Personality and Mental Health
Personality and Mental Health
9: 345–356 (2015)
Published online 15 September 2015 in Wiley Online Library
(wileyonlinelibrary.com) DOI 10.1002/pmh.1311

Acceptance and commitment therapy group-treatment for non-responsive patients with personality disorders: An exploratory study

FARID CHAKHSSI[1,4], WIM JANSSEN[2], SILVIA M. POL[1], MALINDA VAN DREUMEL[3] AND GERBEN J. WESTERHOF[4], [1]Scelta, Apeldoorn, The Netherlands; [2]Windesheim School of Applied Science Zwolle and Altrecht Aventurijn, Den Dolder, The Netherlands; [3]GGZE, Eindhoven, The Netherlands; [4]Department of Psychology, Health, and Technology, University of Twente, Enschede, The Netherlands

ABSTRACT

Patients with personality disorders who did not respond to previous outpatient treatment are among the most challenging patients to treat and are often referred to specialized settings. Acceptance and commitment therapy (ACT) is an innovative therapy that has shown effectiveness in treatment-resistant cases with chronic or recurrent depression with or without co-morbid personality disorders. The central role that ACT accords to positive values and experiential avoidance may enhance treatment responsivity in patients with personality disorders that did not respond to previous treatments. The current nonrandomized study explored the effectiveness of a 26-week ACT-based group treatment (n = 60) for personality disorders compared to treatment-as-usual (n = 21) based on cognitive behaviour therapy (CBT-TAU) at a specialized setting for patients with personality disorders. Individuals in both treatment conditions demonstrated small to moderate decreases in general psychological functioning and personality pathology. There was no main effect of therapy condition. Overall, results suggest that ACT is a possible treatment option for individuals with difficult-to-treat personality pathology and further outcome research is warranted. Copyright © 2015 John Wiley & Sons, Ltd.

Patients with personality disorders with a history of not responding to previous outpatient treatment interventions are among the most challenging patients to treat, and are often referred to specialized inpatient settings (Verheul & Herbrink, 2007). However, current treatment approaches for treatment-resistant patients with various personality disorders are scarce (Duggan, Huband, Smailagic, Ferriter, & Adams, 2007; Reiss, Lieb, Arntz, Shaw, & Farrell, 2014), and the few existing studies evaluating treatment approaches for these non-responding patients have primarily focused on patients with borderline personality disorder (e.g. Reiss et al., 2014) and/or are complex and of long duration, i.e. mixed residential and community-based intensive programmes up to 30 months (e.g. Chiesa, Fonagy, & Holmes, 2006). Thus, there is need for further evaluating treatment approaches, not only for patients with borderline personality disorder but also for patients

with other personality disorders that did not respond to previous treatments.

Acceptance and commitment therapy (ACT; Hayes, Strosahl, & Wilson, 1999) is a cognitive behavioural therapy that targets experiential avoidance—the unwillingness to accept negative thoughts, feelings and emotions—by teaching generic positive psychological skills through a combination of mindfulness, acceptance, values and traditional behavioural change (Hayes et al., 1999). Experiential avoidance is considered to play a central role in the course and development of psychopathology, including personality disorders (Jacob, Ower, & Buchholz, 2013). Randomized trials have demonstrated that ACT may be an effective treatment for a variety of psychiatric disorders by targeting experiential avoidance (Hayes, Luoma, Bond, Masuda, & Lillis, 2006). A recent meta-analysis by A-Tjak et al. (2015) included 39 studies comparing the efficacy of ACT to CBT on outcome and process measures for clinically relevant health problems such as anxiety and depression, addiction, somatic health problems and other mental health problems. The findings showed that ACT was significantly more effective than control conditions (i.e. placebo, waitlist or treatment as usual) at post-treatment and follow-up, in completer and intent-to-treat analyses for primary outcomes (Hedges's $g = 0.57$, $p < .001$). However, ACT was not significantly more effective than CBT (Hedges's $g = .032$, $p = .140$).

Preliminary evidence indicates that ACT may be beneficial for patients with personality pathology (Gratz & Gunderson, 2006; Morton, Snowdon, Gopold, and Guymer, 2012; Clarke, Kingston, James, Bolderston, & Remington, 2014; Clarke, Kingston, Wilson, Bolderston, & Remington, 2012; see Öst, 2014, for a critical review of the earlier studies). The most recent study compared a 16-week group based ACT intervention to a group based cognitive behaviour therapy (CBT) intervention in a sample of 45 patients with chronic or recurrent depression with or without co-morbid personality disorders, who had relapsed from at least one psychosocial intervention (Clarke et al., 2014). Results showed significantly reduced depressive symptoms at post-treatment for both conditions, but the post-treatment gains were significantly more maintained in the ACT condition at 6-month follow-up with a large effect size ($d = .90$). Also, reductions in experiential avoidance—an explicit target of ACT—at post-treatment predicted improved scores on the outcome measures at follow-up in the ACT condition, alone. However, no measure of change in personality pathology was included.

