

**MINDFULNESS, SUBSTANCE-RELATED ADDICTION, AND THE
IMPLICATIONS FOR SOCIAL WORK**

by
William M. Tomlinson
Bachelor of Social Work, University of Victoria 2011

MAJOR PAPER SUBMITTED
IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF SOCIAL WORK
in the
School of Social Work and Human Services

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UNIVERSITY OF THE FRASER VALLEY
Spring 2020

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MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

Approval

Name: William M. Tomlinson

Degree: Master of Social Work

Title: Mindfulness, Substance Related Addiction, and the Implications for Social Work

Examining Committee:

Lisa Moy, BA, BSW, MSW, PhD, RSW

Primary Supervisor

Associate Professor, School of Social Work and Human Services

Leah Douglas, BSW, MSW, PhD, RCSW

Second Reader

Associate Professor, School of Social Work and Human Services

Date Approved:

Table of Contents

Table of Contents	iii
Abstract.....	v
List of Acronyms	vi
Acknowledgments	vii
Introduction.....	1
Research Questions	1
Working Definition of Mindfulness and Substance-Related Addictions	2
Critical Reflexivity	4
Methodology	5
Theoretical Perspectives.....	5
Research Methods	9
Literature Review	10
Theme 1: What Is Mindfulness?	10
The Effects of Mindfulness Practices to Reduce Substance-Related Addictions	12
Theme 2: Impact of Mindfulness on Alcohol Addiction	19
Theme 3: Impact of Mindfulness on Smoking population.....	21
Theme 4: Impact of Mindfulness on Addiction to Illicit Drugs.....	25
<i>Individuals With Opioid Addiction Issues</i>	25
<i>Male Methamphetamine Substance Users</i>	26
Thematic Findings From The Literature Review - Common Findings	28
Gaps in the Literature	33
Literature Review Implications for Social Work Practice.....	35
Benefits of Mindfulness and Social Work	35
Barriers to Mindfulness and Social Work	36

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

Practice Implications for Mindfulness and Social Work	39
Conclusion	44
References	45

MINDFULNESS AND SUBSTANCE RELATED ADDICTION

Abstract

This research paper is a thematic analysis of various studies on mindfulness-based intervention (MBI) strategies, and the effectiveness of MBIs in assisting individuals in reducing or ending their substance use issues. The paper begins with a general examination of the evidence-based findings concerning the effectiveness of MBIs, including an analysis of how MBIs are theorized to work in helping with addiction. Following this, the paper examines research that looks at various substance-using populations and the effectiveness of MBIs. Critical theory is integrated into this paper in terms of how mindfulness could be utilized as a consciousness-raising modality which offers the potential to connect individual issues with larger socio-structural concerns. The findings highlight mindfulness as an effective modality for those dealing with substance-related addiction issues.

List of Acronyms

ADHD - Attention-Deficit Hyperactivity Disorder

CBT - Cognitive-Behavioural Therapy

DMN - Default Mode Network

EMA - Ecological Momentary Assessment

MAAS - Mindful Attention Awareness Scale

MBAT - Mindfulness-Based Addiction Treatment

MBCT - Mindfulness-Based Cognitive Therapy

MBGT - Mindfulness-Based Group Therapy

MBI - Mindfulness-Based Intervention

MBRP - Mindfulness-Based Relapse Prevention

MBSR - Mindfulness Based Stress Reduction

MBT - Mindfulness-Based Therapy

MORE - Mindfulness-Oriented Recovery Enhancement

MTS - Mindfulness Training for Smokers

RP - Relapse Prevention

RR - Reward Responsiveness

SUD - Substance Use Disorder

TAU - Treatment As Usual

UC - Usual Care

Acknowledgments

I would like to thank my most loving, intelligent and beautiful wife Fara, my dad Ron (who passed away recently and is greatly missed), and my mom Miriam for their tremendous support for me throughout this program. I would also like to express my appreciation to all the University faculty who provided feedback and supervision, especially Dr. Lisa Moy, and Dr. Leah Douglas as my primary and secondary readers.

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

This research paper will focus on mindfulness-based intervention (MBI) strategies for individuals who are dealing with substance-related addictions. In addition, I will define and explore approaches to mindfulness, review the historical background of mindfulness, as well as review and summarize the various therapeutic applications of this practice in relation to substance-related addictions. Another area that will be investigated is how mindfulness practices could potentially be harnessed to connect individual oppressions and concerns with larger socio-structural issues. Finally, I will review the benefits and barriers of mindfulness in the context of social work practice.

Research Questions

There are important reasons for studying mindfulness in relation to those who live with substance-related addictions. I think the primary reason this topic should be researched is simply because those who are addicted to substances deserve love, respect, dignity, and freedom from suffering. In other words, I am motivated by the BC Association of Social Workers' Code of Ethics which states that "A social worker shall respect the intrinsic worth of the persons she or he serves in her or his professional relationships with them" (BC Association of Social Workers, 2011).

I have four overarching research questions which underpin this paper. First, how does mindfulness work? In answering this question, I will examine findings related to the unique aspects of mindfulness which can assist individuals in reducing or quitting their substance-related addictions. Second, in what ways is mindfulness useful as a strategy in reducing or ending substance-related addictions for those within various substance using populations? Third, what are the broader practice implications of mindfulness for the field of social work? In

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

answering this question, I will analyze how mindfulness could be used as a therapeutic tool for substance use treatment. Additionally, I will also examine the potential that mindfulness offers as a consciousness raising modality which could allow people to connect their individual concerns with the larger socio-structural environment. Finally, my fourth research question asks what the potential benefits are of mindfulness treatment, as well as some of the barriers that individuals might encounter in accessing and/or receiving treatment.

Working Definition of Mindfulness and Substance-Related Addictions

I will employ the following working definitions of mindfulness and substance-related addiction. Researchers Goldberg, Davis, and Hoyt (2013) write that mindfulness is a practice which can be defined as focusing or paying attention, in certain ways, to the present moment in a non-judgmental manner. This practice has been demonstrated to improve one's abilities in moment-to-moment awareness, non-reactivity to detrimental emotions, sensations and thoughts, as well as increased levels of acceptance (Goldberg et al., 2013). Another definition by authors Hick and Furlotte (2009)—a definition of mindfulness often used in the field of social work—consists of two parts:

- (a) self-regulation of attention so that it is maintained on immediate experience, thereby allowing for increased recognition of mental events in the present moment, and (b) adopting a particular orientation toward one's experiences in the present moment...characterized by curiosity, openness, and acceptance. (p. 8)

According to authors Brewer, Elwafi and Davis (2014), mindfulness training, in theory, offers the advantage of providing individuals with a simple concept that involves an individual paying attention to momentary experiences rather than resisting these same experiences. Mindfulness training is a practice which can be applied broadly to various links within the

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

addictive loop. Over time, effective mindfulness training may cause a dampening as well as an eventual dismantling of an individual's associative learning process regarding one's use of substances (Brewer, Elwafi & Davis, 2014); this differs from merely removing the stimuli. For instance, Brewer and colleagues (2014) argue that through the attentional focus offered by mindfulness training, individuals can improve their awareness of habit-linked bodily sensations and affective states of which they were minimally conscious (ex. low-level craving). In so doing, mindfulness training causes a "de-automating" process that is largely habitual in nature (p. 78).

Brewer, Elwafi and Davis (2014) further write that teaching people mindfulness allows individuals to simply observe their aversive physical and mental states instead of reacting to them. Evidentiary findings have suggested that mindfulness training may provide one with the ability to replace affect and stress induced habitual reactions with responses that are more adaptive. In addition, mindfulness training may also assist people in being able to change their relationships towards mentally or physically unpleasant states.

There are a variety of practical ways in which mindfulness exercises can be carried out. According to Vidrine et al. (2016), the two most prominent mindfulness-based treatments are mindfulness-based stress reduction (MBSR) and mindfulness-based cognitive therapy (MBCT). According to these authors, MBSR was initially used to treat stress as well as pain-related disorders, whereas MBCT was developed for the treatment of reoccurring and chronic depressive disorders. The principal means utilized by each of these approaches to teach mindfulness is meditation (Vidrine et al., 2016).

In considering a definition of substance-related addictions, authors Zou et al. (2017) write that it can be defined as a neuropsychiatric disorder which can be characterized by causing a

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

recurring desire within an individual to continue taking a substance(s) despite suffering harmful consequences. In adding to this definition I would like to state that I take a bio-psycho-social perspective on substance-related addiction. In terms of the causes of substance-related addictions numerous research studies have demonstrated that one's social environment, mental health state and in some cases one's genetic predisposition are factors that have bearing upon one becoming addicted to substances.

