A Community-Based Evaluation of Brief Guided Mindfulness in the Management of Stress and Difficult Emotions

Shaya MacDonald, and Susan Korol

Cape Breton University

Todd Vassallo, and Cathy MacDougall

Sydney, Nova Scotia

ABSTRACT

The current study evaluated the effectiveness of a novel three-hour Guided Mindfulness Program on participants' management of depression, anxiety and stress. The intervention included an educational component emphasizing the psychological value of mindfulness practice combined with a practical training component in mindfulness techniques. The Depression Anxiety Stress Scale was administered at three points in time before and after participation in the program. Additionally, semi-structured interviews were conducted to explore perceived quality of life, happiness, and stress 4 to 8 weeks following the program. All participants reported improvements in overall well-being and reported significant decreases in negative affect when comparing pre-program scores (baseline) to follow-up scores. Notably, qualitative interview results indicated that participants attributed most positive post-program results to informal mindfulness practice.

Keywords: mindfulness, depression, stress, anxiety, quality of life, meditation

RÉSUMÉ

La présente étude visait à évaluer l'efficacité d'un programme original de pleine conscience de 3 heures, sous forme de guide, destiné à la gestion par les participants des niveaux de dépression, d'anxiété et de tension. L'intervention comprenait un volet éducatif mettant l'accent sur la valeur psychologique de la pratique de la pleine conscience en association avec un entraînement aux techniques de la pleine conscience. L'échelle d'évaluation d'anxiété et de dépression a été utilisée à trois reprises avant et après la participation au programme. De plus, des entrevues semi-structurées ont été menées, entre 4 et 8 semaines à la suite du programme, pour explorer la qualité de vie ainsi que les niveaux perçus de bonheur et de tension. Tous les participants ont signalé des améliorations du bien-être général et ont rapporté des diminutions

Shaya MacDonald, Department of Psychology, Cape Breton University, Sydney, Nova Scotia; Susan Korol, Department of Psychology, Cape Breton University, Sydney, Nova Scotia; Todd Vassallo, Sydney, Nova Scotia; Cathy MacDougall, Sydney, Nova Scotia.

This manuscript is based on an Honours thesis in Psychology at Cape Breton University

Correspondence concerning this article should be addressed to Susan Korol, Department of Psychology, Cape Breton University, Sydney, Nova Scotia, B1P 6L2. Email: sue korol@cbu.ca

significatives d'émotions négatives en comparaison avec celles ressenties antérieurement au programme. Enfin, les entrevues qualitatives ont montré que les participants attribuaient à la pratique informelle de la pleine conscience des résultats positifs postprogramme supérieurs.

Mots clés : pleine conscience, dépression, tension, anxiété, qualité de la vie, méditation

The practice of mindfulness consists of cultivating heightened awareness and living in the here and now. It is often described as a state of being in which one is fully conscious and aware of the present moment. A suspension of judgment alongside the adoption of acceptance of one's cognitions and behaviours are core features of mindfulness meditation. This description of mindfulness-based practice is built on the researchers' individual practice and interpretation. According to the executive director of the Center for Mindfulness in Medicine and founder of Mindfulness-Based Stress Reduction, John Kabat-Zinn (2013), describes mindfulness as "purposefully paying attention to the present moment without judgment." Specifically, attention focused on the present moment appears to be of utmost importance, as opposed to the content of what one is attending to. When one attends to the present moment, an increasing awareness of the degree to which the mind wanders and attends to environmental stimuli often results (Kabat-Zinn, 2013). This increased awareness can facilitate the development of insight through perspective shifts.

The clinical value of the practice appears to result at least partially from the acquisition of perceptual and cognitive skills that enable individuals to work with a host of difficult emotions and maladaptive behaviours. These perceptions and cognitions are likely achieved in three distinct ways: by attending to thoughts and perceptions purposefully, by attending to the present moment, and by attending to the present moment in a non-judgmental manner (Bodhipaksa, 2000). In other words, mindfulness involves a deliberate and purposeful awareness of one's sensations and associated responses to those sensations in the present moment while suspending judgment on one's experiences. While this meditative practice dates back to 1500 BCE and is used in various cultural contexts throughout the world, in recent decades its psychotherapeutic value has become a growing area of interest. Although the practice of mindfulness has its historical philosophical and spiritual roots in Asian Buddhist contexts, much of the research that has recently been conducted in Western settings has focused on its study in secularized form, transforming it from its traditional philosophy and practice (Bodhi, 2016).

Recent studies have reported that the practice of mindfulness has been successful in treating clinical and non-clinical disorders, such as state and trait anxiety, binge eating disorder, chronic pain, and in reducing and preventing the relapse of depression (Bergen-Cico & Cheon, 2013; Kristeller, Wolever, & Sheets, 2014; Raes, Griffith, Van der Gucht, & Williams, 2014; Ussher et al., 2014; Wright & Schutte, 2014) less is known about how these positive outcomes develop. To better understand the operant effects of meditation on mental health, this study set forth to examine the potential mediating effects of commonly measured constructs of mindfulness and self-compassion on trait anxiety, a personality trait prevalent in many psychiatric conditions. This longitudinal study uses a meditation treatment (n = 108). Significant reductions in anxiety and emotional dysregulation have also been observed in patients with bipolar disorder in response to Mindfulness Based Cognitive Therapy (Ives Deliperi, 2013). Study findings suggest that the practice of mindfulness provides

relief from chronic tension headaches (Cathcart, Galatis, Immink, Proeve, & Petkov, 2014) and predicts increases in healthy behaviour engagement (Yamaguchi, 2014). For those who experience chronic pain, the practice of mindfulness also demonstrated improvements in attention skills, perceived well-being and quality of sleep (Morone, Lynch, Greco, Tindle, & Weiner, 2008). Furthermore, brain research has recently identified corresponding changes in gray matter concentration in participants who engaged in mindfulness meditation. Specifically structures associated with learning and memory processing, emotional regulation and perspective taking, appear to be implicated (Hölzel et al., 2011; Ives Deliperi, 2013; Kurth, Luders, Wu, & Black, 2014; Lutz et al., 2014; Singleton et al., 2014.

