

OUTCOME DATA FOR THE HOBART CLINIC'S MCBT GROUPS PILOT TRIALS

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Aknowledgement

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Method

Participants

Participants ($N = 21$) were mostly individuals from the clinic's daypatient population, aged 26-67, with approximately 23% males and 77 females, most had been admitted several times at The Hobart Clinic (THC). The diagnoses of these patients included Major Depressive Episode (Chronic), Panic Disorder With (and some without) Agoraphobia, Generalised Anxiety Disorder, Posttraumatic Stress Disorder, Substance Abuse Disorder, Bipolar Affective Disorder, and several personality disorders, such as Dependant Personality Disorder and Borderline Personality Disorder. Each group started with between 4 and 6 patients. The dropout rate seemed proportional to the initial group size; about 1 patient in group of 4 and about 2 patients in a group of 6.

Material

Three measurement tools using a likert-type scale were used, the *Symptom Checklist-90 Revised Edition* (SCL-90-R), the *Depression Anxiety and Stress Scale* (DASS) and the *Short Progress Assessment* (SPA).

The SCL-90-R is a well-established self-rated questionnaire, widely used to assist in the diagnosis of psychopathology. It assesses symptomatology on 10 psychiatric scales, Somatisation, Obsessive-Compulsive, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation, Psychoticism, Additional Items.

The DASS also assesses symptomatology from the patient's perspective, focusing on three clinical scales (Depression, Anxiety and Stress). Patients rate the severity of their symptoms from 0 to 4 on 42 items. This instrument was chosen in accord with the recommendations of recent research and senior clinicians in the local mental health community.

The SPA is a patient-rated questionnaire which provides broad scores on four main scales, Symptom Severity, Symptom Manageability (self-efficacy), Perceived Improvement, and Satisfaction with Therapy. Patients rate the severity and manageability of their symptoms, as well as their perceived improvement (on discharge) on five subscales (Behavioural, Cognitive, Somatic, Affective, and Interpersonal). On discharge, they also rate their satisfaction with therapy on a five-point scale.

Procedure

Each patient assessed was asked to fill in the SCL-90-R, the DASS and the SPA weekly, just before the start of each session. It was emphasised to patients that the assessment was restricted to the MCBT intervention and that any other potential treatments (e.g., medication and group activities) were not to be assessed in this evaluation. Support to fill in the forms was provided by the therapists upon request.

Results

The data from 15 patients were returned in full and entered in most of the analysis (more forms were recovered for some of the measures on the SPA). Given the limited scope of this report, only the scores from the first and the last session are reported. Pre and post-treatment scores on SCL-90-R, DASS and SPA were statistically analysed using paired-sample *t*-test. The statistical analyses for pre-post treatment, including the means, standard deviations, and *t*-tests are in shown in the appendix. All reported *t*-tests have been subjected to a stringent statistical adjustment (Bonneferoni Correction) to avoid Type 1 errors. This involves dividing the .05 alpha by the number of dependent variables and using this corrected alpha level. For the SCL-90-R data, for example, .05 was divided by 12, so that results are considered significant at or below alpha .004. Due to very tight dealines for this report, effect sizes are reported with both Cohen's *d* and R squared values for SCL-90-R data but only R squared values appear for other measures.

Impairment measures on the SCL-90-R

The Global Severity Index (GSI) and the Positive Symptom Distress Index (PSDI) of the SCL-90-R are displayed in Figure 1. These represent the global psychiatric measures at pre- and post-treatment. On the GSI, there was a statistically significant decrease in symptom severity from pre-treatment to post treatment, even with Bonneferoni corrections were applied, $t(14) = 4.25, p < .05$. Similarly, the PSDI measure reflected a significant decrease in symptom distress from pre-treatment to post treatment, $t(14) = 4.638, p < .01$, after Bonneferoni corrections.

