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ORIGINAL PAPER

Mindfulness as a Treatment for Gambling Disorder: Current Directions and Issues

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Abstract Mindfulness is a form of meditation that derives from Buddhist practice and is one of the fastest growing areas of psychological research. Studies investigating the role of mindfulness in the treatment of behavioral addictions have, to date, primarily focused on gambling disorder. Recent pilot studies and clinical case studies have demonstrated that weekly mindfulness therapy sessions can lead to clinically significant change among individuals with gambling problems. This purpose of this paper is to appraise current directions in gambling disorder research as they relates to mindfulness approaches, and discuss issues that are likely to hinder the wider acceptance of mindfulness as a treatment for gambling disorder. It is concluded that although preliminary findings indicate that there are applications for mindfulness approaches in the treatment of gambling disorder, further empirical and clinical research utilizing larger-sample controlled study designs is clearly needed.

Keywords Gambling Disorder, Mindfulness, Meditation Awareness Training, Behavioral Addiction, Buddhism

Introduction

Mindfulness is one of the fastest growing areas of psychological research, and more than 70% of general practitioners in the United Kingdom now believe that mindfulness/

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meditation can be beneficial for patients with mental health issues (Shonin et al. 2013a). It has also been demonstrated that there may be applications for mindfulness approaches in the treatment of non-chemical (i.e. behavioral) addictions including gambling disorder (Shonin et al. 2014a). This purpose of this paper is to appraise current directions in gambling disorder research as it relates to mindfulness approaches and discuss issues that are likely to hinder the wider acceptance of mindfulness as a treatment for gambling disorder.

Problem Gambling Treatment

Problem gambling is highly comorbid with negative affective states, including depression, anxiety, and suicidal ideations (e.g. Lorains et al. 2011). Neuroticism, hypertension, an inability to relax, and altered patterns of autonomic arousal are all associated with gambling disorder (e.g. Mehwash and Griffiths 2010; Sharpe 2004). Furthermore, findings from the National Comorbidity Survey-Replication demonstrate that almost half of individuals with problem gambling behavior (and more than two-thirds with pathological gambling behavior) experience sleep problems (Parhami et al. 2013).

"Second-wave" cognitive behavioral therapies (CBTs) have consistently been regarded as the "intervention of choice" for the treatment of problem gambling (Rickwood et al. 2010). Cognitive-behavioral approaches share a common mechanism of generating therapeutic change via the restructuring of maladaptive core beliefs (Wells 1997). In effect, patients are empowered to control and modify cognitive distortions and to "self-intervene" at the level of individual thoughts and feelings (Shonin et al. 2013b). While CBT is cautiously advocated for the treatment of problem gambling, CBT does not appear to be an effective or accessible treatment for all problem gambling patients (de Lisle et al. 2012). Furthermore, relapse rates for problem gambling can be as high as 75% (Hodgins et al. 2007), and there is a paucity of high quality CBT trials reporting long-term follow-up data (Gooding and Tarrier 2009).

Throughout the last two decades, Buddhist principles have increasingly been employed in the treatment of a wide range of psychological disorders. Such disorders include (among others) mood and anxiety disorders (Van Gordon et al. 2013), substance use disorders (Marlatt 2002), bipolar disorder (Chiesa and Serretti 2011), and schizophrenia-spectrum disorders (Johnson et al. 2011). The emerging role of Buddhism in clinical settings appears to mirror a growth in research examining the potential effects of Buddhist meditation on brain neurophysiology (e.g. Cahn et al. 2010). Such research forms part of a wider dialogue concerned with the evidence-based applications of specific forms of spiritual practice for improved psychological health (Kelly 2008). The central role played by Buddhism in this respect is probably due to its orientation as a philosophical and practice-based system (as opposed to a more dogmatic or belief-based religious tradition) (Shonin et al. 2014b).