Despite the wealth of available studies on mindfulness, the relationship between psychoemotional benefits and the amount of formal training required in the practice has been difficult to establish. Many studies report the benefits of multi-week mindfulness training, requiring adherence to programs between 8 to 16 weeks in duration (Carlson et al., 2007; Carmody & Baer, 2008, Kristeller et al., 2014; Shapiro, Schwartz, & Bonner, 1998). Such programs have been associated with long-term benefits by virtue of their associated increased opportunities for practice and adoption of new techniques into daily routines through repetition and practice. However, a growing number of recent studies have reported positive results in evaluating short-term mindfulness programs (Harnett, Whittingham, Puhakka, Hodges, Spyr, & Dob, 2010). For example, Ding, Tang, Cao, Deng, Wang, Xin, and Posner (2014) found that engaging in short-term (5 hour) mindfulness meditation training over the course of 2 weeks resulted in both increases in cognitive functioning and brain activity that facilitate problem-solving abilities. Such results have led to speculation about the potential short-term clinical benefits of the mindfulness in the treatment of anxiety and depressive disorders given their common ruminative feature of past and future experiences, purported to interfere with active problem solving. Positive results were found in a recent study by Call, Miron, and Orcutt (2014), who reported decreased symptoms of anxiety and stress during a brief mindfulness-based stress reduction program (4 hours of training). In their study examining stress, anxiety and depression among cardiac patients, Nyklíček and colleagues (2014) found that 4 to 8 hours of training in mindfulness resulted in significant reductions in symptoms from pre-treatment (week 1) to post-treatment (week 6). Shapiro, et al. (1998) examined the short-term effects of a 7-week mindfulness meditation-based stress reduction program on pre-medical and medical students. At the end of the program, reductions in participant self-reports of psychological distress (including depression) and state and trait anxiety were observed alongside increases in empathy and spirituality. Additionally, correlations between mindfulness and increases in quality of life have been reported following a brief guided mindfulness program in which participants were offered 6 hours of training in mindfulness (Harnett et al., 2010).

The growing body of evidence pointing to the clinical value of brief mindfulness programs is important to consider in the context of the "dose-response" debate. From an empirical scientific perspective, the question of quantification of treatment is accepted as a valid research objective, the results of which inform our clinical knowledge. However, focusing only on determining the sufficient or optimal "amount" of mindfulness may divert our attention away from identifying important associated qualitative benefits of the practice. These benefits may include cultural or spiritual sources of meaning related to its technique and philosophy. Le (2017) argues that in their focus on isolating the effects of independent variables in promoting internal validity, most of the published clinical trials on mindfulness-related interventions ignore social and cultural contexts that

also influence the experience. In fact, mindfulness has its historical roots within a traditional Asian Buddhist context, guided by a wealth of spiritual and philosophical beliefs (Bodhi, 2016). The lack of consideration of cultural and spiritual components of secular mindfulness interventions may lead to misrepresentations of consequent benefits that simplify its therapeutic value to a practice-outcome relationship.

Given the positive results reported in recent research examining brief guided mindfulness programs, the current study was designed to determine if a brief, three-hour guided mindfulness program would be sufficient to provide participants with the capacity to cope with stress and difficult emotions. While previous studies have evaluated the effectiveness of brief guided mindfulness programs on mild to moderate symptoms of stress, depression and anxiety (e.g., Harnett et al., 2010), and have largely evaluated outcomes immediately following such interventions (e.g., Nyklíček et al., 2014; Shapiro, et al., 1998), we wondered if a brief workshop would help participants effectively manage moderate to severe symptoms both in the short and longer term. The results of this study are of clinical value given current global and local shortages of mental health services and practical barriers and time constraints often confronting participants.

METHOD

Eleven participants were recruited from a small Canadian maritime town through posters displayed in medical offices and local community organizations, and throughout the local university campus. Participants were offered an opportunity to take part in a three-hour Guided Mindfulness Intervention Program which was delivered at a local community centre.

The brief program was offered by two community-based clinicians (one male and one female). One of the facilitators had training in Zen Buddhist mindfulness practice spanning 30 years and is an ordained Buddhist priest and clinical counsellor. The other facilitator, a trained clinical social worker, completed formal training in mindfulness-based stress reduction. Both facilitators worked in private practice in the community and have a combined history of four decades of clinical experience.

Nine of the participants were female and two were male, ranging in age from 28 to 73 years (M = 42.6, SD = 15.8). All participants reported some post-secondary education. Inclusion criteria relied on participants' self-identified need for developing skills to help manage distressing emotions (i.e., stress, anxiety and/or depression). Potential participants who reported extreme, constant, and debilitating symptoms were excluded from the study. Five of the eleven participants indicated that they had been treated for either a past or current clinical depression and/or anxiety. Participants rated the degree to which depression, anxiety, and/or stress presently impacted their lives and coping abilities, on a five-point scale, which influenced one's eligibility to be deemed suitable for the program (see Figure 1). The program was designed to equip individuals with tools to skillfully work with difficult emotions. Participants were evaluated at three time intervals: 30 minutes prior to the program, immediately following the conclusion of the program, and during a 4- to 8-week follow-up evaluation.