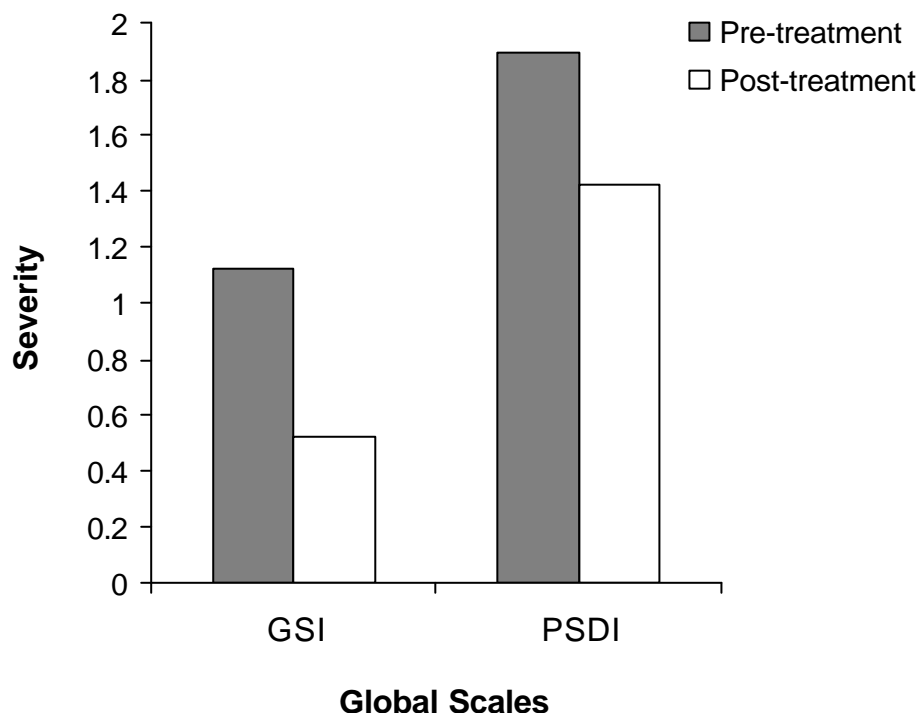


Figure 1. Severity score at pre- and post-treatment, as measured by the SCL-90-R (clinician-rated).

The differences in the severity of symptoms from pre to post treatment across all psychiatric measures are displayed in Figure 2. Following Bonneferoni corrections, the analysis shows a statistically significant decrease in most scales, despite the variety of diagnoses across participants (also reflected by very large standard deviations, see Appendix). The majority of improvement scores were statistically significant after Bonneferoni corrections. The clinical significance was

high on these scales. Table 1 shows effect sizes (Cohen's *d*) reflecting the change from pre- to post-treatment for each scale.

