Evaluation of Outcomes from Sussex Partnership MBCT Staff Courses

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Clara Strauss & Megan Hughes

Background

Mindfulness-Based Cognitive Therapy (MBCT) is an eight week course that can reduce stress in non-clinical populations (Chiesa & Serretti, 2009) and may be particularly helpful in workplace settings to reduce work-related stress (Virgili, 2015). Of all large public sector organisations in the UK, sickness absence is highest in the NHS, running at around 3.5% of the NHS workforce at any one time (ONS, 2017), with mental health related reasons being a prominent reason for sickness absence (ONS, 2017). Sussex Partnership has been offering MBCT courses to staff for over 15 years. This report presents outcomes from MBCT courses for Sussex Partnership staff between 2013 and 2019.

Method

Participants

Data was collected from 345 Sussex Partnership Trust Staff (276 females) with a range of professions between 16th April 2013 and 5th April 2019. Participants' ages ranged from 19 to 75 years (M= 43.77, SD= 11.35). Participants completed a pack of self-report measures at baseline and post-MBCT. Participation in the MBCT courses was voluntary. Two hundred and thirty-seven participants (68.70% of those completing at least one set of measures) completed measures both before and after their MBCT course. The remaining 108 (31.30%) participants either completed just the baseline measures or just the post-MBCT measures, or there were large quantities of missing data.

Measures

*The Five-Facet Mindfulness Questionnaire Short-Form (*FFMQ; Bohlmeijer, Klooster, Fledderus, Veehof, & Baer, 2011) and FFMQ-15 (Gu et al., 2016). The FFMQ Short Form is designed to measure levels of mindfulness. It contains 24 items within five facets; non-reactivity to inner experience, observing, acting with awareness, describing, and non-judging of inner experience. Participants are asked to respond on a rating scale from 1 (never or very rarely true) to 5 (very often or always true) how frequently they had experienced the statements in the last month. The FFMQ 15 is a shorter version containing 3 items from each of the five subscales. Scores on either the FFMQ15 or FFMQ24 were converted to item level means so they could be compared. The observe subscale was not included given its psychometric properties.

*Self-compassion Scale Short-form (*SCS-SF; Raes, Pommier, Neff, & Van Gucht, 2011). The SCS-SF is a 12 item measure of self-compassion. On a sub-scale level it measures self-kindness, self-judgment, common humanity, over identification, isolation, and mindfulness. Participants were asked to indicate how often they behave according to the statements ranging from 1 (almost never) to 5 (almost always). This was the measure of self-compassion used between April 2013 and December 2018.

Sussex-Oxford Compassion for the Self Scale (SOCS-S: Gu, Cavanagh, Kuyken and Strauss (under review)). The SOCS-S is a 20-item measure of self-compassion. On a sub-scale level it measures recognising suffering, understanding the universality of suffering, feeling for the person suffering, tolerating uncomfortable feelings, and acting or being motivated to act to alleviate suffering. Participants were asked to indicate how true statements were from 1- (not at all true) to 5- (always true). This was the measure of self-compassion used between January 2019 and April 2019.

Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983). This 14-item scale measured perceived stress during the past month. Respondents were asked to indicate how often they have felt or thought a certain way ranging from 0 (never) to 4 (very often).

Short Warwick-Edinburgh Mental Wellbeing Scale (SWEMWBS; Stewart-Brown et al., 2009). The SWEMWBS is a 7-item scale measuring psychological and eudemonic well-being. Respondents were required to rate themselves from 1 (none of the time) to 5 (all of the time) to how that item best described their experience over the last 2 weeks.

*Compassion Scale – adapted (*CS; Pommier, 2011*).* This 24-item scale measuring compassion towards others was introduced later on within the study, thus not all participants completed this measure. An additional 10 items were added by the researchers of the present evaluation to make a final 34 item compassion towards others scale. Participants were asked on a scale of 1 (almost never) to 5 (almost always) how often they behave in the stated manner. This was the measure of self-compassion used between April 2013 and December 2018.