The current study aimed to contribute to the small evidence base regarding treatment approaches for patients with personality disorders who did not profit from earlier interventions. This nonrandomized study explored the effect on personality pathology of an ACT-based group treatment for personality disorders compared to treatment-as-usual based on cognitive behaviour therapy (CBT-TAU) at a specialized setting for patients with personality disorders that did not respond to previous treatments. To measure the primary outcome in a sample of patients with personality disorders, an instrument specifically developed for measuring change in personality pathology (Verheul et al., 2008) was included in the study, in addition to other secondary outcome measures aimed at measuring general psychological functioning, experiential avoidance, coping skills, positive outcomes and quality of life. Because of the exploratory nature of the study, we hypothesized that patients receiving ACT would show similar and/or greater improvements in the primary outcome measures across time as those receiving CBT-TAU.

Method

Design

We used a pre-treatment and post-treatment design to compare the effectiveness of 26-week group-based ACT intervention with a group-based

DOI: 10.1002/pmh

TAU-CBT intervention of the same duration at two sites of a specialized day hospital setting for the treatment of personality disordered patients who relapsed from previous outpatient treatment interventions. The protocol was approved by the hospital institutional review board (IRB). The trial was not registered because it was a first nonrandomized exploratory study.

Participants

All participants were recruited from referrals to a specialist day hospital setting for patients with personality disorders at two sites. The two sites belonged to the same specialized setting but were located in geographically different locations, i.e. in two different towns. Patients were eligible to participate in the study if they met the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV; APA, 2000) criteria for at least one personality disorder, had previously received outpatient psychological treatment, had been discharged and subsequently re-referred by an experienced clinician (cfm. Clarke et al., 2012). Participants who met the DSM-IV criteria for borderline intellectual functioning (V62.89) or for a disorder belonging to the DSM-IV disorder categories Schizophrenia and other psychotic disorders or Pervasive developmental disorders were excluded from participation in this study. The participants' characteristics are presented in Table 1.

Interventions

Participants attended weekly 2 days at the specialized day hospital setting, but spent the evenings and nights elsewhere. One site provided only the ACT condition, whilst the other site only provided the TAU-CBT condition. At each site, the treatment programme existed of group therapy (either ACT or TAU-CBT) supplemented by arts therapy, including creative and drama therapy, and rehabilitation counselling. A psychiatrist, two clinical psychologists, a creative arts therapist and psychiatric nurses ran each site. Each day lasted 6 h, divided over group therapy (ACT or CBT; 1.25 h), arts therapy (1 h), rehabilitation counselling (1.25 h), milieu therapy (1 h), lunch break (1 h), and opening- and closing meetings (.25 h, each). Participants had to attend at least 18 weeks to be considered as someone who completed the treatment, with a maximum of 34 weeks (M = 26 weeks).

Acceptance and commitment therapy. ACT-group therapy was run by a clinical psychiatrist, a clinical psychologist and a psychiatric nurse (mean post-qualification experience = 12.5 years). The clinical psychiatrist and psychologist were trained in ACT, and the clinical psychiatrist had previous experience in providing ACT group therapy. There was no supervision, but the therapists met once a month for intervision, aimed at increasing ACT knowledge, improving ACT-skills and maintaining treatment integrity. The ACT treatment programme was not manualized but was developed and tested in the study setting and closely followed the practical ACT guide for practitioners (Hayes & Strosahl, 2005; Luoma, Hayes, & Walser, 2007). Each session addressed specific themes with behavioural, experiential and breathing exercises aimed at enhancing psychological flexibility. These themes included acceptance, cognitive fusion, positive values and committed action (Hayes & Strosahl, 2005).

Treatment-as-usual based on cognitive behaviour therapy. TAU-CBT group was run by a psychotherapist (post-qualification experience = 12.5 years), and a psychiatric nurse (post-qualification experience = 7.5 years). The psychotherapist was trained in CBT. Similar to the ACT condition, there was no supervision, but the therapists met once a month for intervision, aimed at maintaining treatment integrity. The TAU-CBT treatment programme was also not manualized but closely followed the CBT guide for practitioners (Beck, 2011). TAU-CBT programme started with an introduction of the CBT model focused on cognitive schemas. Later sessions centred on one participant

DOI: 10.1002/pmh

Table 1: Baseline characteristics

Characteristics	Total ($n = 81$)	ACT ($n = 60$)	TAU-CBT ($n = 21$)
Age, mean (SD), years	32.98 (9.94)	32.88 (10.13)	33.26 (9.63)
Gender, no. (%)			
Female	67 (82.7%)	51 (85.0%)	16 (76.2%)
Male	14 (17.3%)	9 (15.0%)	5 (23.8%)
Marital status, no. (%)			
Single	65 (80.0%)	44 (73.3%)	19 (90.5%)
Living with partner	18 (20.0%)	16 (26.7%)	2 (9.5%)
Education, no. (%)			
High	13 (16.0%)	6 (10.0%)	7 (33.3%)
Middle	25 (30.8%)	20 (33.3%)	5 (23.8%)
Low	12 (14.8%)	11 (18.3%)	1 (4.8%)
Unknown	31 (38.3%)	23 (38.3%)	8 (38.1%)
Prev. outpatient treatments, no. (%)	81 (100.0%)	60 (100.0%)	21 (100.0%)
Personality diagnosis, no. (%)			
PD NOS	38 (46.9%)	29 (48.3%)	9 (42.9%)
Borderline PD	40 (49.4%)	28 (46.7%)	12 (57.1%)
Avoidant PD	48 (59.3%)	15 (25.0%)	3 (14.3%)
Dependent PD	17 (21.0%)	12 (20.0%)	5 (23.8%)
Obsessive–compulsive PD	10 (12.4%)	5 (8.3%)	5 (23.8%)
Antisocial PD	3 (3.7%)	3 (5.0%)	0 (0.0%)
Comorbidity, no. (%)			
Psychosocial problems	38 (46.9%)	29 (48.3%)	9 (42.9%)
Mood disorder	40 (49.4%)	30 (50.0%)	10 (47.6%)
Anxiety disorder	18 (22.2%)	11 (18.3%)	7 (33.3%)
Somatoform disorder	3 (3.7%)	3 (5.0%)	0 (0.0%)
Eating disorder	4 (4.9%)	3 (5.0%)	1 (4.8%)
Substance abuse	3 (3.7%)	1 (1.7%)	2 (9.5%)