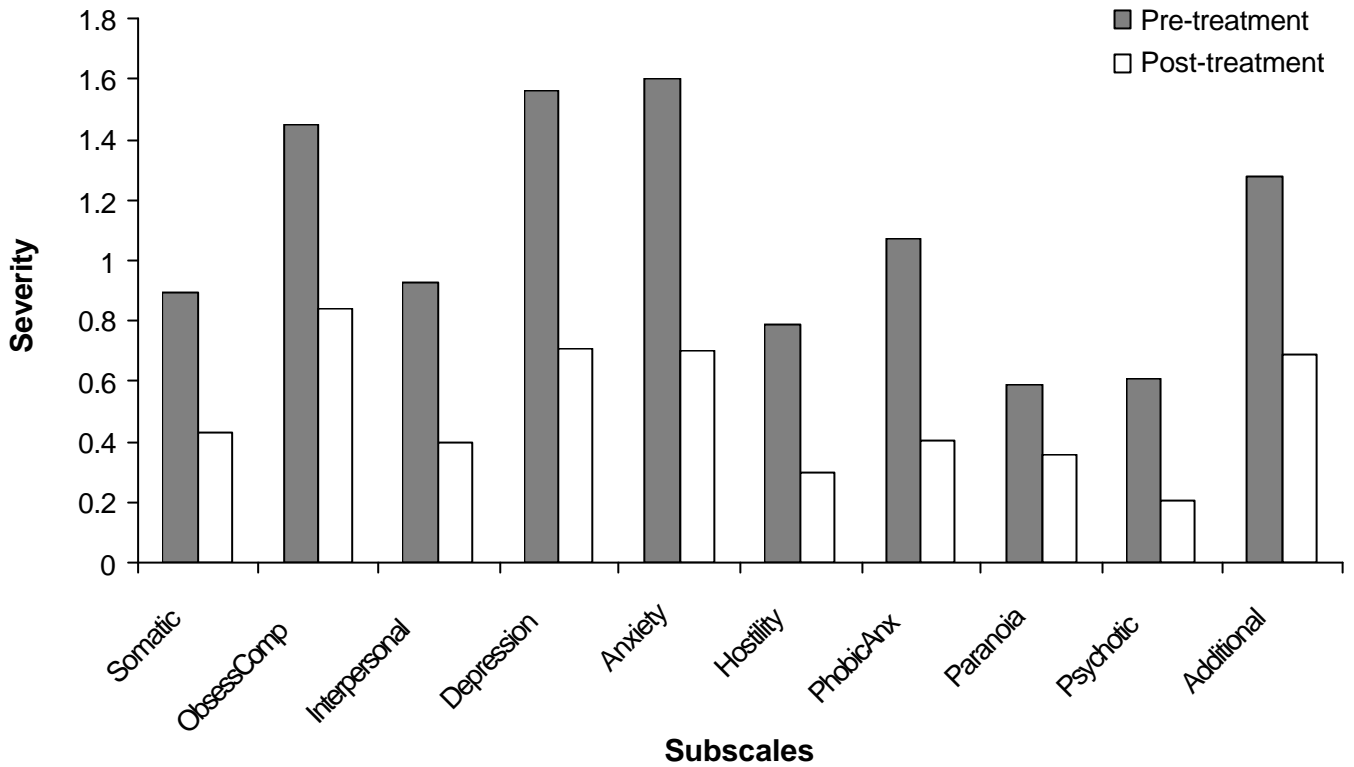


Figure 2. Severity scores at pre- and post-treatment, as measured by each psychiatric scale of the SCL-90-R.

Table 1. Effect Size for each scale of SCL-90-R.

Scale	Cohen's <i>d</i>	t-test
Somatic	1.11	>.05
Obsessive Compulsive	0.83	>.05
Interpersonal Sensitivity	0.94	
Depression	1.18	>.05
Anxiety	0.99	>.05
Hostility	0.76	
Phobic Anxiety	0.82	>.05
Paranoid Ideation	0.48	
Psychoticism	1.09	
Additional Items	0.91	>.05
GSI	1.27	>.05
PSDI	1.14	>.01

Impairment measures on DASS

The DASS self-reported measures at pre- and post-treatment are displayed in Figure 3. Consistent with the SCL-90-R data, patients rated the severity of their symptoms significantly lower at post-treatment than at pre-treatment on the three clinical scales. There was a statistically significant decrease in on the Depression scale, $t(14) = 3.64, p < .05$, the Anxiety scale, $t(14) = 3.24, p < .05$, and the Stress scale, $t(14) = 4.84, p < .01$, after Bonneferoni corrections.

The DASS effect size (Cohen's d) reflecting the change from admission to discharge was as follows:

Depression	Anxiety	Stress
1.00	0.92	1.28

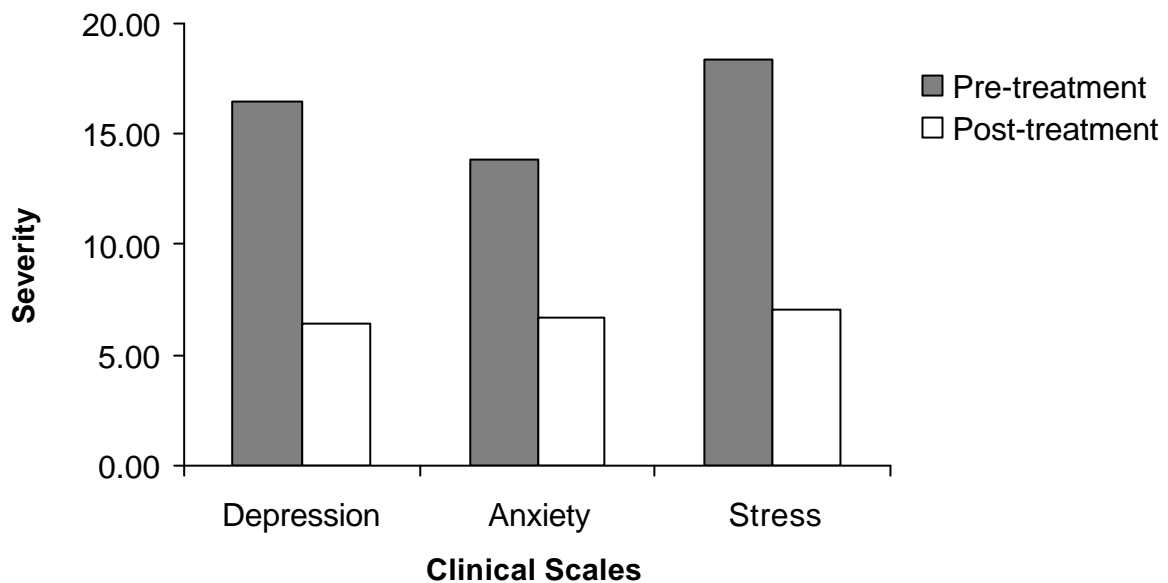


Figure 3. Impairment scores at pre- and post-treatment on the DASS (patient-rated).

