Does Attending an Optional Meditation Group in an ACT-Based Acute Care Partial Hospitalization Program Improve Treatment Outcomes?

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Introduction

In Acceptance and Commitment Therapy (ACT), mindfulness is conceptualized as a core process in the etiology and treatment of mental disorders. Formal mindfulness training such as meditation or yoga, is not necessary to the delivery of ACT-based interventions, though is often included. In the Adult Partial Hospitalization Program (PHP) at Rhode Island Hospital in the United States, the treatment modality is primarily ACT-based. The PHP is a type of day program that serves as an intermediary level of care between inpatient and outpatient settings, and includes half a day of intensive treatment with four groups and daily sessions with both a therapist and psychiatrist. Though patients are taught mindfulness skills in some of their groups, there was a desire by staff and patients for additional mindfulness training. An optional 10-15 minute meditation group was offered to patients during one of their breaks. Initial results of an acceptability and feasibility questionnaire have demonstrated that this meditation group was acceptable and well-tolerated by patients with no adverse events despite the acuity of the population (Pilecki et al., 2016). The present study was conducted to investigate whether attending such a group would demonstrate incremental benefits in mindfulness abilities, psychological flexibility, or symptom reduction. (Though symptom reduction is not a direct aim of ACT, finding such incremental benefit from mindfulness training may help to clarify mechanisms of action or ACT processes that are relevant to this patient population.) The finding of incremental benefit of a meditation group may suggest a role for integrating mindfulness training into acute medical settings in order to improve treatment outcomes.

Methods

The optional meditation group consisted of a brief introduction aimed at beginners (2-4 minutes), a period of silence punctuated by brief prompts (6-8 minutes), and debriefing (2-5 minutes). Announcements were made in other groups and flyers were hung on walls to invite all patients to attend. Participants who chose to attend at least 3 days of the meditation group were considered "attenders", while those who attended 2 or less days were considered "non-attenders".

All participants completed the following measures at intake (pre) and discharge (post):

- **Mindfulness**: Five Face Mindfulness Questionnaire (FFMQ- short form; Baer et al., 2006)
- **Psychological Flexibility**: Acceptance & Action Questionnaire (AAQ-II Bond et al., 2011)
- **Depression**: Clinically Useful Depression Outcome Scale (CUDOS; Zimmerman et al., 2008)
- **Anxiety**: Clinically Useful Anxiety Outcome Scale (CUXOS; Zimmerman et al., 2010)
- **Anger:** Clinically Useful Anger Outcome Scale (CUANGOS; Zimmerman et al., 2010)

It has been previously shown that patients of the PHP (without the optional meditation group) improve in all of the above measures between pre and post (Pilecki et al., 2016). The present analysis attempted to compare the incremental benefit of attending the meditation group by utilizing a two-way ANOVA with a covariate variable that included each participant's scores at intake (pre). In addition, subscale scores of the FFMQ were analyzed to investigate potential differences in specific mindfulness skills of describing, awareness, non-reactance, and non-judging.

Results

Participants included 348 patients from the PHP; 74.7% were white and 25.3% were non-white. Informed consent was obtained at the beginning of treatment, and all admissions to the program were recruited to be part of the study. The average length of stay for participants was 6.9 days. Each day, the meditation group included a mean of 7.6 patients, or 24.5% of the total census for the program. In the current sample, 37.6% reported having "no experience" with mindfulness, 52.8% reported "some experience", and 9.6% reported "much experience" (See Figure 1).

Similar to previous results, all participants showed an increase in mindfulness from pre (M = 2.82) to post (M = 3.33; t = -2.80, p < .05) , as well as decreases in anger from pre (M = 1.1) to post (M = 0.31; *t* = 2.74, p < .05), decreases in depression from pre (M = 2.13) to post (M = 1.17; *t* = 5.41, p < .05), and decreases in anxiety from pre (M = 1.87) to post (M = 0.97; *t* = 4.54, p < .05; see Table 1). Additional results, not shown here, also showed increases in psychological flexibility from pre to post on the AAQ-II.

Results also suggest that when baseline scores were held constant, attenders did not show any significant incremental improvements in psychological flexibility at discharge (M = 3.85) than non-attenders (M = 3.96; F = 1.29, p > .05; see Table 1). There was also no difference in outcomes in overall mindfulness scores of attenders (M = 3.21) and non-attenders (M = 3.18; F = 1.90, p > .05) when baseline scores were held constant. Similarly, no differences for the FFMQ subscale of "describing" between attenders (M = 3.45) and non-attenders (M = 3.42; F = .92, p > .05), for the FFMQ subscale of "awareness" between attenders (M = 3.22) and non-attenders (M = 3.33; F .01, p > .05), and for the FFMQ subscale of "non-reactance" between attenders (M = 2.83) and non-attenders (M = 2.84; F = .09, p < .05). However, results for the "non-judgment" subscale of the FFMQ showed a significant increase in attenders (M = 3.20) as compared to non-attenders (M = 3.02; F = 4.70; p < .05). Additional results, not shown here, showed no incremental reductions in symptom measures of anxiety, depression, and anger.

Figure 1. Prior Experience with Mindfulness Practice

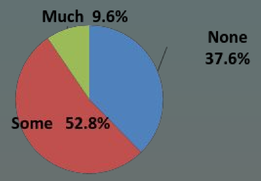

Table 1. Pre and Post Measures for All Participants

Measure	Intake	Discharge	t	Sig.
FFMQ	2.82	3.33	-2.80	p < .05
Anger	1.1	0.31	2.74	p < .05
Depression	2.13	1.17	5.41	p < .05
Anxiety	1.87	0.97	4.54	p < .05

Table 2. Incremental Benefits in Attenders vs. Non-Attenders

Measure (Post)	Non-Attenders	Attenders	F	Sig.
AAQ-II	3.96	3.85	1.29	p>.05
FFMQ	3.18	3.21	1.90	p>.05
Describe	3.42	3.45	.92	p>.05
Aware	3.33	3.22	.01	p>.05
Non-judge	**3.02**	**3.20**	**4.70**	**p<.05**
Non-react	2.84	2.83	.09	P<.05

Discussion

The present study investigated the incremental benefit of attending an optional meditation group for at least three days of a patient's admission. Similar to a prior finding, patients included in this sample showed overall improvements in psychological flexibility, mindfulness, anxiety, depression, and anger. This finding supports the effectiveness of the ACT-based treatment program to teach and develop mindfulness skills. Results showed that except for non-judging, attending a daily meditation group did not confer incremental benefit in increasing mindfulness skills or promoting psychological flexibility. However, this finding is not surprising given that the cutoff to be considered a meditation attender was only three out of an average of seven treatment days. Future research will consider the incremental benefit of daily or almost daily attendance.

One significant finding was that patients who attended meditation did show incremental benefit in the subscale of non-judging, or the ability to experience thoughts, sensations, or emotions as neither good or bad. One explanation for this finding is that of all of the mindfulness skills (describing, awareness, and non-reactance), non-judging is one that is best directly practiced and experienced, rather than explained or taught in a class or group format. Such a finding is in line with the current state of mindfulness research which is moving beyond simply demonstrating support for mindfulness as a general construct into exploring the role of sub-constructs or skills that are included in mindfulness (Dimidjian & Segal, 2015). Future research will investigate the role of non-judging in mediating other treatment outcomes, such as psychological flexibility or symptom measures. Limitations included a self-selecting sample (participants chose to attend meditation or not), a limited duration of intervention (minimum of three 10-15 minute groups), and the fact that the degree of mindfulness training obtained in other groups or individual sessions was not accounted for.

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