Sussex-Oxford Compassion for Others Scale (SOCS-S: Gu, Cavanagh, Kuyken and Strauss (under review)). The SOCS-O is a 20-item measure of compassion. On a sub-scale level it measures recognising suffering, understanding the universality of suffering, feeling for the person suffering, tolerating uncomfortable feelings, and acting or being motivated to act to alleviate suffering. Participants were asked to indicate how true statements were from 1- (not at all true) to 5- (always true). This was the measure of self-compassion used between January 2019 and April 2019.

Procedure

All staff members within Sussex Partnership Trust are offered the opportunity to participate in MBCT courses in various locations around Sussex. Staff self-referred themselves to MBCT but had to get approval from their line managers before they were allocated to MBCT courses. Participants completed a pack of self-report measures at baseline and post-MBCT.

Analysis

Reasons for missing data were largely for logistical reasons as measures were handed out by group facilitators and there was no additional resource for data collection (e.g. research assistants). There were a number of instances where data were missing because measures were not handed out in the first or final session, or where participants missed the first or final session, but attended the remaining sessions. Multiple imputation was used to manage missing data. Paired *t*-tests were used on the imputed dataset to compare participants' baseline and post-MBCT scores. A total of 237 staff were included in the data analysis, being those who had completed both baseline and post-MBCT measures; this accounted for 68.70% of the total initial participant sample of 345. An independent *t*-test was used to compare baseline scores on each of the measures for those who completed both baseline and post-MBCT measures and those who did not complete both. A Chi-Square test was then carried out to see if there was a relationship between gender and whether participants completed both

baseline and post-MBCT measures or not (completers or non-completers) and a t-test was used to see if completers and non-completers differed in age. Analysis was run again on the original dataset to see if the imputed dataset produced greatly different results.

Results

Findings below are using the imputed dataset.

Mindfulness: Scores of mindfulness (item means) at baseline (M=2.93, SD=.56) increased significantly with a large effect size to post-MBCT (M=3.43, SD=.50); t(224) = -13.620, p<.001, d= 0.94, 95% CI [-.57, -.43].

Self-compassion:

SCS: Scores of self-compassion at baseline (M=33.68, SD=8.47) increased significantly with a large effect size to post-MBCT (M=40.29, SD=7.64); t (224) = -12.58, p<.001, d= 0.82, 95% CI [-7.65, -5.56].

SOCS: Scores of self-compassion at baseline (M=63.11, SD=12.87) increased significantly with a very large effect size compared to post-MBCT (M=80.44, SD=14.43); t (8) = -4.370, p=.001, d= 1.27, 95% CI [-21.72, -7.50].

Stress: Scores of stress at baseline (M=41.43, SD=6.69) decreased significantly with a medium-large effect size to post-MBCT (M=36.24, SD=6.77); t (215) = -13.598, p<.001, d= 0.77, 95% CI [-4.44, 5.94].

Wellbeing: Scores of wellbeing at baseline (M=22.68, SD=4.31) increased significantly with a large effect size compared to post-MBCT (M=25.93, SD=3.69); t (219) = -15.095, p<.001, d= 0.81, 95% CI [-3.67, -2.83].

Compassion for others:

CS: Scores of compassion at baseline (M=113.58, SD=18.14) increased significantly with a very large effect size compared to post-MBCT (M=136.83, SD=18.29); t (168) = -3.873, p<.001, d= 1.28, 95% CI [-4.93, -1.56].

SOCS-O: Scores of compassion at baseline (M=81.75, SD=13.47) increased with a small effect size compared to post-MBCT, however this increase did not reach statistical significance (M=85.12, SD=11.41); t (7) = -.338, p=2.07, d= 0.27, 95% CI [-9.11, 2.36].