Note: ACT = Acceptance and Commitment Therapy; TAU-CBT = Treatment-as-usual Cognitive Behaviour Therapy; PD = Personality Disorder; NOS = Not Otherwise specified; Percentages may add up to more than 100% because most patients received more than one DSM-IV diagnosis

each, who presented a specific situation. Thoughts, feelings and behaviours belonging to this situation were identified and reviewed in the group. The session ended for a participant with a flashcard containing a positive self-statement to correct negative thoughts, feelings and behaviours.

Measures

Structured interview for DSM-IV Axis-I and Axis-II disorders. The Structured Clinical Interview for DSM-IV Axis-I Disorders (SCID-I; First, Spitzer, Gibbon, & Williams, 1997) and the Structured Clinical Interview for DSM-IV Axis-I Disorders (SCID-II; First, Gibbon, Spitzer, & Williams, 1996) were used to assess for DSM-IV pathology (see Table 1). The Dutch versions of the SCID-I and the SCID-II have adequate internal consistency and showed moderate to excellent inter-rater agreement in a mixed sample of inpatients and outpatients, and non-patient controls (Lobbestael, Leurgans, & Arntz, 2011).

Severity indices of personality problems. The SIPP-SF (Verheul et al., 2008) is a short version of the SIPP-118 (Verheul et al., 2008), and was used as

DOI: 10.1002/pmh

the primary outcome measure in this study. The SIPP-SF was designed to assess the severity of personality pathology and changes in adaptive and maladaptive personality functioning during the treatment. The SIPP-SF measures five factors: Self-Control, Identity Integration, Relational Capacities, Responsibility and Social Concordance. The 60 items are rated from 1 (least adaptive) to 4 (most adaptive). Higher scores indicate higher levels of functioning. The Dutch version of the SIPP-118 has shown good reliability and validity (Verheul et al., 2008).

Outcome Questionnaire 45. The Outcome Questionnaire (OQ-45; Lambert et al., 1996) is a self-report scale designed to measure general psychological functioning. The 45 items, asking how the respondent felt over the last week, are scored on a 5-point rating, ranging from 0 (*never*) to 4 (*almost always*). Higher scores are indicative of poorer functioning. The Dutch version of the OQ-45 demonstrated sound psychometric properties, including internal consistency, test–retest reliability and validity (de Jong et al., 2007) and was used in this study.

Acceptance and Action Questionnaire, second version. The Acceptance and Action Questionnaire, second version (AAQ-II; Bond et al., 2011) is a self-report measure designed to assess experiential avoidance. The 10 items, asking the respondent to which degree each statement is true for them, are rated on a 7-point scale varying from 1 (*never true*) to 7 (*always true*). Higher scores indicate lower levels of experiential avoidance and higher levers of general acceptance. The Dutch version of the AAQ-II has shown adequate reliability and validity (Fledderus, Oude Voshaar, ten Klooster, & Bohlmeijer, 2012).

Utrechtse Coping List. The Utrechtse Coping List (UCL; Schreurs, van de Willige, Tellegen, & Brosschot, 1993) is a self-report instrument designed to measure different types of coping styles: active tackling, seeking social support, palliative coping, avoiding, passive coping, reassuring thoughts and expression of emotions. The UCL consist of 44 items that are scored using a 4-point scale ranging from 1 (*seldom or never*) to 4 (*very often*). Two subscales were used in this study: (1) active coping subscale (UCL-Act) that measures to what extent respondents use strategies change the nature of the stressor itself or how one thinks about it, and (2) avoiding subscale (UCL-Av) that measures to what extent respondents avoid difficult situations or problems. The UCL is the most widely used coping inventory in the Netherlands (Fledderus, Bohlmeijer, & Pieterse, 2010), has shown good reliability and validity (Schaufeli & van Dierendonck, 1992) and has recently been translated into English (Turner, Bryant-Waugh, Peveler, & Bucks, 2012).

Positive Outcome Scale. The Positive Outcome Scale (POS; Appelo, 2005) is self-report measures designed to measure autonomy and social optimism. The 10 items, asking respondents to which degree each statement is true for them, are rated on a 4-point scale varying from 1 (*never*) to 4 (*always*). Higher scores are indicative of higher levels of autonomy and social optimism. Reliability and validity are adequate (Appelo, 2005).