Critical Reflexivity

I have been interested in the topic of mindfulness for several years. When I first learned about mindfulness, it struck me not only as an interesting concept but also as something that could be used in a variety of ways to not only improve the mental health of individuals but also assist people in reducing or quitting their substance usage. Furthermore, I have worked as a mental health worker with many individuals who frequently have both mental health and substance-related addictions. My observations and experiences have led me to believe that there is a lack of research in this area.

I believe that the largest potential bias and blind spot in carrying out this research is my personal socio-economic position. I mention this because many of the individuals with whom I have worked come from less socio-economically stable and often abusive backgrounds. Due to this, these individuals have faced great stressors in their lives, which may often be a factor causing and maintaining their substance usage. In addition, living in a stressful and abusive environment also often plays a part in stimulating the onset of mental illness for many of these individuals. In contrast, I have had a higher socio-economic status and greater socio-economic stability than most people with whom I have worked, and have not faced addictions or practised the mindfulness techniques discussed in this paper.

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

As a result, the questions I have chosen for this literature review are guided both by gaps in the literature and my own desire to increase my understanding of subjects that could benefit my practice. In other words, since I have not had the same lived experience as most of my clients, I must rely on the evidence-based findings of the most rigorous and recent research in this area.

Methodology

Theoretical Perspectives

Although it may not be immediately evident, mindfulness shares a number of congruencies with critical theory. According to Bohman (2019), critical theory has both a narrow and a broad meaning within philosophy and social science history. In the narrow sense, critical theory refers to the perspective of several generations of German social theorists and philosophers who arose out of a Western-European Marxist intellectual tradition which came to be known as the Frankfurt School (Bohman, 2019). According to this school of thought, a “critical” theory can be distinguished from “traditional” theory in that its purpose is specific and practical in its aim and must seek to emancipate humans from slavery in some manner (Bohman, 2019, Critical Theory section). Thus, the overarching goal of critical theory is to function as a liberating influence which aims to create a world which can satisfy both the needs and powers of human beings (Bohman, 2019).

Bohman (2019) continues by saying that since such theories intend to explain and transform all the circumstances which enslave people, many critical theories that exist within a broader theoretical milieu have been developed. These theories have arisen in conjunction with a variety of social movements which identify multiple dimensions of domination over individuals in modern societies (Bohman, 2019). However, in terms of both its broad and narrow senses,

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

critical theory offers a basic framework for social inquiry which is descriptive and normative as well as having the aim of increasing all forms of freedom by decreasing domination (Bohman, 2019).

Moreover, critical theorists argue that their theoretical perspective not only has a practical emphasis but also a distinctively moral (rather than instrumental) focus (Bohman, 2019). Thus, in order to accomplish such a task, it is essential that there be an interplay between social science and philosophy that utilizes interdisciplinary empirical social research (Bohman, 2019). In another article, Wellmer (2014) summarizes what distinguishes critical and traditional social theory in the following sentences:

What distinguishes a critical theory from traditional forms of social theory is that critical theory conceives of itself as part and parcel of a struggle for an “association of liberated human beings, in which everybody would have an equal chance of self-development”. The theory asserts that the “real possibility” of such an association exists, given the current level of human productive forces, and it asserts, at the same time, the practical necessity of a struggle for the realization of this possibility. (p. 706)

Hick and Furlotte (2009) write that mindfulness itself does not posit any social theory. However, that being said, these authors demonstrate how critical theory can be closely connected with many of the aspects of mindfulness practice. To these researchers, mindfulness is a process through which an individual can uncover how oppression can be perpetuated without the individual being consciously aware of it. In other words, mindfulness is a technique that allows one to perform an internal examination of their perceptions, thoughts, emotions, and consciousness which in turn endows a greater ability to recognize harmful systems and

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

institutions in the external world. Mindfulness can lead to insight about existing oppressive relationships and, through this work, society can be transformed (Hick & Furlotte, 2009).

Hick and Furlotte (2009) go on to suggest that mindfulness practice offers one a technique to experience “felt” oppression within the reality of the present moment (p. 19). Even though mindfulness does not promote any sort of constructed view of the future in terms of social organization, it is not antithetical to arrangements which produce more peaceful and egalitarian relations (Hick & Furlotte, 2009). Thus, one potential intention or benefit of mindfulness practice is that it enables individuals to see how everyone is unconsciously participating in the perpetuation of existing social relations (Hick & Furlotte, 2009).

Hick and Furlotte (2009) suggest that, in time, a theory may develop out of a mindfulness practice itself. However, they write that it would be a theory grounded in concrete conditions and experiential learning rather than a theory based upon relations between various pre-existing concepts. Building upon experiential learning, this knowledge would be gained through an individual examination of feelings, thoughts, and body in connection with the socio-economic and political realms of one’s everyday grounded experience of life (Hick & Furlotte, 2009).

Another similarity between critical theory and mindfulness highlighted by Hick and Furlotte (2009) is that neither philosophy is metaphysical in orientation. Rather, they write that each practice focusses on examining, understanding, and change making. In other words, both mindfulness and critical theory are practices that are focused on assisting people in changing themselves as well as the larger world around them (Hick & Furlotte, 2009).

Rowe (2016) refers to post-Nietzschean political theorists William Connolly and Michel Foucault. Rowe (2016) posits that, according to these authors, power relations exist everywhere, including within our embodied habits and thought processes. Thus, in order to achieve a

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

liberation that is deep and sustained, social movements which tackle the intimate and embodied way power shapes and sculpts individuals are required, thereby making mind/body practices politically crucial in their significance. In and of themselves, mind/body practices will not power any political revolutions on their own. However, if they are connected with actual revolutionaries, what they can offer is an expansion in the realm of possibilities for freedom (Rowe, 2016).

In a similar vein to Rowe, Hick et al. (2009) argue that many of the foundational tenets of social justice approaches connected with social work have their roots within the critical theory conception concerning human nature. An example of this would be classic critical approaches aimed at addressing the socio-economic forces which fuel oppression and are crucial to radically oriented social justice frameworks within the field of social work (Hick et al., 2009). Likewise, Hick et al. (2009) argue that mindfulness challenges the concept that any social institution within capitalist society or otherwise is not only natural but also the only way of being. This feature of mindfulness provides a congruent link between itself and critical theory. In essence, a social work theory, which incorporates a social justice approach that is rooted in critical theory, suggests that differential or inequitable access to wealth is the source of social problems (Hick et al., 2009). Hick et al. (2009) go onto write that mindfulness is also critical of societal practices such as materialism, over-consumption, and the equating of such ideas with happiness. Instead, mindfulness suggests that peace or happiness cannot be provided by wealth or even a lack of poverty. For mindfulness approaches, inner and external levels of ease and peace are necessary for social justice (Hick et al., 2009).

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

Research Methods

The primary research method used here is a thematic review of the literature in relation to the research questions and themes analyzed. In searching for appropriate research materials, the resources for this research paper were obtained through the University of the Fraser Valley's (UFV) list of various library databases in order to find relevant and appropriate qualitative and quantitative research studies. In total, I reviewed fifty-seven articles and selected thirty-three of these articles to include as sources in this research paper. I searched terms such as: addiction and mindfulness, social work and mindfulness, mindfulness and social justice approaches, mindfulness treatment barriers and other search terms that I found to be beneficial in answering my research questions. In searching through these articles, I selected ones which contained relevant information on the effectiveness of mindfulness and substance-related addictions. Additionally, I also selected articles that discussed how mindfulness could be more effectively utilized in social work in a manner that would allow individuals to make connections between their personal lives and the surrounding socio-structural environment. I also accessed other available online resources which met the accepted academic standards of UFV's Master of Social Work program. This was necessary in my search for additional information on critical theory and for constructing a definition of substance-related addictions. In selecting journals, research studies, books and any other sources, I only used academic peer-reviewed sources since I consider these sources to be trustworthy because of the peer review oversight process and rigorous research methods employed. I only used sources from the last seven years except for when I was able to justify the use of an older source. I did include three older sources in the research paper. In a paper by Hick and Furlotte (2009), the authors discussed critical theory which is still currently used in the field of social work as well as other social science disciplines.

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

Another source by Dakwar, Mariani, and Levin (2011) was used because the researchers analyzed the effects of mindfulness upon mono-drug and poly-drug using individuals. Finally, I included an article by Garland, Schwarz, Kelly, Whitt, and Howard (2012) because this study argued that mindfulness was helpful for individuals who had experienced significantly stressful events in their lives.

Literature Review

Theme 1: What Is Mindfulness?

According to authors Shonin and Gordon (2016), mindfulness is a Buddhist meditation technique that is approximately 2600 years old. Although there are a variety of contemplative techniques which are practiced by many of the world's spiritual and religious traditions, the one utilized in mental health settings is primarily grounded in the Buddhist tradition (Shonin and Gordon, 2016).

