Efficacy of Mindfulness- and Acceptance-Based Treatments for Culturally and Linguistically Diverse Patients: Communicating This to Patients

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There is a growing consensus that the use of mindfulness- and acceptance-based behavioral therapies can result in physiological and psychological benefits in Clinical and non-Clinical populations. However, the research on the use of such therapeutic approaches with culturally and linguistically diverse (CLD) populations is still in its infancy. This article reviews the efficacy of mindfulness- and acceptance-based treatments in terms of physiological outcomes, as well as the evidence thus far for their efficacy with CLD groups. We also provide suggestions for communicating with CLD patients about the potential benefits of mindfulness- and acceptance-based approaches in the treatment of stress-related conditions.


Key Words: mindfulness- and acceptance-based treatments, efficacy, cultural and linguistically diverse populations.

INTRODUCTION

Although mindfulness- and acceptance-based practices have existed in numerous cultures and for thousands of years, it is only within the past few decades that the endocrinology and neurophysiology associated with such practices have been explored. Mindfulness- and acceptance-based therapies (MABTs) or acceptance-based behavioral therapies (ABBTs) broadly refer to therapeutic approaches that seek to alter patients’ relationship with seemingly aversive or undesired internal experiences. This perspective argues that avoidant patterns of responding to internal experiences can result in dysfunctional experiential avoidance and distancing from “valued actions” in daily living. The increase in knowledge regarding the biological mechanisms associated with (MABTs) has significant implications in terms of understanding how MABTs work and how to effectively apply them in healthcare. However, in order to effectively translate this new research into meaningful interventions for culturally and linguistically diverse (CLD) patients, a process of cultural consideration becomes necessary. This is based on the research on Cultural Match Theory (CMT), which proposes that as the cultural characteristics of the treatment align with those of the patient, the effectiveness of the treatment will increase. This article will review the potential for MABTs in mitigating the negative impacts of chronic stress, as well as make recommendations for having conversations with CLD patients about stress and encouraging the exploration of MABTs as a method of self-care or a low-cost intervention.

The Potentials of MABTs in Managing Stress

Due to overwhelming demands in life and/or work, financial concerns, chronic illness, or traumatic experiences, many of our patients are under prolonged stress. In 2015, Americans reported stress levels of 5.1 on a 10-point scale (wherein 1 = “little or no stress” and 10 = “a great deal of stress”), with 24% of adults reporting levels of stress as 8.9 or higher. Worries concerning money and work were the top two reported stressors respectively. Many CLD patients in particular may experience higher levels of stress, due to acculturation and safety concerns in their communities. They also often encounter cultural and linguistic barriers, acculturative stress, prejudice and discrimination, and limited financial resources. Chronic or “toxic” stress has been found to be connected to a myriad of negative health outcomes, such as: headaches, hyperventilation/panic attacks, cardiovascular disease, increases vulnerability to Type-II diabetes, heartburn, diherra and/or constipation, and sexual difficulties in males and females.

With stressors like money and work likely not disappearing in the foreseeable future, it may be conducive to cultivating better health for people to develop effective coping strategies for managing stress. The learning of mindfulness and acceptance strategies may be one such coping strategy for developing ways of being and doing that allow one live more harmoniously amongst a sea of troubles. Mindfulness has been defined as “awareness that arises through paying attention, on
purpose, in the present moment, nonjudgmentally.” Researchers such as Kabat-Zinn originally began using programs such as Mindfulness-based Stress Reduction (MBSR) to help people with chronic pain who were not responding well to standard medical treatment. Since that time, a plethora of research has been conducted based on Kabat-Zinn’s transmutation of mindfulness-meditation from a religious practice to a medical intervention. Specifically regarding stress-related disease, mindfulness-meditation has been found to benefit the treatment of chronic pain, anxiety disorders, depression, and hypertension as a few examples. The cultivation of nonjudgmental/non-elaborative awareness through the practice of mindfulness provides the foundational skills for changing one’s relationship with unwanted internal experiences. The importance placed on acceptance in MABTs comes from the belief that the experiential avoidance of aversive internal stimuli (e.g., thinking only ‘weak’ people get depressed) limits one’s cognitive and behavioral repertoire in dealing with inevitable difficulties in life. Experiential avoidance also strengthens the negative valence associated with unwanted stimuli/experience through a process of negative reinforcement (i.e., temporarily relieving suffering, but maintaining in the long-term the cognitive and behavioral processes associated with the unwanted stimuli/experience). What is the hypothesized relationship between the activities associated with MABTs and the healing of the body/mind? MABTs are thought to effectively alter patients’ relationship with their internal experiences, which may have been previously restricted, avoided, or were even beyond their awareness. For example, MBSR’s emphasis on experiencing bodily sensations without judgment but instead with equanimity, may help people harness the benefits of the “relaxation response” in situations that would typically elicit the ‘stress’ response. Thus, programs such as MBSR cultivate an ‘approach’ orientation towards challenges (such as pain) rather than ‘avoidance.’ With this change in orientation towards potential stressors, systems within the body associated with the relaxation response may be more readily harnessed.