University ethics approval and informed consent from individual participants were obtained for the study. This research was conducted between 2014–2015.

Materials

Figure 1 Registration Form for the Guided Mindfulness Session

Name:		Phone Number	r:
Location:		Email:	
Gender:	Age:	Occupation:	
Screening que		ression, anxiety, or stress;	? Yes No
			with both
or other	er forms		
		ale give below please rate	
impacting	your life	_ and your coping	
0 = Not at all/nev	er 1 = Rare 2 = Mo	oderate 3 = Frequent 4	= Severe 5 = Extreme/Alv
		ı taking place today?	

Depression Anxiety and Stress Scale (DASS). Stress was measured by the DASS, a 42-item depression, anxiety, and stress inventory, measured on a 4-point Likert scale (Lovibond & Lovibond, 1993). The depression subscale measures dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest and involvement, anhedonia, and inertia while subscales of anxiety include autonomic arousal, skeletal muscle effects, situation anxiety, and subjective experience of anxious affect. In the current study, the DASS was administered to evaluate the short-term and long-term effectiveness of the program on depression and anxiety symptoms.

The DASS subscales show excellent internal consistency with Cronbach's alphas for depression (0.97), anxiety (0.92), and stress (0.95), and shows satisfactory validity through correlations with other measures of depression and anxiety (Antony, Bieling, Cox, Enns, & Swinson, 1998).

Qualitative Interviews. A follow-up face-to-face, open-ended, semi-structured interview was conducted with each participant between 4 to 8 weeks after the initial start date of the intervention program. The relatively broad follow-up period was necessary to accommodate the diversity of participants' schedules and availability.

This semi-structured interview constituted the "post-program assessment." All interviews were held in a quiet location that was mutually agreed upon by the researcher and the participant. The interviews explored self-perceptions of stress, coping, and life satisfaction. Interviews were audio recorded and followed a conversational style exploring topics including perceived quality of life, happiness, and stress. There were also several questions targeted at gaining insight on each participant's experience within the guided mindfulness program. All interviews lasted approximately 30 minutes. Questions posed to participants covered an array of program-related questions to identify whether participants attributed any significant changes in mood, perspective or quality of life to the program or to the practice of mindfulness. Example questions included "How would you describe your quality of life?", "What enhances/reduces your quality of life?", "What is your current level of stress?", "What increases/reduces your stress?", "Tell me about your experience with the guided mindfulness program", "Did the practice of mindfulness have any effect on your life?", "What did you find useful/not useful about the program?".

Procedure

Preprogram. Participants were screened for eligibility from phone conversations with clinician facilitators. Information gathered from these conversations helped to determine participants' current psychological functioning. Self-reported ratings were obtained that described participant perceptions of the extent to which depression, anxiety and stress impact their lives and their coping ability (see Figure 1). Those reporting moderate to serious levels of difficult emotions were deemed suitable for the program. Participants who rated their symptoms as debilitating were excluded from the program. Eligibility requirements were determined by the facilitators based on their clinical experience. During the phone screening phase, clinicians asked interested participants if they had ever been or currently were being treated for a mental health issue and if so, whether treatment had stabilized their symptoms. Reports of unmanageable symptoms that were not or had not been effectively managed in the past represented ethical concerns regarding the potential of the program to exacerbate symptoms that had not been effectively managed. According to their rationale, participants reporting moderate to severe, but manageable, symptoms would likely have the psychological

capacity to employ new techniques to manage uncomfortable psychoemotional experiences. Participants who rated their symptoms as debilitating were considered unsuitable because of clinicians' concerns regarding their potentially questionable capacity to self-monitor and emotionally self-regulate, posing the obvious perceived ethical risk of causing harm to such participants. The DASS was administered 30 minutes prior to the start of the program. The three-hour guided mindfulness intervention program consisted of several phases.

THE PROGRAM

Intentions. Participants were instructed to begin the session with five minutes of sitting and breathing, during which they were encouraged to focus their attention on both their breath and their body. At this point, participants were instructed to reflect on the factors that motivated them to attend the program.

Mindfulness. An introduction to the topic of mindfulness was discussed, including the "8 attitudes of mindfulness," proposed by Stahl and Goldstein (2010). These include fostering (1) a beginner's mind (i.e., seeing this as new and with curiosity); (2) adopting a non-judgmental attitude (i.e., viewing experiences as neutral); (3) acknowledging emotions and thoughts (i.e., not trying to change them); (4) non-striving (i.e., not trying to make a situation different than what it is); (5) equanimity (i.e., gaining a deeper understanding of what change represents); (6) letting things be (i.e., to truly be in the present moment); (7) self-compassion (i.e., loving oneself without self-blame); and (8) self-reliance (i.e., trusting and relying on oneself).

Body Scan Exercise. The body scan exercise consisted of a scan of the body during which participants were encouraged to focus on specific parts of their bodies to develop an awareness of existing sensations in that particular area. During this phase, participants were encouraged to focus on their breath.

The Brain Connection. This educational phase of the program included a presentation and discussion conducted by the facilitators on the physiology of stress and depression, and their evolutionary development. The value of the practice of mindfulness was examined from this perspective.

Mindful Eating and Walking Meditation. The promotion of mindfulness in everyday rituals and activities was encouraged during this program phase. Specifically, facilitators promoted mindful eating and walking to encourage participants to make healthy lifestyle choices during their quest to be increasingly present.

Sitting Meditation & Breathing. A 15-minute session of sitting meditation and breathing took place. Participants were introduced to the resting mudra, where they rested their hands on their laps, with shoulders relaxed, and eyes partially or fully closed. The facilitators proceeded to guide participants through the first five minutes of meditation.

