the same name teaches psychological resilience at work through mindfulness, emotional intelligence, neuroscience and positive psychology all around the globe.

Challenges of introducing mindfulness to workplace settings arise from numerous factors. First, there is an obvious bias against mindfulness and meditation. In popular culture mindfulness is sometimes used interchangeably with *yoga, breathing exercises, spirituality,* and *Buddhism* and people may view mindfulness and meditation as a 'new age religion', thinking that these practices are not for them, which creates an entry barrier for taking on mindfulness practice, and makes it even more difficult at work place settings. Another factor would be that people may think meditation is not suitable for them because their minds are too busy, or cannot settle down despite numerous attempts, thinking they are not suitable to meditate. In fact, mind wandering happens to everyone, even to experienced meditators, it is the default mode of our minds, and mindfulness meditation is merely being aware of the mind wandering as it is. Another factor would be the belief that mediation and compassion

practices may make people less competitive, too accommodating, or carefree, traits that are thought to be incompatible with work. And a final concern would be since it requires time and effort to develop mindfulness skills, time and money investment in a long skills training would be considered as too costly.

However, there is empirical evidence provided both by academic research and field applications that mindfulness is an effective tool for common workplace distresses. Other than Google, big corporates like Apple, General Mills, Pepsi, Nike, Aetna, Intel, Goldman Sachs have appeared in the press stating that they have deployed mindfulness programs and have had positive results (Schaufenbuel, 2015). General Mills officials announced that in 2006, they have designed a Mindful Leadership program and trained their managers and these managers reported that 89% feel they are better listeners as leaders (Gelles, 2012).

Academic research corresponds with field results. A meta-analysis that looked at results of 56 studies that have examined mindfulness-based training interventions conducted with employees showed that "mindfulness interventions effectively reduce stress, burnout, mental distress, and somatic complaints, while improving mindfulness, well-being, compassion, and job satisfaction" and the effect sizes were found to be small to large (Vonderlin et al., 2020). A study realized in the food and beverage industry reported that mindfulness trait was positively correlated with job performance (Dane & Brummel, 2014). A randomized controlled trial among employees of a midwestern marketing firm (n = 60) compared 6 weeks mindfulness intervention results with half-day mindfulness training seminar, and found out that "although both groups improved comparably on job productivity, the 6-week mindfulness training group had significantly greater improvement in attentional focus at work, and decreases in work–life conflict, as well as a marginal improvement in job

satisfaction" (Slutsky et. al, 2019). Another study in a nuclear power plant showed that "mindfulness had a positive influence on occupational safety performance for high complexity task holders" (Zhang et al., 2013). A study which included 90 nurses working for 3 different university hospitals reported that after receiving the mindfulness intervention, nurses' perceived stress was reduced and compassion scores were increased, and there was no significant differences between results from a 6-week and an 8-week mindfulness intervention, suggesting that even shorter doses of mindfulness is effective. Another intervention documented that military personnel who had mindfulness training had better attentional permanence comparing to the control group (Jha et al., 2015). A meta-analysis that investigated studies that evaluated physiological markers for stress concluded that "mindfulness interventions were promising for improving physiological indices of stress" (Heckenberg et al., 2018). There are also studies on interpersonal mindfulness. A study suggests that mindfulness improved relations with subordinates (Reb & Chaturvedi, 2014), and another one suggests that mindfulness has a positive correlation with improved communication (Dekeyser et al., 2008), and that mindfulness may improve conflict management (Good, et al., 2016) at work. Another meta-analysis that investigated results of 24 MBSR interventions on employees concluded that MBSR may help to improve psychological functioning of the employees (Janssen et al., 2018). These research results suggest that mindfulness training is a promising tool for treating and preventing most common psychological distresses at work, offering a cost effective and humanistic solution to both personal and job related strain.

2.4 Research Question and Hypothesis of the Study: Effectiveness of Mindfulness Training and Moderation Role of Personality Traits

Based on previous research and findings described in the earlier sections, the researcher would like to investigate the possible effects of an 8-week mindfulness intervention in Turkish working adult population. As it is established in the literature, mindfulness intervention may assist with alleviation of psychological distress, and improvement of positive mood. The researcher hypothesizes that, through skills and attitudes learned in a mindfulness-based intervention, a person who is exposed to mindfulness training would have;

(1) increased level of mindfulness
(2) lowered level of perceived stress,
(3) less rumination and negative repetitive thinking habits,
(4) an increased ability of psychological flexibility, meaning less entanglement in to the negative though content, and
(5) improved levels of positive psychological capital.

The second part of the research question involves individual differences, and it is explorative in nature. Personality traits together with personal attitudes and beliefs, previous experiences, and values may play a role in a person's ability to benefit from any intervention including mindfulness. Advocates of mindfulness claim that all people have a potential to exhibit a mindful attitude and behaviors by cultivating mindfulness through performing certain exercises, and that the skill of mindfulness can be developed by anybody in time with practice (Chiesa & Serretti, 2009, Grossman et al., 2004). However, research in the area of individual differences demonstrates that there may be a correlation with personality traits and mindfulness, people with certain temperamental traits may or may not benefit from the technique, or at least find it

easier or more difficult to learn and adapt the techniques and skills, depending on their personality traits.

For the scope of this study, Big 5 Personality traits will be investigated as moderators in relationship between mindfulness intervention and the hypothesized outcomes. First developed in 1980s, the Big 5 traits model is a well-established construct in the individual differences literature, and it is one of the oldest and most used models for personality traits (Rothmann, 2003). The five traits that make up the model are extraversion, agreeability, conscientiousness, neuroticism, and openness, and the model is widely accepted as being one of the most predictable marker of individual differences.

Although a new area of study, there are some studies about correlation of personality traits with mindfulness. A study in this area shows that personality trait and mindfulness together predict psychological distress (Harnetta et al., 2016). Another study in this area is conducted by Baer et al., and the results suggested a positive correlation between mindfulness and openness, a reverse relationship between neuroticism and mindfulness, and a nonsignificant correlation between mindfulness and extraversion, as predicted in the beginning of the study (2006). Finally, a meta-analysis from 32 samples in 29 studies shows that neuroticism and conscientiousness are negatively correlated with mindfulness, whereas openness is positively correlated with mindfulness (Giluk, 2009). Looking closer at the qualities of the personality traits of openness, conscientiousness and neuroticism, and the qualities of 'being mindful', the associations between these constructs may be apparent. First, both personality trait openness and mindfulness emphasize attitudes such as curiosity, paying attention to what is novel and, accepting whatever there is in a receptive manner. Same wise, a positive correlation with personality trait conscientiousness with mindfulness is reasonable since conscientiousness is a trait defined with qualities such ad carefulness,

deliberation, perseverance, and patience, qualities that can be associated with mindfulness as well (Giluk, 2009). Finally, since neuroticism is often associated with anxiety, worry, rumination, anger, and emotional outbursts, it is commonsensical that it has a negative correlation with mindfulness, it can even be argued that low neuroticism, which is emotional stableness, is the same thing as being mindful (Borynski, 2007).

Based on these studies, it seems plausible that, mindfulness together with personal temperaments may predict psychological wellbeing of an individual. In this study the researcher would like to explore the moderating effect of personality traits on the mindfulness intervention. Since both the personality traits and mindfulness constructs are multifaceted in nature, the relationship may be complex, however based on previous research, it is reasonable to expect a positive correlational relationship between mindfulness and personality traits of openness and emotional stability, reverse trait of neuroticism.

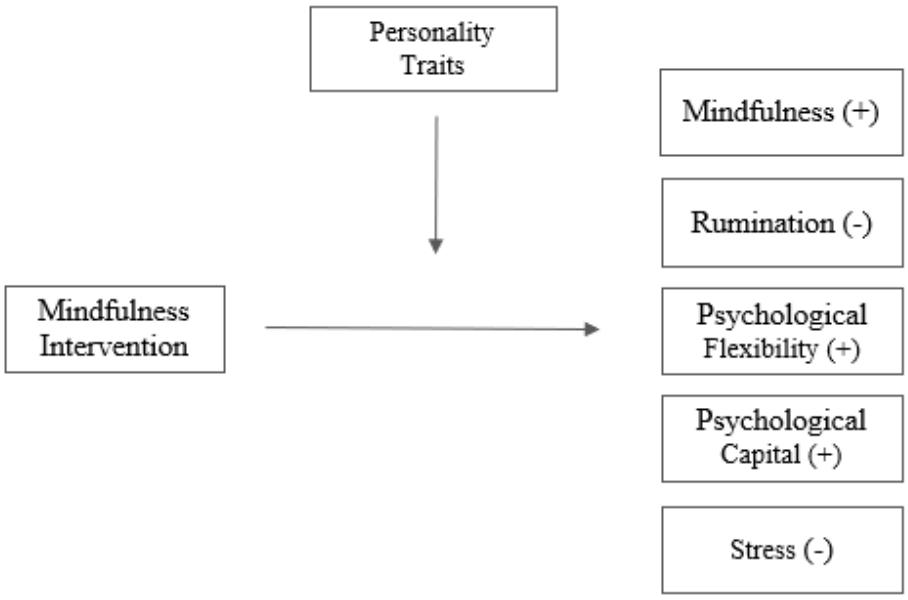


Figure 2.4. *Proposed Model*

CHAPTER III

METHOD

3.1 Design of the Study

The researcher devised a one-group pretest posttest design to study the relationship between mindfulness practice as a focal predictor and repeated measures of mindfulness, stress, rumination. psychological capital, and psychological flexibility as outcomes. Big five personality traits, measured on a single occasion as between subject measures were used as moderators. The method of data collection was self-report scales. The instruments that are used in the study are presented in the following sections.

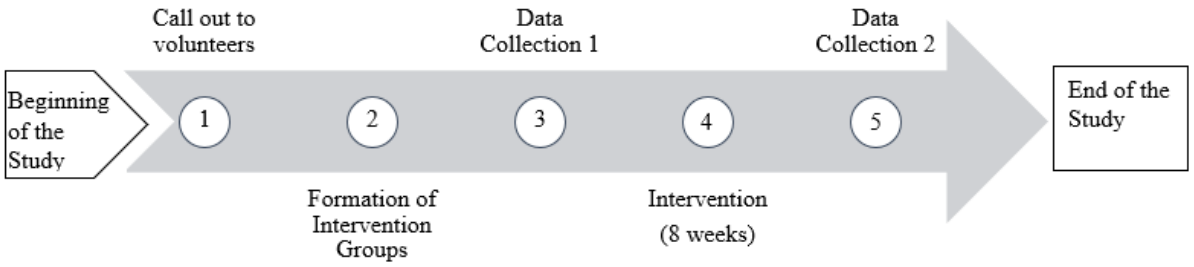


Figure 3.1. *Timeline of the Study*

3.2 Human Participant Research Ethic Committee Approval

Since the study includes human participants and is subject to ethical considerations, Istanbul Bilgi University Human Participant Research Ethic Committee approval was requested and obtained on February 11, 2019. The study started upon receipt of the ethic committee approval. The detailed approval form is presented in the Appendix A.

3.3 Participants and Formation of Intervention Groups

After the obtainment of the ethic committee approval an announcement was posted on various social media and communication channels to contact suitable candidates. The preliminary announcement, presented in the Appendix B, was intended to reach out to potential suitable candidates who could commit to the study for 8 weeks. Since the study would require time and effort commitment from the participants, instead of randomized sampling, convenience sampling was utilized. To minimize potential dropout rates, suitable potential participants among the willing applicants were invited to sign up in any one of the intervention groups that fit their schedule. *Table 3.1* shows the intervention group scheduling and the number of participants who have signed up for the specific intervention group at the beginning of the study, and also the number of participants who have dropped out (14% drop out rate) from the study during the course of 8 weeks.

Table 3.1.
Intervention Groups

	Day	Start time	End time	n	Drop out
Group 1	Monday	14:00	16:30	14	2
Group 2	Wednesday	19:30	22:00	18	1
Group 3	Thursday	19:30	22:00	16	3
Group 4	Friday	10:30	13:00	15	3
Group 5	Saturday	10:30	13:00	14	2
N				77	11

Normally, mindfulness-based interventions are closed group interventions, meaning once the group is formed, the same participants attend to each session of the program and no new participants are accepted within the group. The closed group attribute is an important element of the group process, since participants are supported to feel safe in the circle, sharing and learning from each other (Griffith, Bartley & Crane, 2019). The closed group attribute was mostly protected throughout the intervention, but to sustain the sample size of the study, when participants missed out on sessions, they were encouraged to follow up with the program by joining sessions of other groups then their own, whichever day suits their schedule the best for that week.

Based on previous research, the effect size of this study was expected to be small to medium (0.2 to 0.5). Whilst there were higher effect sizes reported for various other mindfulness meditation based programs for various dependent variables such as attention, self-attributed mindfulness, positive and negative emotions, emotion regulation, and self-realization, MBSR seems to have its most powerful effect on

attaining higher psychological wellbeing (Eberth & Sedlmeier, 2012). A meta-analysis that looked over 39 studies found an effect size of r=0.27 for the MBSR program. Therefore, based on previous research and on effect size and statistical power analysis the study was calculated to hold 87 people at the effect size 0.3 ($p < 0.05$). In execution, a total of 170 applicants applied and after reviewing the applications, 7 applicants were rejected based on the exclusion criteria of presence of previously diagnosed mental disorder, post-traumatic stress disorder and addiction, and no previous work experience. The remaining 163 applicants were contacted according to the order of application, and for logistical reasons, all applicants outside of the city where the research is conducted, were omitted. Finally, a total of 77 suitable applicants were invited to the first session. A total of 11 participants have dropped out of the study at various phases, and the total number of participants who have completed whole 8 weeks was concluded at 66. 6 participants did not take part in the posttest phase and after data cleaning, 2 participants' data were taken out of the data set, leaving the total sample size at N (59). The trainings were delivered free of charge and the participants did not pay any fees in any form to attend to the trainings. A Fee Waiver form presented in Appendix D was obtained from all the participants. At the end of the data collection period, the forms that were collected from the participants were numbered with appropriate coding and the name of the participants were deleted and was not repeated in any of the hard copy or digital paper work created in the scope of the study.

Of the 59 participants that have contributed to the study, 91.50 % (n=54) have reported themselves as female, 6.8% (n=4) as male, and 1.7% (n=1) as other. Participants were between the ages of 23 and 46, mean of the participant age was calculated as 35.47 (*SD*=6.86). Most participants were married 52.5%, (n=31), co-living 3.4% (n=2), or in a relationship 11.9% (n=7). 27.1% (n=16) were single, 5.1%

(n=3) were divorced. Majority of the participants did not have any children, 61% (n=36), 23.7% (n=14) had 1 child, and 15.3% (n=9) had 2.

Among the participants, 64.4% (n=38) were university graduates, whereas 30.5% (n=18) of participants held a higher education degree (masters, PhD), and 5.1% (n=3) were receiving their undergraduate degree. 47.5% (n=28) were employed in a company, 15.3% (n=9) were self-employed, 18.6% (n=11) were working freelance, 19.9% (n=10) were unemployed, and 1 participant chose not to answer this question.

The participants represented a wide range of industries and professions, and there was no similar characteristics in terms of representation of specific conditions unique to professions or industries. Majority of the participants who were working at the time of the study were working full time, 52.5% (n=31), 22% (n=13) parttime, and 13.6% (n=8) were working project based. The average work experience was reported as 11.55 years, with a minimum of 8 months to a maximum of 20 years (*SD*=81.08). The participants have also reported an average of 7.09 hours of daily work, with a minimum of 1 hour to a maximum of 13 hours per day (*SD*=2.48). Additionally, the participants have defined themselves as workers 'who work a lot' (*M*=4.63, *SD*=1.13), 'care about his/her job' (*M*=5.09, *SD*=1.09), and 'generally satisfied with his/her job' (*M*=4.09, *SD*=1.34).

59.3% (n=35) of the participants have reported that they have previously engaged in a experiential awareness activity such as meditation yoga, qigong, or similar, at least for once, and 28.8% (n=17) of them were currently continuing their activities as they have enrolled in the study. Additionally, 57.6% (n=34) of the participants have reported that they were currently engaged in an activity to manage their psychological wellbeing. The activities that participants reported that they have engaged in to support their psychological wellbeing were reported as reading (n=30),

exercising (n=23), talking with family and friends (n=19), breathing exercises (n=19), doing yoga (n=14), spiritual counselling or spiritual activities or religious worship (n=7), receiving psychological counselling or therapy (n=6), attending personal development trainings and activities (n=4), receiving mentoring or coaching (n=3), support group and group activities (n=3).

3.4 Procedure

3.4.1 Designing of the Modified Mindfulness Based Stress Reduction Program (m-MBSR)

The researcher of this study who is an accredited facilitator of the MBSR and MBCT programs, (see the Appendix F for the appropriate certificates to teach these mindfulness-based courses), modified the MBSR (m-MBSR) curriculum for the scope of this study. She has studied and used the following resources to design an 8 weeks mindfulness-based curriculum that utilizes the main structure of the MBSR program with elements drawn from the MBCT, CMT and MSC programs. While keeping the integrity of an MBP as it is explained in the previous sections, the specific intervention for the scope of this study was designed to create the unique weft effect that would be needed to address urban work force population.

- MBSR program of Center for Mindfulness in Medicine, Health Care, and Society of University of Massachusetts Medical School, (Santorelli, Meleo-Meyer, Koerbel, Kabat-Zinn, 2017)
- Full Catastrophe Living, revised edition (Kabat-Zinn, 2009)
- MBCT for Depression (Segal, Williams, Teasdale, 2002)
- The mindful way workbook: An 8-week program to free yourself from

depression and emotional distress (Segal, Williams, Teasdale, 2002)

- The Compassionate Mind (Gilbert, 2009)
- The Mindful Path to Self-Compassion (Germer, 2009)
- The Mindful Self-Compassion Workbook: A Proven Way to Accept Yourself, Build Inner Strength, and Thrive (Neff & Germer, 2018)

In summary, the practices were planned shorter, 20 – 25 minutes, as opposed to 45 minutes or longer as in the MBSR, and the silent day was optional. Additionally, there was an explicit emphasis on ruminative thinking and self-compassion in the m-MBSR program. The following figure presents a summary of the structure of the program that is designed for the scope of this study.

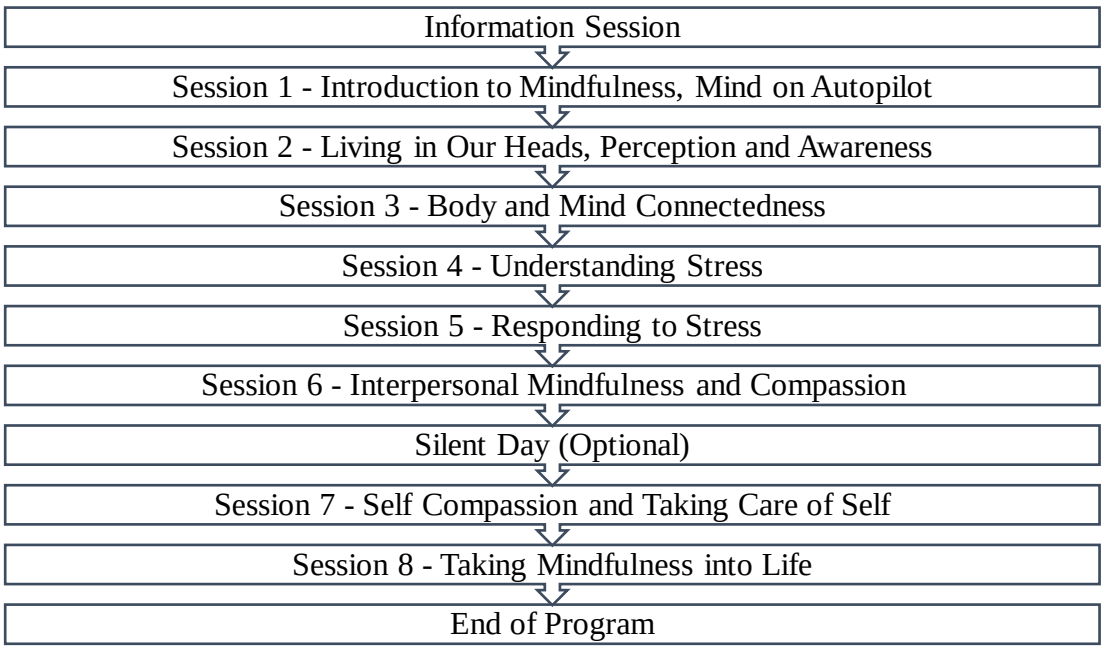


Figure 3.2. *8 Weeks Modified Mindfulness Based Stress Reduction Program Curriculum*

3.4.2 Learning Mode of the Program

The learning mode of mindfulness-based programs are experiential and non-didactic. Each session, the teacher introduces the concepts in line with the theme of the week and invites the participants to engage in a series of exercises. Since the mode of the delivery is experiential and participatory, the teacher does not only facilitate the group but also does the exercises along with the participants, creating a *circle of experience*. Typically, each session would start with an opening meditation, which is called a settling down meditation, followed with exercises in line with the theme of the week, group discussions of the home practice, and a longer meditation. Sometimes poems and stories that demonstrate the key messages of the teaching would be introduced to emphasize the teaching points. Following each meditation, the teacher would engage in an inquiry-based Socratic dialogue with the participants to assist the participants to further explore their present moment experience, which would then connect with the theme of the week and to the general theme of the program.