Bodily Responses Associated with the practice of Mindfulness and Acceptance

But how do MABTs access the “wisdom of the body” in the healing process? It appears that the consistent practice of mindfulness and acceptance works synergistically with the neuroplasticity of the brain. Neuroplasticity is a term describing the brain’s ability to “reorganize” itself throughout the lifespan through the creation of new neural connections. There is accumulating evidence that the practice of mindfulness and acceptance is ‘rewiring’ the brain so that the stress response system handed down through evolutionary pressures can be reorganized in a more adaptive fashion towards the pressures of modernity.

Two vital parts of the brain associated with the stress response, the prefrontal cortex and the amygdala, appear to be especially prone to reorganization resulting from sustained mindfulness- and acceptance-based training. Experienced meditators have been found using MRI scans to have significantly decreased grey matter volume in their right amygdala and left caudate relative to less experienced meditators. What is more, experienced meditators have also been found to have increased prefrontal cortical thickness relative to less experienced meditators. These findings imply that prolonged training in mindfulness and acceptance may reorganize the brain so that one would have 1) reduced stress reactivity and 2) an increased ability of higher-order attentional and executive functionality. It should be noted that the changes in these neurological pathways correspond with theoretical facets of mindfulness such as non-reactivity and describing.

These structural changes in the brain may explain why experienced meditators are also found to have markers associated with positive psychological and physiological outcomes. For example, experienced meditators were found to have lower levels of c-reactive protein and interleukin 6, which are both pro-inflammatory. The adaptive functioning of experienced meditators may best be seen in the inhibition of the cortisol awakening response (CAR), which has the role of continuing the stress response system in the body if the perceptual system still registers the presence of a threat. Such threats include internal stimuli, such as negative emotions and/or worries. A study examining participants’ ability to 1) label and describe inner experiences and 2) accept negative thoughts and feelings without judgement found that such ‘dispositional mindfulness’ moderated the impact of negative stimuli on the CAR. These authors argue that it is not necessarily the content of one’s thoughts, but the way in which one relates to them that moderates the reactivity of the CAR. Moreover, they point out that because the CAR is strongly associated with the experience of waking up, a mindful disposition may be particularly salient in the intensity of hypothalamic-pituitary-adrenal (HPA) axis activity. This is because the process of awakening from sleep is generally paired with a resurfacing of personality characteristics, as well as “anticipation of daily events.” Thus, persons with higher dispositional mindfulness may relate to daily events with less anxiety-provoking appraisals, resulting in lower HPA axis activity than those more prone to react strongly to future uncertainties.

Sanada et al conducted a meta-analysis of five studies (many studies were excluded that did not meet the authors’ criteria, such as, cortisol could not be collected under stressed conditions, participants had to be healthy individuals, etc.) examining the connection between mindfulness-based interventions (MBIs) and salivary cortisol. Their meta-analysis found a moderately low effect size (ES) (Hedges’$g = 0.41$), although perhaps most interesting was the moderate heterogeneity found as a result of 1) age, 2) the number of sessions and 3) the total time of the MBI. From the five randomized control studies (RCTs) examined, it appeared that MBIs had stronger effects for younger participants, the greater number of sessions attended, as well as the greater amount of hours spent practicing the MBI. The authors argue that there is evidence that MBIs can have beneficial effects on reducing cortisol levels in healthy individuals, though more rigorous RCTs are needed in order to support these findings.
Need for Further Research on MBIs/MABTs and Stress
As Sanada et al\textsuperscript{31} argue, there is a scarcity of rigorously conducted RCTs examining the connection between MBIs and stress reactivity. They argue that cortisol needs to be measured carefully, through considering the time of day of collection, using multiple days of collection, as well as assessing appropriate indicators of cortisol production (e.g., CAR, daily output, and diurnal slope). Sanada et al\textsuperscript{31} also point towards the need for the MBis/MABTs to be conducted using standardized intervention programs, such as MBSR and Mindfulness-based Cognitive Therapy (MBCT). Measures of Treatment Fidelity (i.e., was the program implemented as designed) would also strengthen the link between the ‘active ingredients’ of the intervention and outcomes (i.e., was it the intervention or something else that led to the outcomes?)

