

APPENDIX

Implementing Mindfulness-Based Relapse Prevention in Diverse Populations: Challenges and Future Directions

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As a researcher, much of my work has focused on addressing the gap between evidence-based practices for substance use disorders (SUDs) and treatment programming for underrepresented minorities. My entry into mindfulness-based interventions (MBIs) as a potential tool for poor, inner-city minority women in recovery from addiction was filled with curiosity and a pinch of skepticism due to questions of cultural fit and potential efficacy. From my own yoga and meditation practice, I had experienced stress reduction benefits, an increased sense of wellbeing, and balance. At the time, emerging data (Grossman, Niemann, Schmidt, & Walach, 2004) suggested some health benefits of mindfulness-based practices and particularly mindfulness-based stress reduction (MBSR), although few studies were available on MBIs with individuals in recovery from SUDs.

Along with colleagues in Boston, I began to consider how mindfulness practice might be useful to women in our SUD treatment programs. Most had a history of trauma, accumulated stress from years of abuse, and an inordinate number of challenges in their daily lives, reflecting the higher level of social vulnerabilities of minority groups and poor populations. Our work on the treatment of trauma and addiction had laid the groundwork for a mindfulness approach. The Boston Consortium Model (BCM; Amaro, McGraw, et al., 2005) employed an integrated approach to the treatment of addiction, trauma, and mental

illness through which we taught clients simple techniques to quiet the mind. We documented advantages of the BCM over SUD treatment¹ as usual (Amaro et al., 2007; Amaro, Larson, et al., 2005). Our intent in adding mindfulness practices to integrated treatment was to offer a package of services that would integrate stress reduction and mindfulness practices as a holistic approach—addressing the mind, body, and spirit.

Our initial implementation of MBSR received an astounding negative response from the largely African American and Latina women served by the participating SUD treatment programs, even though highly trained and skilled MBSR facilitators delivered the intervention. The participant feedback we received made it clear that there was a lack of fit and low acceptability and enabled us to identify specific areas of incongruity between MBSR and the needs of our clients. During the course of several years, along with our colleagues at the University of Massachusetts Center for Mindfulness, we developed and piloted adaptations to make MBSR more accessible and relevant to women in SUD treatment (Vallejo & Amaro, 2009). This involved refocusing the program as a relapse prevention intervention that helped women understand the role of stress in craving and relapse. The adaptation emphasized how mindfulness practices could help women respond to stress in healthier ways, which in turn would help them cope with triggers and cravings that placed them at

¹The reader is asked to consider that treatment can be briefly and usefully defined as a unique, planned, goal directed, temporally structured, multidimensional change process of necessary quality, appropriateness and conditions (endogenous and exogenous), which is *bounded* (culture, place, time, etc.) and can be categorized into professional-based, tradition-based, mutual-help based (AA, NA, etc.), and self-help (“natural recovery”) models. There are no unique models or techniques used with substance users—of whatever types and heterogeneities—which aren’t also used with nonsubstance users. Whether or not a treatment technique is indicated or contraindicated, and its selection underpinnings (theory-based, empirically-based, “principle of faith-based, tradition-based, etc., continues to be a generic and key treatment issue. In the West, with the relatively new ideology of “harm reduction” and the even newer Quality of Life (QOL) and wellbeing treatment-driven models there are now new sets of goals in addition to those derived from/associated with the older tradition of abstinence-driven models. Conflict-resolution models may stimulate an additional option for intervention. Each ideological model has its own criteria for success as well as failure as well as iatrogenic-related harms. Treatment is implemented in a range of environments; ambulatory as well as within institutions which can include controlled environments. Treatment includes a spectrum of clinician-caregiver-patient relationships representing various forms of decision-making traditions/models (1). The hierarchical model in which the clinician-treatment agent makes the decision(s) and the recipient is compliant and relatively passive, (2) shared decision-making, which facilitates the collaboration between clinician and patient(s) in which both are active, and (3) the “informed model” in which the patient makes the decision(s). Editor’s note.

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risk of relapse. We addressed lack of fit in literacy levels by modifying and simplifying the MBSR manual's language to make the information more accessible, shortened initial practices to foster the experience of success, and modified practices to reduce the potential triggering of trauma. Another change involved building more time for group discussion because participants manifested an interest in and need for processing their experiences with mindfulness practice, asking questions to clarify material presented, and discussing how their practice relates to experiences of relapse triggers and cravings. Finally, we found that it was key to have an experienced SUD counselor as a cofacilitator who was familiar with addiction treatment because participants often brought related issues to group discussions. Our paper in this special issue reports findings from our implementation of Moment to Moment in Women's Recovery: A Mindfulness-Based Relapse Prevention Program.