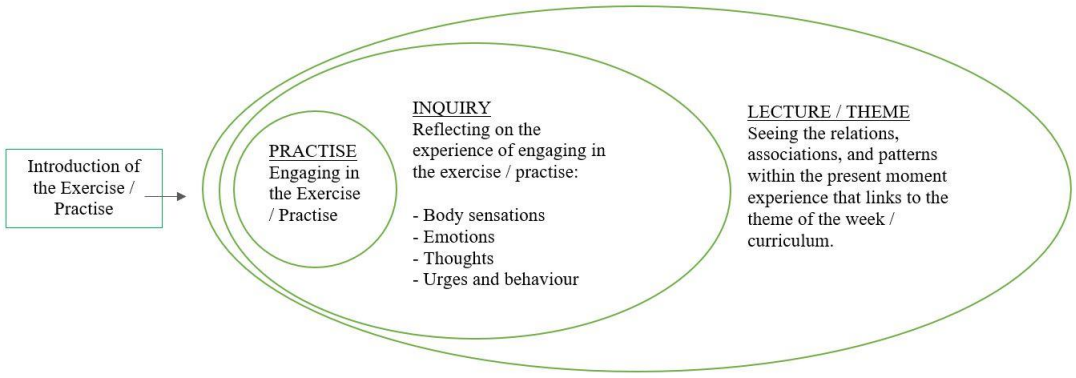


Figure 3.3. *Learning Mode of the Program*

A typical mindfulness program is 8 weeks where the group meets 9 times, 8 weekly classes which is approximately 2 to 3 hours and a Silent Day that is approximately 6 – 7 hours, to complete the program. Additionally, participants undertake daily meditation and life practices, such as guided and free style journaling, thoughts and feelings recording, and other informal meditative exercises. Typically, a participant invests a total of 26 hours in class, and 24 hours at home, a total of 60 hours of labor over a period of 8 weeks to attain mindfulness skills. For the scope of this study, the researcher has designed a program with an optional silent day offered on the 6th week of the curriculum, and shorter meditative practices since the research suggests that both the original and the shorter and 'lighter' versions of mindfulness programs are beneficial (Wolever et al., 2012). In this study, the participants were encouraged to follow up with home meditations, exercises and journaling but were also encouraged to continue with classes even if they fail to follow up with home practices and exercises.

The in-class and at-home exercises that are done within a mindfulness program are of five types:

(1) *Formal meditation sittings* where concentration and insight meditations are practiced,
(2) *Informal meditative exercises,* which are daily activities that are done in a mindful way, such as mindful eating, mindful walking, mindful tooth brushing, etc.,
(3) *Learning activities* such as in class group exercises
(4) *Recording exercises* where the participants are invited to record their thoughts, feelings and sensations as home practice in between the sessions, and finally,
(5) *Reflective exercises* like in class inquiry or guided journaling.

Each session had a structured lesson plan in line with the fundamentals of the MBSR program. A detailed Lesson Plan used by the teacher during this intervention is presented in the Appendix G, and *Table 3.2* shows a summary of types of meditations, exercises and learning activities that are utilized in this program.

Table 3.2.
List of Exercises and Practices Utilized in the Curriculum

Formal Meditations
- Awareness of Breathing - Body Scan - Standing Mindful Movement - Lying Down Mindful Movement - Mountain Pose - 3 Minutes Breathing Space - Exploring the Difficulty - Noting - Five Awareness - Sitting in Choiceless Awareness - Compassionate Breathing - Metta (Kindness)
Informal Meditations
- Mindful Eating - Mindful Walking - Mindfulness of Daily Activities
In Class Exercises
- 9 Dots - Walking in the Street - Communication Exercise - Vicious Flower

- Values
- Life Wheel

Recording Exercises
- Pleasant Events - Unpleasant Events - Daily Stress Awareness - Stressful Events - Relationships Awareness - Nurturing and Depleting Activities - Self-Compassion Evaluation

Reflection Exercises
- Inquiry - Group Discussion - Guided Journaling - Free Style Journaling - Formal Meditation Log - Informal Meditation Log

A synopsis the program and details of the interventions presented in the sessions are summarized in the following sections.

3.4.3 8 Weeks Modified Mindfulness Based Stress Reduction Program (m-MBSR)

3.4.3.1 Week 1 – Introduction to Mindfulness, Mind on Autopilot

Session 1 started with an opening exercise which was a short settling down mediation. The participants were then invited to talk briefly about themselves and about their intention for joining this program. Following the introduction session, the

teacher talked about what mindfulness is, introducing the triangle model of mindfulness (intention, attention and attitude) and presented the mindful attitudes. Participants were then invited to solve the 9 Dots Puzzle, and after that the participants were invited to talk about their experience of working on the puzzle, focusing on the attitudes and thoughts that accompanied the experience. Following the puzzle, Mindful Eating exercise was introduced, and the participants were invited to eat raisins mindfully, engaging all the senses and being fully aware of the eating experience. After the exercise, the participants were asked to reflect on their experience of mindful eating. The session continued with the introduction of Body Scan Meditation, where the participants were invited to lay down in a still position and observe their physical body by mentally scanning it, where they were invited to pay attention to parts of the body in a gradual sequence from feet to head, noticing bodily sensations. Following the meditation, the participants were invited to reflect on their body scan meditation experience in a group discussion. The session ended with presentation of home practice and participants were also reminded about importance of keeping up with home practice and journaling. A total of 77 participants joined the first session in 5 different groups.

3.4.3.2 Week 2 – Living in Our Heads, Perception and Awareness

Session 2 started with a short settling down mediation. The participants were then invited to do the Walking Down the Street exercise which is a guided imagery practice. After the exercise, the participants were invited to talk about their experience doing the exercise. After the discussion session the teacher talked about the construct of our minds, our ways of perceiving ourselves and the world around us, and living on autopilot versus with awareness. After the talking points, the group was informed about correct meditation postures and were shown alternative sitting positions that

would best suit their anatomy and were encouraged to try different posture alternatives to find the best supporting sitting style for themselves. After that, a short sequence of lying down mindful movement practice was introduced, followed by Awareness of Breathing meditation. In the inquiry session, the participants were invited to talk about their present moment experience during the meditation. The last activity of the class was a group discussion regarding the home practice of last week. The session ended with introduction of the homework for the week ahead and the group was reminded that home practice may require some changes in the daily life habits to make room for the newly acquired habits. The group discussed the challenges and presents of establishing a home practice regimen and shared tips on how to make positive changes.

A total of 71 participants joined session 2 in 5 different groups. A total of 3,999 minutes of home practice was reported, which is an average of 56 minutes home practice time per participant per week.

3.4.3.3 Week 3 – Body and Mind Connectedness

In session 3, after the settling down mediation the participants were invited to engage in a short practice of standing mindful movement followed by the mountain pose and walking meditation. After the exercise, the participants were invited to talk about their experience doing the exercise. After the inquiry session the teacher talked about the awareness of body and movement, ability to sense, observe and express body sensations, feelings, and thoughts separately. The session continued with group discussion of last week's home practice, including the Pleasant Events Calendar, where the participants were asked to keep a log of events that they found pleasant in their daily lives. After small group discussions the subject was discussed in the big group, focusing on awareness of the event, body sensations, emotions and the thoughts

that accompanied the event separately, and discussions ended with a poem reading for silent reflection. The session ended with introduction of the homework for the next week.

A total of 62 participants joined session 3 in 5 different groups. A total of 2,729 minutes of home practice was reported, which is an average of 44 minutes home practice time per participant per week.

3.4.3.4 Week 4 – Understanding Stress and Negative Thought Patterns

Session 4 started with a short settling down mediation. Following the opening practice, the participants were introduced the subject of stress and automatic negative thinking. After a short lecture on physiology and psychology of stress and negative thinking, the participants were asked to review their daily stress load and automatic stress reactions in small groups. After that, the participants were introduced the Noting Meditation in which, the participants were invited to observe their thoughts as mental events and note their quality. In the inquiry session followed the meditation, the participants were asked to reflect on their experience of observing their own thoughts. The session continued with group discussion of last week's home practice and Unpleasant Events Recording exercise, where the participants were asked to keep a log of events that they found unpleasant in their daily lives. After small group discussions the subject was discussed in the big group, focusing on awareness of the event, body sensations, emotions and the thoughts that accompanied the specific unpleasant events separately. After the group discussions 3 Steps Breathing Space meditation was introduced in which the attention is deliberately widened, narrowed and then widened again in a gradual order to calm the body and the mind. The session

ended with presentation of home practice for the upcoming week and a poem reading for silent reflection.

A total of 56 participants joined session 4 in 5 different groups. A total of 3,514 minutes of home practice was reported, which is an average of 63 minutes home practice time per participant per week.

3.4.3.5 Week 5 – Responding to Stress and Negative Thought Patterns

Session 5 started with a short settling down mediation. Following the opening practice, the participants were introduced the subject of exploring the difficult emotions and thoughts. In this section the topics covered were ability to respond to stress and negative thinking with awareness, possibility of creating a space between the stimulus and the response and responding with choice / awareness. After the lecture session, Exploring the Difficulty Meditation was introduced. In this meditation the participants were invited to observe what they find difficult, such as painful body sensations, overwhelming emotions, and / or repetitive negative thinking patterns. Using the decentering and re approaching technique, the participants were invited to stay with what they find difficult in their experience. In the inquiry session that followed the meditation, the participants were invited to reflect on their experiences. In the later part of the session, Vicious Flower Exercise was introduced, in which the group explored skillful and unskillful ways of responding to stress and automatic thinking. Skillful ways of responding to adversities were described by the group as ways which are in line with mindful attitudes and behaviors towards alleviating immediate and future distress, whereas unskillful ways of responding were described as poor coping mechanisms that create more distress. For example, eating as a

response to emotional reactivity was considered to be unskillful, whereas taking a break or stretching the body was labeled as skillful.

The session continued with group discussion of last week's home practice and Stressful Events Recording exercise, where the participants were asked to keep a log of events that they found stressful in their daily lives. After small group discussions the subject was discussed in the big group, focusing on awareness of the stressful event, body sensations, emotions and the thoughts that accompanied the specific events separately. The session ended with presentation of home practice for the upcoming week. As a final note, this week's homework also included a guided journaling practice that asked the participants to do a midway assessment about their experience of practicing mindfulness so far.

A total of 56 participants joined session 5 in 5 different groups. A total of 3,104 minutes of home practice is reported, which is an average of 55 minutes home practice time per participant per week.

3.4.3.6 Week 6 – Interpersonal Mindfulness and Compassion

The session 6 started with a settling down mediation after which the participants were invited to engage in 5 Awareness Meditation practice. In this meditation, the participants were invited to observe the body sensations, breathing, thoughts, smells, and sounds by bringing attention to these domains deliberately and in a gradual order. After the practice, the participants were inquired to reflect on their experience of doing the practice. After that, the topic of the week was introduced which was mindfulness of relationships. The relationships were talked based on how we choose our personal communication style and how we respond to others around us.

The participants then engaged in group discussion of last week's home practice, which was Awareness of Relationships where the participants were asked to assess key relationship in their lives in terms of communication style. After small group discussions the subject was discussed in the big group, focusing on awareness of the present moment as the group discussed the key relations in their lives. After that, the group was introduced a Communication Exercise in which the participants were put in pairs to engage in a short reading and reflecting exercise. Last practice of the session was Metta mediation, which is a Buddhist practice in which the participants were invited to meditate on a guided imagery and affirmations, to cultivate kindness and compassion towards self and others. The session ended with introduction of the homework for the next week.

A total of 55 participants joined session 6 in 5 different groups. A total of 2,421 minutes of home practice was reported, which is an average of 44 minutes home practice time per participant per week.

3.4.3.7 Silent Day

Typically, all MBPs would offer a silent day within the 6th week of the program. The day would typically last around 6 – 7 hours, in which the participants are invited to meditate and self-observe throughout the day to deepen their mindfulness practice. Spending time in silence without the absence of any form of communication including talking, reading, and writing is an important cornerstone of mindfulness practice since it leads to greater self-insight.

For the scope of this study Silent Day was not introduced as a mandatory part of the program, but the participants were offered recommended Silent Day program to

do at their home at their convenience if they choose so. The recommended Silent Day program is presented in Appendix G Lesson Plans.

3.4.3.8 Week 7 – Self Compassion and Taking Care of Self

In session 7 a short Smiling Meditation was introduced as the settling down mediation in which the participants were invited to try first smiling and then resting their face in neutral state to observe the different mental states that accompany each condition. After the settling down exercise, the participants engaged in group discussion of last week's home practice, which was Self Compassion Evaluation, where the participants were asked to keep a log of events that the participant felt like he or she was experiencing a difficult situation and had the opportunity to engage in self compassion practice. After small group discussions, the reflections on the Self Compassion Evaluation were discussed in the big group. Later in the session Nurturing and Depleting Activities exercise was introduced in which the group was invited to talk about activities that help to restore one's psychological and physical resources as well as activities that are found exhausting the psychological and physical resources. After that, Compassionate Breathing meditation was introduced, in which the participants were offered a guided imagery to cultivate kindness and compassion towards self and was invited to pay attention in breathing and bodily sensations. In the inquiry session that followed the meditation, the participants were asked to reflect on their experience of engaging in the Compassionate Breathing meditation. The exercise was followed by a short discussion on cultivating one's positive moods and mental states and a short story reading. Last practice of the session was Metta meditation, in which the participants were invited to meditate on guided imagery and affirmations, to cultivate feelings of kindness towards self and others. The session ended with introduction of the homework for the next week.

A total of 57 participants joined session 7 in 5 different groups. A total of 4,583 minutes of home practice was reported, which is an average of 80 minutes home practice time per participant per week.

3.4.3.9 Week 8 – Taking Mindfulness into Life

Session 8 started with a short grounding meditation, after which the Choiceless Awareness Meditation was introduced. In this meditation the participants were invited to engage in sitting still and observing sensations, thought, sounds and emotions as they arise, without any specific inclination towards any of them. This meditation was followed by an inquiry session where the participants were invited to talk about their experience of engaging in the meditation. The session continued with some talking points on seeing life as whole, how to remember to be mindful in the midst of crisis, finding meaning in life and gratitude. To support the talking points, Values and Wheel of Life Exercises were introduced, where the participants were asked to reflect on the different aspects of their lives and their personal values in small group discussions. Finally, the participants were asked to write themselves a letter about their 8 weeks experience, and the letters were collected by the teacher to be posted a month later, as a reminder of their journey. Finally, the session came to an end with the closing remarks in which the participants were asked for their final thoughts and feelings regarding their 8 weeks journey. The session ended with a poem reading for silent reflection.

A total of 59 participants joined session 8 in 5 different groups. A total of 3,045 minutes of home practice was reported, which is an average of 52 minutes home practice time per participant per week.

3.4.4 Summary of the Intervention Program

58 people out of 77 who have signed up for the study had attended 6 or more sessions which would indicate an average of 75% attendance rate. Total of 11 people dropped out during the sessions, reasons for drop out were reported as travel (n=1), workload (n=4), family issues (n=1), undisclosed (n=5). Each group have received a total of 20 hours in class mindfulness exposure over a course of 8 weeks, multiplied by the 75% attendance rate, returned an average of 15 hours of exposure per participant. Additionally, the participants have reported an average of 56 minutes of weekly mindfulness practice at home, summing up to approximately 21.6 hours of total mindfulness exposure per participant during the course of 8 weeks.

3.5 Data Collection

Following the approval of Istanbul Bilgi University Human Participant Research Ethic Committee on February 11, 2019, data collection process started and took two months. A test pack was designed consisting all the forms and instruments (presented in the Appendix E) and the test pack was presented to the participants twice, once at the beginning of the intervention and once at the end. The data was collected in paper and pen form in the classroom.

The first data collection took place at the information session which was at the beginning of the first session. Suitable candidates who were invited to the information session were informed about the scope of the study orally and an informed consent was signed by those who wish to take part in the study. Informed Consent form is presented in Appendix C. After the information session people who decided not to be part of the training and the study were invited to leave at their own

will. Participants who have agreed to stay and take part in the study were then presented the test pack and was given 1 hour to complete the questions. A total of 77 subjects joined the information session and all 77 of them signed the informed consent and proceeded on to complete the test pack. The first session was conducted right after the information session and the completion of the test pack. All 77 participants who have filled in the forms attended the first session.

The second part of data collection took place at the end of the intervention program. At the end of the eight session, the participants who were present were presented the test pack again, except for the Demographics Form, Work and Life Habits and Experiences Form, and the Big 5-50 Personality Inventory, and were given 45 minutes to complete the test pack. A total of 61 participants were present at the last session and all of them have completed the posttest test pack and 2 of the test packs were removed due to missing data and a total of 59 data set was included in the analysis.

3.6 Instruments

In the scope of the study Demographics Form (5 Questions), Work and Life Habits and Experiences Form (11 questions), The Big Five (50 items), Five Facet Mindfulness Questionnaire (39 items), Psychological Capital Questionnaire (23 items), Perceived Stress Scale (14 items), Ruminative Thought Style Questionnaire (15 items) and Acceptance and Action Questionnaire II (7 items) were utilized. Information on the development and characteristics of these instruments are described down below. All the forms and scales are presented in Appendix E, both in English and Turkish, except for the Big Five Inventory which is presented in Turkish only.

3.6.1 Demographics Form

Demographics Form is created by the researcher and it is consisted of 6 questions that include gender, age, education level, relationship status, and number of children. English and Turkish versions of the Demographics Form is presented in Appendix E.

3.6.2 Work and Life Habits and Experiences Form

Work and Life Habits and Experiences Form is created by the researcher and it is consisted of 11 questions that include employment status, work arrangement, work place type, total work experience, daily average work hours, questions regarding perception of work life and work satisfaction, previous and current mindfulness experiences and current stress management habits. English and Turkish versions of the Work and Life Habits and Experiences Form is presented in Appendix E.