MABTs for Culturally and Linguistically Diverse (CLD) Patients. Efficacy of MABTs for CLD Patients
The research on the acceptability and efficacy of MABTs for CLD patients is still in its infancy. It is noteworthy that a meta-analysis\textsuperscript{32} of 32 studies totaling 2,198 patients from nondominant cultural and/or marginalized backgrounds (including racial minorities, refugees, individuals with disabilities and/or low-income) indicated small (Hedges’ $g = .38$) to large (Hedges’ $g = 1.32$) effect sizes for MABTs, which varied by study design. Overall, the studies that examined the efficacy of MABTs for specific minority groups suggest the approach is acceptable and effective. For example, Roth and Creaser\textsuperscript{33} evaluated a bilingual MBSR program in an inner-city setting. The program included practices of breathing meditation, eating meditation, walking meditation, and mindful yoga. The authors examined compliance, medical and psychological symptom reduction, and changes in self-esteem, of English- and Spanish-speaking patients who completed the 8-week Stress Reduction and Relaxation Program at a Community Health Center. Results revealed statistically significant decreases in medical and psychological symptoms and improvements in self-esteem. Participants reported dramatic changes in attitudes, beliefs, habits, and behaviors. The findings suggest that a MBSR course can be an effective health care intervention when utilized by English- and Spanish-speaking patients in an inner-city community health center.

Hinton, Pich, Hofmann, and Otto’s study\textsuperscript{34} with traumatized refugees and ethnic minority populations also indicates that MABTs are effective for these populations. They concluded that mindfulness strategies are therapeutic for refugees and minority populations because mindfulness increases their psychological flexibility, as well as decreases somatic distress and rumination. They argue that mindfulness functions as an emotion regulation technique that decreases the attentional bias to threat and forms part of a new adaptive processing mode. However, Luy’s study\textsuperscript{35} on the efficacy of mindfulness-based (MB) group counseling with 66 Southeast Asian refugees at a mental health clinic yielded mixed results. She found that the MB group counseling improved global functioning (measured by the Global Assessment of Functioning scale) but not functional impairment (measured by the Sheehan Disability Scale). It is not clear why the MB group counseling did not improve functional impairment for this population. Further study is needed for an answer to this question.

Future research should also examine the potential contraindicative elements of MBIs. There may be certain cultural and clinical populations wherein the use of MBIs may actually increase stress reactivity rather than reduce it. For some, the thought that one could remain fully ‘nonjudgmental’ may feel like a cognitive impossibility, and thus they may not be as receptive to some current conceptualizations of mindfulness.

Communicating with CLD Patients about Using MABT to Reduce Stress
Because culture influences the ontology and phenomenology of stress,\textsuperscript{36,37} it is vital to let patients describe not only the sources of their stress, but their thoughts, feelings, and experienced physiology associated with stress. For example, some Chinese patients might attribute their heart palpitations to having a xin xu (“weak heart”) and they may focus more on the influence of their diet rather than stress levels on their heart health. In such a case, it might be helpful to highlight the science behind MABT strategies to the patients through the use of culturally relevant metaphors. The following example case vignette illustrates how this might be done:

Mr. Yu is a 55-year-old patient reporting a rapid heartbeat and sweating during the night. He is also a chronic smoker, and says that without smoking, it would be difficult for him to remain calm and comfortable because of the business of his job. Chronic stress and smoking appear to be affecting his health. He attributes his rapid heartbeat to having too much “yang” (i.e., heat) cultivating food in his diet, and not having enough “yin” (i.e., cooling) food. As his physician, you would like to recommend beginning a smoking-cessation program, but you wonder whether his current coping skills for stress are sufficient for the difficult process of quitting smoking. You would like to recommend a MBSR smoking-cessation program, but at the mention of “mindfulness,” Mr. Yu tenses and says he is not sure such activities would work for him.

Now the questions are: How to frame a conversation about stress and the potential benefits of MBSR to this patient? How to address his problems in a culturally responsive manner? We attempt to address these issues as follows:

First of all, Mr. Yu acknowledges his physical symptoms of a rapid heartbeat and sweating, but he is not sure if MBSR would work for him. We could start the conversation with the relationship between a rapid heartbeat and sweating and stress, and how MBSR can reduce stress and therefore the symptoms such as a rapid heartbeat and sweating. To support our point, we could share with him the physiology of stress and the scientific evidence of how MBSR can reduces stress (see the section on Bodily Responses Associated with the practice of Mindfulness and Acceptance of this article). We could also
share the efficacy of MBSR for people like him with similar symptoms (based on relevant research studies. See the section on Efficacy of MABTs for CLD Patients for some examples).