The World Health Organization Quality of Life-BREF. The World Health Organization Quality of Life-BREF is an abbreviated Quality of Life instrument (WHOQOL-BREF; Skevington, Lotfy, & O'Connell, 2004). The WHOQOL-BREF is a self-report instrument that measures the following domains: physical health, psychological health, social relationships and environment. The 26 items, asking the respondent how they felt about their quality of life, health or other areas of their life, are scored on a 5-point scale, varying from 1 (*not at all*) to 5 (*completely*). Higher total score indicates higher quality of life. The construct validity and the reliability of the Dutch version of the WHOQOL have been reported as good (Trompenaars, Masthoff, van Heck, Hodiamont, & de Vries, 2005).

DOI: 10.1002/pmh

Procedure

Participants were recruited from all consecutive admissions between 2010 and 2013 at the two sites, and informed consent was obtained in 81 cases (see Figure 1). All recruited participants were allocated to either ACT or TAU-CBT based on geographical treatment accessibility. The clinicians or settings that referred the patients had no knowledge of the current study, nor did the participants meet other participants or therapists from the other condition. To assess DSM-IV Axis-I and Axis-II pathology, SCID-I and SCID-II were used. These were administered by Master-level psychology students, all of whom were trained and supervised during the study by experienced raters (clinical psychologists). Pre-treatment data was obtained by administering the questionnaires, OQ-45, SIPP-SF, AAQ-II, UCL, POS and WHOQOL-BREF before the start of the treatment. Post-treatment data was obtained by administering the same questionnaires at the end of the final session. At each time, two groups were run at the ACT site, with a maximum of nine participants per group. However, the TAU-CBT site was smaller, and one group was run with a maximum of eight participants, at each time. This explains the difference in number of participants between the two conditions ($n = 60$ vs $n = 21$).

Statistical analyses

All statistical analyses were performed using IBM Statistical Package for the Social Sciences, version 22 (IBM, 2013). Differences in demographic and DSM-IV pathology between the two conditions were examined using Analysis of Variances (ANOVA) and contingency tables with the Pearson chi-square. A series of Repeated

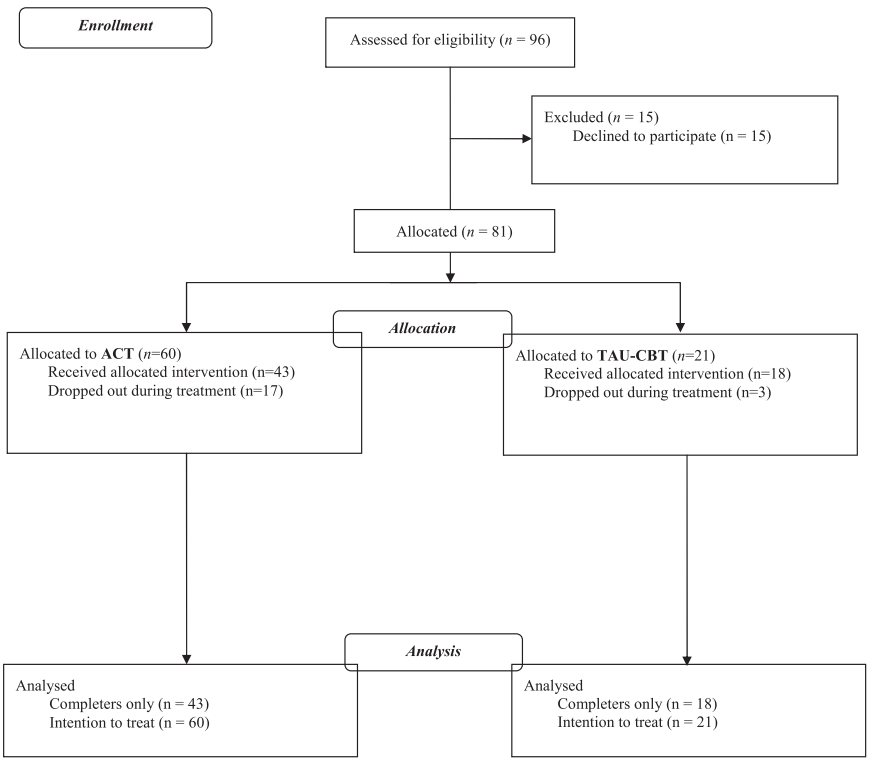

Figure 1: Flowchart

DOI: 10.1002/pmh

Measures ANOVA were used to examine the changes on the measures between pre- and post-treatment, using the condition (ACT vs TAU-CBT) as between-subjects factor. Furthermore, data from all recruited participants, regardless of whether they completed treatment or dropped out, were analysed based on intention-to-treat, using last observation carried forward, based on the assumption of no change in participants who dropped out and/or did not complete post-treatment assessments. We compared these intention-to-treat analyses to completers only and describe possible differences between these two analyses. Cohen's *d* within-group (pre-post difference divided by baseline standard deviation) and between-group effect sizes (mean differences divided by pooled standard deviation with weights for the sample sizes) were calculated and reported when appropriate. According to Cohen (1988), the magnitude of effect sizes can be considered small ($d < .20$), medium ($d = .50$) or large ($d > .80$). Reliable change (cfm. Jacobson & Truax, 1991) was calculated using the primary outcome measure SIPP-SF, to examine whether change on a group level was reflected in change on an individual level.