3.6.3 Personality Traits: Big Five Personality Questionnaire (B5KT-50-Tr)

Big Five Personality Questionnaire (B5KT-50-Tr) version used in this study is an open access personality inventory that is adapted into Turkish (Tatar, 2016; Tatar, 2017). The study that was carried out to examine its psychometric properties revealed that B5KT-50-Tr explained 35.58% of the total variance by five factors and internal consistencies of the factors of the test were calculated between 0.65 and 0.79, and test-retest coefficients were between 0.55 and 0.80. The questionnaire has a total of 50

items in 5 dimensions, which are Extraversion, Agreeability, Conscientiousness, Neuroticism (opposite of *Emotional Stability*), and Openness. The factor analysis is also done for the scope of this study and the results are presented in Chapter IV. Turkish version of the B5KT-50-Tr Question Form is presented in Appendix E.

3.6.4 Mindfulness: Five Facet Mindfulness Questionnaire (FFMQ)

Five Facets Mindfulness Questionnaire (FFMQ) has been developed by Baer et al., (2008) and it is based on a factor analytic study of five independently developed mindfulness questionnaires, which are The Freiburg Mindfulness Inventory (Walach et al., 2006), the Mindful Attention Awareness Scale (Brown & Ryan, 2003), the Kentucky Inventory of Mindfulness Skills (Baer et al., 2005), Cognitive and Affective Mindfulness Scale-Revised (Feldman et al., 2007) and Southampton Mindfulness Questionnaire (Chadwick et al., 2008). The analysis generated five factors that represents elements of mindfulness as conceptualized in the previous literature. The five facets are described as observing, describing, acting with awareness, non-judging of inner experience, and non-reactivity to inner experience. The scale has 39 items in total.

The Turkish translation and adaptation of the FFMQ showed that the inventory has a five-dimension structure just like in the original version (Kınay, 2013) In this adaptation study, the internal consistencies of the scale were found to be between Cronbach's α 0.67 and 0.85. The factor analysis is also done for the scope of this study and the results of the pre and posttest FFMQ measures are presented in Chapter IV. English and Turkish versions of FFMQ Form is presented in Appendix E.

3.6.5 Stress: Perceived Stress Scale (PSS)

Perceived Stress Scale (Cohen et al., 1983) is the most widely used global psychological instrument for measuring the perception of stress. The scale has a total of 14 items and has a two-factor structure. Turkish adaptation of the PSS has been studied by various researchers, validating its internal consistency and reliability. Eskin and colleagues have studied all versions of the PSS, both the long forms and short forms, and verified that the internal consistency reliability coefficients for the Turkish versions of the PSS-14, PSS-10 and PSS-4 were 0.84, 0.82 and 0.66, respectively. The test-retest reliability coefficients for the three versions of the PSS were 0.87, 0.88 and 0.72 respectively (Eskin et al., 2013). Exploratory and confirmatory factor analysis of the PSS indicates that the scale has two factors, perceived helplessness and perceived self-efficacy and Turkish adaptation studies also confirms this two-factor nature of the scale (Örücü & Demir, 2009). The factor analysis is also done for the scope of this study and the results of the pre and posttest PSS measures are presented in Chapter IV. Both English and Turkish versions of PSS Form is presented in Appendix E.

3.6.6 Psychological Capital: Psychological Capital Questionnaire (PCQ)

The Psychological Capital Questionnaire (PCQ) is a self-report scale which aims to measure an individual's positive psychological state of development (Luthans et al., 2014). The scale has 24 questions designed to measure four dimensions of psychological capital, which are hope, efficacy, resilience, and optimism. There are various translation and adaptation studies for this scale in Turkish psychology literature. Çetin & Basım's adaptation study revealed that the scale has a Cronbach's α value of 0.67 to 0.85, and that is consistent with the four-factor structure of the

original scale (2012). The factor analysis is repeated for the scope of this study and the results of the pre and posttest PCQ measures are presented in Chapter IV. English and Turkish versions of PCQ question form is presented in Appendix E.

3.6.7 Rumination: Ruminative Thought Style Questionnaire Short Form (RTSQ-SF)

The Ruminative Thought Style Questionnaire (RTSQ) is a 20-item measure, and the Short Form (SF) has 15 items, both designed by Brinker & Dozois (2009). The short form was studied and the exploratory factor analysis on the 15 items demonstrated that the RTSQ-SF was comprised of four rumination subcomponents, labelled "Problem-Focused Thoughts", "Counterfactual Thinking", "Repetitive Thoughts", and "Anticipatory Thoughts" (Tanner, Voon, Hasking, Martin, 2013) The Turkish adaptation of the scale revealed a high internal consistency with a Cronbach's α of 0.90. The scale explained %63.43 of total variance. The study showed that the scale was a valid and reliable scale under Turkey's conditions (Karatepe, 2010; Karatepe et al., 2016). The factor analysis is repeated for the scope of this study and the results of the pre and posttest RTSQ-SF measures are presented in Chapter IV. English and Turkish versions of RTSQ-SF question form is presented in Appendix E.

3.6.8 Psychological Flexibility: Acceptance and Action Questionnaire II (AAQ-II)

The instrument designed to assess psychological inflexibility or experiential avoidance, as defined by Steven Hayes and colleagues in Acceptance and Commitment Therapy (ACT) is the Acceptance and Action Questionnaire (AAQ),

(Hayes et al., 2004) and was updated later on as Acceptance and Action Questionnaire II (AAQ-II) (Bond, Hayes, et al., 2011). It has seven items and a single factor structure. Psychometric properties of the instrument indicate that AAQ-II is reliable tool to measure psychological inflexibility, in other terms experiential avoidance, with a Cronbach's α score of .84.

In the Turkish adaptation study it was found that Turkish AAQ-II has a one-factor structure and it is a valid scale "for both clinical and non-clinical sample to measure the level of psychological distress" (Yavuz et al., 2016). The factor analysis is also done for the scope of this study and the results are presented in Chapter IV. English and Turkish versions of the AAQ-II question form is presented in Appendix E.

3.7 Data Analysis

The data obtained in the study was analyzed using SPSS (Statistical Package for Social Sciences) for Windows 23.0 program. Basic descriptive statistics, intercorrelations, factor analysis, Kolmogorov – Smirnov test for data normality, Paired Sample T-Test, and non-parametric Wilcoxon Signed Rank analysis for comparing conditions, and finally for moderation analysis model 2 in the Memore macro designed for repeated measures design was conducted.

CHAPTER IV

RESULTS

4.1 Confirmatory Factor Analysis of the Scales

The confirmatory factor analysis of the scales is computed, and all scales are found to be internally consistent. Detailed factor analysis of all scales is presented in the next sections.

4.1.1 Factor Analysis of Big 5 – 50

Big 5 – 50 scale is consisted of 50 items in five dimensions each consisted of 10 items. Sub-dimensions are extraversion, agreeableness, conscientiousness, neuroticism (emotional stability), and openness. Items 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 29, 30, 32, 34, 36, 38, 39, 44, 46, and 49 are coded in reverse. The scale form and detailed items are presented in Appendix E. The scale total explained a total of 32.3 % of the variance and the Cronbach's α value is computed as 0.87, validating that the scale is internally consistent. *Table 4.1* demonstrates the detailed factor analysis for each sub dimension.

Table 4.1.
Factor Analysis of Big 5 – 50 Personality Inventory

	Factor Loading	Eigen Values	Total Variance Explained	Cronbach's α	*M*	*SD*
Scale Total		8.23	32.3%	.87	3.63	.60
Factor 1 Extraversion		4.97	8.2%	.88	3.39	.71

(10 items)						
Item 1	.87					
Item 6	.88					
Item 11	.88					
Item 16	.87					
Item 21	.88					
Item 26	.87					
Item 31	.88					
Item 36	.87					
Item 41	.87					
Item 46	.86					
Factor 2 Agreeableness (10 items)		3.11	5.1%	.70	4.2	.42
Item 2	.70					
Item 7	.66					
Item 12	.74					
Item 17	.66					
Item 22	.67					
Item 27	.69					
Item 32	.67					
Item 37	.67					
Item 42	.68					
Item 47	.69					
Factor 3 Conscientiousness (10 items)		3.71	6.1%	.80	3.81	.61
Item 3	.80					
Item 8	.76					
Item 13	.81					
Item 18	.78					
Item 23	.78					
Item 28	.76					
Item 33	.77					
Item 38	.79					
Item 43	.78					
Item 48	.78					
Factor 4 Emotional Stability (10 items)		4.99	8.2%	.88	2.98	.76
Item 4	.86					
Item 9	.88					

Item 14	.86					
Item 19	.89					
Item 24	.85					
Item 29	.85					
Item 34	.88					
Item 39	.87					
Item 44	.86					
Item 49	.86					
Factor 5 Openness (10 items)		2.85	4.7%	.69	3.78	.50
Item 5	.67					
Item 10	.69					
Item 15	.68					
Item 20	.62					
Item 25	.67					
Item 30	.65					
Item 35	.67					
Item 40	.67					
Item 45	.69					
Item 50	.62					

4.1.2 Factor Analysis of FFMQ

FFMQ is consisted of 39 items in five dimensions. Sub-dimensions are observe (7 items), describe (8 items), act with awareness (8 items), non-react (8 items) and non-judge (8 items). Items 3, 5, 8, 10, 12, 13, 14, 16, 17, 18, 22, 23, 25, 28, 30, 34, 35, 38, and 39 are coded in reverse. The scale form is presented in Appendix E. The scale total explained a total of 60.7 % of the variance in the pretest and a total of 66.9% of the variance in the post test. Cronbach's α value is computed as 0.90 for pre-test and 0.92 for post-test condition validating that the scale is internally consistent. *Table 4.2* and *Table 4.3* demonstrates the detailed factor analysis for each sub dimension for pretest and posttest conditions, respectively.

Table 4.2.
Factor Analysis of FFMQ (Pre-Test)

	Factor Loading	Eigen Values	Total Variance Explained	Cronbach's α	*M*	*SD*
Scale Total			60.7%	.90	3.29	.45
Factor 1 Observe (7 items)		3.66	13.1%	.84	3.51	.71
Item 1	.85					
Item 6	.82					
Item 15	.78					
Item 20	.81					
Item 26	.80					
Item 31	.79					
Item 36	.84					
Factor 2 Describe (8 items)		4.72	14.7%	.90	3.56	.71
Item 2	.89					
Item 7	.88					
Item 12	.89					
Item 16	.88					
Item 22	.89					
Item 27	.88					
Item 32	.89					
Item 37	.88					
Factor 3 Act with Awareness (8 items)		3.59	11.2%	.82	3.18	.49
Item 5	.80					
Item 8	.78					
Item 13	.80					
Item 18	.82					
Item 23	.79					
Item 28	.79					
Item 34	.80					
Item 38	.80					
Factor 4 Non-React (8 items)		3.35	10.5%	.78	3.22	.54
Item 4	.77					

Item 9	.73					
Item 11	.80					
Item 19	.74					
Item 21	.76					
Item 24	.75					
Item 29	.74					
Item 33	.73					
Factor 5 Non-Judge (8 items)		3.60	12.3%	.80	3.02	.51
Item 3	.80					
Item 10	.76					
Item 14	.76					
Item 17	.78					
Item 25	.77					
Item 30	.78					
Item 35	.78					
Item 39	.82					

Table 4.3.
Factor Analysis of FFMQ (Post-Test)

	Factor Loading	Eigen Values	Total Variance Explained	Cronbach's α	*M*	*SD*
Scale Total			66.9%	.92	3.66	.42
Factor 1 Observe (7 items)		2.86	10.7%	.74	3.90	.50
Item 1	.73					
Item 6	.69					
Item 15	.66					
Item 20	.71					
Item 26	.72					
Item 31	.70					
Item 36	.73					
Factor 2 Describe (8 items)		4.82	15.8%	.90	3.81	.60

Item 2	.88					
Item 7	.90					
Item 12	.90					
Item 16	.88					
Item 22	.89					
Item 27	.88					
Item 32	.90					
Item 37	.89					
Factor 3 Act with Awareness (8 items)		4.21	13.8%	.86	3.57	.57
Item 5	.88					
Item 8	.83					
Item 13	.85					
Item 18	.84					
Item 23	.84					
Item 28	.83					
Item 34	.84					
Item 38	.83					
Factor 4 Non-React (8 items)		3.57	11.7%	.80	3.61	.51
Item 4	.79					
Item 9	.77					
Item 11	.82					
Item 19	.76					
Item 21	.78					
Item 24	.78					
Item 29	.78					
Item 33	.78					
Factor 5 Non-Judge (8 items)		4.47	14.7%	.88	3.51	.52
Item 3	.85					
Item 10	.85					
Item 14	.86					
Item 17	.88					
Item 25	.86					
Item 30	.85					
Item 35	.87					
Item 39	.88					

4.1.3 Factor Analysis of PSS

PSS is consisted of 14 items and was found to have a one factor structure. Items 4, 5, 6, 7, 9, 10, and 13 are scored in reverse direction. The scale form is presented in Appendix E. The scale explained a total of 35.4 % of the variance in the pretest and a total of 42.3% of the variance in the post test. Cronbach's α value is computed as 0.84 for pre-test and 0.87 for post-test condition validating that the scale is internally consistent. *Table 4.4* and *Table 4.5* demonstrates the detailed factor analysis for pretest and posttest conditions, respectively.

Table 4.4.
Factor Analysis of PSS (Pre-Test)

	Factor Loading	Eigen Values	Total Variance Explained	Cronbach's *α*	*M*	*SD*
Scale Total (14 Items)		4.95	35.4%	.84	3.04	.44
Item 1	.83					
Item 2	.82					
Item 3	.81					
Item 4	.83					
Item 5	.84					
Item 6	.83					
Item 7	.83					
Item 8	.82					
Item 9	.83					
Item 10	.82					
Item 11	.83					
Item 12	.83					
Item 13	.85					
Item 14	.82					

Table 4.5.
Factor Analysis of PSS (Post-Test)

	Factor Loading	Eigen Values	Total Variance Explained	Cronbach's α	*M*	*SD*
Scale Total (14 Items)		5.92	42.3%	.87	2.46	.48
Item 1	.87					
Item 2	.86					
Item 3	.86					
Item 4	.86					
Item 5	.87					
Item 6	.87					
Item 7	.86					
Item 8	.86					
Item 9	.86					
Item 10	.86					
Item 11	.86					
Item 12	.87					
Item 13	.90					
Item 14	.86					

4.1.4 Factor Analysis of PCQ

PCQ is consisted of 23 items in four dimensions. Sub dimensions are efficacy (7 items), hope (5 items), optimism (5 items) and resilience (6 items). Items 21, 22 and 23 are reverse coded. The scale form is presented in Appendix E. The scale total explained a total of 36.9 % of the variance in the pretest and a total of 40.3% of the variance in the post test. Cronbach's α value is computed as 0.91 for pre-test and .92 for post-test validating that the scale is internally consistent. *Tables 4.6* and *4.7* demonstrates the detailed factor analysis for each sub dimension for pretest and posttest conditions, respectively.

Table 4.6.
Factor Analysis of PCQ (Pre-Test)

	Factor Loading	Eigen Values	Total Variance Explained	Cronbach's α	*M*	*SD*
Scale Total			36.9%	.91	3.62	.57
Factor 1 Efficacy (7 items)		3.84	9.5%	.86	3.72	.86
Item 1	.86					
Item 2	.83					
Item 3	.84					
Item 4	.83					
Item 5	.83					
Item 6	.84					
Item 7	.82					
Factor 2 Hope (5 items)		3.13	10.9%	.84	3.42	.92
Item 8	.81					
Item 9	.78					
Item 10	.76					
Item 11	.78					
Item 15	.89					
Factor 3 Optimism (5 items)		2.10	7.3%	.61	3.51	.76
Item 12	.48					
Item 13	.40					
Item 14	.51					
Item 22	.62					
Item 23	.69					
Factor 4 Resilience (6 items)		3.20	9.3%	.80	3.55	.80
Item 16	.78					
Item 17	.76					
Item 18	.74					
Item 19	.72					
Item 20	.75					
Item 21	.83					

Table 4.7.
Factor Analysis of PCQ (Post-Test)

	Factor Loading	Eigen Values	Total Variance Explained	Cronbach's α	*M*	*SD*
Scale Total			40.3%	.93	3.77	.60
Factor 1 Efficacy (7 items)		4.00	10.2%	.87	3.91	.69
Item 1	.88					
Item 2	.83					
Item 3	.82					
Item 4	.83					
Item 5	.86					
Item 6	.86					
Item 7	.86					
Factor 2 Hope (5 items)		3.12	11.2%	.85	3.59	.85
Item 8	.80					
Item 9	.81					
Item 10	.81					
Item 11	.79					
Item 15	.86					
Factor 3 Optimism (5 items)		2.31	8.3%	.70	3.70	.65
Item 12	.57					
Item 13	.61					
Item 14	.56					
Item 22	.74					
Item 23	.72					
Factor 4 Resilience (6 items)		3.49	10.4%	.85	3.82	.65
Item 16	.81					
Item 17	.82					
Item 18	.80					
Item 19	.80					
Item 20	.85					
Item 21	.86					

4.1.5 Factor Analysis of RTSQ-SF

RTSQ-SF is consisted of 15 items and has a one factor structure and has no reverse coded items. The scale form is presented in Appendix E. The scale explained a total of 48 % of the variance in the pretest and a total of 47.2% of the variance in the post test. Cronbach's α value is computed as 0.91 for both pre-test and post-test, validating that the scale is internally consistent. *Table 4.8* and *Table 4.9* demonstrates the detailed factor analysis for pretest and posttest conditions, respectively.

Table 4.8.
Factor Analysis of RTSQ-SF (Pre-Test)

	Factor Loading	Eigen Values	Total Variance Explained	Cronbach's *α*	*M*	*SD*
Scale Total (15 Items)		7.19	48.0%	.91	4.18	1.07
Item 1	.90					
Item 2	.90					
Item 3	.90					
Item 4	.90					
Item 5	.91					
Item 6	.92					
Item 7	.90					
Item 8	.90					
Item 9	.90					
Item 10	.90					
Item 11	.90					
Item 12	.90					
Item 13	.90					
Item 14	.90					
Item 15	.90					

Table 4.9.
Factor Analysis of RTSQ-SF (Post-Test)

	Factor Loading	Eigen Values	Total Variance Explained	Cronbach's α	*M*	*SD*
Scale Total (15 Items)		7.08	47.2%	.91	3.61	.95
Item 1	.91					
Item 2	.90					
Item 3	.90					
Item 4	.90					
Item 5	.91					
Item 6	.92					
Item 7	.91					
Item 8	.91					
Item 9	.91					
Item 10	.90					
Item 11	.91					
Item 12	.91					
Item 13	.91					
Item 14	.90					
Item 15	.91					

4.1.6 Factor Analysis of AAQ-II

AAQ-II is consisted of 7 items and has a one factor structure and no reverse coded items. The scale form is presented in Appendix E. The scale explained a total of 61.4 % of the variance in the pretest and a total of 55.7% of the variance in the post test. Cronbach's α value is computed as 0.89 for pre-test and 0.86 for post-test validating that the scale is internally consistent. *Tables 4.10* and *4.11* demonstrate the detailed factor analysis for pretest and posttest conditions, respectively.

Table 4.10.
Factor Analysis of AAQ-II (Pre-Test)

	Factor Loading	Eigen Values	Total Variance Explained	Cronbach's α	*M*	*SD*
Scale Total (7 Items)		4.30	61.4%	.89	3.15	1.24
Item 1	.86					
Item 2	.89					
Item 3	.87					
Item 4	.87					
Item 5	.86					
Item 6	.89					
Item 7	.88					

Table 4.11.
Factor Analysis of AAQ-II (Post-Test)

	Factor Loading	Eigen Values	Total Variance Explained	Cronbach's α	*M*	*SD*
Scale Total (7 Items)		3.90	55.7%	.86	2.5	1.05
Item 1	.84					
Item 2	.84					
Item 3	.82					
Item 4	.85					
Item 5	.84					
Item 6	.86					
Item 7	.85					

4.2 Descriptive Statistics

The following table shows the minimum (*Min*), maximum (*Max*), mean (*M*) and standard deviation (*SD*) for all variables. For all variables except for psychological flexibility higher scores indicate higher demonstration of the trait, whereas for psychological flexibility variable higher scores means a more inflexible attitude, demonstrating higher experiential avoidance, regarding one's psychological state, hence, the variable may be referred to as *psychological inflexibility* from this point onwards. Likewise, for neuroticism, higher score should be interpreted as more emotionally stable position, therefor the trait will sometimes be referred as *emotional stability* from this point onwards.