In examining some of the history and concepts of Buddhist mindfulness, Lee (2018) writes that the term mindfulness is derived from a Pali (a language of the Indian subcontinent) term "sati," which translates as "memory" or "recollection". According to core Buddhist teachings, known as the Noble Eightfold Path, mindfulness is a key aspect of "awakening" which is viewed as being a specific mental state or mode of recollection that allows those in such a state or mode to know and observe the truth behind the nature of causes, conditions, and effects (Lee, 2018, p. 220). Put another way, Lee (2018) writes that Buddhist mindfulness is meant to sharpen one's observation skills in relation to all mental processes, one's ability to discern between skillful and unskillful mental qualities, and one's memory elicitation quality to vividly recollect details concerning any experience. Lee states that the overall goal of Buddhist mindfulness is to refine and train one's mind in order to build a foundation to practice Buddhist teachings. Thus,

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

Buddhist mindfulness is meant to be used as a tool to aid practitioners in their cultivation of these teachings rather than as a goal in and of itself (Lee, 2018).

According to Lee (2018), Buddhist mindfulness is viewed as a crucial practice which liberates a practitioner from dukkha (suffering). Lee goes on to write that the ability to liberate oneself from suffering is the primary aspect of Buddhist teachings. As a result, all major concepts in Buddhism connect with the understanding and ceasing of dukkha. In achieving this new level of understanding, consciousness is reshaped into a nongrasping view of worldly phenomena. This transformation allows for a state of experience through which all suffering as well as the origins of that suffering are extinguished (Lee, 2018).

Yi (2017) posits that the utilization of mindfulness as a clinical intervention can be traced historically and culturally to Jon Kabat-Zinn, who became inspired to develop MBSR. While at a retreat, Kabat-Zinn experienced an inspirational moment which lasted approximately fifteen seconds. This moment provided Kabat-Zinn with the insight as to how he could bring the Buddha Dharma into the larger world. This Dharmic aspect of Buddhism was a central feature of Kabat-Zinn's inspiration, describing it as "lawfulness in a similar vein to 'the law of physics' or as 'the way things are' as is the case in the Chinese concept of Tao" (Yi, 2017, p. 212). He emphasises that Dharma offers a coherent description of the nature of the human mind, emotion, and suffering as well as its potential release based upon highly refined practices aimed at cultivating various aspects of the heart and mind through a process of mindful attention (Yi, 2017). With this in mind, Kabat-Zinn formulated a way to incorporate mindfulness that would not dilute, distort, or profane the practice, whilst simultaneously not locking on to a tradition and culture-bound framework which would make the practice totally impenetrable to the individuals who may find it to be extremely useful and liberative (Yi, 2017).

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

Given that mindfulness is meant to assist one in developing their overall mental skills I believe that this technique could be utilized by social workers in a variety of ways. Since the purpose of Buddhist mindfulness is meant to allow one to observe the truth behind the nature of causes, conditions, and effects one can see how it could be a useful skill for those dealing with substance-related addictions. Many individuals who have substance-related addictions often lack insight into how these addictions are detrimentally affecting them from a bio-psycho-social perspective. Like in Buddhism, those dealing with substance-related addictions usually need to arrive at a moment of “awakening”. For individuals with substance-related addictions this “awakening” is akin to insight. Gaining insight is a major step in the journey of one either reducing or quitting their use of substances. Mindfulness appears to be a promising modality which could be utilized by social workers to assist individuals in gaining such insight.

The Effects of Mindfulness Practices to Reduce Substance-Related Addictions

Mindfulness practice has been shown to help individuals quit or reduce their substance usage. For example, Brewer, Elwafi, and Davis (2014) write that humans suffer greatly from substance-related addictions as well as other addictions, and that despite tremendous effort by the bio-medical research community to understand the processes and mechanisms of addiction, strategies for treatment have remained at suboptimal levels over the last number of decades (Brewer et al., 2014). Brewer and colleagues go on to write that mindfulness training which, as previously discussed, is founded in ancient Buddhist concepts of human suffering, has demonstrated preliminary success in the treatment of addictions. Mindfulness-based interventions MBIs could potentially provide more information about craving as well as the underlying neurobiological processes that might be active within an individual (Brewer et al., 2014).

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

As another example, in more recent years, mindfulness has been employed as a way of targeting individual's cravings with the intention of causing clinically relevant changes to the behaviour of those utilizing mindfulness techniques (Tapper, 2018). Tapper reviewed thirty experimental studies on the effects of different modalities of mindfulness practice on cravings for cigarettes, alcohol, and food. Cravings are frequently viewed as an appropriate target intervention for MBIs with the aim of reducing cravings or instead changing one's craving response. However, Tapper writes that researchers are currently limited in their understanding of how these various applications of mindfulness may influence the final craving-related outcomes. As such, researchers lack a complete understanding of how mindfulness practices could influence cravings. Thus, for effective mindfulness-based addiction treatments to be created, a sound theoretical basis needs to be developed (Tapper, 2018). Tapper (2018) explains that a key question about the advantage of mindfulness-based strategies over other strategies is that they could be sustained over a longer timeframe. For example, the technique of focusing on the present moment while experiencing cravings could be more flexibly and easily applied within a wide variety of different settings when compared with a more traditional visualization strategy that might seem more effortful and become rather repetitive. Another question that Tapper (2018) asks is whether the amount of experience with meditation moderates the effects of mindfulness strategies. The majority of studies testing the immediate effects of techniques related to present moment awareness and craving were carried out in a context that did not require intensive training in meditation (Tapper, 2018). Thus, more longitudinal research, as well as research that examines user viewpoints regarding different strategies, would be helpful in addressing these questions. Researchers Szeto, Schoenmakers, van de Mheen, Snelleman, and Waters (2019) argue that an improved understanding of relapse through the use of mindfulness

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

exercise could assist in the development of new interventions. This study used an ecological momentary assessment model (EMA). In contrast, the majority of mindfulness studies have examined the relationship between substance use and MBIs via laboratory assessments. However, an EMA model takes an approach that allows for analysis from both within and between-subject associations with the natural environment. For instance, the EMA model has been used to determine subjects' associations to emotional outcomes and mindfulness (Szeto et al., 2019).

Garland, Roberts-Lewis, Kelley, Tronnier, and Hanley (2014) examine the increasingly large body of research that positions mindfulness as a trait-like construct which may have relevance to substance use disorder (SUD) treatment. Garland and colleagues (2014) examined mindfulness as a naturally occurring trait. They found it to be roughly normally distributed and characterized by an individual's propensity to demonstrate a present-oriented awareness. This present-oriented awareness was nonjudgmental and is the culmination of one's perceptions, emotions, cognitions and habitual behavioural reactions of one's daily life.

Sala, Rochefort, Lui, and Baldwin (2019) separate trait mindfulness from state mindfulness. They write that trait mindfulness reflects individual differences within one's general level of mindfulness when viewed across situations and time. In comparison, state mindfulness describes to what extent an individual is experiencing mindfulness at any particular moment (Sala et al., in press). For example, Sala et al. (in press) use the following distinction to highlight the difference between these two states of mindfulness:

Individuals in a mindful state would be actively attending to the present moment rather than being preoccupied, distracted, or acting without awareness to their actions or internal experiences. State and trait mindfulness are related but distinct constructs; they have been shown

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

to be positively correlated with each other, but also predict other outcomes above and beyond each other. Garland et al. (2014) purport that individuals vary in the extent to which they exhibit mindful dispositions. However, one's dispositionality towards exhibiting mindfulness behaviour may be strengthened by participating in mindfulness training as well as other kinds of interventions. By practicing mindfulness, individuals have been shown to significantly increase their overall level of trait mindfulness which has in turn led to high increases in the level of this mode of mindfulness (Garland et al., 2014). The research by Garland and colleagues (2014) demonstrated a positive correlation amongst optimism, attentiveness, emotional intelligence, mental health, awareness of internal states, well being, and a negative correlation with anger, anxiety, self-consciousness, depression, and impulsivity. Thus, indices relating to not only one's general mental health but also their psychosocial flourishing can be linked to trait mindfulness (Garland et al., 2014).

Garland and colleagues (2014) used a moderately large sample of individuals who were substance users, and who have also been living in residential treatment facilities. The researchers identified a significant inverse association between substance craving and trait mindfulness which was partly statistically mediated by reappraisal and negative affect, but not by a readiness for change. Given that the data from this study is cross-sectional, it cannot be used to identify causal relationships conclusively between the examined variables. The findings of this study supported the notion that individuals who were in recovery due to SUDs and who also reported increased levels of trait mindfulness may be less susceptible to addictive urges. This was seen as a result of their enhanced ability to downregulate distressing emotions and their heightened capacity for the reappraisal of the meaning of life's challenges (Garland et al., 2014).