Results

As shown in Figure 1, 81 eligible participants were allocated between the two sites (ACT: $n = 60$; TAU-CBT: $n = 21$). The sample consisted of 67 women (82.7%) and 14 men with a mean age of 32.98 years (SD = 9.94). All participants had undergone previous outpatient treatment, were referred to the specialized setting by an experienced clinician and met the criteria for at least one DSM-IV personality disorder. DSM-IV axis-I disorders were highly prevalent in the total sample (see Table 1). No significant differences were observed between the groups on baseline characteristics. During the study period, 21 participants (18 in the ACT therapy condition and 3 in the TAU-CBT condition) dropped out. The difference between the two conditions in dropout percent was not significant ($\chi^2 = 3.2$, $p = .074$). A comparison between participants who completed the treatment and those who did not show no significant differences on baseline characteristics or on the pre-treatment scores of the measures.

The results of the repeated measures ANOVA using the intention-to-treat sample showed no significant Group × Time interactions, but significant effects for time were observed for the primary outcome (SIPP-SF: $F = 5.794$, $p = .018$) and the secondary outcome measures [OQ-45: $F = 12.586$, $p = .001$; UCL-Act: $F = 12.452$, $p = .001$; PUL: $F = 5.721$, $p = .019$; WHOQOL: $F = 7.069$, $p = .009$], with the exception of experiential avoidance [AAQ-II: $F = 2.717$, $p = .103$] and avoidant coping skills [UCL-Av: $F = 0.112$, $p = .739$]. No group differences were observed on the outcome measures.

Next, the repeated measures ANOVA were performed again based on the completers-only sample (see Table 2). The results were similar to the results from the intention-to-treat sample. Participants showed significant improvements over time in personality pathology (SIPP-SF), as well as in general psychological functioning (OQ-45), active coping skills (UCL-Act scale), positive outcomes (PUL) and quality of life (WHOQOL), regardless of whether participants received ACT or TAU-CBT. No significant improvements over time were found for experiential avoidance (AAQ-II) and avoidant coping skills (UCL-Av scale). There was a significant effect of Group only for the UCL-Act scale. Post-hoc analyses revealed that the participants who received ACT had significantly lower mean scores on the UCL-Act at pre-treatment compared to the participants who received TAU-CBT [$t\ (59) = -2.691$, $p = .009$]. Finally, there was no significant Group × Time interaction observed which indicates that there was no differential effect of the two therapy interventions on the outcome measures.

DOI: 10.1002/pmh

Table 2: Mean, standard deviation (between parentheses) and effect sizes (Cohen's d) for the measures comparing pre- and post-treatment in the completers-only sample

Measure	ACT ($n = 43$)			TAU-CBT ($n = 18$)			Repeated measures ANOVA		
	Pre-treatment	Post-treatment		Pre-treatment	Post-treatment		Group	Time	Group × time
	M(*SD*)	M(*SD*)	*d*	M(*SD*)	M(*SD*)	*d*	*F*	*F*	*F*
SIPP-SF	158.37 (26.62)	170.33 (25.87)	.455	162.44 (32.65)	164.80 (29.63)	.037	.010	6.983 *	3.133
OQ-45	88.00 (19.51)	77.63 (21.36)	.506	88.44 (29.67)	81.07 (25.64)	.265	.107	13.850 **	.393
AAQ-II	33.49 (8.75)	37.00 (9.08)	.360	32.44 (8.55)	33.67 (10.67)	.126	1.253	2.944	.545
WHOQOL	5.65 (1.48)	6.43 (1.32)	.557	5.33 (1.88)	5.73 (1.76)	.220	1.834	7.807 **	.816
UCL-Act	15.09 (3.75)	17.07 (3.27)	.561	17.83 (3.29)	18.93 (3.23)	.338	6.880 *	14.208 **	1.152
UCL-Av	18.49 (3.10)	18.07 (2.42)	.152	18.72 (2.78)	18.80 (2.89)	.014	.561	.146	.309
POS	25.95 (4.14)	27.60 (3.73)	.418	25.17 (5.36)	26.07 (5.25)	.169	1.078	6.200 *	.532

Note: SIPP-SF = Severity Indices of Personality Problems—Short Form; OQ45 = Outcome Questionnaire-45; AAQ-II = Acceptance and Action Questionnaire; WHOQOL = Quality of Life; UCL-Act = Utrechtse Coping list Active coping scale; UCL-Av = Utrechtse Coping list Avoidance scale; POS = Positive Outcome Scale; *d* = Cohen's *d*; SD = standard deviation.
*$p < .05$.
**$p < .01$.

