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RESEARCH ARTICLE

Outcome of day treatment for older adults with affective disorders: An observational pre-post design of two transdiagnostic approaches

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Objective: First, to evaluate the outcome of 2 transdiagnostic day treatment programs. A 20-week psychotherapeutic day treatment (PDT) and an activating day treatment (ADT) program delivered in blocks of 4 weeks with a maximum of 24 weeks with respect to depression, anxiety, and hypochondriasis. Second, to explore the impact of cognitive impairment and personality pathology on treatment outcome.

Methods: The course of depression (Inventory of Depressive Symptoms), anxiety (Geriatric Anxiety Inventory), and hypochondriasis (Whitley Index) were evaluated by linear mixed models adjusted for age, sex, level of education, and alcohol usage among 49 patients (mean age 65 years, 67% females) receiving PDT and among 61 patients (mean age 67.1, 61% females) receiving ADT. Pre-post effect-sizes were expressed as Cohen's *d*. Subsequently, cognitive impairment (no, suspected, established) and personality pathology (DSM-IV criteria as well as the Big Five personality traits) were examined as potential moderators of treatment outcome.

Results: Among patients receiving PDT, large improvements were found for depression ($d = 1.1$) and anxiety ($d = 1.2$) but not for hypochondriasis ($d = 0.0$). Patients receiving ADT showed moderate treatment effects for depression ($d = 0.6$), anxiety ($d = 0.6$), as well as hypochondriasis ($d = 0.6$). Personality pathology moderates treatment outcome of neither PDT nor ADT. Cognitive impairment negatively interfered with the course of depressive symptoms among patients receiving PDT.

Conclusions: Transdiagnostic day treatment is promising for older adults with affective disorders with high feasibility.

KEYWORDS

transdiagnostic day treatment, older adults, Depression anxiety, personality disorders, cognitive functioning

1 | INTRODUCTION

In geriatric psychiatry, affective disorders encompassing depressive, anxiety and somatic symptom disorders are the most prevalent disorders. Despite effective treatment with either psychotropic drugs or psychological therapy, only a minority fully remit. Transdiagnostic day treatment may offer therapeutic chances for many older patients but has hardly been examined systematically. Initially, cognitive behavioural therapy (CBT) protocols were highly disorder specific in order to maximize treatment outcome. The resulting proliferation of

CBT protocols challenges dissemination and implementation efforts.¹ Moreover, individual affective disorders are often comorbid to each other and share many common psychological processes.^{2,3} Transdiagnostic treatments are based on the notion that various disorder-specific protocols contain overlapping treatment components that can be distilled into a single treatment and therefore address the symptoms and comorbidities across all disorders at once.⁴⁻⁶ Recently, a large non-randomized comparison study found larger effects of transdiagnostic CBT compared with disorder-specific CBT protocols in primary care.⁷ Similar results were obtained by meta-analysis of 4

smaller randomized controlled trials comparing transdiagnostic and disorder specific protocols.⁷ A transdiagnostic approach in day treatment settings saves therapist time and reduces treatment costs.⁸ A transdiagnostic approach may especially be valuable for geriatric psychiatry as depressive, anxiety and somatic symptom disorders are often comorbid and diagnostic classifications of affective disorders have low stability over time.⁹ Furthermore, group interventions are especially suitable for the needs of older adults¹⁰ while costs are approximately half as much than individual therapy.¹¹

To our knowledge, no empirical studies on the effects of psychiatric day treatment for older adults have been published yet. Transdiagnostic day treatment can be offered to intensify outpatient treatment when affective disorders or residual symptoms become chronically or functional limitations remain. Another indication for transdiagnostic day treatment is severe mental illnesses in order to prevent (or shorten) inpatient care. In this case, transdiagnostic day treatment offers a less costly alternative while keeping patients connected with their inner circle of family and friends.