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

Researchers Dakwar and colleagues (2011) analyze what they term mindfulness deficits. They define mindfulness deficits as being a characteristic of individuals who are tested according to requirements of the mindful attention awareness scale (MAAS) testing process and found to have particular mindfulness-related attentional impairments. What these findings suggest is that mindfulness-related attentional impairments might be common within individuals seeking SUD treatment. Furthermore, these impairments may vary depending upon the variety and types of substances used, thereby, making this a suitable focus of care within substance use treatment (Dakwar et al., 2011).

Dakwar and colleagues (2011) believe that attentional difficulties could have a role in causing or maintaining SUDs. This possibility has received a great deal of attention in the area of attention-deficit hyperactivity disorder (ADHD) research, as there is a high comorbidity between ADHD and SUDs (Dawkar et al., 2011). This connection has been attributed to ADHD-related heightened impulsivity, recklessness, impaired self-regulation, increased delay discounting, sensation seeking, as well as self-medication attempts (Dawkar et al., 2011). Implicated in conjunction with many of these deficits is impaired attention, which mindfulness could help with. These mindful attention impairments could lead to increases in vulnerability in relation to SUDs in a similar way to ADHD, even though such impairments may be too mild or subtle to be diagnostic of the disorder (Dawkar et al., 2011).

Dakwar and colleagues (2011) emphasize that moment-to-moment attention as a protective factor in relapse prevention (RP) is well-recognized in the field of substance use treatment. This form of therapy emphasizes the development of one's awareness of triggers and cues so that these factors are more easily navigated. Thereby encouraging individuals to remain cognizant of the consequences of their intentions and decisions even though such intentions and

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

decisions may initially seem irrelevant to substance use (Dakwar et al., 2011). Although this study occurs prior to the seven-year cut off mark for selected research articles that I tried to adhere to in this literature review, it is significant in that it compares the effects of MBIs between mono-drug and poly-drug using individuals, and suggests mindfulness deficits amongst populations of substance users.

Garland (2016) discusses a new mindfulness intervention for addiction issues called mindfulness-oriented recovery enhancement (MORE), which has empirical support. Not only is MORE innovative, it is distinct from extant MBIs because it combines traditional mindfulness meditation through strategies of reappraisal and savoring to reverse the downward salient shift of natural rewards in relation to substance use rewards. Creating such a shift in an individual represents a crucial tipping point in disrupting the pattern of substance use (Garland, 2016).

Garland (2016) argues that these unique strategies combine mindfulness, reappraisal and savoring techniques to restructure the reward processes. If neural reward circuits offer a basic logic for the selection of goals sustained, training selective attention to strengthen natural rewards rather than substance use rewards may provide the necessary learning signal to reverse one's substance-related addiction (Garland, 2016).

Garland (2016) writes that MORE may represent a sizeable advance in terms of applying clinical interventions within the arena of contemplative science. While there are numerous currently existing MBIs which utilize mindfulness to disrupt maladaptive associative learning patterns, they nonetheless eschew an explicit focus upon promoting evaluative processing but do not intentionally or directly engage individuals in the restructuring of learned responses. In comparison, the aim of MORE is to restructure drug cue reactivity through the enhancement of an individual's natural reward responsiveness (RR) (Garland, 2016).

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

A significant finding of this study by Garland et al. (2012) was that those individuals who participated in the MORE intervention process experienced a substantial positive impact on their lives. The participants in this study had experienced many years of trauma, homelessness, poverty, violence, low levels of education, a lack of political capital, and more. The results of this study are especially interesting as the researchers state that the majority of prior studies on mindfulness have focussed their attention upon people who are living in less stressful, more stable situations (Garland et al., 2012). Not only does the MORE modality appear to hold much promise as a therapeutic intervention, but the findings of this study demonstrated that it was helpful for individuals who had experienced significant stressors in their lives.

According to the findings of these studies it seems clear that MBIs are effective at assisting individuals in helping them to reduce or quit their substance usage. I believe that social workers who are dealing with individuals with substance-related addictions are well suited through their education and work experience to assist individuals by learning and utilizing mindfulness modalities like MORE to assist those with substance-related addictions in restructuring their natural RR, as a way to direct them away from substance use. In doing this, social workers could utilize various individualized and group exercises to assist people through the process of restructuring their natural RR. Due to the flexibility of MBIs there are a variety of ways in which they could be applied. Social workers could teach MBI techniques to those whom they are assisting so that individuals could utilize them when not attending a session with their social worker or group activity. Additionally, MBIs could be incorporated into counselling sessions that one might have with their social worker when discussing their substance-related addiction issues. Such sessions could also be used as an opportunity to review, refine and analyze the MBI modality itself.

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

In the next few sections, I will review in detail through the literature review the effect of MBIs on individuals with addictions to alcohol, smoking, and illicit substances. In having examined the general effectiveness of mindfulness practice and substance-related addictions, I will more specifically analyze a literature on the effectiveness of mindfulness practices concerning specific substance using populations to determine its efficacy for each population. I reviewed the findings regarding the different MBIs such as mindfulness-based relapse prevention (MBRP), MORE, mindfulness-based group therapy (MBGT), mindfulness-based addiction treatment (MBAT), and, via a literature review, compared these modalities with one another in relation to techniques such as cognitive-behavioral therapy (CBT) and treatment as usual (TAU). While it is not the intention of this literature review to describe these models in detail, it is important to broadly note that the models are similar in that they all utilize mindfulness-based techniques to help with a variety of substance-related addiction issues. Moreover, they also differ in their goals and objectives in terms of the specific area(s) for which one needs assistance. I reviewed how these techniques were practiced with different substance using populations and explain my findings below.

Theme 2: Impact of Mindfulness on Alcohol Addiction

The study by Szeto and colleagues (2019) focussed on alcohol dependent patients from Holland who carried personal digital assistants, otherwise known as a handheld computer, on them for a period of four weeks while participants tried to abstain from using alcohol. The participants completed random assessments three times a day and when they experienced a strong urge towards having a drink or were on the brink of drinking but did not succumb to this urge. At each assessment point, categories such as stress level, craving, negative affect, recent drinking, as well as attentional or approach bias were assessed. At baseline, the researchers used

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

MAAS to assess the participant's mindfulness. The results revealed that the more mindful individuals (who reported higher MAAS scores) also reported lower cravings than the less mindful individuals (Szeto et al., 2019). Furthermore, the study showed no evidence that negative affect, stress, approach or attentional bias mediated any association between craving and MAAS (Szeto et al., 2019). However, this study did offer evidence of an indirect path between MAAS and drinking which demonstrated that a higher level of mindfulness related to lower craving levels; this in turn, produced a lower level of drinking (Szeto et al., 2019).

A paper by Garland, Schwarz, Kelly, Whitt, and Howard (2012) discusses how MBIs can reduce addictive behaviours while also increasing one's ability to have nonreactivity to stressors. This study utilized a qualitative methodology to increase understanding of the effects of mindfulness-related treatments. The participants in this study were eighteen adults with alcohol addiction issues who had all utilized MORE as an intervention strategy. Researchers conducted interviews to elicit participant narratives as well as open ended questions, which were then analyzed through a grounded theory lens as well as a constant comparison methodology. Narrative accounts indicated to the researchers that MORE was able to enhance one's self-awareness while also helping clients to cope with addictive impulses and emotional stressors more effectively (Garland et al., 2012). It was determined that MORE not only appears to be an acceptable therapeutic intervention strategy according to participants but also functions well in a residential treatment environment (Garland et al., 2012).

There were several limitations in this study by Garland and colleagues (2012). First, the researchers needed to more carefully distinguish between the MORE related effects of treatment and those therapies which are more generally associated with community treatment. Also, the researchers needed to more systematically assess therapist factors as well as nonspecific

treatment variables so that the variables associated explicitly with mindfulness can be more easily differentiated from common factors (Garland et al., 2012).

Theme 3: Impact of Mindfulness on Smoking populations

Another research article which utilized the EMA methodology focused on individuals who were dealing with smoking addiction. Spears and colleagues (2019) used an EMA model to investigate the mechanisms of mindfulness on smoking cessation, building on findings that those with greater mindfulness (non-judgmental and present-focused) are more likely to quit smoking. In total, three hundred and fifty-five smokers received the smoking cessation treatment. Participant's states of mindfulness were assessed at baseline and then again on their quit date. For four days prior to quitting and one week after quitting the study, participants completed up to four EMAs each day revealing negative affect levels, positive affect levels, smoking urges, as well as affect regulation expectancies (Spears et al., 2019).