Table 4.12.
Descriptive Statistics

	N	Min.	Max.	*M*	*SD*
Extraversion	59	1.70	5.00	3.39	0.71
Agreeability	59	3.10	5.00	4.20	0.42
Conscientiousness	59	2.60	4.80	3.81	0.62
Emotional Stability	59	1.40	4.30	2.98	0.77
Openness	59	2.50	4.90	3.78	0.51
Pre Mindfulness	59	2.21	4.15	3.29	0.45
Pre Observe	59	1.29	4.71	3.51	0.71
Pre Describe	59	2.00	5.00	3.56	0.71
Pre Act with Awareness	59	2.29	4.14	3.18	0.49
Pre Non-React	59	1.86	4.43	3.22	0.54
Pre Non-Judge	59	1.84	3.92	3.02	0.51
Pre Perceived Stress	59	2.07	4.36	3.04	0.44

Pre PsyCap	58	2.35	4.74	3.62	0.57
Pre Efficacy	57	2.29	5.00	3.79	0.71
Pre Hope	57	1.60	5.00	3.48	0.81
Pre Optimism	57	1.75	4.75	3.41	0.72
Pre Resilience	57	2.17	4.67	3.61	0.66
Pre Rumination	59	0.00	6.40	4.18	1.07
Pre Psychological Inflexibility	59	1.14	7.00	3.15	1.24
Post Mindfulness	59	2.79	4.49	3.66	0.42
Post Observe	59	2.71	4.71	3.90	0.50
Post Describe	59	2.14	4.86	3.81	0.60
Post Act with Awareness	59	2.43	4.71	3.57	0.57
Post Non-React	59	2.29	4.57	3.61	0.51
Post Non-Judge	59	2.53	4.61	3.51	0.52
Post Perceived Stress	59	1.36	3.93	2.46	0.48
Post PsyCap	58	2.52	4.78	3.77	0.60
Post Efficacy	58	2.14	5.00	3.91	0.69
Post Hope	58	1.50	5.00	3.59	0.85
Post Optimism	58	2.20	4.80	3.70	0.65
Post Resilience	58	2.50	5.00	3.82	0.65
Post Rumination	59	1.80	5.73	3.61	0.95
Post Psychological Inflexibility	59	1.00	5.00	2.47	1.05

4.3 Correlational Analysis of the Variables

A Pearson correlation coefficient was computed to assess the relationship between the variables. The following *Table 4.13* demonstrates the correlational relationship of all the variables.

Table 4.13.
Correlational Analysis of the Variables

		Correlations														
	RHO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Extraversion	1														
2	Agreeability	.44**	1													
3	Conciensciousness	-.01	.10	1												
4	Emotional Stability	.24	.00	.32*	1											
5	Openness	.37**	.22	.02	.24	1										
6	Pre Mindfulness	.32*	.04	.15	.61**	.46**	1									
7	Pre Perceived Stress	-.09	.15	-.20	-.55**	-.04	-.48**	1								
8	Pre PsyCap	.59**	.17	.19	.38**	.43**	.45**	-.38**	1							
9	Pre Rumination	-.21	.12	-.22	-.56**	.08	-.42**	.49**	-.27*	1						
10	Pre Psychological Inflexibility	-.19	.03	-.28*	-.55**	-.01	-.64**	.58**	-.28*	.57**	1					
11	Post Mindfulness	.20	.03	.02	.41**	.35**	.49**	-.43**	.37**	-.31*	-.39**	1				
12	Post Perceived Stress	-.12	.06	-.01	-.28*	-.13	-.14	.41**	-.31*	.28*	.24	-.59**	1			
13	Post PsyCap	.39**	.06	.22	.45**	.40**	.37**	-.28*	.64**	-.25	-0.22	.62**	-.64**	1		
14	Post Rumination	-.14	.13	-.09	-.38**	-.14	-.19	.38**	-.33*	.55**	.30*	-.59**	.66**	-.48**	1	
15	Post Psychological Inflexibility	-.14	-.01	-.23	-.45**	-.18	-.31*	.52**	-.29	.43**	.58**	-.60**	.64**	-.51**	.65**	1

**Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

As it can be interpreted from *Table 4.13,* mindfulness and emotional stability were found to be positively correlated, for both pretest and posttest conditions, $r = .61$, $p < .01$ and $r = .41$, $p < .01$ respectively, as it was suggested in the literature. Additionally, openness trait was found to be positively correlated with mindfulness, for both pretest and posttest conditions, $r = .46$, $p < .01$ and $r = .35$, $p < .01$ respectively, this was too suggested in the literature. Other constructs that are predicted to be inversely related to mindfulness, rumination, and psychological inflexibility, were both found to be negatively correlated with emotional stability, strengthening the positive relationship between emotional stability trait and mindfulness trait. Mindfulness was found to be positively correlated with extraversion trait in the pretest condition, $r = .32$, $p < .05$. On the other hand, mindfulness was found to be negatively correlated with psychological inflexibility and rumination. Since it was conceptualized such that mindfulness in a way is opposite of ruminative, inflexible mind entangled with thoughts, the medium to large correlations that are found between mindfulness, rumination and psychological inflexibility variables was expected. Mindfulness was also found to be positively correlated with psychological capital construct, and negatively with stress. In conclusion the overall findings were found to be consistent and commonsensical, and in line with the previous scientific literature.

4.4 Data Normality Analysis

Test of Normality analysis was conducted to see if the data violated the normality assumptions. The analysis revealed that the data was mixed in nature, results of some measures were distributed normally, whereas the others were not. For composite results, whilst mindfulness and rumination data were normally distributed, perceived stress, composite psychological capital, and psychological flexibility data

distribution violated the normality assumptions. Presented down below, *Table 4.14* shows the results of the normality analysis.

Table 4.14.
Data Normality Analysis

	Kolmogorov-Smirnov				*Shapiro-Wilk*		
	Statistic	*df*	*Sig.*		*Statistic*	*df*	*Sig.*
Extraversion	0.10	56	0.20	*	0.98	56	0.43
Agreeability	0.10	56	0.20	*	0.98	56	0.66
Conscientiousness	0.11	56	0.10		0.96	56	0.05
Emotional Stability	0.09	56	0.20	*	0.97	56	0.14
Openness	0.07	56	0.20	*	0.99	56	0.94
Pre-Mindfulness	0.10	56	0.20	*	0.98	56	0.36
Pre-Observe	0.14	56	0.01		0.95	56	0.01
Pre-Describe	0.14	56	0.01		0.97	56	0.18
Pre-Act with Awareness	0.09	56	0.20	*	0.97	56	0.15
Pre Non-React	0.12	56	0.06		0.97	56	0.13
Pre Non-Judge	0.09	56	0.20	*	0.97	56	0.15
Pre Perceived Stress	0.08	56	0.20	*	0.98	56	0.38
Pre PsyCap	0.11	56	0.09		0.97	56	0.24
Pre Efficacy	0.15	56	0.00		0.95	56	0.02
Pre Hope	0.08	56	0.20	*	0.97	56	0.16
Pre Optimism	0.09	56	0.20	*	0.97	56	0.28
Pre Resilience	0.13	56	0.03		0.95	56	0.03
Pre Rumination	0.09	56	0.20	*	0.95	56	0.02
Pre Psychological Inflexibility	0.07	56	0.20	*	0.96	56	0.08
Post Mindfulness	0.06	56	0.20	*	0.98	56	0.66
Post Observe	0.15	56	0.01		0.94	56	0.01
Post Describe	0.08	56	0.20	*	0.97	56	0.24
Post Act with Awareness	0.11	56	0.09		0.97	56	0.13
Post Non-React	0.10	56	0.20	*	0.97	56	0.12
Post Non-Judge	0.06	56	0.20	*	0.98	56	0.63
Post Perceived Stress	0.13	56	0.03		0.98	56	0.51
Post PsyCap	0.13	56	0.02		0.97	56	0.10
Post Efficacy	0.14	56	0.01		0.94	56	0.01

Post Hope	0.11	56	0.10		0.97	56	0.18
Post Optimism	0.11	56	0.08		0.97	56	0.12
Post Resilience	0.10	56	0.20	*	0.97	56	0.20
Post Rumination	0.09	56	0.20	*	0.98	56	0.49
Post Psychological Inflexibility	0.14	56	0.01		0.94	56	0.01

Note: (*) This is a lower bound of the true significance. p=.20 is automatically assigned when data are normal

4.5 Results of Hypothesis Testing

The difference between the pretest and posttest scores for each variable was probed in paired samples t-test for the normally distributed data and non-parametric Wilcoxon signed rank analysis was used for variables that violated normality assumptions. The results are reported in the following sections. The effect sizes were calculated using Cohen's for T-Test and calculation described in Pallant's SPSS Manual for Wilcoxon signed rank analysis (2020).

4.5.1 Results of Paired Sample T-Test Analysis

The paired sample t-test analysis showed that the effect of treatment was positive for the mindfulness variable. The posttest result (M= 3.66, SD= 0.42) was significantly higher than pretest result (M= 3.29, SD= 0.45), t (59) = -6.50, $p < .01$, indicating that the treatment was effective and participants benefitted from the intervention and have reported higher mindfulness levels compared to pre intervention levels. The effect size was computed as large (d=.86). The analysis also revealed that in sub dimensions of mindfulness, acting with awareness, non-reacting and non-

judging dimensions, the treatment effect size was found to be large too *(d*=.72, .74, and .95 respectively).

The treatment was also found to be effective for psychological capital optimism sub dimension. The pretest and posttest results are computed as (*M*=3.41, *SD*=.72) and (*M*=3.70, *SD*=.65) respectively, and the effect of treatment was computed highly significant, *t* (58) =-3.34, *p*<.01. The effect size was small to medium (*d*=.42). However, the effect of mindfulness intervention was not found to be significant for psychological capital hope sub dimension.

Mindfulness treatment have also affected rumination positively. Participants have reported less rumination after the treatment *(M*=3.61, *SD*=.95), compared to pretreatment (*M*=4.18, *SD*=1.07), and the difference was found to be highly significant *t* (59) =4.52, *p*<.01. The effect size was computed as medium to large (*d*=.56). The table down below presents the findings of the paired sample t-test analysis.

Table 4.15.
Paired Sample T-Test Analysis

		N	*M*	*SD*	*t*	*p*	*Cohen's d*
Mindfulness	Pre-Test	59	3.29	0.45	-6.50	0.00	0.86
	Post-Test	59	3.66	0.42			
Mindfulness - Act with Awareness	Pre-Test	59	3.18	0.49	-5.33	0.00	0.72
	Post-Test	59	3.57	0.57			
Mindfulness - Non-React	Pre-Test	59	3.22	0.54	-5.03	0.00	0.74
	Post-Test	59	3.61	0.51			
Mindfulness - Non-Judge	Pre-Test	59	3.02	0.51	-6.30	0.00	0.95
	Post-Test	59	3.51	0.52			
PsyCap - Hope	Pre-Test	57	3.48	0.81	-0.91	0.36	
	Post-Test	58	3.59	0.85			

PsyCap - Optimism	Pre-Test	57	3.41	0.72	-3.34	0.00	0.42
	Post-Test	58	3.70	0.65			
Rumination	Pre-Test	59	4.18	1.07	4.52	0.00	0.56
	Post-Test	59	3.61	0.95			

4.5.2 Results of Non-Parametric Wilcoxon Signed Rank Analysis

For data that was not normally distributed non-parametric Wilcoxon signed rank analysis was used to compare the pre and post test scores. For effect size calculation test statistic is divided by the square root of the sample size (Pallant, 2020).

The results demonstrated that mindfulness sub dimensions observe and describe post treatment results were different than the pretreatment results in the positive direction. Observe posttest result *(M*=3.90 *SD*=.50) was significantly higher than pretest result (*M*=3.51, *SD*=.71) the comparison was found to be statistically significant, *z* (59) = -4,098, *p*=<.01. Describe posttest result *(M*=3.81, *SD*=.60) was also significantly higher than the pretest result *(M*=3.56, *SD*=.71), and it was too found to be statistically significant, *z* (59) = -3,458, *p*<.01. The effect sizes were found to be small for both variables. Putting together the results of paired sample t-test and the non-parametric Wilcoxon analysis, the mindfulness intervention was effective in raising the mindfulness level of the participants.

Mindfulness treatment has also affected stress positively. Participants have reported less stress after the treatment *(M*=2.46, *SD*=.48), compared to pretreatment (*M*=3.04, *SD*=.44), and the difference was found to be statistically significant, *z* (59) = -6.02 , *p*<.01. The effect size was computed as large (*d*= 0.55).

The intervention was effective on psychological capital too, increasing the participants' psychological capital overall. Psychological capital composite posttest result *(M*=3.77, *SD*=.60) was higher than pretest result (*M*=3.62, *SD*=.57) at *Z* (58) = -2,285, *p*<.05. The effect size was found to be medium (*d*=0.21). For resilience sub dimension posttest results was also significantly higher than pretest results, however no meaningful result was founded for efficacy sub dimension.

Finally, the intervention was found to be effective in increasing psychological flexibility too. The posttest results *(M*=2.47, *SD*=1.05) was significantly lower than pretest results (*M*=3.15, *SD*=1.24), meaning the participants have reported themselves as holding their thought more lightly, engaging in their own thoughts in a more flexible manner. The analysis was found to be statistically significant, z (59) = -4,45, *p*<.01. The effect size was computed as medium (*r*= 0.41). *Table 4.16* summarizes the findings down below.

Table 4.16.
Wilcoxon Signed Rank Analysis

		N	*M*	*SD*	*Z*	*p*	*Effect Size*
Mindfulness Observe	Pre-Test	59	3.51	0.71	-4.09	0.00	0.38
	Post-Test	59	3.90	0.50			
Mindfulness Describe	Pre-Test	59	3.56	0.71	-3.46	0.00	0.32
	Post-Test	59	3.81	0.60			
Perceived Stress	Pre-Test	59	3.04	0.44	-6.02	0.00	0.55
	Post-Test	59	2.46	0.48			
PsyCap	Pre-Test	58	3.62	0.57	-2.28	0.02*	0.21
	Post-Test	58	3.77	0.60			
PsyCap-Efficacy	Pre-Test	57	3.79	0.71	-1.51	0.13	
	Post-Test	58	3.91	0.69			
PsyCap-	Pre-Test	57	3.61	0.66	-2.54	0.01	0.24

Resilience	Post-Test	58	3.82	0.65			
Psychological Inflexibility	Pre-Test	59	3.15	1.24	-4.45	0.00	0.41
	Post-Test	59	2.47	1.05			

*Note: *Significant at* p<0.05, the rest are significant at p<0.01

4.5.3 Summary of Pretest – Posttest Comparisons

Table 4.17 demonstrates the combined results of paired sample t-test analysis and Wilcoxon signed rank analysis in order of effect size impact. It is observed that all variables were affected by the intervention in the positive direction, mindfulness being the most strongly affected (d=.86, *p*<.01), followed by rumination (d=.56, *p*<.01), perceived stress (d =.55, *p*<.01), psychological flexibility (d=.41, *p*<.01) and psychological capital (d=.21, *p*<.05). The five sub dimensions of the mindfulness scale were all changed in the positive direction as well, non-judge dimension (d=.95) having the largest effect size. Psychological Capital sub dimensions demonstrated mixed results, whilst optimism and resilience dimensions improved significantly, no meaningful change was observed for hope and efficacy sub dimensions.

Table 4.17.
Summary of Pretest Posttest Comparisons

	Pretest		Posttest				
	M	*SD*	*M*	*SD*	Mdif	*p*	*Effect Size*
Main Effects							
Mindfulness	3.29	0.45	3.66	0.42	0.37	0.00	0.86
Rumination	4.18	1.07	3.61	0.95	-0.57	0.00	0.56
Perceived Stress	3.04	0.44	2.46	0.48	-0.58	0.00	0.55
Psychological Inflexibility	3.15	1.24	2.47	1.05	-0.68	0.00	0.41
PsyCap	3.62	0.57	3.77	0.6	0.15	0.02*	0.21

Mindfulness Sub Dimensions							
Mindfulness - Non-Judge	3.02	0.51	3.51	0.52	0.49	0.00	0.95
Mindfulness - Non-React	3.22	0.54	3.61	0.51	0.39	0.00	0.74
Mindfulness - Act with Awareness	3.18	0.49	3.57	0.57	0.39	0.00	0.72
Mindfulness - Observe	3.51	0.71	3.9	0.5	0.39	0.00	0.38
Mindfulness - Describe	3.56	0.71	3.81	0.6	0.25	0.00	0.32
PsyCap Sub Dimensions							
PsyCap - Optimism	3.41	0.72	3.7	0.65	0.29	0.00	0.42
PsyCap - Resilience	3.61	0.66	3.82	0.65	0.21	0.01	0.24
PsyCap - Hope	3.48	0.81	3.59	0.85	0.11	0.36	
PsyCap - Efficacy	3.79	0.71	3.91	0.69	0.12	0.13	

*Correlation is significant at the 0.05 level (2-tailed)

4.6 Results of Moderation Analysis

A moderation analysis was conducted using model 2 in the Memore program 2.1, a macro used for estimating mediation or moderation models in two condition repeated measures designs (Montoya, 2019). The predictor (X) was mindfulness intervention, represented in the data by repeated measurements of the outcome variables (Y), including mindfulness, stress, psychological capital, psychological flexibility, and rumination. The individual difference moderators were extraversion, agreeableness, conscientiousness, neuroticism (or the reverse trait; emotional stability), and openness, indicated by a single pretest measurement. The analysis reports the effect of the moderators on the posttest-pretest difference score for each outcome, including *B,* standard error, *t,* and *p* values, and 95% confidence intervals of *B.* A significant effect specifies that the personality trait moderated the effect of the intervention on the outcome. For significant effects, the interaction is graphed, and the region of significance using Johnson-Neyman technique is indicated. The analysis

estimated the effect of intervention on the posttest-pretest difference score of each outcome variable at values of the moderator (10th, 25th, 50th, 75th, and 90th percentile). Additionally, the linear effects of the moderator at the pre-test and post test scores of the outcomes are also reported.

4.6.1 Moderation Effect of Personality Traits on Mindfulness

See *Table 4.18* for the results of the moderation analysis. Each personality trait had a non-significant impact, indicating that participants personality traits did not moderate the effect of mindfulness intervention on participants' mindfulness. Conditional analysis showed that the effect of mindfulness intervention on mindfulness was positive and significant at the five tested levels of each personality trait ($p<.01$).