In addition to other therapeutic approaches, certain Buddhist principles have been integrated into what have been termed "third-wave" cognitive behavioral approaches (Howells et al. 2010). Rather than a deliberate attempt to control and modify individual cognitions (i.e. the second-wave CBT approaches), third-wave CBT approaches operate via the mechanism of transformative meditative awareness and perceptual re-distancing (Shonin et al. 2014b). More specifically, third-wave CBTs make use of mindfulness techniques, and, in recent years, a small body of evidence has emerged suggesting that mindfulness has a role in the treatment of gambling disorder.

What Is Mindfulness?

Mindfulness is a form of meditation that derives from Buddhist practice. It is defined as the process of engaging a full, direct, and active awareness of experienced phenomena that is (a) spiritual in aspect and (b) maintained from one moment to the next (Shonin et al. 2014c). As part of the practice of mindfulness, a "meditative anchor"—such as observing the breath—is typically used to aid concentration and to help maintain an open-awareness of present moment sensory and cognitive-affective experience.

Within mental health and addiction treatment settings, mindfulness-based interventions (MBIs) are generally delivered in a secular 8-week format and often comprise the following: (a) weekly sessions of 90–180 minutes duration, (b) a taught psycho-education component, (c) guided mindfulness exercises, (d) a CD of guided meditation to facilitate daily self-practice, and (e) varying degrees of one-to-one discussion-based therapy with the program instructor (Van Gordon et al. 2013). Examples of MBIs used in behavioral addiction treatment studies include mindfulness-based cognitive therapy, mindfulness-enhanced cognitive behavior therapy, mindfulness-based relapse prevention, mindfulness-based stress reduction, and meditation awareness training (de Lisle et al. 2011; Shonin et al. 2013b; Toneatto et al. 2014).

Mindfulness in the Treatment of Gambling Disorder

To date, studies investigating the role of mindfulness in the treatment of behavioral addictions have primarily focused on problem or pathological gambling (now re-termed "gambling disorder" in the DSM-5 [American Psychiatric Association (APA) 2013]), although other behavioral addictions, such as workaholism (Shonin et al. 2014d) and sex addiction (Reid et al. 2014) have been treated using mindfulness techniques (Shonin et al. 2014a).

Cross-sectional studies have shown that levels of dispositional mindfulness in problem gamblers are inversely associated with gambling severity (Lakey et al. 2007), thought suppression (Riley 2014), and psychological distress (de Lisle et al. 2014). Recent clinical case studies have demonstrated that weekly mindfulness therapy sessions can lead to clinically significant change in individuals with gambling problems. Published case studies include: (a) a male in his 60s addicted to offline roulette playing (treated with a program of CBT followed by mindfulness techniques; Toneatto et al. 2007), (b) a 61-year-old female (with comorbid anxiety and depression) addicted to slot machine gambling (treated with a modified version of mindfulness-based cognitive therapy; de Lisle et al. 2011), and (c) a 32-year-old female (with co-occurring schizophrenia) addicted to online slot-machine playing (treated with CBT and a modified version of meditation awareness training; Shonin et al. 2014e).

As indicated above, it should be noted that these case study treatments often used mindfulness as an adjunct to other more conventional therapeutic techniques. For instance, the case study reported by Shonin et al. (2014e) also used cognitive-behavior therapy along with diary keeping, behavioral experiments, goal setting, and psycho-education. The authors also reported that the intervention employed a broad range of meditation exercises and meditation-based dialogue techniques that may exert specific training (and, therefore, time) demands on the part of the therapist. Other notable limitations of this (and other case reports in the literature) include the absence of a longer-term follow-up period and the utilization of a preceding 7-day period for measuring gambling involvement (i.e. that does not control for short-term contextual factors such as availability of money). Thus, further clinical

evaluation using both single-participant and controlled larger-sample designs is required to replicate these findings relating to clinical case reports.