Individuals who demonstrated a higher level of mindfulness in the study also appeared to have emotional profiles (psycho-emotional characteristics) which were beneficial to them when in the earlier stages of quitting smoking (Spears et al., 2019). As a result, these individuals were also more likely to achieve early cessation milestones (Spears et al., 2019). The researchers found that one's key emotional processes may be targeted by mindfulness, thereby weakening patterns of negative reinforcement which are hypothesized to underlie addictions. These findings have implications in terms of understanding MBIs and the fostering of emotional profiles that offer greater levels of adaptability when in the pre-quit period. The pre-quit period was a four day period in which a participant's baseline level of mindfulness was assessed and four EMA assessments per day were carried out. During this pre-quit period, having a lower stress level due to mindfulness practice could be a primary mechanism in enhancing the smoking cessation

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

process. Within this first week of quitting, stress level may be lowered by the stimulation of certain emotional states such as decreased levels of sadness, boredom, anger in conjunction with greater levels of relaxation and happiness as a result of mindfulness (Spears et al., 2019).

De Souza et al. (2015) conducted a systematic literature review aimed at analyzing the effectiveness of mindfulness-based practices on people trying to quit smoking. The majority of the articles were connected to randomized controlled feasibility trials or pilot studies, which had a low bias risk in relation to attrition, random sequence generation, and reporting. De Souza et al. (2015) concluded that mindfulness seems to affect one's mental health in a positive manner, which in turn may contribute towards one's ability to refrain from the use of tobacco.

Witkiewitz, Bowen et al. (2014) offer a review of mindfulness-based addiction treatment models as well as a number of hypothesized causes of change. Witkiewitz, Bowen et al. (2014) hypothesize that training in mindfulness may have a direct impact in preventing the occurrence of high-risk situations as well as a reduction in phasic risk. Mindfulness may also aid individuals in substance use prevention by increasing one's awareness of automatic non-mindful responses and judgemental thinking. Additionally, mindfulness has also been shown to increase one's levels of self-compassion, kindness, and relapse resistance. According to neurobiological perspectives regarding mindfulness meditation and addiction, there are several plausible mechanisms through which MBIs could affect an individual's cravings and substance use (Witkiewitz, Bowen et al., 2014).

In attempting to integrate both mindfulness practices as well as perspectives into a treatment that is both deliverable and replicable for those dealing with addictive behaviours, Witkiewitz, Bowen et al. (2014) refer to a study that was structured as an eight-week manualized outpatient aftercare program. This program incorporated CBT skills such as the recognition of

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

common relapse antecedents, effective coping skills, and self-efficacy. Mindfulness-based practices were employed to reduce the likelihood of relapse by increasing participant's awareness and flexible responding when faced with substance use triggers. To date, Witkiewitz, Bowen et al. (2014) discovered that MBRP was effective in treating those with substance use issues in relation to the TAU control group within the outpatient treatment environment. Furthermore, MBRP's efficacy was also demonstrated when compared with a program for RP at a residential women's treatment centre, as well as an intervention for a smoking cessation program called Freedom from Smoking (Witkiewitz, Bowen et al., 2014).

Spears et al. (2017) analyzed the cognitive and affective mechanisms that underlie MBAT in comparison to CBT and the usual care (UC) treatment for smoking cessation. Spears et al. (2017) go on to write that even though mindfulness-based treatments demonstrate promise regarding smoking cessation, there is a limited amount of data on mindfulness's differential effects in relation to the specific hypothesized mechanisms of other active treatments. Also, the parent trial uncovered that treatment type did not have any impact when it came to overall abstinence rates. However it was discovered that MBAT greatly increased lapse recovery levels in relation to UC and CBT (Spears et al., 2017). As hypothesized, individuals receiving MBAT perceived themselves as having more volitional control over their smoking along with lower levels of anger volatility than did the participants utilizing the other treatments offered (Spears et al., 2017).

Davis et al. (2014) reviewed the differences between a mindfulness-based treatment program for smokers called mindfulness training for smokers (MTS) and the usual type of therapy, which consisted of nicotine patches and the tobacco quit line. The participants of this study were randomized into either the telephone support service or to MTS. Treatment indicators

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

showed that there were significant differences between the two groups: the success rate was 20.6% for the telephone support group, and for the MTS group, it was 38.7% (Davis et al., 2014).

Researchers Goldberg et al. (2013) set up a randomized controlled trial that examined the lack of consensus around how MBIs affect change. One of the plausible explanations which remains underexplored is the therapeutic connection that clients have between themselves and their mindfulness instructors. This study suggested that when measured at the mid-treatment point, the therapeutic alliance between the client and the instructor did not have much bearing on predicting primary smoking outcomes (Goldberg et al., 2013). Improvement was predicted in this alliance on several variable outcome scores in the posttreatment phase. However, the alliance did predict an improvement in the posttreatment scores in relation to several outcome variables connected to mindfulness practice (Goldberg et al., 2013). The areas which showed improvements due to this alliance were treatment compliance, negative affect, mindfulness, and emotional regulation (Goldberg et al., 2013). These findings hold significance for social work since the quality of the therapeutic connection between social work practitioners of mindfulness, and their clients can affect these particular areas.

Even though the study by Goldberg et al. (2013) uses a sample size that is relatively small, the data nonetheless suggests various tentative conclusions. First, there are important pre-post changes that were observed via several measures, which indicate that MTS was effective as an intervention in the development of emotional regulation and mindfulness (Goldberg et al., 2013). This is significant because MTS incorporates mindfulness training in conjunction with smoking cessation intervention. These findings support self-reported improvements connected

with other MBIs not aimed at smokers, thereby supporting the generalizability of these findings (Goldberg et al., 2013).

Theme 4: Impact of Mindfulness on Addiction to Illicit Drugs

Individuals With Opioid Addiction Issues

Garland, Froeliger, and Howard (2014) examined how MORE affected RR on opioid cue-reactivity in connection with a sample of patients who had been experiencing chronic pain as well as opioid use problems. The findings of this study indicate that the MORE intervention process was not only able to reduce opioid cue-reactivity but was also able to enhance one's natural reward processing ability. These results support the hypothesis that RR and therapeutic enhancement are linked to a reduction in opioid cravings within this particular sample of drug-dependent individuals. However, a connection of causal directionality in this study was not able to be conclusively established amongst the findings (Garland, Froeliger, & Howard, 2014).

In a research study by Dakwar, Mariani, and Levin (2011), the researchers used the MAAS in order to examine mindfulness levels within individuals who had presented themselves for drug addiction treatment. This study compared mono-drug with poly-drug users and compared the two groups for differences based upon the substances used. The results of this study discovered that the average MAAS scores of the majority of drug populations were lower than the national average. Furthermore, poly-drug individuals obtained a lower score on the MAAS in comparison to the mono-drug individuals. The results of this study indicate that mindfulness deficits could be commonplace within populations of substance users and that there could also be sub-groups of people who have even more pronounced deficits in this area. Such findings lend validity to the idea that mindfulness-based treatments for individuals dealing with SUDs require continued development (Dakwar et al., 2011).

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

Fahmy et al. (2019) focussed on opioid dependence and the effectiveness of mindfulness. Here, the authors write that mindfulness training has already demonstrated counter-addictive properties by supporting individuals' habit modification, emotional regulation, restoration of natural RR, as well as stress reactivity and cognitive appraisal. Furthermore, neuroimaging studies analyzing structural changes in the brains of those who have practiced mindfulness have demonstrated increases in the cortical thickness in the insula, the prefrontal cortex as well as the somatosensory cortex (Fahmy et al., 2019). Moreover, functional imaging studies have found neural similarities in expert meditators' brain activity while meditating and while at rest. (Fahmy et al., 2019). Like studies of other types of cognitive training, these findings demonstrate long lasting and stable brain changes connected to the duration of one's practice. A consistent outcome of those who practice mindfulness meditation is a modulatory activation pattern within regions of the brain known as the default mode network (DMN) (Fahmy et al., 2019).

Fahmy et al. (2019) aimed to detect decreased DMN connectivity changes in the brains of opiate-dependent patients who were also receiving mindfulness-based therapy (MBT) over the first treatment month. Using resting state functional magnetic resonance imaging (fMRI), Fahmy et al. (2019) looked for treatment-related changes in the anterior and posterior DMN subsystems in thirty-two participants who either received MBT or TAU control. The authors found decreased levels of impulsivity and lowered negative urgency scores (the tendency to behave rashly when in a negative emotional state) in the MBT group. In comparison, the TAU control showed only improved tolerance of distress and regulation (Fahmy et al., 2019).