Table 4.18.
Moderation Effect of Personality Traits on Mindfulness

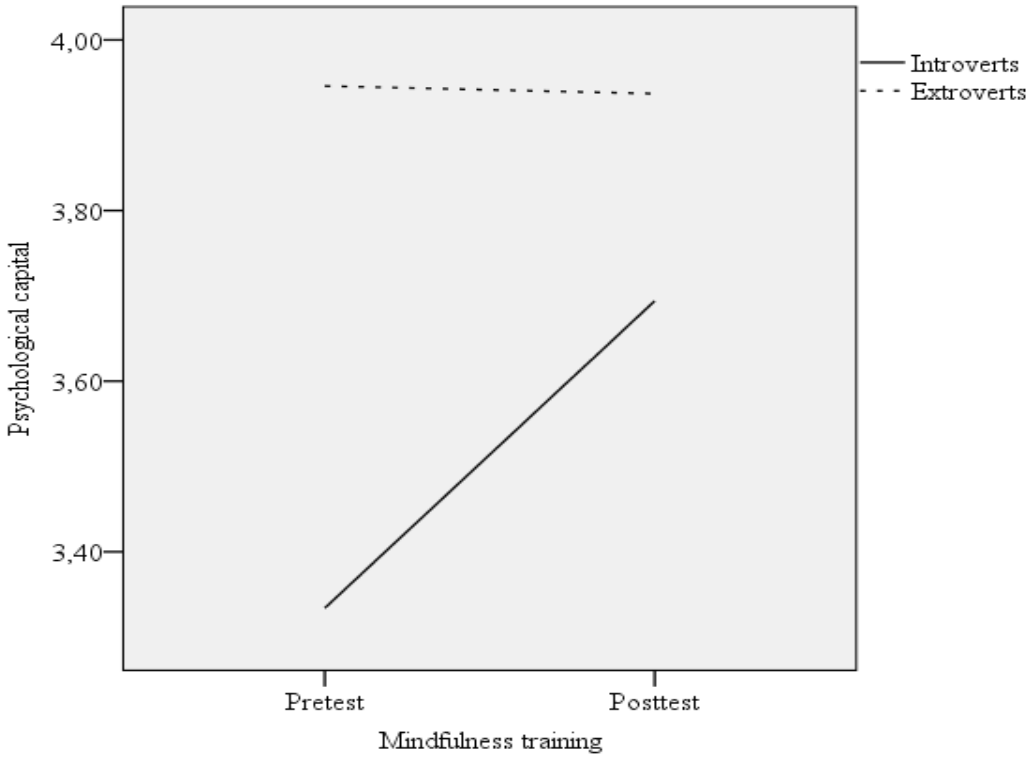
	B	*SE*	*t*	*p*	*LLCI*	*ULCI*
ZExtrav	-0.05	.07	-0.78	.44	-0.19	0.08
ZAgree	0.02	.07	0.34	.74	-0.11	0.15
ZConsc	-0.02	.06	-0.38	.70	-0.15	0.10
ZNeuro	-0.08	.06	-1.23	.22	-0.21	0.05
ZOpeness	-0.05	.06	-0.76	.45	-0.17	0.08

4.6.2 Moderation Effect of Personality Traits on Psychological Capital

Table 4.19 summarizes the results of the regression analysis for psychological capital. Extraversion had a significant negative effect on the pretest-posttest difference scores for psychological capital. The rest of the personality traits were not significant. *Figure 4.1* displays the moderating effect of Extraversion/Introversion at -1 and +1 *SD* above the mean on the scale for extraversion. To interpret this interaction, *Table 4.19* shows the estimates of the effect of mindfulness intervention on psychological capital at specific values of Extraversion. The significance region using Johnson-Neyman technique includes about 51 percent of the participants at and below z=0.49 on the Extraversion scale. These participants are located at the lower end of the scale (i.e., introverts). The effect of the intervention was positive, and the *B* value gradually increased from .16 (*z*=0.05) to .61 (*z*=-2.38). For introverts, the mindfulness intervention resulted in a significant increase in psychological capital, while for extroverts, who had a relatively high level of psychological capital from the start, the intervention did not have an effect. Further analysis indicated that extraversion significantly related with pretest psychological capital scores, *B*=.31, *se*=.11, *t*=2.66, *p*<.01. This relationship was non-significant for the posttest scores, *B*=.12, *se*=.11, *t*=1.09, *p*>.05. In sum, in terms of psychological capital, introverts benefitted from participating in the mindfulness intervention.

Table 4.19.
Regression Analysis for Psychological Capital

	B	*SE*	*t*	*p*	*LLCI*	*ULCI*
ZExtrav	-0.23	.10	-2.24	.03	-0.43	-0.02
ZAgree	0.03	.10	0.30	.77	-0.16	0.22
ZConsc	0.09	.09	0.99	.33	-0.09	0.27
ZNeuro	0.07	.09	0.70	.49	-0.12	0.26
ZOpeness	0.05	.09	0.51	.61	-0.14	0.23



Note: Extraversion is displayed at -1 and +1 SD above the mean.

Figure 4.1. *Moderation Role of Extraversion on the Relationship Between Mindfulness Intervention and Psychological Capital*

Table 4.20.

Effects of Mindfulness Intervention on Psychological Capital at Values of Extraversion

Extraversion	*B*	*se*	*t*	*p*	*LLCI*	*ULCI*
-2.38	0.61	0.22	2.85	0.00	0.18	1.05
-2.14	0.57	0.20	2.89	0.00	0.17	0.96

-1.89	0.52	0.18	2.94	0.00	0.17	0.88
-1.65	0.48	0.16	2.98	0.00	0.16	0.80
-1.41	0.43	0.14	3.02	0.00	0.15	0.72
-1.16	0.39	0.13	3.05	0.00	0.13	0.65
-0.92	0.34	0.11	3.05	0.00	0.12	0.57
-0.67	0.30	0.10	2.99	0.00	0.10	0.50
-0.43	0.25	0.09	2.82	0.01	0.07	0.44
-0.19	0.21	0.08	2.48	0.02	0.04	0.38
0.05	0.17	0.08	2.00	0.05	0.00	0.33
0.06	0.16	0.08	1.98	0.05	0.00	0.33
0.30	0.12	0.09	1.38	0.17	-0.05	0.29
0.55	0.07	0.10	0.79	0.44	-0.12	0.26
0.79	0.03	0.11	0.28	0.78	-0.18	0.24
1.04	-0.02	0.12	-0.13	0.90	-0.26	0.22
1.28	-0.06	0.14	-0.45	0.66	-0.33	0.21
1.52	-0.11	0.15	-0.70	0.49	-0.41	0.20
1.77	-0.15	0.17	-0.89	0.38	-0.49	0.19
2.01	-0.20	0.19	-1.04	0.30	-0.57	0.18
2.25	-0.24	0.21	-1.17	0.25	-0.65	0.17

Note: Values represented as z-scores

4.6.3 Moderation Effect of Personality Traits on Rumination

Table 4.21 shows the results of regression analysis for rumination. Openness to new experience was significant, and neuroticism (emotional stability) was marginally significant. The rest of the traits were not significant. *Figure 4.2* shows the graphing of the moderating effect of openness on rumination at 1 standard deviation above and below the mean for openness. The effect of mindfulness intervention on rumination was not significant at 10^{th} and 25^{th} percentile, it was significant at and above the 50^{th} percentile of the openness scale (see *Table 4.21* for this conditional analysis). In the pretest condition, highly open participants indicated having significantly higher levels of rumination as compared to less open participants, *B*=.28,

se=.12, *t*=2.23, *p*<.05. Openness was not significantly related with posttest rumination scores, *B*=-.05, *se*=.13, *t*=.42, *p*>.05.

Table 4.21.
Pretest-posttest Rumination Difference Scores as Predicted by Big Five Traits

	B	*se*	*t*	*p*	*LLCI*	*ULCI*
ZExtrav	0.16	.15	1.08	.28	-0.13	0.45
ZAgree	-0.01	.14	-0.04	.97	-0.28	0.27
ZConsc	0.07	.13	0.53	.60	-0.19	0.33
ZNeuro	0.26	.14	1.92	.06	-0.01	0.53
ZOpeness	-0.33	.13	-2.51	.01	-0.60	-0.07

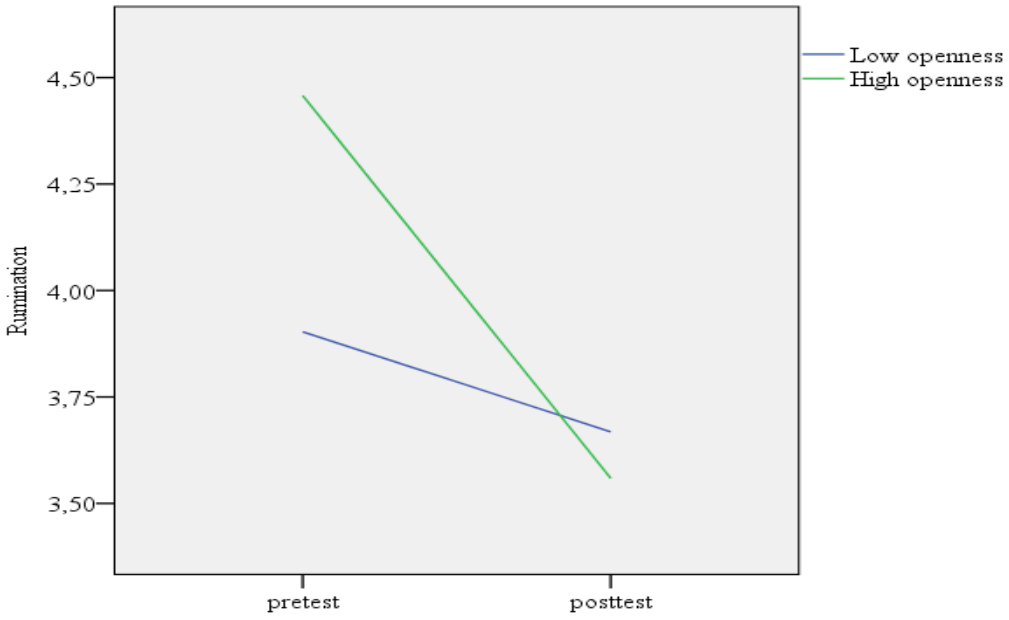


Figure 4.2. *Moderation Role Openness on the Relationship Between Mindfulness Intervention and Rumination*

Table 4.22.
Moderation Effect of Mindfulness Intervention on Rumination at Values of Openness

Openness	*B*	*se*	*t*	*p*	*LLCI*	*ULCI*
-1.34	-0.08	.22	-0.37	.71	-0.53	0.36
-0.75	-0.28	.16	-1.71	.09	-0.61	0.05
0.04	-0.54	.12	-4.38	.00	-0.79	-0.29
0.83	-0.81	.16	-5.02	.00	-1.13	-0.48
1.23	-0.94	.20	-4.73	.00	-1.34	-0.54

Note: The rest of the four traits are used as constants at the 50th percentile.

4.6.4 Moderation Effect of Personality Traits on Psychological Flexibility and Stress

The effect of mindfulness intervention on psychological flexibility and stress were not affected significantly by the personality traits. See *Table 4.23* and *Table 4.24* for the regression analysis for psychological flexibility and stress, respectively.

Table 4.23.
Moderation Effect of Personality Traits on Psychological Flexibility

	B	*Se*	*t*	*p*	*LLCI*	*ULCI*
ZExtrav	0.14	.17	0.83	.41	-0.20	0.48
ZAgree	-0.08	.16	-0.52	.61	-0.41	0.24
ZConsc	0.06	.15	0.37	.71	-0.25	0.36
ZNeuro	0.21	.16	1.30	.20	-0.11	0.52
ZOpeness	-0.15	.15	-0.99	.32	-0.46	0.16

Table 4.24.
Moderation Effect of Personality Traits on Stress

	B	*se*	*t*	*p*	*LLCI*	*ULCI*
ZExtrav	-0.01	.08	-0.12	.90	-0.17	0.15
ZAgree	-0.03	.075	-0.35	.72	-0.18	0.12
ZConsc	0.05	.071	0.70	.48	-0.09	0.19
ZNeuro	0.11	.074	1.45	.15	-0.04	0.26
ZOpeness	-0.06	.072	-0.85	.40	-0.21	0.08

CHAPTER V

DISCUSSION

5.1 Summary of the Findings

The purpose of this study was to look at the effectiveness of mindfulness intervention on a sample from Turkish urban workforce population whilst exploring possible moderation effect of personality traits on mindfulness intervention. To do this, a one-group pretest posttest quasi experimental model was designed, and effectiveness of mindfulness training was tested on mindfulness, stress, rumination, psychological capital, and psychological flexibility as outcomes. Big five personality traits, measured on a single occasion were used as moderators. The mindfulness based training program that was delivered in the scope of the study (m-MBSR) was designed using Mindfulness Based Stress Reduction (MBSR) program as a template and elements and teachings from Mindfulness Based Cognitive Therapy (MBCT) and mindfulness based compassion programs, namely Mindful Self Compassion (MSC) and Compassionate Mind Training (CMT), were drawn to create an effective curriculum with shorter meditation practices, additional in class group exercises and an optional silent day.

The intervention program was delivered over a course of 8 weeks. The overall attendance rate was 75%, and the participants were exposed to an average of 21.6 hours of mindfulness training in the form of in class group intervention and at home practice. The method of data collection was self-report scales and The Big Five (50 items), Five Facet Mindfulness Questionnaire (39 items), Psychological Capital Questionnaire (23 items), Perceived Stress Scale (14 items), Ruminative Thought

Style Questionnaire (15 items) and Acceptance and Action Questionnaire II (7 items) were utilized. At the end of the study 59 participants' data were found to be suitable for analysis. The results were analyzed using quantitative methods in SPSS. Factor analysis and reliability tests were run, and the results revealed that the scales were reliable and consistent. Analysis phase continued with data normality, descriptive statistics and intercorrelation analysis. The data distribution was found to be mixed in nature, and as a result for normally distributed data paired sample t-test analysis, and for data that normal distribution assumption was violated, a non-parametric Wilcoxon signed rank analysis was utilized to compare the pretest and posttest conditions.

The data analysis showed that mindfulness was positively correlated with emotional stability (r =.61 and r =.41*)* and openness traits (r =.46, and r =.35) in both pretest and posttest conditions. Additionally, a positive correlation was observed between pretest measure of mindfulness and extraversion (r =.32). Rumination and psychological inflexibility, were both found to be negatively correlated with emotional stability and mindfulness, strengthening the inverse relationship between neuroticism and mindfulness. A positive correlation between mindfulness and psychological capital, and a negative correlation between mindfulness and stress was also noted. In further analysis, it was observed that following the mindfulness training intervention, mindfulness, psychological capital, and psychological flexibility significantly increased, while perceived stress and rumination significantly decreased. Main scales effect sizes included large, medium and small effects, mindfulness being the most strongly affected (d=.86), followed by rumination (d=.56), perceived stress (d =.55), psychological flexibility (d=.41) and psychological capital (d=.21, p<.05). In line with the prior research described in the earlier sections of this thesis and as expected, mindfulness intervention made a significant difference in the positive direction on the mental wellbeing of the participants. The second level of analysis involved moderation analysis and for this analysis, model 2 in the Memore program was

conducted. The analysis revealed that introverts as compared extroverts, and highly open participants as compared to those who were less open, benefitted from the training the most in terms of an increase in psychological capital and decrease in ruminative thinking, respectively.

This study provided empirical evidence on effectiveness of mindfulness training and confirmed previous findings in the literature, providing further support that mindfulness may be an effective intervention for stress, rumination and psychological inflexibility, common distresses in everyday life. Additionally, the study demonstrated that mindfulness may be an effective intervention for alleviating psychological distress in non-clinical populations too. Also, the study findings confirmed that there is a correlation between mindfulness and psychological capital, and that mindfulness may be a tool to improve positive psychological capital of an individual. Further, by providing a moderation analysis using specific personality traits, the study extends the literature on factors of individual differences that influence the success of mindfulness trainings in terms of inducing a positive psychological affect. Another implication of the study is that, even a mindfulness program with shorter meditation regimen is still effective, suggesting that lowed does mindfulness trainings may still be effective in treatment of psychological distress.

5.2 Limitations of This Research and Further Studies

Before else, it should be noted that mindfulness research and studies have been criticized extensively, and that there is a lack of confidence voiced by some opponents. Critics claim that most of the mindfulness studies are poorly designed, and since there is no exact agreement on the definition of mindfulness, the attempts to measure mindfulness lacks scientific basis. It is also argued that, because of the extensive marketing on the subject, the ‘hype’ that is created far exceeds the actual benefits of

the approach. On a final note, it is stated that mindfulness may be harmful to some people with certain conditions, but this fails to be reflected in scientific research (Van Dam et al., 2018).

Limitations particular to this study were about sampling, design, and confounding variables. First, the participants were selected among volunteers who were reached via social media. Applicants were almost all females, educated to the level of undergraduate degree or higher, between the ages of 23 to 46 (*SD*=6.86). Based on effect size and statistical power analysis the study was calculated to hold 87 people at the effect size of 0.3 ($p < 0.05$). However, 77 suitable participants signed up initially, and sample size ended up at 59 after data cleaning. To summarize, the sample was formed from a small size of motivated, predominantly female participants who were with in second or third degree of the researcher's social media circles, which affects the generalizability of the results.

Additionally, 57.6% of the participants were already engaged in an activity to reduce their psychological distress and improve psychological wellbeing as they have joined the study. It would be appropriate to assume that these other activities the participants were already engaged in might have a confounding effect on the results. Additionally, the population at hand was already interested in mindfulness and was motivated to make a positive change in their lives, and 59.3% of the participants were previously engaged in mindfulness and 28.8% reported that they were currently continuing their individual practice of yoga, meditation and other experiential awareness practices at the beginning of the study, which might have also affected the results, since some participants were having higher doses of mindfulness.

Another point to consider is that the intervention was conducted at a private training studio and people working for different companies and in different settings

were brought together as a group to receive the intervention. None of the participants were working for the same organization, nor they were not colleagues. It is plausible to assume that receiving an intervention at the company offices with coworkers upon request of department managers and human resources department, as it is the standard form of receiving training in organization settings, might affect the results. It can be argued that already motivated individuals who have made the effort of joining a study based on volunteerism would benefit more from any intervention as opposed to receiving an intervention that imposed in an organizational setting.

The design of the study was one group pretest-posttest design. Participants clearly reported improvement in all measured variables, however it would have strengthened the study to have a control group to compare against the experiment group or follow up post test results at a later time to see if positive results were sustained over time. However, this type of research is logistically challenging, since it requires participants to commit over a long period of time, thus, generating large number of participants is quite difficult, especially for the control condition. Another note regarding the design can be made on group consistency. At the beginning of the study, each participant was assigned to an intervention group that best fits his or her schedule. However, during the 8 weeks, if a participant is unable to attend a session with his or her initially assigned group, he or she was encouraged to join the session with another group. This approach was helpful to minimize the dropout rates and increase the number of sessions attended, however it also made the groups not fully consistent, and this might have affected the results in a negative way since it is suggested in the literature that group process is an important part of a mindfulness intervention.

A final note can be said about the teaching quality of the intervention. As it was discussed in earlier chapters, the quality of teaching is very important in effective

delivery of mindfulness training. In this study, the researcher was also the mindfulness teacher who delivered the intervention programs, and she have worked alone during the study, teaching all five groups herself, which was approximately 25 hours per week of teaching including the preparation before the classes, voice recordings and administrative work. It is normally recommended that only one mindfulness intervention group is taken by a teacher at a time, and since it was the first teaching experience of the researcher, along with the high work load, it is possible that teaching quality might have been compromised and the results might have been reflecting this condition.

Despite the research limitations this study provided substantial evidence that mindfulness intervention may have positive outcomes for non-clinical population working adults. Future research might investigate other aspects of mindfulness-based interventions. One thing to look at would be, as there is substantial evidence in the literature on associations of mindfulness and emotional regulation, to look in how mindfulness affects emotional regulation, since this study was mainly focused on thought content. Mediation analysis would also be an area of exploration. In this study the researcher had the intention of looking into possible mediation roles of the variables, but preliminary analysis showed that the sample size was too small to draw any meaningful outcomes, so mediation analysis was dropped altogether.

For workplace context since previous research suggests that mindfulness and job satisfaction are positively correlated, it can be further investigated how mindfulness is related to job satisfaction and moderation of personality traits may be an area of focus. In this study moderation analysis provided some meaningful results, showing that there may be added benefit of mindfulness training for certain individuals, and this can be further explored. As stress is reduced, mindfulness is expected to enhance job satisfaction, and this could be an important effect particularly

among employees with high levels of neuroticism. These employees are usually less satisfied than emotionally stable employees, and the difference is attributed mainly to higher stress levels in employees who score higher in neuroticism, since this trait is found to be positively correlated with job stress (Birch & Kamali, 2001; Nasurdin, et al., 2005).