Psychiatric day treatment programs generally consist of a combination of verbal and non-verbal therapies. Although empirical data supporting the efficacy of non-verbal therapies, like psychomotor therapy, creative therapy and sociotherapy, are lacking, meta-analyses have proven the efficacy of the verbal components like CBT and behavioural activation for both depression and anxiety in later life,^{12,13} as well as life-review therapy for late-life depression.^{14,15} Nonetheless, the effect-sizes are somewhat lower compared with figures found among younger adults,¹⁶ which might be explained by the chronicity of symptoms over the lifespan (especially anxiety) as well as mild cognitive impairment (especially depression).¹⁷ Unfortunately, randomized controlled trials for somatic symptom disorders (or somatoform disorders in DSM-IV and DSM-III) in later life are completely lacking.^{18,19}

The aim of this study was to describe the effects of 2 transdiagnostic day treatment programs (delivered in an outpatient setting) for older adults with affective disorders, ie, a psychotherapeutic day treatment (PDT) and an activating day treatment (ADT). The scarcity of empirical data among older samples precludes firm hypotheses about moderators of treatment outcome. As mild cognitive impairment has consistently been identified as a negative moderator in the treatment outcome of late-life depression¹⁷ and personality pathology of treatment in younger depressed patients,¹⁶ we hypothesized these 2 characteristics to negatively interfere with treatment outcome.^{16,20-24} The secondary aim of this study is to explore the potential role of these 2 treatment moderators.

2 | METHODS

2.1 | Study design

Within an observational pre-post design, we examined the pre-post effectiveness of 2 transdiagnostic day treatment programs. Both programs, ie, a PDT and an ADT, are provided as a clinical service embedded within an academic department of psychiatry. Both programs are described in more detail later. Directly after referral patients are

Key points

- Psychiatric day treatment is feasible for older patients with mixed depressive, anxiety, and somatic symptom disorders.
- Moderate to large pre-post effect sizes argue for further testing of efficacy using randomized controlled study designs.
- Personality pathology does not moderate treatment outcome.
- Mild cognitive impairment negatively interferes with personality changing day treatment but not with adaptation enhanced day treatment.

informed that treatment monitoring data can be used anonymously for scientific purposes. Patients are offered the opportunity to withdraw from this systematic consent at any time.

2.2 | Participants

Participants are in fact consecutive case series of patients referred to our transdiagnostic day treatment programs. Inclusion criteria for both programs were (1) an age of 60 years and older and (2) presence of a depressive or anxiety or somatoform disorder according to the DSM-IV-TR.²⁵ Exclusion criteria were (1) presence of primary addiction disorder, (2) suffering from terminal illness, (3) not sufficiently speaking the Dutch language, (4) severe auditory and/or visual limitations, and (5) mild cognitive impairment interfering with introspective abilities (PDT program) or an established diagnoses of dementia at the start of treatment (ADT program). A clinical psychologist (first author) assessed all patients for eligibility for the programs.

2.3 | Treatment interventions

Both transdiagnostic day treatment programs have a multidisciplinary character including verbal and non-verbal therapies. The PDT as well as the ADT programs were delivered 2 days a week in so-called open groups with a maximum of 8 patients at the same time.

The PDT is a psychotherapeutic 20-week transdiagnostic day treatment in which therapists focus not only on the affective disorders but also on the comorbid dysfunctional aspects of the personality and coping. The patients suffer from mild to moderate affective disorders often with (traits of) comorbid personality disorders. The goal is to get at their former level of functioning and get tools for personality and coping challenges. In the pre-treatment phase, the patient must formulate a need for transformation and demonstrate introspective and self-reflective abilities. Every 4 weeks, the progress is evaluated with the patient and a significant other. The verbal therapies consist of interpersonal psychotherapy and cognitive-behavioural therapy (CBT) and setting personal weekly targets. The non-verbal therapies consist of psychomotor therapy and creative therapy. The role of the therapists is to guide the process of the patients in the group and to

provide a holding environment wherein the patients can practice their new behaviour.