To compare the magnitude of effect sizes, Cohen's *d* within-group effect size were calculated for both the completers-only and the intention-to-treat sample. The within-group effect sizes for the completers-only sample ranged from small to moderate and were overall larger in the ACT therapy condition compared to the TAU-CBT therapy condition (see Table 2). Cohen's *d* within-group effect sizes for the intention-to-treat sample followed a similar pattern to the within-group effect sizes in the completers-only sample, although the effect sizes were somewhat lower: small to moderate within-group effect sizes were observed for the SIPP-SF (ACT: $d = .314$; TAU-CBT: $d = .061$), OQ-45 (ACT: $d = .316$; TAU-CBT: $d = .234$), AAQ-II (ACT: $d = .239$; TAU-CBT: $d = .115$), UCL-Act scale (ACT: $d = .370$; TAU-CBT: $d = .249$), UCL Av-scale (ACT: $d = .312$; TAU-CBT: $d = .021$), POS (ACT: $d = .264$; TAU-CBT: $d = .136$) and WHOQOL (ACT: $d = .357$; TAU-CBT: $d = .180$). Between-group effect sizes for both the completers-only (d_{co}) and the intention-to-treat sample (d_{itt}) at post-treatment were small to moderate for the SIPP-SF ($d_{co} = .20$; $d_{itt} = .25$), OQ-45 ($d_{co} = .15$; $d_{itt} = .13$), AAQ-II ($d_{co} = .36$; $d_{itt} = .33$), UCL-Act scale ($d_{co} = .29$; $d_{itt} = .33$), UCL Av-scale ($d_{co} = .59$; $d_{itt} = .50$), POS ($d_{co} = .36$; $d_{itt} = .50$) and WHOQOL ($d_{co} = .314$; $d_{itt} = .061$). All between-group effect sizes were in favour for the ACT therapy condition, except for the UCL-Act and UCL-Av scales.

Table 3: Number (%) of reliable change for ACT and TAU-CBT from pre- to post-treatment measured with the SIPP-SF of the intention-to-treat sample

	ACT	TAU-CBT
	n (%)	*n* (%)
SIPP-SF*		
Improved	20 (33.3%)	2 (9.5%)
No change	33 (55.0%)	19 (90.5%)
Deteriorated	7 (11.7%)	0 (0.0%)

Note: SIPP-SF = Severity Indices of Personality Problems—Short Form.
*$p < .05$.

Because broadly similar results and magnitude of effect sizes were observed in the completers-only sample and the intention-to-treat sample, subsequent analyses and discussion will be based on the intention-to-treat sample.

Reliable change was calculated for the primary outcome measure, the SIPP-SF, using the equation developed by Jacobson and Truax (1991) that results in three categories: percent of participants who have *reliably improved* from pre- to post-treatment, participants who have showed *no change* and participants who have *reliably deteriorated*. In Table 3, the percentage of ACT and TAU-CBT participants is shown who reliably improved, showed no change or deteriorated. The differences was significant for the SIPP-SF [$\chi^2 = 4.800$, $p = .029$]: more ACT participants improved than CBT-TAU participants.

Discussion

This exploratory study shows that group-based interventions for treatment-resistant patients with personality disorders led to significant improvements in personality pathology, general psychological functioning, coping skills and quality of life, regardless of whether participants received ACT or TAU-CBT. In group analyses, no main effect of therapy condition (ACT vs TAU-CBT) was observed on the outcome measures. ACT obtained equivalent results compared to TAU-CBT. Assessment of change on an individual level showed that a significantly higher percentage of participants receiving ACT improved on personality pathology. These findings need to be evaluated in randomized controlled studies with follow-up after discharge to evaluate whether the improvements will be maintained over time in the ACT group and the TAU-CBT group. Previous studies of ACT in patients with co-morbid personality pathology (e.g. Clarke et al., 2014) suggest that participants who received ACT

DOI: 10.1002/pmh

treatment were more likely to maintain improvements at follow-up after discharge than those who received CBT.

The current findings provide preliminary support that ACT may be helpful for patients with personality disorders with a history of not responding to previous outpatient treatment interventions. To the best of our knowledge, this is the first study evaluating ACT in a sample of difficult to treat patients with personality disorders in a specialized setting. Thus, our study contributes to the small evidence base regarding treatment approaches in specialized settings, by showing that ACT can be applied to patients with other personality disorders besides borderline personality disorder and can be delivered over 26 weeks using a group-based format. The overall results, in terms of effect sizes, were slightly lower compared to studies examining structured specialized inpatient treatment programme based on schema therapy for patients with borderline personality disorders that relapsed after previous treatments (Reiss et al., 2014). One explanation could be the difference in settings: inpatient versus day-hospital treatment. In addition, differences in personality pathology between the two studies may also have affected outcome. The inpatient schema therapy programme excluded patients with other personality disorders than borderline personality disorders (Reiss et al., 2014), whilst in the current study no personality disorders were excluded.

Contrary to our expectations, experiential avoidance did not significantly improve in the ACT-participants. Although, the AAQ-II was specifically designed to measure changes in experiential avoidance during treatment, no significant differences were found from pre- to post-treatment on this measure. However, the ACT participants showed a larger improvement in experiential avoidance, with small to moderate effect size, compared to the TAU-CBT participants. It is possible that our study was underpowered and that differential improvement in experiential avoidance between the two groups would reach significance in larger samples, as it would in the other outcome measures that showed larger but not significantly different effect sizes for the ACT group.

In the current study, the overall retention rate was higher compared to other studies examining ACT in patients that did not respond to previous treatments (e.g. Clarke et al., 2014) but differed among participants who received ACT than those who received TAU-CBT (70.5% vs 85.7%, respectively). No baseline differences were found between the completers and dropouts that could explain the differential retention rates, and future studies should add measures to examine the factors that contributed to the attrition.