The Four Truths. The four truths are statements that originated from Buddhist and mindfulness traditions, which are stated as absolutely true and will always be true for everyone. Participants were encouraged to agree or disagree with the statements. The purpose of discussing these statements was to provide participants with further insight that suffering is universal, and that each individual controls how much they suffer or whether they suffer at all.

Mindfulness & Stress. The connection between mindfulness and stress management was addressed by the co-facilitators who argued that as little as 12 minutes a day of informal or formal practice was

sufficient to decrease anxiety and stress levels and increase life satisfaction (i.e., formal practice was considered meditation, whereas informal practice was considered using mindfulness throughout our daily life activities).

Conclusion. The session ended with practicing mindfulness formally and informally. At this point, participants were reminded that the practice of mindfulness could occur continuously throughout the day.

Post-Program Evaluation and Follow-up

The second administration of the DASS took place prior to participants' departure. All follow-ups with participants were conducted 4 to 8 weeks after the program. As noted above, this phase consisted of qualitative interviews and final DASS administration to collect further information on participants' levels of depression, anxiety, and stress, and to examine the longer-term effectiveness of the program. It is important to note that in the context of the current study, "longer-term effects" apply to those observed within the 4- to 8-week follow-up post workshop.

RESULTS—QUANTITATIVE

The following results come from a small sample size of 11 participants, consequently limiting power and generalizability. Our quantitative analysis was conducted to identify if pre and post intervention trends were observed in stress, anxiety, and depression.

A One-Way Repeated Measures ANOVA was conducted to determine if depression, anxiety, and stress decreased over three time periods. While examining the within-subject factors (time), a Mauchly's Test of Sphericity revealed that sphericity was to be assumed for depression scores (Mauchly's W (2) = .700, p = .201), anxiety scores (Mauchly's W (2) = .596, p = .098), and stress scores (Mauchly's W (2) = .629, p = .124). Sphericity did not violate the assumption greater than p = .05 for depression, stress, and anxiety. There was a statistically significant effect within the dependent variable group for depression F(2, 20) = 16.375, p = .000, anxiety F(2, 20) = 3.915, p = .037, and stress F(2, 20) = 234.939, p = .005.

A Paired-Samples T-Test revealed a significant decrease in depression between time 1 and time 2: t(10) = 3.708, p = .004, and between time 1 and time 3: t(10) = 7.378, p < .0001. There was also a significant decrease in anxiety between time 1 and time 2: t(10) = 2.320, p = .043, and a slightly significant decrease between time 1 and time 3: t(10) = 2.151, p = .057. Lastly, a significant decrease in stress was observed between time 1 and time 2: t(10) = 2.492, p = .032, and between time 1 and time 3: t(10) = 3.041, p = .012. However, there were no significant differences for depression between time 2 and time 3: t(10) = .820, p = .432, for anxiety between time 2 and time 3: t(10) = 1.061, p = .314, and for stress between time 2 and time 3: t(10) = 1.110, p = .293. Group means and standard deviations are reported in Table 1, and group t-test and significance are reported in Table 2.

Table 1

Mean Scores of Depression, Anxiety, and Stress Across Three Time Periods

		Time Periods		
	Pre-program	Post-program	Follow-up	
Depression	9.81 (6.61)	5.36 (6.32)	4.54 (5.66)	
Anxiety	8.00 (8.30)	5.09 (6.18)	3.63 (5.88)	
Stress	16.00 (10.32)	9.00 (7.07)	7.27 (4.19)	

Note. Standard deviations are reported in parentheses.

Table 2 Scores of Depression, Anxiety, and Stress (n = 11)

Time Periods	t	p	
Pre-Program/Post-Program			
Depression	3.708	.004**	
Anxiety	2.320	.043*	
Stress	2.492	.032*	
Pre-Program/Follow-up			
Depression	7.378	.0001***	
Anxiety	2.151	.057	
Stress	3.041	.012*	
Post-Program/Follow-up			
Depression	.820	.432	
Anxiety	1.061	.314	
Stress	1.110	.293	

Note. *p<.05, **p<.01, ***<.001

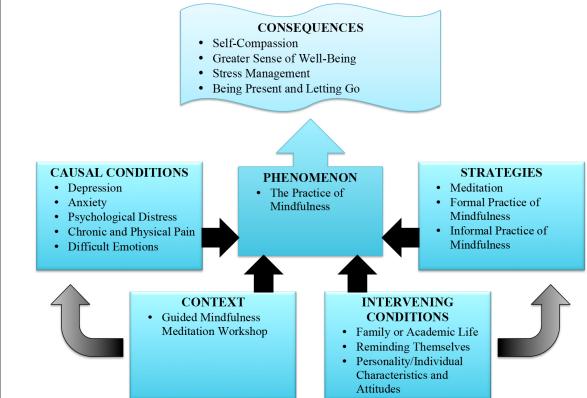
Qualitative Analysis

All digitally recorded interviews were transcribed verbatim after each interview was conducted. The process of transcribing and analyzing data followed a grounded theoretical analytic framework. This inductive methodology was used to understand the phenomenon of mindfulness and its role in quality of life and in coping with depression, anxiety, and stress. Analysis involved a process of constant comparison of the data through open coding and axial coding which led to the emergence of classification and concepts that ultimately generated an explanatory model based on Strauss and Corbin's (1990) paradigm. For a visual of the conceptualization paradigm of the practice of mindfulness, see Figure 2.