Table 1: Baseline scores for participants completing and not completing measures at both baseline and post-MBCT (as a proxy for intervention completion):

		N	Mean	Std. Deviation	t	p
FFMQ	**non-completer**	70	2.98	.53	-.827	.409
	completer	225	2.92	.57		
SCS	**non-completer**	69	32.57	8.86	1.095	.930
	completer	225	33.86	8.47		
SOCS-S	**non-completer**	15	64.47	9.63	-.319	.753
	completer	9	63.00	12.87		

PSS	non-completer	66	41.06	6.57	.583	.560
	completer	216	41.06	6.68		
CS	non-completer	56	135.68	14.82	-1.059	.236
	completer	169	132.76	18.74		
SOCS-O	non-completer	15	83.07	8.15	-.294	.772
	completer	8	81.75	13.47		
SWEMWBS	non-completer	67	22.50	4.39	.215	.830
	completer	220	22.64	3.93		

Table 1 shows that when looking at the means of completers vs. non-completers on all outcome measures at baseline, that there were non-significant differences between these groups. Also, measure completers and non-completers did not differ in relation to gender (χ^2=1.868, p=.172) or age (t=-.387, p=.699) This shows that individuals who failed to complete measures at both time points (taken as a proxy for dropping out of the course) were not experiencing higher perceived stress, or poorer compassion or wellbeing than individuals completing both the baseline and post-MBCT measures, and that they did not differ from each other in terms of age or gender.

All analyses were repeated on the unimputed dataset, and a similar pattern of results was found.

Discussion

The aim of this report is to evaluate outcomes from MBCT courses for SPFT staff. Findings were that there were significant pre-post MBCT improvements in mindfulness, wellbeing, stress and self-compassion, with effect sizes being medium to very large. Improvements in compassion for others (using SOCS-O) failed to reach statistical significance, though this may be because of the very small sample size using the recently introduced SOCS-O (n=24) rather than CS (n=294). An important factor to note is that stress levels decreased significantly with a medium-large effect size, which indicates that the course has beneficial effects on stress (albeit the evaluation is uncontrolled). This in turn may have a positive impact on how staff deliver care to service users, although the current evaluation did not assess this directly.

The size of effect on perceived stress (*d*= 0.68) is in line with findings from a meta-analysis of mindfulness-based interventions (MBIs) in non-clinical populations (Chiesa & Serretti, 2009) and from a meta-analysis of MBIs in workplace settings (Virgili, 2015). Virgili (2015) found a medium to large effect size for within group (pre-post) reductions in stress (Hedges *g*=.68[1]). This suggests that the benefits of SPT staff MBCT courses on staff stress are in line with what would be expected given the research evidence. Taken together this suggests that MBCT courses are beneficial for healthcare staff stress and that these benefits can translate from research trials into real-world healthcare settings.

On evaluating initial scores of those who completed both the baseline and post-MBCT measures and those who did not complete both, scores did not differ significantly; suggesting participants did not drop out of the course due to experiencing more severe stress, lower compassion or lower wellbeing. It would have been a concern for instance if participants had dropped out due to higher stress levels. Furthermore, there was no significant difference in the effect that age and gender had on who those who completed both baseline and post-MBCT measures and those who did not.

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[1] Cohen's d and Hedge's g are roughly comparable, with Hedge's g being a variant of Cohen's d taking into account small sample sizes.

There are some limitations to the current evaluation. One limitation is that participants completed the measures in the MBCT group setting which could increase demand characteristics and inflate effect sizes. Having an independent researcher administer the measures could be a solution to this limitation. Furthermore, 31.3% of participants did not complete both the baseline and post-MBCT measures, therefore those who did not complete the post-MBCT measures may have benefitted less from the MBCT course than measure completers. This may have been for reasons including but not limited to; pressures and time commitments of working within the NHS, pre-existing mental health conditions, time off work, or non-enjoyment of the course. In despite of this, it is important to note that those who did not complete both the baseline and post measures and those who did, did not differ significantly on any of the outcome measures at baseline, or in age or gender. Enhancing measure completion rates in future evaluations would be recommended, and it may be helpful to collect qualitative data as to why these staff members dropped out. In turn, this would allow course leaders to make any changes to the way they administer the course where necessary. A strength of this analysis is that the results are likely to be more accurate than in previous reports, as multiple imputation was used to account for missing data, and analyses on the imputed dataset did not show different patterns of findings to the non-imputed dataset.

Findings of this evaluation provide strong support for staff MBCT courses in Sussex Partnership. In order to reduce staff stress and improve wellbeing MBCT should be made widely available for healthcare staff. Although further research is needed, reducing staff stress and improving wellbeing may lead to reduced levels of staff sickness absence; mindfulness skills could be a protective factor in managing highly stressful care giving roles.

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