During the last decade, the literature on MBSR and its health benefits have grown tremendously. A more limited number of studies have focused on the benefit of MBIs for individuals in recovery from SUDs (see review by Zgierska et al., 2009). The well-documented underlying role of stress as a factor in relapse (Brewer et al., 2009; Brown, Vik, Patterson, Grant, & Schuckit, 1995; Sinha, 2008) combined with the high level of chronic stress in the lives of many individuals diagnosed with SUDs² suggests that mindfulness-based relapse prevention and the use of other MBI approaches for this population could be useful. Because MBI research within the SUD context is in the early stages of scientific inquiry, the field faces multiple methodological challenges and a need to document mechanisms of action (Zgierska et al., 2009). Nevertheless, existing studies have suggested that MBIs can assist individuals with SUDs to develop positive coping skills for dealing with stress and preventing relapse (Katz & Toner, 2012; Marcus, Schmitz, Moeller, Liehr, Cron et al., 2009; Witkiewitz, Bowen, Douglas, & Hsu,

2013; Zgierska et al., 2009). Studies have documented reductions in addiction severity, perceived stress (Amaro, Spear, Vallejo, Conron, & Black, this issue), and alcohol and illicit drug use cravings, as well as increases in patient acceptance and awareness of thoughts and emotions (Bowen et al., 2009; Brewer et al., 2009; Chiesa & Serretti, 2013; Zgierska et al., 2009).

This editorial highlights some critical challenges for MBI research with a specific focus on the need for research to establish acceptability, fit, and efficacy of MBI approaches in relapse prevention. First, not unlike other areas of SUD treatment research (Amaro, Arévalo, Gonzalez, Szapocznik, & Iguchi, 2006; Burlew, Larios, et al., 2011), MBI research faces the challenge of engaging study participants of diverse socioeconomic, racial/ethnic, cultural, and clinical profiles. An important limiting feature of MBI research among individuals with SUDs which is rarely discussed is that, for the most part, MBI studies have been conducted with small, male, and/or Caucasian samples with only a handful focusing on women or having a high proportion of women (Amaro et al., this issue; Bowen et al., 2009; Chiesa & Serretti, 2013; de Dios et al., 2012; Linehan et al., 2002); only one study specifically focused on women with co-occurring disorders (Amaro et al., this issue). For example, a recent review of MBI studies focused on SUD treatment (Zgierska et al., 2009) provided an excellent critique of MBI research, methods, and approaches, but failed to mention the lack of attention to sample diversity in terms of race, ethnicity, and socioeconomic characteristics.

Katz and Toner's (2012) review of gender differences in the effectiveness of mindfulness-based treatments for SUDs noted the lack of racial/ethnic diversity in MBI study samples and analysis of outcomes by sex. The efficacy of mindfulness-based relapse prevention for African American and Latina women, for example, is unknown. Evidence from efficacy studies that have tested evidence-based programs for SUD treatment indicates the need to demonstrate efficacy of these programs with diverse groups rather than assume they are efficacious for all groups (Amaro et al., 2006; Burlew, Weekes, et al., 2011). This research gap raises the question of whether findings on the benefits of MBIs documented to date are generalizable to the significant number of patients in publicly funded SUD treatment, among whom racial and ethnic minorities comprise an increasing proportion and among whom histories of trauma experiences and co-occurring disorders are prevalent. This warrants attention in light of existing health disparities in SUD consequences, treatment outcomes, treatment retention, and/or relapse (Guerrero et al., 2013; Marsh, Cao, Guerrero, & Shin, 2009; Saloner & Lê Cook, 2013) and the potential of MBIs to reduce such disparities. To address this gap, studies that are powered to test efficacy across race and ethnicity as well as gender are needed. If shown to be effective with diverse groups, mindfulness-based relapse prevention interventions could be an important treatment enhancement with the potential of improving treatment retention, relapse, and related outcomes.

²The reader is asked to consider that *Substance Use Disorder Drug* (SUD) is a relatively new diagnostic category (APA, 1995; 2013) which is the outcome of a recent check-listing process of medicalizing and "symptomizing" a range of human behaviors which is based upon expert committee consensualization of perceptions, judgments, and decision-making. It is a labeling process based upon 11 criteria (APA, 2013,) which deal with time, a person's experiences, impaired judgment, prosocial role malfunctioning, negative effects on a range of pro-social activities and the introduction, and dependence, upon two concepts- tolerance and withdrawal. These terms represent the development of "drug" use -related processes which are not delineated in terms of their pharmacological actions on the micro-cellular level from a macro "drug experience" which is the outcome of the dynamic interaction between the actual active "natural" or man-made chemical, the user and the site of use at a given point in time. (Zinberg, N. E. (1984). *Drug, Set, and Setting: The Basis for Controlled Intoxicant Use*. New Haven: Yale University Press) The *Substance Use Disorder* is not evidence-informed. Nor are any of the other diagnoses in this pathologizing nosological system. A useful diagnosis, which is the outcome of collecting relevant materials, over time, and which are culture-context and situation sensitive, in order to make a needed relevant decision, should, at the very least, enable an understanding of etiology, prognosis, and process of the posited "disease" or condition for effective treatment planning, implementation, and assessment. Editor's note