Although the study was performed in a naturalistic settings, thereby contributing to the ecological validity of the findings, it was not without limitations. First, participants were not randomized but allocated to a therapy condition based on geographical treatment accessibility which may indicate a selection bias. However, we found no differences between the two conditions on demographic or baseline characteristics. Second, treatment fidelity was not assessed. Although the therapists in both conditions received extensive training, supervision during their training and intervision during the study, these factors may have affected outcome and/or the different dropout percentages between the two conditions. Future studies should include measures for treatment fidelity, also in order to determine if the attrition rate in these samples is influenced by specific or non-specific treatment factors. The intention-to-treat analyses showed broadly the same magnitude of effect sizes as the completers-only analyses, indicating that the differences in attrition did not affect the between-group comparisons. Third, the unequal sample size across groups that may have affected the results, in particular because it might be underpowered. Further research with an equal sample size across groups will allow the verification of our findings. Fourth, the patients were not only provided with ACT or TAU-CBT but also with other treatments such as arts therapy,

DOI: 10.1002/pmh

rehabilitation counselling and milieu therapy. Although the amount of the additional treatment was the same for both conditions, the effect of these treatments on the outcomes remains unknown. Fifth, we did not measure medication use during the study. Potentially, medication use during the study may have affected the results, and this should also be examined in future research. Finally, no independent data was available on the type and quality of previous outpatient treatment interventions. The effect of previous treatment experiences on outcome in this study remains unclear.

Despite these limitations, this study provides preliminary support that ACT may be beneficial for patients with various personality disorders that did respond to previous treatments. The next logical step would be to examine group-based ACT of treatment-resistant patients with personality disorders in controlled studies.

Clinical implications. The current study provides preliminary evidence that patients with personality disorders that did not respond to earlier treatment efforts may benefit from a 26-week day-hospital programme. The results showed that ACT obtained equivalent results compared to TAU-CBT, that is, small to moderate improvements at post-treatment in personality pathology, as well in as in general psychological functioning, active coping skills, social optimism and quality of life.

Conflict of Interest

None

References

A-Tjak, J. G. L., Davis, M. L., Morina, N., Powers, M. B., Smits, J. A. J., & Emmelkamp, P. M. G. (2015). A meta-analysis of the efficacy of acceptance and commitment therapy for clinically relevant mental and physical health problems. *Psychotherapy and Psychosomatics*, *84*, 30–36.

American Psychiatric Association (APA). (2000). *Diagnostic and statistical manual of mental disorders* (revised 4th ed.). Washington, DC: APA.

Appelo, M. T. (2005). *Positieve uitkomsten lijst* (*PUL*). (*Positive Outcome Scale*). Nijmegen: Cure and Care Publishers.

Beck, J. S. (2011). *Cognitive behavior therapy*, *2nd Edition*: *basics and beyond*. Guilford Press.

Bond, F. W., Hayes, S. C., Baer, R. A., Carpenter, K. M., Guenole, N., Orcutt, H. K., … Zettle, R. D. (2011). Preliminary psychometric properties of the Acceptance and Action Questionnaire—II: a revised measure of psychological inflexibility and experiential avoidance. *Behavior Therapy*, *42*, 676–688.

Chiesa, M., Fonagy, P., & Holmes, J. (2006). Six-year follow-up of three treatment programs to personality disorder. *Journal of Personality Disorders*, *20*, 493–509.

Clarke, S., Kingston, J., James, K., Bolderston, H., & Remington, B. (2014). Acceptance and commitment therapy group for treatment-resistant participants: a randomized controlled trial. *Journal of Contextual Behavioral Science*, *3*, 179–188.

Clarke, S., Kingston, J., Wilson, K. G., Bolderston, H., & Remington, B. (2012). Acceptance and Commitment Therapy for a heterogeneous group of treatment-resistant clients: a treatment development study. *Cognitive and Behavioral Practice*, *19*, 560–572.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (*2nd ed.*). Hillsdale, NJ: Lawrence Erlbaum.

de Jong, K., Nugter, M. A., Polak, M. G., Wagenborg, J. E., Spinhoven, P., & Heiser, W. J. (2007). The Outcome Questionnaire (OQ-45) in a Dutch population: a cross-cultural validation. *Clinical Psychology & Psychotherapy*, *14*, 288–301.

Duggan, C., Huband, N., Smailagic, N., Ferriter, M., & Adams, C. (2007). The use of psychological treatments for people with personality disorder: a systematic review of randomized controlled trials. *Personality and Mental Health*, *1*, 95–125.

First, M. B., Spitzer, R. L., Gibbon, M., & Williams, J. B. W. (1997). *Structured Clinical Interview for DSM-IV Axis I disorders (SCID-I)*. New York: Biometric Research Department.

First, M. B., Gibbon, M., Spitzer, R. L., & Williams, J. B. W. (1996). *Structured Clinical Interview for DSM-IV Axis II disorders* (*SCID-II*). New York: Biometric Research Department.

Fledderus, M., Bohlmeijer, E. T., & Pieterse, M. E. (2010). Does experiential avoidance mediate the effects of maladaptive coping styles on psychopathology and mental health? *Behavior Modification*, *34*, 503–519.