In addition to case studies, a recent controlled study showed that problem gamblers who received mindfulness-enhanced cognitive behavior therapy demonstrated significant improvements over wait-list control participants in levels of gambling severity, gambling urges, and emotional distress (Toneatto et al. 2014). Another recent study by Chen and colleagues (2014) administered a mindfulness treatment to 17 problem gamblers. The study highlighted a number of improvements in the lives of the problem gamblers, including being more in control, relaxed and able "to stay in the now" (p. 1). However, both of these studies were limited by small sample sizes and by the absence of a robust control condition.

Currently, empirical investigation of the role of mindfulness in the treatment of behavioral addictions has focused on addictions to gambling, work, and (to a lesser extent) sex (Shonin et al. 2014a). However, based on an assessment and review of the mechanisms underlying improvements facilitated by the use of mindfulness in problem gamblers, we would argue that mindfulness approaches are likely to have psychotherapeutic utility across a wider variety of behavioral addictions, including internet addiction, social networking addiction, and video game addiction (Shonin et al. 2013b, 2014a).

Mechanisms of Action

A number of proposals have been made in terms of the mechanisms of action that underlie the effective treatment of problem gambling using mindfulness. Unsurprisingly, many of these overlap with the mechanisms identified as part of the mindfulness-based treatment of chemical addictions. The most widely reported or accepted mechanisms of action include the following: (a) a perceptual shift in the mode of responding and relating to sensory and cognitive-affective stimuli that permits individuals to objectify their cognitive processes and apprehend them as passing phenomena; (b) reductions in relapse and withdrawal symptoms via substituting maladaptive addictive behaviors with a "positive addiction" to mindfulness/meditation (particularly the blissful or tranquil states associated with certain meditative practices); (c) transferring the locus of control for stress from external conditions to internal metacognitive and attentional resources; (d) the modulation of dysphoric mood states and addiction-related shameful and self-disparaging schemas via the cultivation of self-awareness and self-compassion; (e) reductions in salience and myopic focus on reward (i.e. by undermining the intrinsic value and authenticity that individuals assign to the object of addiction) due to a better understanding of the impermanent nature of existence; (f) growth in spiritual awareness that broadens perspective and induces a re-evaluation of life priorities; (g) "urge surfing" (the meditative process of adopting an observatory, nonjudgmental, and nonreactive attentional-set towards mental urges) that aids in the regulation of habitual compulsive responses; (h) reduced autonomic and psychological arousal via conscious-breathing-induced increases in prefrontal functioning and vagal nerve output (breath awareness is a central feature of mindfulness practice); (i) increased capacity to defer gratitude due to improvements in levels of patience; and (j) a greater ability to label and therefore modulate mental urges and faulty thinking patterns (Derezotes 2000; Gillespie et al. 2012; Rungreangkulki et al. 2011; Shonin et al. 2013a, 2013b; Sumpter et al. 2009).

Where Do We Go from Here?

Although it appears that mindfulness can play an important role in ameliorating problem gambling symptomatology (based on the published studies to date), further empirical and clinical research utilizing larger-sample controlled study designs is clearly needed. As an

adjunct to mindfulness, Shonin et al. (2013b) suggested that other Buddhist-based practices may also be particularly suited for the treatment of problem gambling. These practices include (a) insight meditation techniques (e.g. meditations on "emptiness") to overcome avoidance and dissociation strategies; (b) making use of "antidotes" (e.g. patience, impermanence, etc.) to attenuate impulsivity and salience-related issues; (c) loving-kindness and compassion meditation to foster positive thinking and reduce conflict; and (d) "middle-way" principles and "bliss-substitution" to reduce relapse and temper withdrawal symptoms.

Future research and dialogue should also focus on addressing some of the issues that currently hinder the wide-scale operationalization of mindfulness as an addiction treatment. Such issues include the need for a more established training and assessment curriculum for MBI instructors who, in some instances, may have as little as one year's mindfulness practice and teaching experience following completion of a single 8-week training course (Shonin et al. 2014e; Van Gordon et al. 2015). Additionally, diverse models of mindfulness are employed in different MBIs, and this is problematic when attempting to identify the precise attributes of mindfulness practice that are mechanistically active in the treatment of gambling disorder.

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