A second limitation of MBI research for individuals with SUDs is the lack of attention to and consideration of socioeconomic and ethnocultural factors in the development of MBI interventions. Some research on the implementation of MBIs with poor, inner-city, and Latina and African American women with co-occurring disorders and history of trauma (Amaro et al., 2010; Amaro et al., this issue; Amaro & Vallejo, 2009; Meléndez, Cortés, & Amaro, 2012; Vallejo & Amaro, 2009) indicated that although the active ingredients of such interventions are highly relevant and potentially useful for this population, some features of MBIs need adaptation. Such features are those common to ensuring fit between an evidence-based practice and populations with whom they are used. A basic principle for the implementation and dissemination of evidence-based behavioral interventions is that such interventions need to be appropriate to the target settings and populations, which often differ from the populations with which the interventions were originally tested. In discussing the future of prevention science, Botvin (2004) noted that there is a need to determine the efficacy of evidence-based practices with different minority populations as well as adaptations of evidence-based practices. The need for culturally adapted practices to enhance the effectiveness of SUD treatment for minority populations is widely recognized (McCaul, Svikis, & Moore, 2001; Milligan, Nich, & Carroll, 2004). Studies have supported the growing consensus of the value of cultural adaptations and their efficacy (American Psychological Association Task Force on Evidence-Based Practices, 2006; Bernal, Jiménez-Chafey, & Domenech Rodríguez, 2009; Castro, Barrera, & Holleran Steiker, 2010; Castro, Barrera, & Martinez, 2004). Cultural adaptations are aimed at increasing ecological validity and congruence between the client's experience and elements of the treatment. Ecological validity is defined as the degree of congruence between the environment as experienced by the subject and properties of the environment as assumed by the investigator (Brofenbrenner, 1977). Because culture determines meaning, the cultural context is seen as an important starting point for the development of a treatment approach. Substance use, stress, and factors that lead to relapse are experiences in which meaning making can have a critical impact on symptom development and response to treatment. For example, stress related to gender-based family responsibilities, expectations, and roles may be experienced as more acute among Latinas based on the cultural value of *familismo*, defined as a strong orientation and commitment toward the nuclear and extended family. Similarly, by addressing immigration- and discrimination-related factors as potential sources of stress that are highly salient in some minority populations (Alegria et al., 2004), acceptability and engagement in treatment may be enhanced. When developed without an understanding of cultural factors, mindfulness-based relapse prevention approaches can easily miss opportunities for efficacy in ethnocultural groups. Cultural adaptations may be necessary when a cultural group exhibits unique clinical problems based on a distinct set of risks or

resilience factors (Lau, 2006), such as social vulnerability and exposure to community-level violence—both of which are more prevalent among African American and Latina women in SUD treatment (Amaro, Larson, et al., 2005; Jacobson, Robinson, & Bluthenthal, 2007; Tonigan, 2003).

Cultural adaptations of interventions can be conceptualized based on two divergent viewpoints on the emic-etic framework (Brislin, 1986, as cited in Matias Carrelo et al., 2003). In the context of clinical group interventions, the integration of both of these perspectives means that the clinician balances universal norms, specific group norms, and individual norms while differentiating between normal and abnormal behavior (López et al., 1989). In either case, the clinician is required to have a deep understanding of the cultural context of group participants. Existing approaches for undertaking cultural adaptations and addressing related fidelity concerns (Bernal, Bonilla, & Bellido, 1995; Bernal et al., 2009; Castro et al., 2004; Castro et al., 2010; Lau, 2006) are useful resources for developers of mindfulness-based relapse prevention interventions.

As noted in the National Institute on Drug Abuse Plan on Health Disparities (National Institute on Drug Abuse, 2008), treatment approaches that address disparities in SUD and its consequences and that attend to language and cultural differences are urgently needed because evidence has indicated that African Americans and Latinos fare worse in treatment satisfaction, retention, outcomes, and consequences relevant for long-term recovery (Caetano, 2003; Marsh et al., 2009). As an emerging field, research on MBIs for SUDs has the opportunity to avoid the problems of unknown fit and efficacy among diverse populations that have plagued most evidence-based treatment research by (a) structuring studies with sufficient power to assess efficacy across diverse groups or within specific ethnocultural groups and (b) ensuring that MBIs have ecological validity for diverse populations.

Declaration of Interest

The author reports no conflict of interest. The author alone is responsible for the content and writing of the article.

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populations. Her interest in the application of mindfulness-based methods in addictions treatment emerged from her yoga practice, training in Mindfulness-Based Stress Reduction and collaboration with colleagues at the University of Massachusetts Center for Mindfulness.

GLOSSARY

Mindfulness: “The awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment” (Kabat-Zinn, 2003).

Mindfulness-based relapse prevention (MBRP): An intervention that combines mindfulness strategies with relapse prevention techniques to help people with substance use disorders cope with cravings by increasing their awareness of thoughts, emotions, and environments that lead to using substances and developing coping skills to prevent relapse.

Mindfulness-based stress reduction (MBSR): A mindfulness training method that combines mindfulness meditation and yoga. It was originally developed for populations with chronic pain and stress-related disorders. In addition to meditation and yoga, MBSR training teaches participants to practice mindfulness during ordinary activities like walking, standing, and eating.

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