Another important and interesting direction for future research may be about organizational climate and mindfulness. Opponents of mindfulness training at work place argues that in organizations where the culture is dysfunctional, mindfulness training may be interpreted such that employees are responsible for their own stress, irrespective of the mistreatment of the employees or poor working conditions, creating "passive tolerance of oppressive working conditions" (Purser & Milillo, 2015). With the current popularity of mindfulness, it is important to consider that mindfulness interventions are designed for the right goals, so that they benefit the participating individuals as well as the organization (Hülsheger, 2015). In this regard, a research that incorporates organizational climate, mindfulness, and job satisfaction would be significant.

A final comment can be made regarding the content of the curriculum. The curriculum was already modified to make it more suitable for workplace settings, however the sessions were still 2.5 to 3 hours long and the intervention lasted 8 weeks, which may be considered too long and intense for workplace settings. A lower dose mindfulness study can be done in workplace settings, preferably at the premises of the companies or organizations, to see if the positive effects of the mindfulness interventions would still be sustained.

5.3 Conclusion

As Buddha have said there is suffering, and psychological suffering makes quite a big part of it. Some of this suffering is acknowledged. Individuals with significant mental health issues seek help within the healthcare system, receiving medication and therapy. However, there is also the *unacknowledged suffering*, which is the everyday stress, worry, unsatisfactoriness, sorrow and misery that goes unsoothed which makes life low dose painful and dull, not so much to seek medical treatment but not small enough to let go unnoticed. Mindfulness seems to provide a solution to this the low dose pain. If enough of these small distressed piles up, the person easily finds himself or herself over the cliff, facing more serious physical and psychological health issues. The system that we live in adds on to the suffering, creating a fast-paced consumerist and competitive culture that creates more distress. There are definitely important issues that needs to be addressed within the system and institutions. Some scholars argue that depression is not a medical disease, but it is a humanistic adaptive mechanism to the system we live in. It can be argued that we live in cultures that do not take care of us well, and the burden of taking care of ourselves lies with us. However, mindfulness seems to offer more than a remedy to individual psychological stress. Mindfulness nurtures qualities such as sensitivity, compassion, insight, empathy and tolerance, qualities much needed in a healthy functioning society, and it is as easy as starting to pay attention, and it is cost effective. A growing number of people are adopting mindfulness as they find it useful in their lives. With steady development, mindfulness may be a solution to more than depression, rumination and stress, it may be a solution to a more compassionate system that takes better care of its members.

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ETİK KURUL DEĞERLENDİRME SONUCU / RESULT OF EVALUATION BY THE ETHICS COMMİTTEE

Covid-19 salgını nedeniyle İstanbul Bilgi Üniversitesi İnsan Araştırmaları Etik Kurulu, 2019-2020 Bahar dönemimde teslim edilecek lisansüstü tezlerin onay yetkisini ilgili etik kurul alt komitelerine devretmiştir. / Due to the Covid-19 outbreak, Istanbul Bilgi University Human Research Ethics Committee has transferred its approval authority to the Ethics Board Sub-Committees organized within each graduate program. Thus, the graduate theses to be submitted in the spring semester of 2019-2020 should/must get the approval of the Ethics Board Sub-Committee within their own graduate program.

ETİK KURUL ALT KOMİTESİ DEĞERLENDİRME SONUCU / ETHICS BOARD SUB-COMMITTEE EVALUATION RESULT

Bu bölüm lisansüstü tez araştırmaları için ilgili Etik Kurul alt komitesince doldurulacaktır. / This part to be completed by the Ethics Board sub-committee responsible for graduate dissertation studies.

Başvuru Sahibi / Applicant: **Kıvılcım Kıran Gen**

Proje Başlığı / Project Title: **Exploring Effectiveness of 8 Weeks Modified Mindfulness Based Intervention on Perceived Stress and Psychological Capital moderated by Personality Traits**

Değerlendirme Sonucu/ Result of Evaluation

1.Herhangi bir değişikliğe gerek yoktur. Veri toplama/uygulama başlatılabilir./ There is no need for revision. Data collection/application may commence : X

2. Ret / Application Rejected : _____

Reddin gerekçesi / Reason of Rejection : _____

Değerlendirme Tarihi / Date of Evaluation: **11.02.2019**

Unvanı, Adı, Soyadı / Title, Name, Surname:

İmza / Signature:

Dr. Öğr. Üyesi. Ümit Akırmak **Dr. Öğr. Üyesi. Gergely Czukor**

APPENDIX B

VOLUNTARY APPLICATION FORM (TURKISH)

Mindfulness Temelli Psikoeğitim Programı Gönüllü Katılım Bilgi Talebi Formu

Merhaba,

Mindfulness Eğitiminin etkiliğini araştıran bir çalışma kapsamında ücretsiz olarak 8 haftalık Mindfulness Eğitimi verilecektir. Katılımcılardan eğitim programına 8 hafta boyunca devam etmeleri ve eğitim öncesi ve sonrasında bazı anket soruları cevaplamaları beklenecektir. Katılımcı bilgileri anonim olarak tutulacaktır.

Eğer 8 hafta boyunca haftada 1 gün 2.5 saat sürecek bu eğitim programına katılım için gönüllüyseniz lütfen aşağıdaki kısa bilgi formunu doldurun,

Eğitim yeri Levent Mindfulness Hareketi Eğitim Stüdyosu'dur (Kanyon Alışveriş Merkezi Karşısı). Diğer detaylar telefonda ve bilgilendirme görüşmesinde verilecektir.

*** Kıvılcım Kıran Gen 2016 yılında Bangor Üniversitesi'ne bağlı Centre for Mindfulness Research and Practice kurumu tarafından verilen Mindfulness Temelli Stres Azaltma Programı Eğitimcinin Eğitimi - 1 Eğitimini tamamlamıştır ve aynı kurumdan süpervizyon almaktadır.

*** Bu form daha ayrıntılı bilgilendirme yapmak için ön talep toplama niteliğindedir, çalışmaya kesin katılım hakkı vermez.

Email Adresi:

Ad – Soyad:

Telefon numarası:

Çalışma Durumunuz (Size en uygun olan seçeneği işaretleyin)

- ☐ Bir iş yerinde (özel kurum veya dernek, vakıf vs.) ücretli olarak çalışıyorum
- ☐ Kendi iş yerimde / Kendi iş alanımda çalışıyorum (düzenli ve devamlı)
- ☐ Free lancer olarak çalışıyorum (düzensiz, belirsiz aralıklarla)
- ☐ Şu anda çalışmıyorum, iş arıyorum
- ☐ Kendi işimi kurmak üzere çalışıyorum / hazırlık aşamasındayım
- ☐ Öğrenciyim ancak düzenli olarak bir işte de çalışıyorum
- ☐ Öğrenciyim
- ☐ Şu anda çalışmıyorum

Kısaca neden bu programa katılmak istediğinizden bahseder misiniz:

Eklemek istediğiniz notlar ve bilgiler varsa lütfen buraya yazın:

Lütfen onay kutularını işaretleyin:

Verdiğim bilgilerin doğruluğunu teyid ederim: Onay ☐

APPENDIX C

INFORMED CONSENT FORM (TURKISH & ENGLISH)

Bilgilendirilmiş Onay

Tez Çalışması Bilgileri

Bu yüksek lisans tezi çalışmasında çalışan kesim üzerinde Mindfulness Temelli Stres Azaltma Müdahalesinin etkililiğinin araştırılması hedeflenmiştir. Çalışma Yrd. Doçent Gergely Czukor danışmanlığında İstanbul Bilgi Üniversitesi, Örgütsel Psikoloji bölümü öğrencisi Kıvılcım Kıran Gen tarafından yürütülmektedir.

Programa dahil edilmeyecek gruplar

Mindfulness Temelli Müdahaleler çeşitli olup bu çalışma kapsamında Mindfulness Temelli Stres Azaltma (MBSR) protokolünün bir uyarlaması kullanılacaktır. Bu protokolün aktif madde bağımlılığı olan, travma sonrası stres bozukluğu yaşayan, akut depresyon ya da diğer majör psikiyatrik tanısı olan kişiler üzerinde kullanılması bu çalışma kapsamında uygun değildir.

Yukarıda belirtilen durumlardan biri sizi tanımlıyorsa lütfen bu formu doldurmaya devam etmeyin.

☐ Aktif madde bağımlılığımın olmadığını, travma sonrası stres bozukluğu, akut depresyon, ya da diğer majör psikiyatrik tanılardan birini almadığımı beyan ederim.

Çalışmanın Yürütülüş Şekli

Bu araştırmada gönüllüler arasından araştırmanın katılımcı kriterlerine uygun olan kişiler 8 hafta boyunca sürecek uyarlanmış Mindfulness Temelli Stres Azaltma eğitim guplarından birine katılmışlardır. Katılımcılar ilk oturumda oryantasyona tabi tutularak programın amacı, eğitim yeri, eğitim gün ve saatleri, oturumların işleyiş şekli, yapılacak egzersizler ve ev uygulamaları konusunda ayrıntılı biçimde bilgilendirilir.

Veri toplama ve Gizlilik

Bu çalışmada katıcılımların bazı anket soruları cevaplamaları istenecektir. Anket soruları arasında kişisel rahatsızlık verecek bilgiler istenmemektedir. Ancak, katılım sırasında sorulardan ya da herhangi başka bir nedenden ötürü kendinizi rahatsız hissederseniz cevaplama işini yarıda bırakıp, çalışmaya katılmamakta serbestsiniz. Bütün katılımcıların kişisel bilgileri gizli tutulacak, elde edilen anonim bilgiler sadece araştırmacılar tarafından değerlendirilecek ve bilgiler yine anonim olarak kullanılacaktır.

Gönüllülük

Katılım tamamen gönüllülük üzerine kuruludur. Çalışmaların herhangi bir aşamasında sebep bildirmeksizin çalışmayı bırakabilir ya da hiçbir mazeret belirtmeden katılmak istemediğiniz bölümlere katılmayabilirsiniz.

Araştırma Sonuçları

Araştırmaya katıldıktan sonra herhangi bir sorunuz olduğu takdirde ya da araştırma sonuçlarını elde etmek için Kıvılcım Kıran Gen (kivilcimkiran@gmail.com) ya da Gergely Czukor (gergely.czukor@bilgi.edu.tr) ile irtibata geçebilirsiniz.

Yukarıdaki çalışmanın amacını ve içeriğini belirten bildiriyi okudum ve anladım. Gönüllü olarak bu çalışmaya katılmayı talep ediyorum.

Lütfen, “Gönüllü olarak katılmayı talep ediyorum” yazın ve İsminizi yazın:

Kabul ediyorum. ☐ Kabul etmiyorum. ☐ İmza:

Lütfen araştırmacının size ulaşabileceği email ve telefon numarası yazın: ……

Informed Consent

General Information

The aim of this master thesis is to investigate the effectiveness of Mindfulness Based Stress Reduction Intervention program on working population. The study is designed and executed by Kıvılcım Kıran Gen, student of the Department of Organizational Psychology at Istanbul Bilgi University, under the supervision of associate professor Gergely Czukor.

Groups not included in the program

Mindfulness Based Interventions are various and in this study an adaptation of the Mindfulness Based Stress Reduction (MBSR) protocol will be used. The use of this protocol on subjects with active substance dependence, post-traumatic stress disorder, acute depression or other major psychiatric diagnoses is not suitable.

If your have any of the conditions explained above please do not continue to fill in this form.

□ I hereby declare that I have no active substance dependence, post-traumatic stress disorder, acute depression, or other major psychiatric diagnoses.

Execution of the Study

In this study suitable volunteers who meet the inclusion criteria are selected to attend the Mindfulness Based Stress Reduction training program which will last for 8 weeks. Participants will receive an orientation in the first session, and will be informed in detail about the program's purpose, training place, training days and times, the way the sessions are conducted, the exercises to be performed, and the home study.

Data Collection and Privacy

In this study, the participants will be asked to respond to some survey questions. Answering these surveys should not create any distress, however, for any reason if you feel uncomfortable answering these questions or do not feel all right about your participation, you are free to leave the study. The personal information of all participants will be kept confidential and anonymous. The data collected will only be evaluated by the researchers and the research findings will only be used anonymously.

Volunteering

Participation is based entirely on volunteerism. You may discontinue the study at any stage, without giving a reason, or you may not participate in the sections that you do not wish to attend without specifying any excuses.

Research Findings

If you have any questions regarding the research or would like to obtain a copy of the research findings, please contact Kıvılcım Kıran Gen (kivilcimkiran@gmail.com) or Gergely Czukor (gergely.czukor@bilgi.edu.tr).

I have read and understood the purpose and content of the above study. I would like to voluntarily participate in this study.

Please write, “I hereby volunteer to this study” and print your name:

I accept. □ I do not accept. □ Signature:

Please write your phone number and email address that the researcher can contact you: ……

APPENDIX D

FEE WAIVER (TURKISH & ENGLISH)

Ücretten Feragat

Yrd. Doçent Gergely Czukor danışmanlığında İstanbul Bilgi Üniversitesi, Örgütsel Psikoloji bölümü öğrencisi Kıvılcım Kıran Gen tarafından yürütülen ve Çalışan Kesim Üzerinde Mindfulness (Bilinçli Farkındalık) Temelli Stres Azaltma Müdahalesinin Etkililiğinin araştırıldığı çalışmaya gönüllü olarak katıldığımı ve bu çalışma kapsamında verilen eğitim için benden herhangi bir isim altında hiçbir ücret talep edilmediğini ve bu eğitim için hiçbir ücret ödemediğimi kabul ve beyan ederim.

Fee Waiver

I hereby declare that I have voluntarily participated in this study designed and executed by Kıvılcım Kıran Gen, student of the Department of Organizational Psychology at Istanbul Bilgi University, under the supervision of associate professor Gergely Czukor, and that I have not been asked for any fees or charges and I have not paid any fees or charges for the training I have received during this training.

İsim – Name:

İmza – Signature:

APPENDIX E

FORMS & SCALES (TURKISH & ENGLISH)

1. Demographics Form – English
2. Work and Life Habits and Experiences Form – English
3. Demographics Form – Turkish
4. Work and Life Habits and Experiences Form – Turkish
5. Big Five – 50 – Turkish
6. Mindfulness: Five Facet Mindfulness Questionnaire (FFMQ) – English
7. Mindfulness: Five Facet Mindfulness Questionnaire (FFMQ) – Turkish
8. Perceived Stress Scale (PSS) – English
9. Perceived Stress Scale (PSS) – Turkish
10. Psychological Capital Questionnaire (PCQ) – English
11. Psychological Capital Questionnaire (PCQ) – Turkish
12. Ruminative Thought Style Questionnaire (RTSQ-SF) – English
13. Ruminative Thought Style Questionnaire (RTSQ-SF) – Turkish
14. Acceptance and Action Questionnaire (AAQ-II) – English
15. Acceptance and Action Questionnaire (AAQ-II) – Turkish

Participant No:

Name Surname:

Demographic Information

1. Gender: □Woman □Man □Other

2. Date of Birth: _____

3. Education Level: □ Great School □ High School □ Undergraduate Student □ University Degree □Graduate Student □ Graduate degree □ Other (Please Specify) _____

4. Relationship Status: □ Married □ Single □ Widow □ Divorced □ Separated □In a relationship □ Co-living

5. Number of Children: □None □1 □2 □3 □4 or more

Work and Life Experiences Questions

1. Employment Status □ Employee □ Self Employed □Free lance □Unemployed

2. Work time arrangement □Full time □Part time □Project based

3. Work place: □Private sector □Public Sector □NGO

□Self Employed □Other _____

4. Total work experience (in month and years) _____

5. Your daily average total work hours (including in the office, mobile and distance working):

_____

6. Have you ever tried any experiential awareness exercises such as mindfulness meditation / yoga/ qigong with assistance from an experienced teacher or by your self?

□Yes □No

7. Currently do you engage in regular Mindfulness or other experiential awareness exercises and if yes how often?

□Every day □2 – 3 times per week □1 time per week

□1 – 2 times per month

8. Do you currently engage in a regular activity to manage your stress and support your well-being and if yes what do you do?

□ sports □ reading □ psychological counselling □ personal development trainings

□ mentoring, coaching □ yoga □ talking with family and friends

□breathing exercises □ support group (group therapy etc.)

□ religious worship □ spiritual counselling □ qigong

□ Other _____

Please answer the following questions on a scale of 1 to 6

9. Do you consider yourself as someone who work a lot?

(1: I do not work a lot, 6:I work a lot.)

1 2 3 4 5 6

_____

10. Do you consider yourself as someone who cares about his / her job?

(1: My job is not important, 6: My job is very important).

1 2 3 4 5 6

_____

11. Do you consider yourself as someone who is satisfied about his / her job?

(1: I am not satisfied with my job 6: I am satisfied with my job).

1 2 3 4 5 6

_____

Katılımcı No:

Ad Soyad:

Demografik Bilgiler

1. Cinsiyetiniz: □ Kadın □Erkek □Diğer

2. Doğum tarihiniz: _____

3. Eğitim Durumunuz: □İlköğretim mezunu □Lise mezunu □ Üniversite öğrencisi

□Üniversite mezunu □ Lisansüstü öğrencisi □ Lisansüstü mezunu

□ Diğer (Lütfen belirtiniz) _____

4. Medeni Durumunuz; □Evli □Bekar □Dul □Boşanmış □Eşinden Ayrı Yaşıyor

□İlişkisi var □Partneri ile beraber yaşıyor

5. Çocuk Sayınız: □Yok □1 □2 □3 □4 ve daha fazla

Çalışma ve Hayat Deneyimleri Soruları

1. Çalışma Durumunuz: □Bir işyerinde Ücretli Çalışan □Kendi iş yerinde Çalışan □Free lance - Serbest Çalışan □ Şu anda çalışmıyor

2. Çalışma Süresi Şekliniz: □ Full time □ Part time □ Proje bazlı

3. Çalışma yeri: □ Özel Sektörde ücretli □ Kamuda ücretli □ Kar amacı gütmeyen vakıf / dernekte ücretli

□Kendi işyerinde □Diğer _____

4. Toplam iş hayatı tecrübeniz (Ay veya yıl cinsinden belirtebilirsiniz): _____

5. Günlük ortalama çalışma saatiniz (iş yerinde, mobil ve uzaktan çalışma olarak toplam

saat):_____

6. Daha önce bir eğitmen eşliğinde veya kendi başınıza Meditasyon/ Yoga/ Qigong/ Bilinçli Farkındalık gibi deneyimsel farkındalık çalışmalarına katıldınız mı?

□Evet □Hayır

7. Hali hazırda düzenli olarak uyguladığınız Mindfulness (Bilinçli Farkındalık) veya deneyimsel farkındalık çalışmaları varsa, bu çalışmaları ne sıklıkta uyguluyorsunuz?

□Her gün □Haftada 2-3 kez □Haftada 1 kez □Ayda 1-2 kez

8. Hali hazırda düzenli olarak uyguladığınız stresinizi azaltan ve iyi oluş halinizi destekleyen çalışmalar yapıyor, bu alanda destek alıyor musunuz, cevabınız evet ise, neler yapıyorsunuz?

□spor □kitap okuma □psikolojik danışmanlık □kişisel gelişim eğitimleri

□mentorluk, koçluk □yoga □aile fertleri, arkadaş gibi kişilerle konuşma

□nefes egzersizleri □destek çemberi (grup terapisi vb.)

□dini ibadet □manevi danışmanlık □qigong

□diğer _____

Lütfen aşağıdakı soruları 1'den 6'ya kadar bir puan vererek cevaplayın.

