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Mindfulness-Based Therapies for Substance Use Disorders: Part 1 (Editorial)

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The link between stress and addiction is well-known. Stress increases the likelihood of alcohol and drug use, and can precipitate relapses following treatment (1). Clinicians and researchers recognize the critical need to incorporate stress management techniques into inpatient and outpatient treatment. The goal is to assist clients to replace substance use with healthy coping skills when confronted with the inevitable stressors that threaten sobriety. Improved treatment retention and relapse prevention are desired outcomes of the challenging search for evidenced-based programs for recovering addicts.

This thematic issue of *Substance Abuse* is devoted to an emerging, promising area of research, mindfulness meditation as a therapy for addictive disorders. Conceptual framework and findings from a pilot-level research combined with an anecdotal evidence from clinical practice support the use of this innovative therapy for a broad spectrum of substance use disorders and mental health problems in general. If effective, mindfulness meditation based interventions could help improve treatment outcomes in addictive disorders.

Mindfulness meditation, originally derived from Buddhist *Vipassana* meditation, is the cornerstone of the Mindfulness-Based Stress Reduction (MBSR) program developed by Kabat-Zinn in 1979 to teach patients with chronic physical and mental health problems how to improve their lives. MBSR is now used as an adjunctive treatment for a wide range of disorders and is increasingly finding its way into the treatment of addiction. Kabat-Zinn defines mindfulness as “paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally” (2). Mindfulness encourages awareness and acceptance of thoughts, feelings and bodily sensations as they arise, and recognition of their impermanence. Mindfulness practitioners are taught to *acknowledge and accept* their experiences rather than to modify or suppress them. This change in one’s relationship to present-moment experience has been described as “reperceiving” (3) or “attentional control” (4), and may facilitate more mindful behavioral choices. The set of skills associated with mindfulness can be taught independent of religious or cultural background, and in a variety of forms of interventions (5). In addition to MBSR, mindfulness-based interventions, used in a context of addictive disorders, include Mindfulness-Based Cognitive Therapy (MBCT) (6), Dialectical Behavior Therapy (DBT) (7), and Acceptance and Commitment Therapy (ACT) (8). Recent modifications of these approaches, developed specifically for substance abusing populations, include Mindfulness-Based Relapse Prevention (MBRP) (9) and Mindfulness-Based Therapeutic Community (MBTC) treatment (10).

The potential utility of mindfulness-based interventions for individuals in recovery from addictive disorders is particularly compelling. As an example, experiential avoidance, or an individual’s unwillingness to remain in contact with unpleasant thoughts and experiences, has

been implicated in substance abuse (11). Two studies showed that mindfulness meditation limits experiential avoidance by promoting nonjudgmental acceptance of moment-to-moment thoughts (12) and by interrupting the tendency to respond using maladaptive behaviors such as substance use (3). Craving, too, may be ameliorated by mindfulness practice as one learns not to react automatically but respond with awareness (13).

Although mindfulness meditation has been used in clinical settings as an adjunctive therapy for substance abuse for a long time, there has been a relative paucity of research in this field. When we ‘placed a call’ for papers focused on mindfulness based interventions targeting substance abuse, we were surprised by many submissions from multiple authors from a variety of clinical research settings around the world. Although this high turn-out has exceeded our expectations, it highlights a growing interest in this clinical and research area. For this Special Issue of Substance Abuse, we accepted 10 excellent papers. Half of these articles is assembled in this issue, and the remaining 5 will be published in a subsequent issue of *Substance Abuse*.

The first paper by Zgierska and colleagues, “Mindfulness Meditation for Substance Use Disorders: A Systematic Review”, is an extensive assessment of the clinical trial evidence of the effects of mindfulness-based therapies on addictive disorders. The authors found that while preliminary evidence suggests that mindfulness based interventions are efficacious, the data are inclusive; they also provided useful directions for further research to assist scholars in advancing the field.

Bowen and colleagues contributed “Mindfulness-based Relapse Prevention (MBRP) for Substance Use Disorders: A Pilot Efficacy Trial”, a study of MBRP for individuals who had recently completed intensive inpatient or outpatient addiction treatment. They report that MBRP participants, compared to those who received usual treatment only, experienced greater decreases in craving, and greater increases in acceptance and acting with awareness.

In “Mindfulness Training and Stress Reactivity in Substance Abuse: Results from a Randomized, Controlled Stage 1 Pilot Study,” Brewer and colleagues compared a manualized version of mindfulness training to cognitive behavior therapy (CBT) for individuals in community-based outpatient addiction treatment. This study, which combined a laboratory-based behavioral experiment with psychological and physiological measures, suggested a reduction in stress-related indices in the mindfulness group compared to the CBT group.

The last two papers are derived from the same main study and report findings of cross-sectional analyses of baseline (pre-cessation) data of 158 smokers enrolled in a smoking cessation trial comparing effects of MBSR to a standard of care treatment. Vidrine and colleagues examined the “Associations of Mindfulness with Nicotine Dependence, Withdrawal and Agency,” and found that mindfulness was negatively associated with the level of nicotine dependence and “anticipatory” withdrawal severity, and positively associated with a sense of agency related to cessation. In the same sample of individuals, Waters and colleagues evaluated “Associations Between Mindfulness and Implicit Cognition and Self-reported Affect” and noted that degree of mindfulness was negatively associated with severity of self-reported negative affect, perceived stress and depressive symptoms, and positively associated with positive affect level.

Combined, these studies offer an intriguing glimpse into the continuing quest for appropriate strategies to reduce stress and improve treatment outcomes in an especially vulnerable population, individuals with substance use disorders. A forthcoming issue of *Substance Abuse* will continue this theme with articles that look at effects of other mindfulness-based interventions in a range of substance-abusing client populations. The papers in the second issue will illustrate the ways in which mindfulness practice has been combined with other behavioral treatments and/or adapted to meet the needs of specific client populations (14-18).

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