Male Methamphetamine Substance Users

Shareh, Gholami, and Jafari (2018) carried out a study to determine how effective MBGT can be for RP in male methamphetamine substance users. This study indicated that MBGT was

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

more beneficial for RP than was common group therapy (Shareh et al., 2018). Shareh and colleagues go onto write that their results were consistent with several other similar studies. The first of these studies was by researchers Witkiewitz, Marlatt, and Walker (2005, as cited in Shareh et al., 2018). Their findings suggested that MBRP is effective as a coping strategy when one is facing high-risk situations in terms of substance usage. According to these researchers, this is because mindfulness assists in creating awareness and acceptance of emotions, feelings and thoughts (Witkiewitz et al., 2005, as cited in Shareh et al., 2018). The second study mentioned by Shareh et al. (2018) was by researchers Zemestani, Babamiri, and Sepyani (2016). Their findings indicated that mindfulness is effective regarding the improvement of anxiety, depression, reduced substance cravings as well as relapse (Zemestani et al., 2016, as cited in Shareh et al., 2018).

In a third study analyzed by Shareh and colleagues (2018), researchers Kiani et al. (2012) investigated the effects of acceptance and commitment therapy in conjunction with MBT on the lowered rate of cravings in methamphetamine substance users. These researchers proposed that both treatments provide effective results due to common shared mechanisms. These common treatment mechanisms allow individuals to only be an observer, rather than making decisions based on one's feelings and thoughts through momentary mindfulness and separation of such feelings and thoughts from one's self. This process also provides one with an understanding of one's emotional and physiological sensitivities and the impact they have on their behaviour (Kiani et al., 2012, as cited in Shareh et al., 2018).

This study by Shareh and colleagues (2018) was a clinical trial that employed a control group pretest-post test design configuration. After a period of detoxification, forty individuals were selected via convenience sampling and were later assigned randomly to either an

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

experimental group or a control group. While the subjects who were assigned to the experimental group participated in nine sessions of MBTs oriented towards RP, the control group of subjects took part in the group therapy program already used by the treatment centre. MBGT reduced drug cravings, the likelihood of substance use, depression, and produced an overall improvement level within individuals. Moreover, no major differences were observed between either group in relation to treatment satisfaction. However, the number of control group members who experienced relapses was over twice as high as those in the experimental group (Shareh et al., 2018).

Thematic Findings From The Literature Review - Common Findings

In analyzing the literature on mindfulness and substance usage, I offered evidence for the effectiveness of mindfulness-based practises for several substance use issues and contexts. Evidence suggests that MBIs could also be beneficial for individuals who are members of a variety of substance using populations. The literature review revealed that mindfulness-based strategies have proven themselves to be effective for many people with substance-related addictions.

MBIs may hold an advantage over other strategies such as more traditional visualization strategies in sustaining their effects over a greater length of time. This seems to be in large part due to their greater level of flexibility and applicability to a wide variety of settings and contexts. Additionally, traditional visualization strategies may require more effort and have a greater degree of repetitiveness to them.

Various researchers also found that key emotional processes may be targeted by MBIs, which may weaken patterns of negative reinforcement within people. Such emotional processes are hypothesized to underlie addictions.

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

Davis, Berry et al., (2018) focus on whether MBRP is an appropriate and viable treatment for individuals in young adulthood who are participating in residential substance use and disorder treatment programs. Each participant in this study had an initial baseline assessment which evaluated each individual's behavioural, psychological, and social domains. Afterwards, test subjects were assigned randomly to receive either TAU or MBRP. All people receiving these treatments completed bimonthly assessments over six-months after their baseline evaluation (Davis, Berry et al., (2018).

The results of this study by Davis, Berry et al., (2018) suggest that MBRP is a viable and useful intervention for young adults who are in residential treatment and who fit the criteria of having been marginalized. Those who received MBRP had reduced substance use, cravings, and stress levels six months after beginning their treatment. This is significant because young adults who have been marginalized often deal with greater stressors and traumas due to their life circumstances, such as involvement in the criminal justice system or the child welfare system, not having attended some type of higher education, and being at greater risk for mental, physical, and substance use addiction (Davis, Berry et al., (2018)). The fact that MBRP was beneficial for this population speaks to the effectiveness of this intervention.

An article by Witkiewitz et al. (2014) utilized MBRP in comparison to the TAU RP for a residentially based treatment program aimed at helping incarcerated women. During an intensive phase of treatment in this program, MBRP was found to offer a modest level of support as an effective intervention strategy in relation to RP. However, those participants who were selected randomly to receive MBRP treatment reported significantly fewer days of substance use as well as fewer medical and legal issues at the fifteen-week follow-up period when compared with the individuals who received RP. The substance use relapse rate was low in terms of both MBRP

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

and RP, which indicated that the RP program was effective at RP. However, while the RP program had a substance use relapse rate of 10%, the MBRP program had a relapse rate of only 1.8%. Moreover, the relapse rates of each approach were low in comparison to what the researchers uncovered in the literature (Witkiewitz et al., 2014).

The primary goal of Witkiewitz et al. (2014) was to assist individuals in identifying their “automatic-pilot” state and its connection to substance use relapse as well as recognizing cravings and triggers (p. 538). The researchers also wanted to provide ways in which mindfulness practices could be integrated into one’s daily life by practicing the skills participants had learned for usage in high-risk situations, along with the specific role that one’s thoughts play in relapse. Each of the mindfulness treatment sessions began with a short-guided meditation, such as a sitting or body scan meditation. Included with these exercises were several experiential activities that allowed participants to utilize their mindfulness-based skills to lower their reactivity when in high risk situations. Afterwards, these sessions were followed by discussions, and group members were also assigned exercises to practice outside of the groups’ sessions and given handouts to follow (Witkiewitz et al., 2014).

In reviewing all these articles, it seems that mindfulness is useful as a strategy in reducing or ending substance-related addictions for the various substance using populations reviewed in the previous sections. In analysing the previous research about individuals with alcohol addiction issues and individuals with opioid addiction issues, researchers discovered that MORE was helpful for individuals who were trying to reduce or quit their alcohol and opioid substance-related addiction. Their findings also reveal that the current evidence suggests that MBIs can assist individuals in reducing their usage of substances such as opiates, cocaine, alcohol,

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

cigarettes, amphetamines and marijuana. The results of these studies also offered preliminary evidence that MBIs can also reduce one's substance related cravings.

Regarding individuals with smoking addiction issues, authors Spears et al. (2017) discovered that MTS had a high success rate for those dealing with smoking addiction issues. Moreover, MBRP was found to be beneficial in relation to the TAU program as well as a RP program for a residential women's treatment centre. Also, these researchers discovered that MBAT significantly increased lapse recovery levels in relation to the UC and CBT treatment. Additionally, study participants who received MBAT training also perceived themselves as having a greater level of volitional control regarding their smoking, as well as lower anger volatility levels.

According to researchers Chiesa and Serretti (2014) all MBIs share two fundamental features. The first characteristic of mindfulness is the development of a mental state that allows individuals to focus their full attention upon their internal and external experiences at any given moment. The second characteristic is the development and cultivation of a non-judgemental attitude of openness towards such experiences. Chiesa and Serretti (2014) continue by listing three main reasons as to why MBI's might be useful for those dealing with substance use and misuse (SUM) issues. The first reason is because MBIs allow for the fostering of a non-judgemental attitude within individuals towards distressing phenomena that could reduce the associated distress. Secondly, MBIs lead to the development of adaptive changes within one's thought patterns or may stimulate attitudinal changes towards their thoughts. Thirdly, MBIs allow individuals to enhance their ability to accept distressing present moment experiences. Thus, by enhancing this ability this could also allow individuals to lessen their substance using behaviors as a way to suppress painful emotional experiences.

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

Overall, according to the research it seems that by utilizing MBIs individuals are able to create within their minds a mental state that enhances their self awareness. In developing this state of greater self awareness one then becomes better able to recognize and cope with addictive and emotional impulses more effectively. Another extremely beneficial feature of mindfulness seems to be that it enables individuals to cultivate a non-judgemental and present focused awareness which allows one to examine their thoughts, emotions and actions in an accepting and non-judgemental manner. In utilizing mindfulness one can act as an observer in order to learn how to recognize which thoughts, emotions and actions are detrimental to their substance-related addiction recovery process. According to authors Chiesa and Serretti (2014) MBIs are becoming an increasingly recommended approach for what the authors term substance use and misuse (SUM) issues. Chiesa and Serretti (2014) report that the suggestion by the current evidence is that MBIs reduce the intake of a variety of substances such as opiates, cocaine, alcohol, cigarettes, amphetamines, and marijuana. Some of the preliminary evidence also supports a connection between MBIs and the reduction of cravings along with increased mindfulness (Chiesa & Serretti, 2014).