Impairment measures on the SPA

The SPA Symptom Severity scale measures at pre- and post-treatment are displayed in Figure 4. Patients rated the severity of their symptoms significantly lower at post-treatment than at pre-treatment in all domains of functioning. Following Bonneferoni adjustment, there was a statistically significant decrease in symptomatology on the Cognitive scale, $t(14) = 5.14, p < .01$, the Somatic scale, $t(14) = 3.42, p < .05$, the Affective scale, $t(14) = 3.54, p < .05$, and the Interpersonal scale, $t(14) = 3.23, p < .05$.

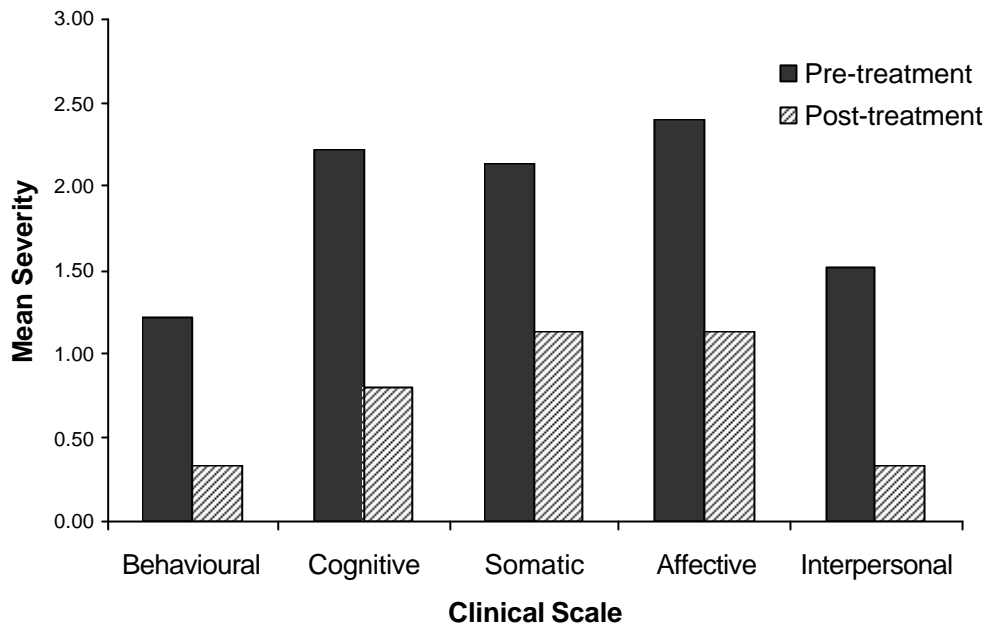


Figure 4. Symptom severity measures at pre- and post-treatment as measured by the SPA Severity scale.

The SPA Symptom Manageability (self-efficacy) measures at pre- and post-treatment are displayed in Figure 5, showing a statistically significant increase across the five subscales. Following Bonferroni adjustment, there was a statistically significant increase in self-efficacy on the Cognitive scale, $t(14) = 3.37, p < .05$, the Somatic scale, $t(14) = 3.23, p < .05$, the Affective scale, $t(14) = 3.54, p < .05$, and the Interpersonal scale, $t(14) = 3.7, p < .01$.