While all participants reported engaging in informal mindfulness practice post-program, only 3 of the 11 participants reported engaging in mindfulness practice both formally and informally. No differences were observed between formal and informal practice in participants' reported changes in perspectives, reductions in stress or improvements in mood.

Figure 2

Qualitative Model: Conceptualization Paradigm of the Practice of Mindfulness



Phenomenon

The phenomenon is the central concept that unifies the qualitative data. The phenomenon in the current study was the practice of mindfulness, including factors that lead to and promote its practice.

Causal Condition

The casual condition provides the basis for the phenomenon to occur. In other words, these conditions influence the practice of mindfulness. The casual conditions in the current study include depression, anxiety, psychological distress, chronic pain, and other difficult emotions, including grief, aging, and fear of isolation. The casual conditions were all conditions that were identified by the participants: depression, anxiety, pain, psychological distress, and difficult emotions (e.g., loss, grief).

Context

The context influences the casual conditions and the phenomena either by occurring together or representing one another. The contextual conditions in the current study are identified as the guided mindfulness workshop and the home environment. This is because the basis of the workshop (and attending the workshop), as well as the home environment, all influenced participants to work with one's depression, anxiety, psychological distress, chronic and physical pain, and difficult emotions, via the practice of mindfulness.

Strategies

Strategies are used to represent the phenomenon in determining what helped participants enhance his/her sense of well-being and work through difficult emotions by making use of the practice of mindfulness. The strategies that were employed in the current study included meditation and engaging in formal and informal practice of mindfulness in everyday life. The following participant reports emphasized perceived value of the practice.

Meditation

I find that regular meditation is great for my ability to tolerate problems...I am more and more able to withstand a lot of the difficulties of life without getting so stressed about them. (Participant 2)

It's the same every night before I go to bed. I have 10 to 15 minutes and just sit and try to shut everything down. And, it changed since the program started. It was very methodical and right now it's not...it's just, sit and shut things down." (Participant 4)

Informal Practice of Mindfulness

I am not committed to it daily. Although things come across my lap daily, I will instantly think "mindfulness—It's just thoughts, go away." That's what I do. I take a deep breath and say that they're just thoughts. That happens daily, so I guess, I am practising daily without even knowing about it. (Participant 2)

It felt great the day of, and I didn't practice a whole lot after. But, it left me with a lot of things to think about, like being in the moment much more and taking time to enjoy right now, rather than constantly looking into the future. (Participant 3)

Intervening Conditions

The intervening conditions are general factors that influence the participant's development of strategies to help work with the phenomenon. These are conditions that facilitated participants' engagement in formal and informal mindfulness practice. The intervening conditions in the current study included support and/or stress that either related to one's family life or academic life, the act of simply reminding themselves to be more mindful, and certain personality or individual characteristics and attitudes.

Family or Academic Lifestyle

I was talking to my cousin last night... and she said that I have to get more into meditating. We keep in touch quite often. We're both sort of going down the same pathway this winter. This is our project [now]. (Participant 7)

Reminding Themselves

What I found most helpful is what (the facilitator) said about learning to be, looking at being rather than doing. So, reminding yourself if you have a thought or an image in your head, or somebody says something that is kind-of upsetting, reminding yourself that it is only a comment, that it is only a thought, and not getting hooked in to emotionally reacting...and taking responsibility for our own reactions to circumstances." (Participant 1)

I found how it taught you to just take a second. You know and realize the situation is not as bad as it seems. I found that helpful." (Participant 4)

Personality/Individual Characteristics and Attitudes

Reducing the stress is just a matter of...stepping back, thinking of it logically, while bringing it into the big picture. There is not a whole lot that is going to ruin my day. (Participant 5)

I am a type "A" [personality] and am more controlling. I think I got a lot of out this. (Participant 11)

Consequences

The consequences refer to the outcomes of the employed strategies, which are influenced by the conceptual paradigm. The consequences of the practice of mindfulness allowed participants to become more self-compassionate in reducing self-imposed expectations and by adopting kinder perspectives surrounding self-care. This increased self-compassion enhanced participants' perceived sense of well-being and increased their ability to manage stress. Participants reported more focus on being in the present and letting go of control and of the past and future worries. Identified consequences included self-compassion and self-care, a reported greater sense of well-being, competence in stress management, being present and "letting go."

Self-compassion and self-care

In my mind, you always want to strive towards being happy. So, as far as being happy, feeling at the end of the day you did the best you did at work, coming home to your family, to your dog, to your home. (Participant 4)

I was reminded to take a breath when I felt myself getting anxious...Overall, the biggest thing I took from [the program] was to pay attention to how I'm feeling and in those moments when daily stresses can come up and get at you and create that anxiousness. (Participant 11)

Greater sense of well-being

The program gave me more of a positive outlook ... (Participant 11)

Sleep was an issue...I've really been able to really calm myself down at the end of the day, go to sleep and get a better quality of sleep. (Participant 4)

WOW, this is amazing that I can still be happy even though these whacky things are going on...It's just remarkable... I think I just got a really different mindset these days. (Participant 12)

Stress management

That was one thing I noticed... It makes a lot of smaller things easy to handle and you don't sweat the small stuff. (Participant 4)

My level of stress is down and I attribute it to that three-hour session. It just made me more cognizant of the fact that I know what I have to do...I have to stop, take time whenever I need to, and bring myself down. (Participant 7)

Generally being able to have a better viewpoint on my life allows me to put things into perspective more. So, definitely, my quality of life is way better than what it has been in the past. (Participant 8)

Being present and letting go

I am trying to let them go because you can't control them. You can't control the future; the past is in the past, it's gone. (Participant 2)

I am in the moment much more, enjoying that, and taking time to enjoy right now rather than constantly looking into the future. (Participant 3)

Qualitative results of our study indicated that participants reported positive changes post-program, which ultimately resulted in improved quality of life. Participants experienced increases in self-compassion by allocating more time for themselves and by responding to themselves with greater kindness and self-care. They also reported a greater sense of well-being in adopting more positive attitudes toward their problems and ailment(s).