Fledderus, M., Oude Voshaar, M. A., ten Klooster, P. M., & Bohlmeijer, E. T. (2012). Further evaluation of the psychometric properties of the Acceptance and Action Questionnaire—II. *Psychological Assessment*, *24*, 925–936.

Gratz, K. L., & Gunderson, J. G. (2006). Preliminary data on an acceptance-based emotion regulation group intervention for deliberate self-harm among women with borderline personality disorder. *Behavior Therapy*, *37*, 25–35.

Hayes, S. C., Luoma, J. B., Bond, F. W., Masuda, A., & Lillis, J. (2006). Acceptance and commitment therapy: model, processes and outcomes. *Behaviour Research and Therapy*, *44*, 1–25.

Hayes, S. C. & Strosahl, K. D. (2005). *A practical guide to acceptance and commitment therapy*. New York: Springer-Verlag.

Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (1999). *Acceptance and commitment therapy: an experiential approach to behavior change*. New York: Guilford Press.

IBM (2013). *IBM SPSS Statistics for Windows*, Version 22.0. New York: IBM Corp.

Jacob, G. A., Ower, N., & Buchholz, A. (2013). The role of experiential avoidance, psychopathology, and borderline personality features in experiencing positive emotions: A path analysis. *Journal of Behavior Therapy and Experimental Psychiatry*, *44*, 61–68.

Jacobson, N. S., & Truax, P. (1991). Clinical significance: a statistical approach to defining meaningful change in psychotherapy research. *Journal of Consulting and Clinical Psychology*, *59*, 12–19.

Lambert, M. J., Burlingame, G. M., Umphress, V., Hansen, N. B., Vermeersch, D. A., Clouse, G. C., …Burlingame, G.M. (1996). The reliability and validity of the Outcome Questionnaire. *Clinical Psychology and Psychotherapy*, *3*, 249–258.

Lobbestael, J., Leurgans, M., & Arntz, A. (2011). Inter-rater reliability of the structured clinical interview for DSM-IV Axis I disorders (SCID I) and Axis II disorders (SCID II). *Clinical Psychology & Psychotherapy*, *18*, 75–79.

Luoma, J. B., Hayes, S. C., & Walser, R. D. (2007). *Learning ACT: an Acceptance & Commitment Therapy skills-training manual for therapists*. Oakland: New Harbinger Publications.

Morton, J., Snowdon, S., Gopold, M., & Guymer, E. (2012). Acceptance and commitment therapy group treatment for symptoms of borderline personality disorder: a public sector pilot study. *Cognitive and Behavioral Practice*, *19*, 527–544.

Öst, L. G. (2014). The efficacy of Acceptance and Commitment Therapy: an updated systematic review and meta-analysis. *Behaviour Research and Therapy*, *61*, 105–121.

Reiss, N., Lieb, K., Arntz, A., Shaw, I. A., & Farrell, J. (2014). Responding to the treatment challenge of patients with severe BPD: results of three pilot studies of inpatient schema therapy. *Behavioural and Cognitive Psychotherapy*, *42*, 355–367.

Skevington, S. M., Lotfy, M., & O'Connell, K. A. (2004). The World Health Organization's WHOQOL-BREF quality of life assessment: psychometric properties and results of the international field trial. *A report from the WHOQOL group. Quality of life Research*, *13*, 299–310.

Schaufeli, W., & van Dierendonck, D. (1992). De betrouwbaarheid en validiteit van de Utrechtse Coping Lijst. Een longitudinaal onderzoek bij schoolverlaters. [The reliability and validity of the Utrecht Coping List: a longitudinal study among school drop-outs]. *Gedrag en Gezondheid*, *20*, 38–45.

Schreurs, P. J. G., van de Willige, G., Tellegen, B., & Brosschot, J. F. (1993). *Herziene handleiding Utrechtse Coping Lijst (UCL) [The revised manual of the Utrechtse Coping List (UCL)]*. Lisse: Swets & Zeitlinger B.V.

Trompenaars, F. J., Masthoff, E. D., Van Heck, G. L., Hodiamont, P. P., & De Vries, J. (2005). Content validity, construct validity, and reliability of the WHOQOL-Bref in a population of Dutch adult psychiatric outpatients. *Quality of Life Research*, *14* 151–160.

Turner, H., Bryant-Waugh, R., Peveler, R., & Bucks, R. S. (2012). A psychometric evaluation of an English version of the Utrecht Coping List. *European Eating Disorders Review*, *20*, 339–342.

Verheul, R., Andrea, H., Berghout, C. C., Dolan, C., Busschbach, J. J., van der Kroft, P. J., … Fonagy, P. (2008). Severity Indices of Personality Problems (SIPP-118): development, factor structure, reliability, and validity. *Psychological Assessment*, *20*, 23–34.

Verheul, R., & Herbrink, M. (2007). The efficacy of various modalities of psychotherapy for personality disorders: a systematic review of the evidence and clinical recommendations. *International Review of Psychiatry*, *19*, 25–38.

Address correspondence to: Farid Chakhssi, Scelta, PO Box 928, 7301 BD, Apeldoorn, The Netherlands. Email: f.chakhssi@ggnet.nl

DOI: 10.1002/pmh