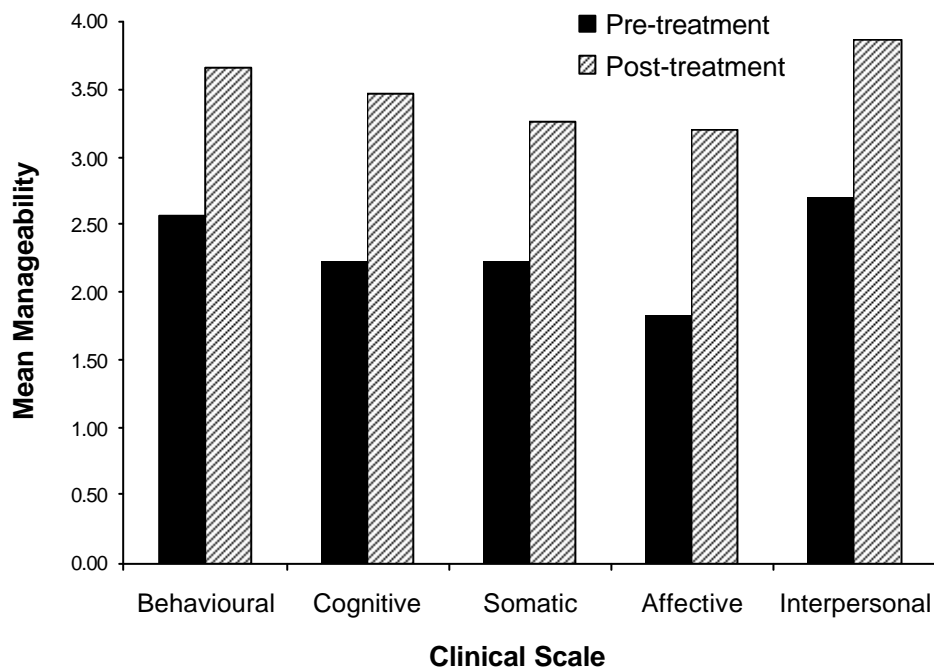


Figure 5 Symptom manageability (self-efficacy) measures at pre- and post-treatment on the SPA Manageability scale.

Improvement measures on the SPA

The percentage of change on each clinical scale is calculated by adding the severity and manageability scores and then by calculating the percentage difference between pre-and post-treatment scores on these two scales. In contrast, the Perceived Improvement scale measures directly the way in which clients *perceive* their progress across the scales on discharge. It is calculated by the “absolute percentage” (where the maximum possible score [4] = 100 %). Both the percentage of change (calculated improvement) and the percentage of Perceived Improvement for each clinical scale are displayed in Figure 6.

The scores show an overall 66.04 % calculated improvement and an overall 69.54 % perceived improvement. All Perceived Improvement scores show high statistical significance (Behavioural, $t(19) = 12.46, p < .001$; Cognitive, $t(19) = 17.11, p < .001$; Somatic, $t(20) = 15.34, p < .001$; Affective, $t(19) = 11.17, p < .001$; Interpersonal, $t(19) = 11.17, p < .001$; after Bonneferoni adjustment).

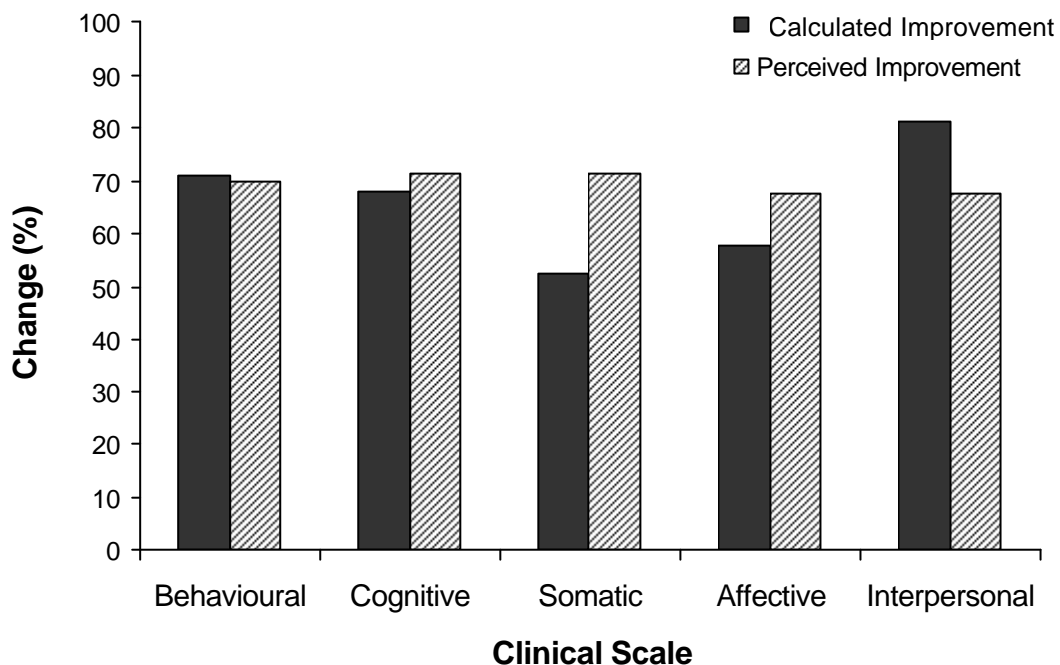


Figure 6. Percentage of change, calculated on pre-and post-treatment SPA scores, compared with improvement across the five scales as perceived by the patient. Larger scores show greater improvement.