9. Kendinizi çok çalışan biri olarak görürmüsünüz?

(1: Az çalışıyorum 6: Çok çalışıyorum)

1 2 3 4 5 6

_____

10. Kendinizi işine önem veren biri olarak görürmüsünüz?

(1: İşim önemli değildir 6: İşim çok önemlidir)

1 2 3 4 5 6

_____

11. Kendinizi genel olarak işinden memnun biri olarak görürmüsünüz?

(1: İşimden hiç memnun değilim 6: İşimden oldukça memnunum)

1 2 3 4 5 6

_____

E-5: Big Five – 50 – Turkish

Aşağıda genel hal, tavır ve davranışlarınıza yönelik bir dizi soru yöneltilmektedir. Her soruyu dikkatlice okuyarak size en uygun seçeneğin altındaki kutuya bir çarpı işareti koyarak cevaplayınız. Soruların doğru veya yanlış cevabı yoktur. Önemli olan sizin hal, duygu ve düşüncelerinizi yansıtan yanıtları vermenizdir.

	Hiç uygun değil	Uygun değil	Orta / Kararsız	Biraz Uygun	Çok uygun
1 . Toplantıların gözdesiyimdir					
2 . Başkalarına pek ilgi duymam					
3 . Her zaman hazırlıklıyımdır					
4 . Kolayca kendimi baskı altında hissederim					
5 . Kelime hazinem zengindir					
6 . Çok konuşmam					
7 . İnsanlarla ilgilenirim					
8 . Kişisel eşyalarımı etrafta bırakırım					
9 . Genelde rahatımdır					
10 . Soyut fikirleri kavramakta zorlanırım					
11 . İnsanların arasında kendimi rahat hissederim					
12 . İnsanlara hakaret ederim					
13 . Detaylara dikkat ederim					
14 . Her şeye endişelenirim					
15 . Olayları zihnimde canlandırırım					
16 . Arka planda kalmayı tercih ederim					
17 . Başkalarının duygularını anlayıp paylaşırım					
18 . İşleri karmakarışık yaparım					
19 . Nadiren kendimi keyifsiz hissederim					
20 . Soyut fikirlerle ilgilenmem					
21 . Konuşmayı genelde ben başlatırım					
22 . Başka insanların problemleriyle ilgilenmem					
23 . İşleri hemen hallederim					
24 . Kolayca huzursuz olurum					
25 . Mükemmel fikirlerim vardır					
26 . Söyleyecek çok şeyim yoktur					
27 . Yumuşak kalpliyim					
28 . Genellikle eşyaları yerlerine koymayı unuturum					
29 . Moralim çabuk bozulur					
30 . Hayal gücüm kuvvetli değildir					
31 . Toplantılarda değişik insanlarla konuşabilirim					
32 . Aslında başkalarıyla pek ilgilenmem					
33 . Düzeni severim					
34 . Ruh halim çok sık değişir					
35 . Olayları anlamada hızlıyımdır					
36 . Dikkat kendi üzerime çekmekten hoşlanmam					
37 . Başkalarına zaman ayırırım					

38 . Görevlerimden kaçarım					
39 . Ruhsal dengem sık değişir					
40 . Zor kelimeler kullanırım					
41 . İlgi odağı olmaktan rahatsızlık duymam					
42 . Başkalarının duygularını hissederim					
43 . Bir plan takip ederim					
44 . Çabuk rahatsız olurum					
45 . Olaylar üzerinde düşünerek vakit geçiririm					
46 . Yabancıların arasında genelde sessizimdir					
47 . İnsanları rahatlatırım					
48 . İşimde titizimdir					
49 . Çoğu zaman kendimi keyifsiz hissederim					
50 . Fikirlerle doluyumdur					

Ters puanlanan maddeler: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 29, 30, 32, 34, 36, 38, 39, 44, 46, 49

E-6: Five Facet Mindfulness Questionnaire (FFMQ) – English

Down below are a series of questions about your personal experiences. Read each question carefully and answer the question by placing a cross on the box below the option that best suits you. There are no right or wrong answers to the questions. The important thing is that you give answers that reflect your feelings and thoughts.

	never or very rarely true 1	rarely true 2	sometimes true 3	often true 4	always true 5
1 . When I'm walking, I deliberately notice the sensations of my body moving.					
2 . I'm good at finding words to describe my feelings.					
3 . I criticize myself for having irrational or inappropriate emotions.					
4 . I perceive my feelings and emotions without having to react to them.					
5 . When I do things, my mind wanders off and I'm easily distracted.					
6 . When I take a shower or bath, I stay alert to the sensations of water on my body.					
7 . I can easily put my beliefs, opinions, and expectations into words.					
8 . I don't pay attention to what I'm doing because I'm daydreaming, worrying, or otherwise distracted.					
9 . I watch my feelings without getting lost in them.					
10 . I tell myself I shouldn't be feeling the way I'm feeling.					
11 . I notice how foods and drinks affect my thoughts, bodily sensations, and emotions.					
12 . It's hard for me to find the words to describe what I'm thinking.					
13 . I am easily distracted.					
14 . I believe some of my thoughts are abnormal or bad and I shouldn't think that way.					
15 . I pay attention to sensations, such as the wind in my hair or sun on my face.					
16 . I have trouble thinking of the right words to express how I feel about things					
17 . I make judgments about whether my thoughts are good or bad.					
18 . I find it difficult to stay focused on what's happening in the present.					
19 . When I have distressing thoughts or images, I "step back" and am aware of the thought or image without getting taken over by it.					
20 . I pay attention to sounds, such as clocks ticking, birds chirping, or cars passing.					
21 . In difficult situations, I can pause without immediately reacting.					
22 . When I have a sensation in my body, it's difficult for me to describe it because I can't find the right words.					
23 . It seems I am "running on automatic" without much awareness of what I'm doing.					
24 . When I have distressing thoughts or images, I feel calm soon after.					
25 . I tell myself that I shouldn't be thinking the way I'm thinking.					
26 . I notice the smells and aromas of things.					
27 . Even when I'm feeling terribly upset, I can find a way to put it into words.					

28 . I rush through activities without being really attentive to them.					
29 . When I have distressing thoughts or images I am able just to notice them without reacting.					
30 . I think some of my emotions are bad or inappropriate and I shouldn't feel them.					
31 . I notice visual elements in art or nature, such as colors, shapes, textures, or patterns of light and shadow.					
32 . My natural tendency is to put my experiences into words.					
33 . When I have distressing thoughts or images, I just notice them and let them go.					
34 . I do jobs or tasks automatically without being aware of what I'm doing.					
35 . When I have distressing thoughts or images, I judge myself as good or bad, depending what the thought/image is about.					
36 . I pay attention to how my emotions affect my thoughts and behavior.					
37 . I can usually describe how I feel at the moment in considerable detail.					
38 . I find myself doing things without paying attention.					
39 . I disapprove of myself when I have irrational ideas.					

Items 3, 5, 8, 10, 12, 13, 14, 16, 17, 18, 22, 23, 25, 28, 30, 34, 35, 38, 39 are coded in reverse direction.

E-7: Five Facet Mindfulness Questionnaire (FFMQ) – Turkish

Aşağıda genel hal, tavır ve davranışlarınıza yönelik bir dizi soru yöneltilmektedir. Her soruyu dikkatlice okuyarak size en uygun seçeneğin altındaki kutuya bir çarpı işareti koyarak cevaplayınız. Soruların doğru veya yanlış cevabı yoktur. Önemli olan sizin hal, duygu ve düşüncelerinizi yansıtan yanıtları vermenizdir.

	Kesinlikle Doğru Değil 1	Nadiren Doğru 2	Bazen Doğru 3	Çoğunlukla Doğru 4	Her zaman Doğru 5
1. Yürürken vücudumda oluşan hareketlerin verdiği hislere özellikle dikkat ederim.					
2. Hislerimi tanımlayan kelimeleri bulmakta iyiyimdir.					
3. Mantığa aykırı veya yersiz duygular yaşadığımda kendimi eleştiririm.					
4. Duygu ve hislerimi, onları reddetmeksizin algılarım.					
5. Bir şeyler yaparken konudan uzaklaşırım ve dikkatim kolay dağılır.					
6. Duş alırken veya banyo yaparken, suyun bedenim üzerindeki yarattığı hislere karşı duyarlıyımdır.					
7. İnanç, görüş ve beklentilerimi kolayca kelimelere dökebilirim.					
8. Ne yaptığıma dikkat etmem; çünkü ya dalıp giderim, ya endişelenirim ya da bir şekilde dikkatim dağılmış olur.					
9. Duygularımın içinde kaybolup gitmeden onları izleyebilirim.					
10. Kendi kendime hissettiğim şekilde hissetmememem gerektiğini söylediğim olur.					
11. Yediğim ve içtiğim şeylerin düşüncelerimi, bedensel duyularımı ve duygularımı nasıl etkilediklerini fark ederim.					
12. Düşüncelerimi tanımlayan kelimeleri bulmak benim için zordur.					
13. Dikkatim kolay dağılır.					
14. Bazı düşüncelerimin anormal veya kötü olduğuna ve o şekilde düşünmemem gerektiğine inanırım.					
15. Saçlarımın arasında dolaşan rüzgar ve yüzüme vuran güneş gibi hislere dikkat ederim.					
16. Bir şeyler hakkında nasıl hissettiğimi ifade edecek doğru kelimeleri düşünmekte zorlanırım.					
17. Düşüncelerimin iyi veya kötü olup olmadığı konusunda değerlendirmeler yaparım.					
18. Şu anda olup bitene odaklanmak benim için zordur.					
19. Bana sıkıntı veren düşünce ve imgelere sahip olduğumda, bir adım geri atar ve o düşünce ve imgeye esir olmadan, onları fark ederim.					
20. Saatlerin tıklaması, kuşların cıvıltısı ya da yoldan geçen arabaların gürültüleri gibi seslere dikkat ederim.					
21. Zor durumlarda, hemen tepki vermeden duraksayabilirim.					

22.	Bedenimde bir şey duyumsadığımda, bunu tanımlamak bana zor gelir; çünkü doğru kelimeleri bulamam.					
23.	Ne yaptığımın pek farkına varmaksızın, otomatiğe bağlanmışım gibime geliyor.					
24.	Bana sıkıntı veren düşünce ve imgelere sahip olduğumda, çok geçmeden kendimi sakin hissederim.					
25.	Kendi kendime, düşündüğüm şekilde düşünmemem gerektiğini söylerim.					
26.	Çevremdeki koku ve aromaları fark ederim.					
27.	Kendimi çok kötü hissettiğim durumlarda bile, bu durumu kelimelere dökmenin bir yolunu bulabilirim.					
28.	Ne yaptığıma çok dikkat etmeksizin, işlerimi acele ile yapıp geçerim.					
29.	Bana sıkıntı veren düşünce ve imgelere sahip olduğumda, tepki vermeksizin onları fark ederim.					
30.	Bazı duygularımın kötü veya yersiz olduğunu ve bunları hissetmemem gerektiğini düşünürüm.					
31.	Sanat veya doğadaki görsel öğeleri; örneğin renkleri, şekilleri, dokuları ya da ışık ve gölge motiflerini fark ederim.					
32.	Deneyimlerimi kelimelere dökmek gibi doğal bir eğilimim vardır.					
33.	Bana sıkıntı veren düşünce ve imgelere sahip olduğumda, onları sadece fark eder ve salıveririm.					
34.	Ne yaptığımın farkına varmaksızın, iş ve görevlerimi otomatiğe bağlanmış gibi yaparım.					
35.	Bana sıkıntı veren düşünce ve imgelere sahip olduğumda, o düşünce ve imgenin ne olduğuna bağlı olarak kendimi iyi veya kötü bir insan olarak değerlendiririm.					
36.	Duygularımın düşünce ve davranışlarımı nasıl etkilediğine dikkat ederim.					
37.	Genellikle şu anda nasıl hissettiğimi ayrıntılı bir biçimde tanımlayabilirim.					
38.	Kendimi, ne yaptığıma dikkat etmeksizin bir şeyler yaparken bulurum.					
39.	Mantığa aykırı fikirlerim olduğu zaman kendimi onaylamam.					

Ters puanlanan maddeler: 3, 5, 8, 10, 12, 13, 14, 16, 17, 18, 22, 23, 25, 28, 30, 34, 35, 38, 39

E-8: Perceived Stress Scale (PSS) – English

Down below are a series of questions about your personal experiences over the past month. Read each question carefully and answer the question by placing a cross on the box below the option that best suits you. There are no right or wrong answers to the questions. The important thing is that you give answers that reflect your feelings and thoughts.

	Never 1	Almost Never 2	Sometimes 3	Fairly Often 4	Very Often 5
1. In the last month, how often have you been upset because of something that happened unexpectedly?					
2. In the last month, how often have you felt that you were unable to control important things in your life?					
3. In the last month, how often have you felt nervous and "stressed"?					
4. In the last month, how often have you dealt successfully with irritating life hassles?					
5. In the last month, how often have you felt that you were effectively coping with important changes that were occurring in your life?					
6. In the last month, how often have you felt confident about your ability to handle your personal problems?					
7. In the last month, how often have you felt that things were going your way?					
8. In the last month, how often have you found that you could not cope with all the things that you had to do?					
9. In the last month, how often have you been able to control irritations in your life?					
10. In the last month, how often have you felt that you were on top of things?					
11. In the last month, how often have you been angered because of things that happened that were outside of your control?					
12. In the last month, how often have you found yourself thinking about things that you have to accomplish?					
13. In the last month, how often have you been able to control the way you spend your time?					
14. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?					

Items 4, 5, 6, 7, 9, 10, and 13 are scored in reverse direction.

E-9: Perceived Stress Scale (PSS) – Turkish

Aşağıda geçtiğimiz ay içerisindeki kişisel deneyimleriniz hakkında bir dizi soru yöneltilmektedir. Her soruyu dikkatlice okuyarak size en uygun seçeneğin altındaki kutuya bir çarpı işareti koyarak cevaplayınız. Soruların doğru veya yanlış cevabı yoktur. Önemli olan sizin duygu ve düşüncelerinizi yansıtan yanıtları vermenizdir.

	Hiçbir Zaman 1	Neredeyse Hiçbir Zaman 2	Bazen 3	Oldukça Sık 4	Çok sık 5
1. Geçen ay, beklenmedik bir şeylerin olması nedeniyle ne sıklıkta rahatsızlık duydunuz?					
2. Geçen ay, hayatınızdaki önemli şeyleri kontrol edemediğinizi ne sıklıkta hissettiniz?					
3. Geçen ay, kendinizi ne sıklıkta sinirli ve stresli hissettiniz?					
4. Geçen ay, ne sıklıkta gündelik zorlukların üstesinden başarıyla geldiniz?					
5. Geçen ay, hayatınızda ortaya çıkan önemli değişikliklerle etkili bir şekilde başa çıktığınızı ne sıklıkta hissettiniz?					
6. Geçen ay, kişisel sorunlarınızı ele alma yeteneğinize ne sıklıkta güven duydunuz?					
7. Geçen ay, her şeyin yolunda gittiğini ne sıklıkta hissettiniz?					
8. Geçen ay, ne sıklıkta yapmanız gereken şeylerle başa çıkamadığınızı fark ettiniz?					
9. Geçen ay, hayatınızdaki zorlukları ne sıklıkta kontrol edebildiniz?					
10. Geçen ay, ne sıklıkta her şeyin üstesinden geldiğinizi hissettiniz?					
11. Geçen ay, ne sıklıkta kontrolünüz dışında gelişen olaylar yüzünden öfkelendiniz?					
12. Geçen ay, kendinizi ne sıklıkta başarmak zorunda olduğunuz şeyleri düşünürken buldunuz?					
13. Geçen ay, ne sıklıkta zamanınızı nasıl kullanacağınızı kontrol edebildiniz?					
14. Geçen ay, ne sıklıkta problemlerin üstesinden gelemeyeceğiniz kadar biriktiğini hissettiniz?					

Ters puanlanan maddeler: 4,5,6,7,9,10,13

E-10: Psychological Capital Questionnaire (PCQ) – English

Down below are a series of questions about your personal experiences. Read each question carefully and answer the question by placing a cross on the box below the option that best suits you. There are no right or wrong answers to the questions. The important thing is that you give answers that reflect your feelings and thoughts.

	never or very rarely true 1	rarely true 2	sometimes true 3	often true 4	always true 5
1. I feel confident analysing a long-term problem to find a solution.					
2. I feel confident in representing my work area in meetings with management.					
3. I feel confident contributing to discussions about the company's strategy.					
4. I feel confident helping to set targets/goals in my work area.					
5. I feel confident contacting people outside the company (e.g., suppliers, customers) to discuss problems.					
6. I feel confident presenting information to a group of colleagues.					
7. If I should find myself in a jam at work, I could think of many ways to get out of it.					
8. At the present time, I am energetically pursuing my work goals.					
9. Right now I see myself as being pretty successful at work.					
10. I can think of many ways to reach my current work goals.					
11. At this time, I am meeting the work goals that I have set for myself.					
12. When things are uncertain for me at work, I usually expect the best.					
13. I always look on the bright side of things regarding my job.					
14. I'm optimistic about what will happen to me in the future as it pertains to work.					
15. There are lots of ways around any problem.					
16. I usually manage difficulties one way or another at work.					
17. I can be 'on my own', so to speak, at work if I have to.					
18. I usually take stressful things at work in stride.					
19. I can get through difficult times at work because I've experienced difficulty before.					
20. I feel I can handle many things at a time at this job.					

21.	When I have a setback at work, I have trouble recovering from it, moving on.					
22.	If something can go wrong for me work-wise, it will.					
23.	In this job, things never work out the way I want them to.					

Items 21, 22 and 23 are coded reverse.

E-11: Psychological Capital Questionnaire (PCQ) – Turkish

Aşağıda genel hal, tavır ve davranışlarınıza yönelik bir dizi soru yöneltilmektedir. Her soruyu dikkatlice okuyarak size en uygun seçeneğin altındaki kutuya bir çarpı işareti koyarak cevaplayınız. Soruların doğru veya yanlış cevabı yoktur. Önemli olan sizin duygu ve düşüncelerinizi yansıtan yanıtları vermenizdir.

	Hiçbir Zaman 1	Bazen 2	Genellikle 3	Çoğu Zaman 4	Her Zaman 5
1. Uzun vadeli bir probleme çözüm bulma konusunda kendime güvenirim.					
2. Üstlerimle yaptığımız toplantılarda kendi alanımı çok iyi temsil ederim.					
3. İşletmenin izleyeceği stratejinin ne olacağı hususunda yapılan tartışmalara kendime güvenerek iştirak ederim.					
4. Çalıştığım alana ilişkin hedef ve amaçların belirlenmesine katkıda bulunma konusunda kendime güvenirim.					
5. İşletme dışındaki insanlarla (örneğin tedarikçilerle, müşterilerle) herhangi bir sorunu görüşmek için iletişim kurmada kendime güvenim tamdır.					
6. Çalışma arkadaşlarımı işle ilgili tatmin edici şekilde bilgilendiririm.					
7. İşler tıkandığında, bu durumdan kurtulmaya yönelik birçok çare/yol bulurum.					
8. Halihazırda iş hedeflerime enerjik bir şekilde ulaşmaya çalışıyorum.					
9. Halihazırda işimde oldukça başarılı olduğuma inanıyorum.					
10. Şu anki iş hedeflerime ulaşmak için pek çok yol bulabilirim.					
11. İşle ilgili kendime koymuş olduğum hedefleri şu anda gerçekleştiriyorum.					
12. Her sorun için birden fazla çözüm vardır.					
13. İşte belirsizlik söz konusu olduğunda, sonucun hep en iyi olmasını ümit ederim.					
14. İşimle ilgili konularda bardağa hep dolu tarafından bakarım.					
15. İşimle ilgili gelecekte yaşayacaklarım konusunda iyimserim.					
16. İşte bazı şeylerin ters gitme ihtimali varsa, ters gider.					
17. Bu işte hiç bir şey benim istediğim şekilde olmaz.					
18. İş ortamında meydana gelen güçlüklerin bir şekilde üstesinden gelirim.					
19. Zorunluluk halinde, işte kendi başımın çaresine bakarım.					
20. Stresli işleri kendime dert etmem, soğukkanlılıkla halletmeye bakarım.					