The ADT is a structuring and activating therapy in which therapists have a more directive approach compared with the PDT. The goal is to activate patients and structure critical environmental circumstances. The patients suffer from moderate to severe affective disorders. The goal is to get at their former level of functioning and where possible get some tools for adaptation. The ADT has no a priori defined duration of treatment; however, it has a minimum of 4 and a maximum of 24 weeks. Every 4 weeks, the progress is evaluated with the patient and a significant other, where the decision will be made to end or extend treatment for another 4 weeks. The verbal therapies consist of life review, CBT, and BA and setting weekly individual targets. The non-verbal therapies consist of psychomotor therapy, creative therapy and sociotherapy.

2.4 | Primary outcome parameters

The primary outcome parameters were severity of depressive symptoms, level of anxiety and health anxiety. Patients were assessed before their treatment (pre-test) and at end of their treatment (post-test). Participants of the PDT program were also tested halfway their treatment at 10 weeks (mid-test).

2.5 | Depression

The severity of depressive symptoms was assessed with the 28-item self-report version of the Inventory of Depressive Symptomatology (IDS-SR).²⁶ The IDS-SR can be used to measure 3 homogeneous symptom dimensions that are specific to older people.²⁷

2.6 | Anxiety

The level of anxiety was assessed with the Geriatric Anxiety Inventory (GAI).²⁸ The GAI is a 20-item measure of anxiety symptoms developed for older adults. It has been shown to have an adequate internal consistency, test-retest reliability and concurrent validity.²⁸

2.7 | Hypochondriasis

Hypochondriasis (health anxiety) was assessed with the Whitely Index (WI). The WI has 14 items to be rated yes or no and generally exhibits excellent and robust psychometric properties for internal consistency, test-retest reliability, convergent validity, and concurrent validity.²⁹

2.8 | Potential moderators of treatment

Personality pathology as well as cognitive impairment was examined as potential moderators of treatment outcome.

2.9 | Personality pathology

Personality disorders (PD) were assessed according to DSM-IV criteria and classified as either cluster B or C pathology. Because the criterion threshold for diagnosing a personality disorder is too strict for older patients,^{30,31} older patients meeting the general diagnostic criteria for a personality disorder but falling short 1 content criterion for a

specific cluster B or C personality disorder were also considered to have either cluster B or C personality pathology. Older patients generally endorse fewer specific PD criteria than younger age groups (29% of the criteria contain measurement bias in older age groups), while the latent variable structure for each personality disorder suggests a similar severity level of personality pathology.³¹ Diagnoses were based on (autobiographical) history taken of both the patient and an informant, by an old age psychiatrist (R.C.O.V.) and a clinical psychologist (S.D.M.v.D.) following the LEAD Standard.³² Because of the absence of a golden standard for diagnosing personality disorders, we used The LEAD standard. The LEAD acronym stands for Longitudinal Expert and All Data.³³ In case of doubt, the SCID-II interview was applied.³⁴ In addition, the Big Five personality domains, measuring the adaptation abilities of the patient, ie, neuroticism, extraversion, conscientiousness, agreeableness, and openness to experience, were assessed with the 60-item NEO-Five Factor Inventory (NEO-FFI).³⁵ The psychometric properties of the Dutch version of the NEO-FFI are generally good.³⁶ The internal consistencies of all domains range from acceptable to good and are comparable to those of the American version.³⁷ After the assessments, the results will be discussed within a multidisciplinary diagnostic team.

2.10 | Cognitive functioning

Cognitive screening was conducted with either the Mini Mental State Examination (MMSE)³⁸ or the Montreal Cognitive Assessment (MoCA) (MoCA.com). If patients were suspected of (mild) cognitive impairment, full neuropsychological testing and/or referral to an (associated) memory clinic was applied. Based on the final conclusion in the medical files when concluding the day treatment, patients were classified as having no cognitive impairment, suspected for cognitive impairment (primarily based on screenings-tests and group functioning), and finally established mild cognitive impairment or dementia (based on formal neuropsychological testing).