Satisfaction with Therapy

Satisfaction with therapy was calculated by the “absolute percentage” (where the maximum possible score [4] = 100 %). Patients rated an overall 80.92 % satisfaction with therapy. The satisfaction scores are displayed in Figure 7 (the “Cost” measure on this scale was omitted as most patients did not include a rating). All scores show high statistical significance (Treatment Type, $t(18) = 17.65, p < .001$; Treatment Length, $t(18) = 12.78, p < .001$; Relation with Therapist, $t(18) = 27.57, p < .001$; Skill Learned, $t(18) = 21.77, p < .001$; (after Bonneferoni adjustment).

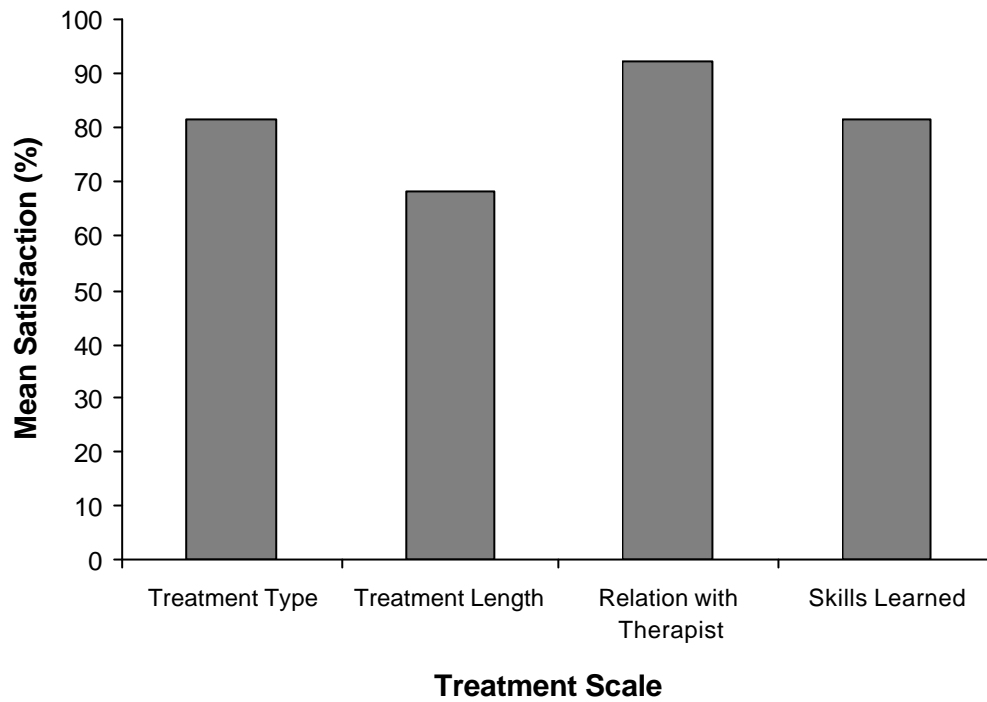


Figure 7. “Absolute” percentage of patient satisfaction with therapy as measured by the SPA.

Concluding Comment

Based on the three measurement tools used, the results of this outcome analysis demonstrate a statistically significant improvement across a number of life domains after an 8-week MCBT intervention. On the SCL-90-R, the participants’ high level of improvement across all psychiatric scales is notable because their principal diagnoses (besides common depression and anxiety symptoms) were very different. This is reflected by very large standard deviations at pre-treatment. It is reasonable to expect even much more dramatic changes if the intervention had involved homogeneous groups (e.g., analysing only the results from depressed individuals, then analysis those from participants with hostility, etc, since the standard deviations within diagnostic categories are substantially smaller than those between diagnostic categories. Nevertheless, the effect sizes for the SCL-90-R are still large overall despite the heterogeneity of the sample.

On the DASS, the scores were reliably correlated with SCL-90-R results (though correlations are not reported here). The SPA data provide further evidence that the program had a large effect on both perceived and calculated improvement, as well as high client satisfaction.