21.	Deneyimlerim sayesinde iş yerindeki zorlukların üstesinden gelebiliyorum.					
22.	Bu işte aynı anda birden fazla şeyin üstesinden gelebilirim.					
23.	İşte başarısız olduğumda, bundan kurtulmakta ve yoluma devam etmekte zorlanıyorum.					

Ters puanlanan maddeler: 21, 22, 23

E-12: Ruminative Thought Style Questionnaire (RTSQ-SF) – English

Down below are a series of questions about your personal experiences. Read each question carefully and answer the question by placing a cross on the box below the option that best suits you. There are no right or wrong answers to the questions. The important thing is that you give answers that reflect your feelings and thoughts.

	Never 1	Almost Never 2	Rarely 3	Sometimes 4	Often 5	Very Often 6	Always 7
1. I find that my mind goes over things again and again.							
2. When I have a problem, it will gnaw on my mind for a long time.							
3. I find that some thoughts come to mind over and over through out the day.							
4. I can't stop thinking about some things.							
5. When I am expecting to meet someone, I will imagine every possible scenario and conversation.							
6. I tend to replay past events as I would have liked them to happen.							
7. I find myself daydreaming about things I wish I had done.							
8. When I feel I have had a bad interaction with someone, I tend to imagine vairous scenario and conversation.							
9. When trying to solve a complicated problem, I find that I just keep coming back to the beginning without ever finding a solution.							
10. I have never been able to distract myself from unwanted thoughts.							
11. Even if I think about a problem for hours, I still have hard time coming to clear understanding.							
12. It is very difficult for me to come to a clear conclusion about some problems, no matter how much I think about them.							
13. Sometimes I realise I have been sitting and thinking about something for hours.							
14. When I am looking forward to an exciting event, thoughts of it interfere with what I am working on.							
15. I f I have an important event coming up I can't stop thinking about it.							

E-13: Ruminative Thought Style Questionnaire (RTSQ-SF) – Turkish

Aşağıda genel hal, tavır ve davranışlarınıza yönelik bir dizi soru yöneltilmektedir. Her soruyu dikkatlice okuyarak size en uygun seçeneğin altındaki kutuya bir çarpı işareti koyarak cevaplayınız. Soruların doğru veya yanlış cevabı yoktur. Önemli olan sizin duygu ve düşüncelerinizi yansıtan yanıtları vermenizdir.

		Hiçbir zaman doğru değil 1	Çok nadiren doğru 2	Nadiren doğru 3	Bazen Doğru 4	Sıklıkla Doğru 5	Neredeyse Her zaman Doğru 6	Her zaman doğru 7
1.	Zihnimin sürekli bazı şeyleri tekrar tekrar gözden geçirdiğini fark ederim.							
2.	Bir sorunum olduğunda bu durum uzun süre zihnimi kemirir.							
3.	Gün boyu bazı düşüncelerin tekrar tekrar zihnime üşüştüğünü fark ederim.							
4.	Bazı şeyleri sürekli düşünmekten kendimi alamam.							
5.	Birileriyle karşılaşma öncesinde olabilecek bütün senaryoları ve konuşmaları zihnimde canlandırırım.							
6.	Önceden yaşadığım hoşuma giden olayları hayalimde tekrar canlandırmaya yatkınımdır.							
7.	Kendimi, gün içerisinde “Keşke yapsaydım” dediğim şeyleri hayal ederken bulurum.							
8.	Kötü geçtiğini düşündüğüm bir görüşme sonrasında, “keşke şöyle davransaydım” dediğim farklı senaryolar hayal ederim.							
9.	Karmaşık bir problemi çözmeye çalışırken çözüme ulaşmak yerine problemin başına döndüğümü fark ederim.							
10.	İstenmeyen düşünceleri zihnimden bir türlü atamam.							
11.	Bir problem hakkında saatlerce düşünsem de sorunu açıkça anlamak için biraz daha zamana ihtiyaç duyarım.							
12.	Hakkında ne kadar düşünürsem düşüneyim, bazı sorunlarla ilgili net bir çözüme ulaşmam benim için çok zordur.							
13.	Bazen bir şeyler hakkında saatlerce oturup düşündüğüm olur.							
14.	Heyecan verici bir olayı beklerken, bu olay ile alakalı düşünceler, o anda yaptığım işi engeller.							
15.	Önemli bir olay yaklaşıyorsa bununla ilgili düşünmekten kendimi alamam.							

E-14: Acceptance and Action Questionnaire (AAQ-II) – English

	Never True 1	Very Seldom True 2	Seldom True 3	Sometimes True 4	Frequently True 5	Almost Always True 6	Always True 7
1. My painful experiences and memories make it difficult for me to live a life that I would value.							
2. I'm afraid of my feelings.							
3. I worry about not being able to control my worries and feelings.							
4. My painful memories prevent me from having a fulfilling life.							
5. Emotions cause problems in my life.							
6. It seems like most people are handling their lives better than I am.							
7. Worries get in the way of my success.							

E-15: Acceptance and Action Questionnaire (AAQ-II) – Turkish

	Hiçbir zaman doğru değil 1	Çok nadiren doğru 2	Nadiren doğru 3	Bazen Doğru 4	Sıklıkla Doğru 5	Neredeyse Her zaman Doğru 6	Her zaman doğru 7
1. Geçmişte olan acı veren yaşantılarım ve hatıralarım değer verdiğim bir hayatı yaşamayı zorlaştırıyor.							
2. Hislerimden korkarım.							
3. Kaygılarımı ve hislerimi kontrol edememekten endişelenirim.							
4. Acı hatıralarım dolu dolu bir hayat yaşamamı engelliyor.							
5. Duygular hayatımda sorunlara yol açar.							
6. İnsanların çoğu hayatlarını benden daha kolay idare ediyor gibi görünüyor.							
7. Endişelerim başarılı olmamı engelliyor.							

APPENDIX F

Kıvılcım Kıran Gen Biography and Credentials to Teach Mindfulness Based Interventions

KIVILCIM KIRAN GEN IS AN ACCREDITED MBSR AND MBCT TEACHER AND FOLLOWS THE PROFESSIONAL TEACHER TRAINING PATH OF THE UK MINDFULNESS NETWORK IN COLLABORATION WITH CENTER FOR MINDFULNESS RESEARCH AND PRACTICE, SCHOOL OF PSYCHOLOGY, BANGOR UNIVERSITY WHICH IS A RECOGNIZED TEACHER TRAINING PROGRAM BY BAMBA, THE BRITISH ASSOCIATION OF MINDFULNESS BASED APPROACHES.

KIRAN GEN HAS AN ETHICAL COMMITMENT TO FOLLOW THE GOOD PRACTICE GUIDELINES FOR TEACHING MINDFULNESS-BASED COURSES OF BAMBA.

DOWN BELOW PLEASE FIND A LIST OF PROFFESIONAL TRAINING SHE ATTENDED IN THE FIELD OF MINDFULNESS:

PROFESSIONAL TRANINGS

- MINDFULNESS BASED STRESS REDUCTION TEACHER TRAINING LEVEL 1, BANGOR UNIVERSITY, 2016
- MINDFULNESS SUMMER SCHOOL, UNIVERSITY OF OXFORD, 2019
- MINDFULNESS BASED COGNITIVE THERAPY SPECIALIST TRAINING, BANGOR UNIVERSITY 2019
- EMBEDDING MINDFULNESS AT WORKPLACE, UNIVERSITY OF OXFORD, 2019

PRIFYSGOL BANGOR UNIVERSITY

This certificate confirms that

Kivilcim Kiran Gen

attended

LEVEL 1 Training to Teach Mindfulness-based Courses

An eight-day Retreat-based Training

Between 09 September 2016 and 16 September 2016

Centre for Mindfulness Research and Practice
School of Psychology
Bangor University
North Wales
LL57 1UT

This certificate is awarded by Centre for Mindfulness Research and Practice, Bangor University to confirm details about the nature of the course and the hours involved. It does not constitute an authorisation from CMRP to teach mindfulness-based approaches, but is recognition of engagement with a training process, for mindfulness-based teaching. Within the UK there is now a formal listing of Mindfulness-Based Course teachers overseen by the UK Network for Mindfulness-Based Teacher Training Organisations (see http://mindfulnessteachersuk.org.uk). CMRP are part of this collaboration and our Level 1 trainings along with adherence to recognised on-going Good Practice Guidance will enable practitioners to apply be recognised on this list.

Oxford Mindfulness Centre

This is to certify that

Kivilcim Kiran Gen

has participated in:

OMC Summer School 2019

26th August 2019 - 30th August 2019

oxfordmindfulness.org

Prof. Willem Kuyken, Director

PRIFYSGOL BANGOR UNIVERSITY

CENTRE FOR MINDFULNESS RESEARCH AND PRACTICE
CANOLFAN YMWYBYDDIAETH OFALGAR YMCHWIL AC YMARFER

The Mindfulness Network

The Centre for Mindfulness Research and Practice (CMRP), Bangor University, in collaboration with the Mindfulness Network

confirm that

Kivilcim Kiran Gen

attended

MBCT Specialist Residential Training

8th - 12th February 2020, Trigonos, North Wales

Trainers: Alison Evans and Pamela Duckerin

TTP Programme Lead
Sophie Sansom

Oxford Mindfulness Centre

This is to certify that

Kivilcim Kiran Gen

has attended the below Masterclass:

Embedding Mindfulness in the Workplace - Masterclass

November 2019

1. This certification does not imply that the holder is qualified to teach MBCT
2. No assessment of teaching competency is included in this training (see Good Practice Guidelines on reverse)
3. This certification is not a University of Oxford degree, or part thereof.

oxfordmindfulness.org

Prof. Willem Kuyken, Director

UK Network for Mindfulness-Based Teacher Training Organisation
Good Practice Guidelines for Teaching Mindfulness-Based Courses

A teacher of mindfulness-based approaches should have the following:

A. Mindfulness Based Teacher Training

1. ***Familiarity through personal participation*** with the mindfulness-based course curriculum that they will be learning to teach, with particular in-depth personal experience of all the core meditation practices of this mindfulness-based programme.
2. ***Completion of an in-depth, rigorous mindfulness-based teacher training programme*** or supervised pathway over a minimum duration of 12 months.

B. Training or background required in addition to mindfulness-based teacher training

1. ***A professional qualification*** in mental or physical health care, education or social care, or equivalent life experience, recognized by the organization or context within which the teaching will take place.
2. ***Knowledge and experience*** of the populations that the mindfulness-based course will be delivered to, including experience of teaching, therapeutic or other care provision with groups and/or individuals, unless such knowledge and experience is provided to an adequate level by the mindfulness-based teacher training itself. An exception to this can be when teaching with the help of a colleague who knows well the population to whom the course will be delivered and has a relevant qualification.
   They would also need to have an understanding of mindfulness-based approaches.
3. If delivering MBCT, knowledge of relevant underlying psychological processes, associated research and evidence-based practice, unless these are provided to an adequate level by the mindfulness teacher training programme.
4. If delivering MBCT or other mindfulness-based course with a clinical population, an appropriate professional clinical training

C. Ongoing Good Practice Requirements

1. ***Commitment to a personal mindfulness practice*** through
   daily formal and informal practice
   participation in annual residential teacher-led mindfulness meditation retreats
2. ***Engagement in processes which continue to develop mindfulness-based teaching practice:***
   ongoing contacts with other mindfulness practitioners and teachers, built and maintained as a means to share experiences and learn collaboratively and regular supervision with an experienced mindfulness-based teacher including:
   (a) opportunity to reflect on/inquire into personal process in relation to personal mindfulness practice and mindfulness-based teaching practice
   (b) receiving periodic feedback on teaching through video recordings, supervisor sitting in on teaching sessions or co-teaching with reciprocal feedback.
3. ***A commitment to ongoing development as a teacher*** through further training, keeping up to date with the evidence base, recording and reflecting on teaching sessions, participation in webs forums etc.
4. ***Adherence to the ethical framework appropriate to the teacher's professional background and working context***

APPENDIX G

The 8 Weeks Modified Mindfulness Based Stress Reduction

(m-MBSR) Program Lesson Plans

Instructor: Kıvılcım Kıran Gen

Description: This is a modified mindfulness-based intervention program based on MBSR and MBCT, designed for the scope of a thesis study targeting working adults in non-clinical population

Intervention format: Experiential and inquiry based in classroom lecture and exercises, at home practices and journaling.

Program Outline:

Week / Session	Length in Hours	Title	Theme
1	**2.5**	Introduction to Mindfulness, Mind on Autopilot	"There is more right with you, than wrong with you, start at where you are" - Jon Kabat-Zinn
2	**2.5**	Awareness and Perception, Living in our Heads	"It is Your Mind that Creates this World." - Buddha
3	**2.5**	Body and Mind Connectedness	"Because you are alive, everything is possible" - Thich Nhat Hanh
4	**2.5**	Understanding Stress and Rumination	"You cannot stop the waves, but you can learn to surf." - Jon Kabat-Zinn
5	**2.5**	Responding to Stress and Rumination	"You are the sky. Everything else is weather." - Pema Chödrön
6	**2.5**	Interpersonal Mindfulness and Compassion	"If you want others to be happy practice compassion. If you want to be happy practice compassion" - Dalai Lama
	6	Silent Day	
7	**2.5**	Self-Compassion and Taking Care of Self	"If your compassion does not include yourself, it is incomplete." - Jack Kornfield
8	**2.5**	Taking Mindfulness into Life	"The real meditation is how you live your life." - Jon Kabat-Zinn

Week 1 - Session 1

Title: Introduction to Mindfulness, Mind on Autopilot

Talking Points: Intention of the program**,** the definition and foundations of mindfulness, mindful attitudes, autopilot mode of the mind, importance of journaling and home exercises and doing homework

In Class Exercises and Practices: Settle down and intention exercise followed by introductions (60 min), Mindful Eating and Inquiry (25 min), 9 Dots Puzzle and Inquiry (20 min), Body Scan and Inquiry (30 min)

Homework – Exercises and Practices: Mindful Eating, Body Scan

Homework – Journaling:

- Formal Meditation Log
- Informal Meditation Log

Week 2 - Session 2

Title: Awareness and Perception, Living in our Heads

Talking Points: The construct of our minds, our ways of perceiving ourselves and the world around us, living on autopilot versus with awareness, meditation postures

In Class Exercises and Practices: Settle down exercise (10 min), Walking in the Street Exercise and Inquiry (30 min), Lying Down Mindful Movement and Inquiry (30 min), Awareness of Breathing and Inquiry (30 min)

Homework – Exercises and Practices: Meditation assigned for the week, Mindfulness of Daily Activities

Homework – Journaling:

- Formal Meditation Log
- Informal Meditation Log
- Pleasant Events Calendar

Week 3 - Session 3

Title: Body and Mind Connectedness

Talking Points: Awareness of breath and body sensations while moving, present moment awareness, recognizing thoughts, feelings and senses, expression of sensations, emotions, and thoughts

In Class Exercises and Practices: Settle down exercise (10 min), Standing up Mindful Movement and Inquiry (15 min), Mountain Pose (10 min), Mindful Walking and Inquiry (30 min), Pleasant Events Group Discussion (30min), Poem Reading – Kendisiyle Barışık İnsan Bedeni

Homework – Exercises and Practices: Meditation assigned for the week, Mindfulness of Daily Activities

Homework – Journaling:

- Formal Meditation Log
- Informal Meditation Log
- Unpleasant Events Calendar

Week 4 - Session 4

Title: Understanding Stress and Negative Thought Patterns

Talking Points: Physiology and psychology of stress and negative thinking, reactions to stress and coping with stress, awareness of reactive patterns, destructive stress habits, automatic negative thoughts

In Class Exercises and Practices: Settle down exercise (10 min), 3 Steps Breathing Space and Inquiry (30 min), Noting Meditation and Inquiry (30 min), Unpleasant Events Group Discussion (30 min), Daily Stress Exercise (20 min), Poem Reading – Rumi, Guesthouse

Homework – Exercises and Practices: Meditation assigned for the week, 3 Steps Breathing Space, Mindfulness of Daily Activities

Homework – Journaling:

- Formal Meditation Log
- Informal Meditation Log
- Stressful Events Calendar

Week 5 - Session 5

Title: Responding to Stress and and Negative Thought Patterns

Talking Points: Ability to respond to stress and negative thinking with awareness, creating the space between the stimulus and the response, and to respond with choice / awareness, understanding the negative thought cycle and the relationship to our moods

In Class Exercises and Practices: Settle down exercise (10 min), Exploring the Difficulty Mediation and Inquiry (40 min), Stressful Events Group Discussion (30 min), Vicious Flower Exercise (30 min)

Homework – Exercises and Practices: Meditation assigned for the week, Mindfulness of Daily Activities

Homework – Journaling:

- Formal Meditation Log
- Informal Meditation Log
- Guided Journaling: Midway Assessment
- Relationship Awareness Evaluation

Week 6 - Session 6

Title: Interpersonal Mindfulness and Compassion

Talking Points: To be aware of our reactions and patterns in relations and throughout our communications, listening and self-expression, empathy, and compassion

In Class Exercises and Practices: Settle Down Exercise (10 min), 5 Awareness Meditation and Inquiry (30 min), Metta Meditation and Inquiry (40 min), Relationship Awareness Evaluation Group Discussion (25 min), Just like me Exercise and Inquiry (25 min)

Homework – Exercises and Practices: Meditation assigned for the week, Mindfulness of Daily Activities

Homework – Journaling:

- Formal Meditation Log
- Informal Meditation Log
- Self-Compassion Evaluation

Week 6 - Silent Day

Title: A Day of Mindfulness

Talking Points: Experiencing the silence

In Class Exercises and Practices: None

Homework – Exercises and Practices:

Suggested Plan
9:30 - 10:00 Awareness of Breathing Meditation
10:00 - 10:30 Lying Down Mindful Movement
10:30 - 11:00 Body Scan Meditation
11:00 - 11:20 Break
11:20 - 11:40 Mountain Pose
11:40 - 12:00 Standing Up Mindful Movement
12:00 - 12:30 Exploring Difficulty Meditation
12:30 - 14:00 Mindful Lunch and Resting
14:00 - 14:20 Mindful Walking
14:20 - 14:50 Compassionate Breathing Meditation
14:50 - 15:20 Choiceless Awareness Meditation

Homework – Journaling:

- Guided journaling: Reflecting on Silent Day

Week 7 - Session 7

Title: Self Compassion and Taking Care of Self

Talking Points: Realizing what nurtures us and what depletes us, self-compassion, taking care of self

In Class Exercises and Practices: Settle Down Exercise: Smiling Meditation (10 min), Compassionate Breathing Meditation and Inquiry (30 min), Metta Meditation and Inquiry (35 min), Self-Compassion Evaluation Group Discussion (25 min), Nurturing and Depleting Activities Exercise (25 min),

Homework – Exercises and Practices: Meditation assigned for the week, Mindfulness of Daily Activities

Homework – Journaling:

- Formal Meditation Log
- Informal Meditation Log

Week 8 - Session 8

Title: Taking Mindfulness into Life

Talking Points: Seeing life as whole, remembering to be mindful in all areas of our lives, meaning and gratitude, a farewell, and a new beginning

In Class Exercises and Practices: Settle Down Exercise (10 min), Choiceless Awareness Meditation and Inquiry (30 min), Wheel of life Exercise (25 min), Values Exercise (25 min), Writing myself a letter Exercise (20 min) Closing (40 min), Poem Reading – Autobiography in 5 Chapters

Homework – Exercises and Practices: None

Homework – Journaling: None