2.11 | Covariates

Age, sex, partner status and alcohol usage. Alcohol usage was quantified with the AUDIT. The AUDIT was developed by the World Health Organization (WHO) as a simple method of screening for excessive drinking and to assist in brief assessment. It can help in identifying excessive drinking as the cause of the presenting illness.³⁹

2.12 | Analyses

The descriptive characteristics will be presented as means (with standard deviation, SD) or numbers with proportions (%). Difference between both groups will be tested by either Student's *t*-test (normally distributed continuous variables) or Chi² tests (categorical variables). Treatment effects were analysed on an intention-to-treat basis using mixed linear models with separate models for the 3 outcome measures, ie, depressive symptoms (IDS), anxiety (GAI) and hypochondriasis (WI) as the dependent variables (measured at pre-test, mid-term, and post-test in the PDT and pre-post treatment in the AET). All covariates were tested separately (main effect and interaction with time) and, in case of statistical significance, remained in the analyses. We used the Cohen's

d to measure the strength of outcome by calculating within subject effect sizes Cohen's d ,⁴⁰ based on the difference between the pre-test and post-test score divided by the pre-test SD. According to conventional criteria, $d < 0.20$ is considered a small effect size, $d = 0.50$ a medium effect size, and $d > 0.80$ a large effect size.

In the final models, we explored the impact of the potential moderators (cognitive functioning, personality pathology according to DSM-IV-TR and personality traits based on the NEO-FFI). The Statistical Package for the Social Sciences version 22 for Windows (SPSS Inc., Chicago, USA) has been used.⁴¹ All the analyses were 2-tailed with a significant level of 5%.

3 | RESULTS

3.1 | Patient characteristics

Of the 53 patients assigned to PDT, 4 patients dropped out prematurely (7.5%). The mean age of the remaining 49 patients receiving PDT was 65.0 (5.7) years. Of the 64 patients assigned to ADT, 3 patients dropped out prematurely (4.7%). Among the 61 patients receiving ADT, the mean

age was 67.1 (6.2) years. In both groups, around two third of the patients were female 33 (67.3%) in the PDT and 37 (60.7%) in the ADT. Table 1 presents the characteristics of the study population.

3.2 | Results PDT

As shown in Table 2, large effects were achieved in depression and anxiety, while no effect on hypochondriasis was achieved in patients participating in our PDT program.

Cognitive impairment significantly interacted with the course of depressive symptoms over time (cognitive impairment by time: $F = 4.77$, $df = 2,100$, $P = .010$). Patients with cognitive impairment improved less over time. Nonetheless, cognitive impairment did not interact with anxiety ($F = 2.61$, $df = 2,87$, $P = .080$) and hypochondriasis ($F = 0.82$, $df = 2,89$, $P = .443$).

The presence of DSM-IV personality pathology did not moderate the course of depressive symptoms (time by personality pathology: $F = 0.09$, $df = 2,97$, $P = .917$), anxiety symptoms (time by anxiety: $F = 0.35$, $df = 2,79$, $P = .710$), or hypochondriasis (time by hypochondriasis: $F = 0.32$, $df = 2,89$, $P = .731$). Moreover, patients with DSM-IV personality pathology did not differ with respect to the overall severity