Although the outcome data from this uncontrolled pilot study must be considered cautiously, they call for attention in the newly emerging field of mindfulness research and therapy. While most mindfulness-based therapy models address homogeneous diagnostic clusters, such as people recovered from at least two episodes of depression (Segal, Teasdale, & Williams, 2002) or Borderline Personality Disorder (Linehan, 1993), more comprehensive and controlled studies may show the possible generalisability of an MCBT model such as the one used by the authors. The present data warrant further research to investigate the clinical viability of the 8-week MCBT program across a broad range of chronic psychopathologies. If the results we have been observing for the last two years in our regular groups are maintained with randomised controlled trials, using a mindfulness-based CBT model which targets common factors of recovery across psychopathologies may be a considerable alternative in the management of crisis situations and relapse.

Appendix

STATISTICAL ANALYSES T-Test for Pre and Post MCBT Treatment

SCL-90-R

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PreSOM	.9000	15	.52385	.13526
	PostSOM	.4333	15	.32066	.08279
Pair 2	PreOC	1.4527	15	.79770	.20596
	PostOC	.8400	15	.68222	.17615
Pair 3	PreIS	.9333	15	.69634	.17980
	PostIS	.3993	15	.44567	.11507
Pair 4	PreDEP	1.5587	15	.93172	.24057
	PostDEP	.7060	15	.51695	.13348
Pair 5	PreANX	1.6000	15	1.13011	.29179
	PostANX	.7000	15	.61179	.15796
Pair 6	PreHOS	.7893	15	.82918	.21409
	PostHOS	.3013	15	.45975	.11871
Pair 7	PrePHOB	1.0667	15	1.12655	.29087
	PostPHOB	.4107	15	.47382	.12234
Pair 8	PrePAR	.5893	15	.65298	.16860
	PostPAR	.3567	15	.32093	.08286
Pair 9	PrePSY	.6113	15	.55375	.14298
	PostPSY	.2067	15	.18696	.04827
Pair 10	PreADD	1.2760	15	.69082	.17837
	PostADD	.6873	15	.59986	.15488
Pair 11	PreGSI	1.1193	15	.63418	.16374
	PostGSI	.5227	15	.30607	.07903
Pair 12	PrePSDI	1.9007	15	.49459	.12770
	PostPSDI	1.4220	15	.34681	.08954

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	PreSOM - PostSOM	.46667	.48413	.12500	.19856	.73477	3.733	14	.002
Pair 2	PreOC - PostOC	.61267	.61375	.15847	.27278	.95255	3.866	14	.002
Pair 3	PreIS - PostIS	.53400	.73122	.18880	.12906	.93894	2.828	14	.013
Pair 4	PreDEP - PostDEP	.85267	.89231	.23039	.35852	1.34681	3.701	14	.002
Pair 5	PreANX - PostANX	.90000	.96511	.24919	.36554	1.43446	3.612	14	.003
Pair 6	PreHOS - PostHOS	.48800	.84587	.21840	.01958	.95642	2.234	14	.042
Pair 7	PrePHOB - PostPHOB	.65600	.79744	.20590	.21439	1.09761	3.186	14	.007
Pair 8	PrePAR - PostPAR	.23267	.42997	.11102	-.00545	.47078	2.096	14	.055
Pair 9	PrePSY - PostPSY	.40467	.57025	.14724	.08887	.72046	2.748	14	.016
Pair 10	PreADD - PostADD	.58867	.64240	.16587	.23291	.94442	3.549	14	.003
Pair 11	PreGSI - PostGSI	.59667	.54371	.14039	.29557	.89776	4.250	14	.001
Pair 12	PrePSDI - PostPSDI	.47867	.39968	.10320	.25733	.70000	4.638	14	.000

DASS

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRE_DEP	16.433333	15	10.923217	2.820362
	POST_DEP	6.466667	15	8.887123	2.294645
Pair 2	PRE_ANX	13.866667	15	9.577628	2.472933
	POST_ANX	6.666667	15	6.125668	1.581641
Pair 3	PRE_STR	18.400000	15	9.500376	2.452987
	POST_STR	7.066667	15	8.261068	2.132998

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	PRE_DEP - POST_DEP	9.966667	10.600651	2.737076	4.096222	15.837112	3.641	14	.003
Pair 2	PRE_ANX - POST_ANX	7.200000	8.601910	2.221004	2.436421	11.963579	3.242	14	.006
Pair 3	PRE_STR - POST_STR	11.333333	9.066553	2.340974	6.312444	16.354223	4.841	14	.000