Enhanced quality of life was attributed to learning skills to manage stress and better identify, respond, and cope with daily struggles. Increases in quality of life were also attributed to participants' self-perceptions of competence and views about their ability to become grounded and present in the moment, less focused on past and future thoughts, and an increased acceptance of, and surrendering to, things out of one's control. These results support clinical findings of mindfulness with depressed participants who reported increases in changes in attitudes towards acceptance, living more in the present moment, and becoming more relaxed and at ease with oneself (Mason & Hargreaves, 2001).

DISCUSSION

The purpose of the current study was to determine if attending a three-hour guided mindfulness intervention program would significantly decrease negative emotions and improve participants' overall quality of life. We employed a mixed methods approach that consisted of quantitative and qualitative analyses. The goal was to gain a better understanding of the practice of mindfulness by examining participants'

negative emotions through a self-reported questionnaire, and by probing into their experiences to identify the mechanisms that led to reductions in stress, anxiety and depression and increases in well-being.

Quantitative results revealed that depression, anxiety, and stress all decreased over time. Participants reported less severe and frequency of depression, anxiety, and stress symptoms, immediately after attending the program (time 2) and during a 4- to 8-week follow-up period (time 3), all when comparing his/her/their scores to the baseline measurement that was taken immediately prior to the program (time 1). These results suggest that partaking in a program that teaches the practice of mindfulness may result in immediate decreases in depression, anxiety, and stress that remain reduced over time. These results are consistent with previous findings that found that brief guided mindfulness results in decreased psychological distress in participants without severe or debilitating symptoms (Bergen-Cico & Cheon, 2013; Ding et al., 2014; Harnett, et al., 2010).

Our study results suggest that attending a 3-hour guided mindfulness group-based program reduced negative emotions and psychological distress among participants. A program of this minimal time frame is novel and offers clinical promise as a valuable community mental health support potential. The results of the current study also contribute to the growing body of literature (e.g., Bergen-Cico & Cheon, 2013; Chen et al., 2013 Harnett, et al., 2010, Ussher et al., 2014) supporting the psychoemotional value of brief mindfulness programs.

Additionally, it is important to note that while statistical differences were not observed between time 2 to time 3, participant scores indicated a further downward trend in stress, anxiety and depression ratings. The maintained decrease in stress, anxiety, and depression scores over time is of immense clinical value. If a brief community mindfulness program offers the potential to address common psychological symptoms, which may be maintained over time, this will be an important area of future research.

Post-program decreases in scores observed through the administration of the DASS immediately after the program (time 2) suggests the stress, anxiety and depression reduction value of the program to which participants had immediate prior exposure and potential "honeymoon-phased" interpretations of the nature of their experiences. The DASS results confirming statistical significance between time 1 and time 3 (4 to 8 weeks post-program) are suggestive of the longer-term value of a program that introduces and teaches participants practical skills they can make use of in their daily lives. The results of the third administration of the DASS alongside the qualitative data obtained through interviews offers the most important clinical potential of the program and its obvious potential long-term resilience-promoting value. Further research in this area will be important in identifying the extent to which such community programs may benefit mental health and effectively reduce rates of relapse from a host of psychological problems.

The most notable and unexpected finding in our study was the identification of the value of informal mindfulness practice and its effects on coping, stress management, and enhanced quality of life. While informal practice was a topic of discussion throughout the 3-hour session, our research objectives focused on evaluating the effectiveness of a brief format program given that most positive results have been observed in 6- to 8-week format programs. Despite the fact that very few of the participants in our study adhered to regular formal practice post-intervention, they nonetheless attributed benefits associated with informal practice (e.g., being in the "here-and-now," reflecting on emotional reactions to situations, worrying less about the past and future, practicing kindness and self-compassion). Observed increases in informal practice are

likely indicative of perspective shifts in participants' assessment of thoughts, feelings, and emotions, which may contribute to improved psychological wellness. Given the focus of most clinical research on formal mindfulness, this finding is important in directing further attention to the potential psychological benefits of informal mindfulness practice.

LIMITATIONS

There are a number of limitations within the present study that may have influenced the results. The current study was primarily limited by the small sample size, which may make it more difficult to generalize the results to the wider, and more diverse populations. The size of the sample also reduced the power of quantitative results, analyses which were conducted primarily to identify pre and post program trends in scores.

The current study was also limited by the absence of a control group. This could have been accomplished by having a "wait-list" scenario where a separate group of participants would have been matched to those who participated in the study. Ideally, this control group would have been administered the DASS questionnaire during the same time frame to allow the scores to be compared to group norms. However, the researchers did not use a control group since the participants in the current study were self-motivated to participate because they were seeking support for coping and working with negative emotions. The researchers agreed that preventing intrinsically motivated individuals from accessing such a program would be unethical. Nonetheless, this ethical concern could be addressed in future studies by offering wait-listed control group participants access to the program upon conclusion of the study. Such a design modification would further increase methodological rigor.