Second, we should answer any questions that Mr. Yu may have about MBSR and clarify any misunderstandings. We could also take the opportunity to highlight that MBSR is based on the premise that every individual has vast inner resources that, through mindfulness meditation practice, can be mobilized to assist in healing.\textsuperscript{33} Mindfulness-based stress reduction can be introduced as a new tool or strategy that can be used to address many of the challenges patients are facing in their daily lives.\textsuperscript{20} Further, it could include a variety of formats of meditation and/or mindfulness activities, such as practices of breathing meditation, eating meditation, walking meditation, and mindful yoga.\textsuperscript{33} Patients can choose a method that works for them as a simple self-care method in their daily lives. Patients can practice mindfulness when cooking, cleaning, relaxing, walking, jogging, and swimming, etc.

Third, as Mr. Wu attributes his rapid heartbeat to having too much “yang” food and not having enough “yin” food, he seems to think in terms of the popular theory of traditional Chinese medicine, in which balancing one’s “yin” and “yang” energy is very important for health. We should respect his cultural belief and approach to health. We can recommend MBSR as a method to complement his effort to balance “yin” and “yang” through diet rather than replacing it. We could use the popular Chinese saying “a peaceful mind leads to a healthy body” to illustrate our point. We should also take the social stigma of mental health patients into consideration. In the Chinese culture, getting treatment for mental health problems may result in potential stigma. Thus, framing the symptoms from physiological and dietary perspectives may help Mr. Wu avoid the potential harm of feeling stigmatized. In this cultural context, we could frame MBSR as an ‘educational’ process of self-care rather than a ‘mental health’ intervention.

Fourth, we should also take cultural, linguistic, religious, and individual differences into consideration when recommending and communicating about MBSR. Cultural considerations include cultural mediation, values, and practices relevant to mindfulness meditation. As an example of cultural consideration, we took cultural beliefs and practices into account in Mr. Yu’s case. In religious consideration, we examined whether mindfulness is consistent with one’s religious beliefs. In Mr. Yu’s case, this does not appear to be a problem. In other cases, we may need to explore with the patients whether they can find similarities between their own religious practice (such as prayer) and mindfulness meditation. If they can, they may be able to benefit from MBSR. If they cannot, they may not be ready to participate in MBSR. For these patients, we could explore what cultural and religious practices in their lives may help them reduce stress. Individual differences include age, gender, lifestyle, physical and mental functioning, the kind of illness, and past experiences. For instance, sitting straightly and quietly for an extended time may be difficult for young children and adults who have back pain. These people may need alternative formats or postures. Furthermore, systemic barriers in the patients’ lives should also be considered. For instance, if a patient needs to resolve shelter and medical insurance issues before s/he can focus on MBSR, then we have to think beyond our typical roles by taking steps to help address these issues and make appropriate referrals.\textsuperscript{33}

Thus, in the case of Mr. Yu and with any patient, being mindful of not only the socio-cultural characteristics of the patient but of the proposed intervention as well can help increase the match between the intervention and the patient’s needs. This aforementioned Cultural Match approach\textsuperscript{5,6,7} utilizes the discrepancies between the cultural characteristics of interventions and patients as the guiding information for creating cultural adaptations.\textsuperscript{38} Because of the intersectional nature of identity\textsuperscript{39} and heterogeneity of individuals within specific cultural groups, it is also important not to make generalized assumptions about the endorsement of cultural beliefs within individuals. Thus, cultural adaptions are best designed through collaborative processes with the patient, wherein dialogue about epistemic factors (i.e., how does the patient define the problem? What does s/he believe will lead to improvements?) and salient cultural variables (e.g., self-orientation, gender roles, acculturation level, etc.) are considered.\textsuperscript{38} Examples of cultural adaptations for MABTs could include the use of culturally and/or personally meaningful metaphors for guided imagery exercises, the integration of mindfulness practice with current religious practices, as well as values exploration/cultivation in the face of oppressive experiences.\textsuperscript{32}

CONCLUSIONS
The growing interest and research in practices grounded in mindfulness and acceptance is resulting in a number of evidence-based mindfulness therapies for a wide variety of stress-related medical issues. The evidence thus far regarding the adaptation of these therapies for CLD populations is promising, and they would be further strengthened though a continual exploration of the cultural meanings implicit in both MABTs and the experience of individuals practicing such approaches. As we communicate with CLD patients about the efficacy of MABTs, we should remember that beliefs about efficacy are also shaped by cultural beliefs. The more we understand the ontological and epistemological basis for these beliefs, the better we can frame the rationale for our medical interventions in a manner acceptable to the patient. This is especially critical in MABTs, because they in large part depend on the willingness of the individual to explore a novel way of relating to stress.

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CONFLICT OF INTEREST
None.

REFERENCES