In relating these thematic findings more specifically to social work practice MBIs have proven themselves to be useful for a variety of issues and contexts other than just substance-related addictions. Due to the broadly applicable nature of MBIs it seems clear that there are other areas of one's life to which they could be applied. Initially, mindfulness arose out of Buddhism as a way to allow Buddhist monks to more easily cultivate the teachings of Buddhism. However, a key aspect of Buddhist mindfulness as well as all of its derivative forms is to understand and learn how to put an end to whatever form(s) of suffering an individual may be experiencing. Moreover, within Buddhism mindfulness is considered to be a key aspect of

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

“awakening” which is viewed as a specific mode of recollection or mental state that allows one to understand the truth behind the nature of conditions, causes and effects.

Similarly, critical theory shares commonalities with mindfulness. Both critical theory and mindfulness approaches have as their focus the alleviation of suffering. For instance, one can distinguish between critical theory and traditional theory by virtue of the fact that critical theory has as its practical aim the emancipation of humans from some form of slavery. Buddhism on the other hand seeks to alleviate suffering from one’s life by allowing one to reshape their consciousness into one that takes a non-grasping view of worldly phenomena through which one’s suffering is extinguished along with its origins. The field of social work certainly shares the goal of the elimination of human suffering. Due to the commonalities shared by mindfulness and critical theory, it would seem that these approaches could be used in conjunction with each other to develop a broader analysis. Those who are dealing with substance-related addictions are also often affected in a detrimental manner by larger socio-structural forces and institutions within society. An analysis that integrates both approaches may provide individuals with a greater ability to deal with their suffering and develop better solutions for overcoming it.

Gaps in the Literature

I note several gaps in this literature review. Some of the following areas were lacking in content. Having more information on how to carry out MBIs regarding specific substance using populations would be very useful. Overall, the literature seemed to provide more information relating to the efficacy of MBIs rather than how to perform such activities. Amongst the majority of the articles I reviewed there was a limited amount of step-by-step instructional

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

information which social workers could draw upon in order to practice the MBI activities being analyzed with their own clients.

Furthermore, I did not find much information regarding the use of computer software applications and mindfulness. I believe that such information could be beneficial in this current age of various smartphone applications, and I know that such applications exist and that many people are using them. Having such options available makes mindfulness an even more flexible alternative for those dealing with substance-related addiction or for any other issues for which mindfulness is beneficial.

The majority of the studies that I reviewed were usually small scale in design, thereby, lacking large enough sample sizes for their findings to be very generalizable. Some studies lacked generalizability of the analyzed findings due to methodologies that lacked details, had small scale sizes, and lacked replicated findings.

In creating a stronger evidence base for the effectiveness of MBIs, I believe that what is required are research projects with larger sample sizes, a greater variety of participants and contexts, as well as studies that are more longitudinal in design. In addition, I believe that including a more significant amount of training in mindfulness for research participants would improve the quality and findings of any future research studies.

Another area where knowledge seems to be lacking is the area of substance addiction cravings. According to some of the most recent studies, researchers still seem to lack a complete understanding of how mindfulness practices influence craving related changes. It would seem that more research in this area is needed.

Literature Review Implications for Social Work Practice

Benefits of Mindfulness and Social Work

Due to the broad macro-oriented theoretical scope that social work education entails in conjunction with a micro-oriented therapeutic approach, I believe that this could allow social workers to make the most of mindfulness modalities. Mindfulness interventions are already being successfully applied to several individually based issues such as mindfulness-based stress reduction, mindfulness-based cognitive therapy, mindful body scanning meditation etcetera. Social workers are well suited to assisting individuals with such issues due to their micro-therapeutic knowledge and skills. However, if social workers can find ways to link mindfulness approaches to larger socio-structural concerns as well this could allow for a more transformative experience for their clients.

In terms of those with substance-related addictions social workers might be able to utilize or develop MBI interventions that will instil within individuals an awareness of how larger socio-structural issues may have played, or may continue to play a part, in their ongoing substance-related addiction(s). Such an approach may allow individuals to consider other factors unrelated to their own actions that they may not have considered previously. Often factors such as guilt, shame, low self-esteem, loneliness, stress, trauma, mental health issues etcetera can cause one to develop a substance-related addiction(s). These issues are often individualized by those who have them. However, such issues are often connected to wider socio-cultural concepts that unfairly encourage an individualizing approach to such matters. In taking approaches that integrate a micro as well as a macro focus this could allow individuals to view the causes and continuation of their substance-related addictions within a wider context. This wider view could

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

allow people dealing with substance-related addictions to be better able to make changes in their lives that allow them to either reduce or end their substance-related addiction(s) usage.

Authors Banerjee, Cavanaugh, and Strauss (2018) write that there is a substantial amount of evidence for the effectiveness of group based MBIs. These authors suggest that if social workers were to utilize more group based MBIs in their practice that this could greatly widen access to MBIs for the individuals whom they serve. Utilizing such group based MBIs would not only allow social workers to teach and treat a greater number of individuals more easily but would probably be better venues for making socio-structural connections. Since socio-structural forces affect everyone as a group, albeit, not always in the same way due to issues of ethnicity, class etcetera discussing and sharing one's experiences in this realm could be beneficial. These group sessions could operate not only as mindfulness sessions but could also function as consciousness raising educational events.

Barriers to Mindfulness and Social Work

Many of the barriers that individuals might face in accessing mindfulness treatments are centered around the ability of mental health and addiction professionals to offer people this treatment. Edwards, Cohen, and Wupperman (2016) examined the rates of mindfulness modality adoption by substance-treatment professionals and also explored the perceived barriers to the adoption of such a treatment approach, including in social work contexts. This study revealed that approximately one third of practitioners reported having incorporated mindfulness into their treatment regimes (Edwards et al., 2016). Almost two thirds reported having some familiarity with mindfulness in terms of its treatment applications for substance-related addiction and respondents who had more familiarity with mindfulness were found to be significantly more likely to utilize it within their treatment practices (Edwards et al., 2016). However, fewer than

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

20% of those practitioners who were using mindfulness in their practice were doing so in a research-supported manner via the use of formalized manuals (Edwards et al., 2016). Moreover, reported familiarity with mindfulness and educational study completion dates did not demonstrate a significant relationship (Edwards et al., 2016).

On average, Edwards et al. (2016) found only small to moderate barriers were reported by practitioners in terms of being able to utilize mindfulness for treating substance use issues. Notably, regardless of their discipline, familiarity, or usage of mindfulness as a treatment modality, what was viewed by practitioners as the greatest obstacle was the need for further training (Edwards et al., 2016). In comparison, religious and philosophical issues posed only minor barriers (Edwards et al., 2016). Overall, when viewed from across all the disciplines studied, the differences in the severity of the perceived barriers were minimal even amongst individuals with varying years of experience in the field (Edwards et al., 2016).

Banerjee, Cavanaugh, and Strauss (2018) write that not much is known regarding what factors are effective when it comes to increasing one's engagement with MBIs. Moreover, the authors posit that the basis through which engagement in mindfulness is usually defined is via class attendance (physical engagement) only. In contrast to this way of defining an individual's engagement with mindfulness, recent psychotherapy literature has emphasized the importance of measuring a participant's level of involvement with MBIs (psychological engagement, Banerjee et al., 2018). The authors of this study tested a research model which revealed that worry and rumination can act as barriers to both physical as well as psychological engagement, which can impede one's ability to learn mindfulness (Banerjee et al., 2018).

Banerjee et al. (2018) write that the literature does not provide a clear definition of MBI engagement. In terms of psychological therapies more broadly, the authors write that within the

field, there is a lack of consensus on how engagement is defined in this area. For individuals to become more mindful, these authors state that ‘psychological participation’ is required (Banerjee et al., 2018). This means that one not only needs to engage with normal mindfulness practice but also needs to develop a radically different ‘being’ or mode which can be entered into at any moment, thus perhaps making MBI engagement somewhat different in comparison to engagement with other psychotherapies. In highlighting this difference mindfulness is often considered to be an ‘approach to life’ rather than as strictly a health behaviour (Banerjee et al., 2018, p. 981).

In considering what psychological engagement would entail, Banerjee and colleagues (2018) propose a definition of psychological engagement consisting of five factors: (1) motivation – for putting aside the time to participate in an MBI course, (2) intention – maintenance of one’s formal mindfulness practice while participating in an MBI course and afterwards, (3) commitment – towards utilizing mindfulness within one’s daily life, (4) the belief – that in practicing mindfulness it will be beneficial for one’s well-being or mental health, (5) the therapeutic relationship - between an MBI participant and their instructor and/or group (p. 981).

This study by Banerjee, Cavanaugh and Strauss (2018) utilized one hundred and twenty-four participants who were provided with access to a two-week-long online mindfulness-based self-help (MBSH) intervention. The participants used self-reporting measures regarding mindfulness, worry, rumination, and positive beliefs concerning rumination, as well as worry and positive beliefs concerning psychological and physical engagement. This study revealed that what can increase one’s chances of disengagement from MBSH are rumination and worry and, in so doing, hinder one’s cultivation of mindfulness (Banerjee et al., 2018).