While results of our study indicated that the three-hour guided mindfulness program was sufficient in achieving reductions in participants' stress, anxiety, and depression, the dose-response issue was only partially answered. The lack of specific identified amount of mindfulness training or practice on the degree of reported associated change is an inherent limitation of the study. Our objective was to identify whether brief exposure to the philosophy and practice of Stahl and Goldstein's (2010) "8 attitudes of mindfulness" could result in reductions of identified difficult emotions. The results of the study simply confirmed that exposure to the brief program resulted in reported reductions in stress, anxiety, and depressive experiences, However, the quantity of factors contributing to their reduction (e.g., frequency of formal mindfulness meditation, frequency of engagement in informal mindfulness thought) remains unknown. Our qualitative analysis revealed that reductions in difficult emotions often resulted from perspective shifts associated with heightened awareness of being in the present moment and acceptance associated with "letting go" of past worries. This shift in perspective attributed to participation in the guided mindfulness program appeared to be the catalyst for reported unquantifiable change. Therefore, as stated earlier in the paper, albeit often a seemingly valid clinical research assumption, the "dose-response" question may not be appropriate in studying the effects of mindfulness exposure on participant outcomes. Our results suggested that exposure to the practice of mindfulness via our brief program was sufficient to prompt qualitative cognitive changes. Participants' notable improvements in managing difficult emotions were necessarily influenced by their unique problems and individual life contexts. Because of reported differences in interpretations of mindfulness philosophy to which participants were exposed, a reductionistic epistemic focus is likely misguided. Fortunately, the qualitative component of our mixed-method approach sheds some light on the need for more detailed understandings of the complexity and diversity of individual participant experiences that led to observed reductions in reported symptoms.

Community Relevance

The program that the researchers evaluated was purposefully designed to provide community members with tools to skillfully work with depression, anxiety, stress, grief, and other difficult emotions. With the aim to provide immediate access to these tools, it has the potential benefit of filling in the gaps within the community by facilitating access to mental health services and supports. Therefore, the researchers and co-facilitators aimed to discover if there was value in offering an extensive three-hour guided mindfulness intervention program. The identified benefits of attending such a program have led the co-facilitators to implement the program in the community on a regular basis.

Concluding Remarks and Future Research Directions

The results from the present study suggest that 3 hours of mindfulness training can significantly affect the negative emotional stages of depression, anxiety, and stress, as well as improve one's sense of well-being, self-compassion, and emotional regulation. These declines in negative emotions and the improvements in well-being have been shown in past studies; however, there tends to be a large focus on longer mindfulness programs that last between 8 to 16 weeks. The teaching of techniques and educational components of mindfulness during the program, and the combination of informal and formal practice of mindfulness in the home environment, appear to be important in achieving the benefits of the practice of mindfulness. Finally, results also support past findings, which suggest that as little as 5 hours of mindfulness training can provide short-term benefits. However, such studies have shown only benefits for those with non-clinical disorders. Due to the complexity of the relationship between the practice of mindfulness and associated benefits, it is hard to determine if brief mindfulness training will offer benefits, both short-and long-term, to those with more frequent or severe symptoms of negative emotions. Future studies might explore the short and longterm effects of guided mindfulness programs with clinical populations and participants with more severe symptoms. As noted earlier, the current study excluded participants reporting severe or debilitating symptoms. It may be useful to explore the potential value of brief and longer-term guided mindfulness exposure with clinical populations to perhaps identify differences in amounts of exposure to mindfulness practice required by various levels of symptoms severity.

Future research might also consider examining potential psychological differences between formal and informal mindfulness practice. This might help determine whether qualitative differences in experiences exist between types of mindfulness practice.

REFERENCES

Antony, M., Bieling, P., Cox, B., Enns, M., & Swinson, R. (1998). Psychometric properties of the 42-item and 21-item versions of the Depression Anxiety Stress Scales in clinical groups and a community sample. *Psychological Assessment*, 10, 176–181.

Bergen-Cico, D., & Cheon, S. (2013). The mediating effects of mindfulness and self-compassion on trait anxiety. *Mindfulness*, 5(5), 505–519. doi:10.1007/s12671-013-0205-y