SPA-Severity

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	BE_SEV_B	1.0667	15	1.1629	.3003
	BE_SEV_A	.3333	15	.6172	.1594
Pair 2	CO_SEV_B	2.2000	15	1.1464	.2960
	CO_SEV_A	.8000	15	.6761	.1746
Pair 3	SO_SEV_B	2.1333	15	1.0601	.2737
	SO_SEV_A	1.1333	15	.7432	.1919
Pair 4	AF_SEV_B	2.4000	15	1.1212	.2895
	AF_SEV_A	1.1333	15	.8338	.2153
Pair 5	IN_SEV_B	1.4000	15	1.3522	.3491
	IN_SEV_A	.3333	15	.6172	.1594

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	BE_SEV_B - BE_SEV_A	.7333	1.2799	.3305	.456E-02	1.4421	2.219	14	.044
Pair 2	CO_SEV_B - CO_SEV_A	1.4000	1.0556	.2726	.8154	1.9846	5.137	14	.000
Pair 3	SO_SEV_B - SO_SEV_A	1.0000	1.1339	.2928	.3721	1.6279	3.416	14	.004
Pair 4	AF_SEV_B - AF_SEV_A	1.2667	1.3870	.3581	.4986	2.0348	3.537	14	.003
Pair 5	IN_SEV_B - IN_SEV_A	1.0667	1.2799	.3305	.3579	1.7754	3.228	14	.006

SPA-Manageability

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	BE_MAN_B	2.8667	15	1.3558	.3501
	BE_MAN_A	3.6667	15	.6172	.1594
Pair 2	CO_MAN_B	2.3333	15	1.2910	.3333
	CO_MAN_A	3.4667	15	.6399	.1652
Pair 3	SO_MAN_B	2.2000	15	1.2071	.3117
	SO_MAN_A	3.2667	15	.7988	.2063
Pair 4	AF_MAN_B	1.9333	15	1.2228	.3157
	AF_MAN_A	3.2000	15	.8619	.2225
Pair 5	IN_MAN_B	2.7333	15	1.2799	.3305
	IN_MAN_A	3.8667	15	.3519	9.085E-02

Paired Samples Test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 BE_MAN_B - BE_MAN_A	-.8000	1.2071	.3117	-1.4685	-.1315	-2.567	14	.022
Pair 2 CO_MAN_B - CO_MAN_A	-1.1333	1.3020	.3362	-1.8544	-.4123	-3.371	14	.005
Pair 3 SO_MAN_B - SO_MAN_A	-1.0667	1.2799	.3305	-1.7754	-.3579	-3.228	14	.006
Pair 4 AF_MAN_B - AF_MAN_A	-1.2667	1.3870	.3581	-2.0348	-.4986	-3.537	14	.003
Pair 5 IN_MAN_B - IN_MAN_A	-1.1333	1.1872	.3065	-1.7908	-.4759	-3.697	14	.002

SPA-PERCEIVED IMPROVEMENT

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
BE_IMP	20	2.8000	1.0052	.2248
CO_IMP	20	2.8500	.7452	.1666
SO_IMP	21	2.8571	.8536	.1863
AF_IMP	20	2.7000	1.0809	.2417
IN_IMP	20	2.7000	1.0311	.2306

One-Sample Test

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
BE_IMP	12.457	19	.000	2.8000	2.3295	3.2705
CO_IMP	17.105	19	.000	2.8500	2.5013	3.1987
SO_IMP	15.339	20	.000	2.8571	2.4686	3.2457
AF_IMP	11.171	19	.000	2.7000	2.1941	3.2059
IN_IMP	11.711	19	.000	2.7000	2.2174	3.1826

SPA-SATISFACTION WITH THERAPY

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
TH_TYPE	19	3.2632	.8057	.1848
TH_LENGT	19	2.7368	.9335	.2142
TH_RELAT	19	3.6842	.5824	.1336
TH_SKILL	19	3.2632	.6534	.1499

One-Sample Test

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
TH_TYPE	17.654	18	.000	3.2632	2.8748	3.6515
TH_LENGT	12.780	18	.000	2.7368	2.2869	3.1868
TH_RELAT	27.574	18	.000	3.6842	3.4035	3.9649
TH_SKILL	21.770	18	.000	3.2632	2.9482	3.5781