Practice Implications for Mindfulness and Social Work

Dylan and Coates (2016) write that there has been an increasing amount of interest in mindfulness within the social work field due to its applicability to a wide variety of human endeavors and issues. Dylan and Coates (2016) state that since mindfulness is so multifaceted and ever evolving, it has quickly become an important methodology across a variety of academic disciplines, helping professions, health sectors, geographic regions, as well as ethnocultural groups within North America. However, despite the increasingly significant amount of evidence demonstrating the efficacy of mindfulness as a strategy to alleviate a multiplicity of specific human concerns, several issues have arisen.

Dylan and Coates (2016) also reaffirm that mindfulness is a core aspect of the Eightfold Noble Path of Buddhism, and thus, is derived from a particular philosophical and religious tradition. However, within North America, mindfulness is often de-coupled from this Buddhist tradition and is frequently taught in a secularized manner that risks cultural appropriation. A secularized approach may allow mindfulness to be more easily accessed by a greater number of individuals as well as increase its adaptability to a larger variety of applications. However, such changes also have the potential to weaken the robustness, wholeness and integrity of the practice. In applying mindfulness in this broader manner, there is a risk that its defining characteristics or meaning could become diffused (Dylan & Coates, 2016).

Furthermore, Dylan and Coates (2016) write that it is particularly important for the profession of social work to consider how mindfulness can be incorporated into their practice. For instance, to utilize mindfulness in their professional practice, a practitioner must also be experienced in practicing it themselves. Connected to this question are the additional questions of how one applies mindfulness, for what purpose, and with what degree of effectiveness. These

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

authors posit that in operating from a position of mindfulness and time, practitioners might come to recognize the impact of systemic and structural realities upon their lives. Thus, what is needed is research directed towards how mindfulness can be employed in advancing the social work profession's radical and social justice objectives (Dylan & Coates, 2016).

I did not encounter very much discussion on how to carry out specific MBI practices. As a way to promote the incorporation of mindfulness into one's practice I believe that social workers should at least be introduced to the practice of mindfulness when in social work school. Perhaps mindfulness could be offered as an elective course. I think that one of the easiest ways for social workers to introduce mindfulness into their practice would be by incorporating it into counselling sessions with their clients. Social workers could begin and/or end each counselling session with some sort of a mindfulness practice. One mindfulness-based practice modality that could be useful within this context which was initially used to treat stress as well as pain-related disorders is mindfulness-based stress reduction (MBSR). Since counselling sessions often involve the discussion of stressful issues the utilization of MBSR before and/or after each counseling session could allow one to more easily discuss and process emotionally difficult issues and experiences. Additionally, another mindfulness modality that could be helpful with counselling sessions could be mindfulness-based cognitive therapy (MBCT) since this modality can assist individuals in dealing with negative thought patterns. In moving beyond individualized sessions, social workers could also apply mindfulness-based modalities to groups sessions. Some of these group sessions could involve discussions amongst clients regarding their journey towards overcoming their substance-related addictions. Social workers could also facilitate educational discussion sessions around the effects of societal dynamics upon peoples lives and work collaboratively with group attendees to develop solutions to overcoming societal

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

obstacles that they might be dealing with. Mindfulness modalities meant to assist individuals in recognizing how socio-structural issues were affecting their lives could be utilized in such a group.

In examining how social workers could promote and employ mindfulness techniques in order to affect systemic change, Rowe (2016) writes that Kabat-Zinn likened mindfulness to a form of “institutional aikido” (p. 207). Kabat-Zinn (as cited in Rowe, 2016) stated that mindfulness could not only change organizations from within but could also allow practitioners to heighten their awareness and progressively become more aware of issues related to hatred, greed, and delusion that cause a great deal of collective suffering within society. Furthermore, Rowe (2016) also cites a philosopher and activist named Angela Davis who, after debating with Kabat-Zinn, recognized that mindfulness has the potential of becoming a revolutionary force if it is embedded within social movements which target oppressive systems. Such movements also offer political and ethical analyses which can serve as a way of utilizing mind/body practices towards the service of creating radical social change.

I believe that mind/body practices do have the potential for assisting people involved in creating large scale macro-changes within society. For instance, I can see how mindfulness could be used as a method to bring people together. Besides meeting to practice mindfulness, such sessions could also be used as an opportunity to develop and maintain social connections and create a broader sense of group solidarity. I agree with the perspective that mindfulness practices alone will not power any revolutions unless they are paired with goals that further the revolution. In order to further such goals, I believe that a socio-structural analysis of the social changes being pursued would need to be incorporated into an individual’s mindfulness practice.

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

It would appear that both mindfulness and critical theory can be utilized in conjunction with each other. Individuals can use mindfulness strategies to analyze their internal state in terms of thoughts, emotions, and body sensations. This practice can then be linked with critical theory approaches which focus on the overarching socio-economic system and structures responsible for creating and perpetuating unfairness and oppression. Hick et al. (2009) write that since mindfulness enables a sustained awareness of thoughts, emotions, and physical sensations, this practice can also be used to delve into societal dynamics. As one's sense of interconnectedness increases, so will one's sense of compassion for the world. In strengthening this sense of interconnectedness, practitioners of mindfulness begin to understand how their actions could be influencing and perpetuating injustice (Hick et al., 2009).

Hick et al. (2009) state that two elements, which are key to practicing social justice approaches in social work entails viewing economic and social structures as having a major influence on how social justice and oppression is perpetuated. These elements also focus on the dialectical interaction between societal and individual influences regarding social problems. Moreover, each of these elements could fit with mindfulness practice goals. Mindfulness practices mirror the structural tendency to analyze social and economic structures. It elucidates a vision of our unsustainable and fast-paced economic system, as maintaining oppressive social relations by perpetuating mindlessness or being on "autopilot" (Hick et al., 2009, p. 14). In this way, Hick et al. (2009) demonstrate that mindfulness is change-oriented since it allows one to develop a sense of awareness of when they are on autopilot, and in so doing, cultivates an awareness of the present moment. Once one can learn to develop a sustained level of awareness, individuals can start to link their personal lived experiences in relation to broader social structures. Thus, mindfulness practices could be of assistance to social justice approaches in

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

cultivating an awareness of how power inequities are reinforced through well-worn practices. Having this critical awareness of the functioning of dominant institutions reveals possibilities in terms of their dismantling, thereby suggesting a vision of social transformation (Hick et al., 2009).

As a social worker, I believe that utilizing mindfulness strategies to assist individuals in reducing or ending their substance usage would be helpful. However, as a larger long-term goal, I believe that integrating mindfulness practices with educational discussion sessions to elucidate the connection between individuals' personal lives and socio-structural issues of oppression could generate actions towards larger socio-economic changes within society.

Hick et al. (2009) posit that, in identifying key broad ways through which mindfulness and social justice approaches to social work are congruent, mindfulness approaches could be integrated into one's practice. In particular, concepts such as self-reflection, social relations and consciousness provide guideposts as to how such a co-mingling might occur. Social justice approaches offer skillful methods to social work in uncovering, analyzing, and changing unjust social institutions and structures (Hick et al., 2009). Hick et al. (2009) propose that mindfulness introduces a skillful method for not only cultivating but also sustaining awareness about ourselves, as well as our everyday experience and overall experience in the world. When taken together, this can allow social workers to consciously understand both their inner and outer experiences along with the dialectical relationship between these experiences and society (Hick et al., 2009).

Hick et al. (2009) argue that by developing an awareness of social relations, one can become aware of unconscious participation in reproducing social structures. Through this understanding, one can increase their choices regarding future actions in terms of how one

MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

chooses to live within society and the approach one might adopt in changing it. Hick et al. (2009) write that this consciousness raising can create an awareness that can allow one to see how everyday activities could be organized and articulated in a manner that reduces or remedies oppressive social relations. Within this self-reflective realm, the goal of each approach is to develop an understanding of oneself in relation to how one operates in the world. Thus, mindfulness offers a comprehensive modality for examining inner experiences in a manner that does not cause one's inner experience(s) to be viewed as a pathology or personal fault(s) (Hick et al., 2009).

Conclusion

In conclusion, in having analyzed the efficacy of mindfulness as a modality to treat substance-related addictions as well as a potential consciousness raising modality, it appears as though mindfulness is beneficial for both of these pursuits. Mindfulness is being increasingly applied to a variety of issues and contexts due to its usefulness and flexibility. Moreover, mindfulness can also be used in conjunction with a number of other therapeutic approaches and modalities making it especially useful when working towards client outcome goals. As a social worker, I intend to utilize mindfulness techniques in all applicable areas when working with individuals.

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MINDFULNESS AND SUBSTANCE-RELATED ADDICTION

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