- Bodhi, V. B. (2016). The challenge of mindful engagement. In R. E. Purser, D. Forbes, & A. Burke (Eds.), *Handbook of mindfulness: Culture, context, and social engagement* (pp. 15–26). Switzerland: Springer.
- Bodhipaksa. (2000). What is mindfulness? | Wildmind Buddhist Meditation. Retrieved from http://www.wildmind.org/applied/daily-life/what-is-mindfulness
- Call, D., Miron, L., & Orcutt, H. (2014). Effectiveness of brief mindfulness techniques in reducing symptoms of anxiety and stress. *Mindfulness*, 5(6), 658–668. doi.org/10.1007/s12671-013-0218-6
- Carlson, L. E., Speca, M., Faris, P., & Patel, K. D. (2007). One year pre–post intervention follow-up of psychological, immune, endocrine and blood pressure outcomes of mindfulness-based stress reduction (MBSR) in breast and prostate cancer outpatients. *Brain, Behavior, and Immunity*, 21(8), 1038–1049. doi:10.1016/j.bbi.2007.04.002
- Carmody, J., & Baer, R. A. (2008). Relationships between mindfulness practice and levels of mindfulness, medical and psychological symptoms and well-being in a mindfulness-based stress reduction program. *Journal of Behavioral Medicine*, 31(1), 23–33. doi:10.1007/s10865-007-9130-7
- Cathcart, S., Galatis, N., Immink, M., Proeve, M., & Petkov, J. (2014). Brief mindfulness-based therapy for chronic tension-type headache: A randomized controlled pilot study. *Behavioural and Cognitive Psychotherapy*, 42(1), 1–15. doi:10.1017/S1352465813000234
- Chen, Y., Yang, X., Wang, L., & Zhang, X. (2013). A randomized controlled trial of the effects of brief mindfulness meditation on anxiety symptoms and systolic blood pressure in Chinese nursing students. *Nurse Education Today*, 33(10), 1166–72.
- Ding, X., Tang, Y.-Y., Cao, C., Deng, Y., Wang, Y., Xin, X., & Posner, M. I. (2014). Short-term meditation modulates brain activity of insight evoked with solution cue. *Social Cognitive and Affective Neuroscience*. doi:10.1093/scan/nsu032
- Harnett, P. H., Whittingham, K., Puhakka, E., Hodges, J., Spry, C., & Dob, R. (2010). The short-term impact of a brief group-based mindfulness therapy program on depression and life satisfaction. *Mindfulness*, *1*(3), 183–188. doi:10.1007/s12671-010-0024-3
- Hölzel, B. K., Carmody, J., Vangel, M., Congleton, C., Yerramsetti, S. M., Gard, T., & Lazar, S. W. (2011). Mindfulness practice leads to increases in regional brain gray matter density. *Psychiatry Research*, 191(1), 36–43. doi:10.1016/j. pscychresns.2010.08.006
- Ives Deliperi, V. L. (2013). The effects of mindfulness-based cognitive therapy in patients with bipolar disorder: A controlled functional MRI investigation. *Journal of Affective Disorders*, 150(3), 1152. doi:10.1016/j. jad.2013.05.074
- Kabat-Zinn, J. (2013). What is Mindfulness? PsychAlive. Retrieved from https://www.youtube.com/watch?v=HmEo6RI4Wvs Kristeller, J., Wolever, R. Q., & Sheets, V. (2014). Mindfulness-Based Eating Awareness Training (MB-EAT) for binge eating: A randomized clinical trial. Mindfulness, 5(3), 282–297. doi:10.1007/s12671-012-0179-1
- Kurth, F., Luders, E., Wu, B., & Black, D. S. (2014). Brain gray matter changes associated with mindfulness meditation in older adults: An exploratory pilot study using Voxel-based Morphometry. *Neuro Openventio Journal*, 1(1), 23–26. doi:http://dx.doi.org/10.17140/NOJ-1-106
- Le, T. N. (2017). Cultural considerations in a phenomenological study of mindfulness with Vietnamese youth and cyclo drivers. *International Perspectives in Psychology: Research, Practice, Consultation, 6(4)*, 246–260.
- Lovibond, S. H., & Lovibond, P. F. (1993). Manual for the Depression Anxiety Stress Scales (DASS). *Psychology Foundation*.
- Lutz, J., Herwig, U., Opialla, S., Hittmeyer, A., Jäncke, L., Rufer, M., ... Brühl, A. B. (2014). Mindfulness and emotion regulation—an fMRI study. *Social Cognitive and Affective Neuroscience*, 9(6), 776–785. doi:10.1093/scan/nst043
- Mason, O., & Hargreaves, I. (2001). A qualitative study of mindfulness-based cognitive therapy for depression. *The British Journal of Medical Psychology*, 74(Pt 2), 197–212.
- Morone, N. E., Lynch, C. S., Greco, C. M., Tindle, H. A., & Weiner, D. K. (2008). "I felt like a new person." the effects of mindfulness meditation on older adults with chronic pain: Qualitative narrative analysis of diary entries. *The Journal of Pain: Official Journal of the American Pain Society*, 9(9), 841–848. doi:10.1016/j.jpain.2008.04.003
- Nyklíček, I., Dijksman, S. C., Lenders, P. J., Fonteijn, W. A., & Koolen, J. J. (2014). A brief mindfulness based intervention for increase in emotional well-being and quality of life in percutaneous coronary intervention (PCI) patients: The MindfulHeart randomized controlled trial. *Journal of Behavioral Medicine*, 37(1), 135–144. doi:10.1007/s10865-012-9475-4

- Raes, F., Griffith, J. W., Van der Gucht, K., & Williams, J. M. G. (2014). School-based prevention and reduction of depression in adolescents: A cluster-randomized controlled trial of a mindfulness group program. *Mindfulness*, 5(5), 477–486. doi:10.1007/s12671-013-0202-1
- Shapiro, S. L., Schwartz, G. E., & Bonner, G. (1998). Effects of mindfulness-based stress reduction on medical and premedical students. *Journal of Behavioral Medicine*, 21(6), 581–599.
- Singleton, O., Holzel, B. K., Vangel, M., Brach, N., Carmody, J., & Lazar, S. W. (2014). Change in brainstem gray matter concentration following a mindfulness-based intervention is correlated with improvement in psychological well-being. *Frontiers in Human Neuroscience*, 8(33), 1–7.
- Stahl, B., & Goldstein, E. (2010). A Mindfulness-Based Stress Reduction Workbook. Oakland, California: New Harbinger Publications.
- Strauss, A., & Corbin, Juliet M. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Newbury Park, California: Sage Publications.
- Ussher, M., Spatz, A., Copland, C., Nicolaou, A., Cargill, A., Amini-Tabrizi, N., & McCracken, L. (2014). Immediate effects of a brief mindfulness-based body scan on patients with chronic pain. *Journal of Behavioral Medicine*, 37(1), 127–134.
- Wright, C. J., & Schutte, N. S. (2014). The relationship between greater mindfulness and less subjective experience of chronic pain: Mediating functions of pain management self-efficacy and emotional intelligence. *Australian Journal of Psychology*, 66(3), 181–186. doi:10.1111/ajpy.12041
- Yamaguchi, A. (2014). Influences of quality of life on health and well-being. *Social Indicators Research*, 1–26. doi:10.1007/s11205-014-0738-z