TABLE 1 Descriptive characteristics of study sample

Characteristics		P PDT (n = 49)	AEDT (n = 61)
<i>Demographics:</i>			
Age (years)	Mean (SD)	65.0 (5.7)	67.1 (6.2)
Female sex	n (%)	33 (67.3)	37 (60.7)
<i>Highest level of education:</i>			
• no/elementary school	n (%)	26 (53.1)	42 (68.9)
• secondary school	n (%)	13 (26.5)	13 (21.3)
• higher education	n (%)	10 (20.4)	6 (9.8)
Stable relationship (yes)	n (%)	39 (79.6)	42 (68.9)
<i>Psychopathology severity indicators:</i>			
Depressive symptoms (IDS-SR)	Mean (SD)	30.6 (11.1)	31.8 (14.1)
Anxiety (GAI)	Mean (SD)	12.6 (5.1)	12.2 (6.0)
Hypochondriasis (WI)	Mean (SD)	4.6 (3.3)	5.5 (3.0)
Alcohol usage (AUDIT)	Mean (SD)	2.3 (3.5)	2.0 (2.9)
<i>DSM-IV-TR personality pathology:</i>			
• cluster B pathology	n (%)	12 (24.5)	8 (13.1)
• cluster C pathology	n (%)	16 (32.7)	17 (27.9)
• cluster B or C pathology	n (%)	25 (51.0)	21 (34.4)
<i>BIG-5 personality profile:</i>			
• neuroticism	Mean (SD)	40.3 (6.7)	37.7 (7.4)
• extraversion	Mean (SD)	32.6 (5.9)	33.3 (6.6)
• openness	Mean (SD)	36.0 (6.0)	34.9 (4.2)
• agreeableness	Mean (SD)	44. (4.7)	43.7 (4.4)
• conscientiousness	Mean (SD)	38.9 (6.2)	40.0 (6.6)
<i>Cognitive functioning:</i>			
• no cognitive problems	n (%)	40 (81.6)	30 (49.2)
• suspected for cognitive impairment	n (%)	8 (16.3)	21 (34.4)
• established MCI	n (%)	1 (2.0)	7 (11.5)
• established dementia	n (%)	-	3 (4.9)

Statistical significant difference between both groups ($P < .05$)

Abbreviations: AEDT, adaptation enhancing day treatment; GAI, Geriatric Anxiety Inventory; IDS-SR, Inventory of Depressive Symptoms, self-report; MCI, mild cognitive impairment; PDT, day treatment; WI, Whitley Index.

TABLE 2 Estimated marginal means (standard error of the mean) of primary outcome parameters among participants of the estimated by linear mixed models adjusted for covariates*

Variable	Pre-test	Halfway	Post-test	Statistics	Pre-post Cohen's <i>d</i>
• depression (IDS)	30.8 (1.7)	25.5 (2.0)	18.7 (2.0)	$F = 10.8, df = 2,103, P < .001$	1.1
• anxiety (GAI)	12.7 (0.9)	9.6 (1.0)	6.6 (1.1)	$F = 9.5, df = 2,90, P < .001$	1.2
• hypochondriasis (WI)	4.6 (0.5)	5.1 (0.6)	4.5 (0.6)	$F = 0.3, df = 2,92, P = .750$	0.0

*Only significant covariates ($P < .05$) are included in the presented model, ie, level of education in case of depression ($F = 5.15, df = 1,103, P = .025$), alcohol usage in case of anxiety ($F = 4.16, df = 1,90, P = .044$), and none in case of hypochondriasis.

of depression ($F = 0.01, df = 1,99, P = .927$) or anxiety ($F = 2.41, df = 1,89, P = .124$) compared with patients without personality pathology but showed a significantly lower level of hypochondriasis ($F = 11.04, df = 1,91, P = .001$).

Of all personality dimensions of the NEO-FFI only, the level of conscientiousness moderated the course of hypochondriasis over time ($F = 3.93, df = 3,83, P = .011$).

3.3 | Results ADT

As shown in Table 3, medium effects were achieved with respect to depression, anxiety as well as hypochondriasis in patients participating in our ADT program.

Cognitive impairment did not moderate the course of depressive symptoms (time by cognitive impairment: $F = 0.15, df = 1,88, P = .701$), anxiety (time by cognitive impairment: $F = 3.80, df = 1,75, P = .055$), or hypochondriasis (time by hypochondriasis: $F = 0.49, df = 1,72, P = .485$).

The presence of personality pathology did not moderate the course of depressive symptoms over time (time by personality pathology: $F < 0.01, df = 1,88, P = .971$), anxiety (time by personality pathology: $F = 1.39, df = 1,75, P = .242$), or hypochondriasis (time by hypochondriasis: $F = 0.01, df = 1,72, P = .927$). However, patients with DSM-IV personality pathology had a significantly higher overall severity level of depressive symptoms ($F = 4.03, df = 1,89, P = .048$) and anxiety ($F = 7.63, df = 1,76, P = .007$) but not hypochondriasis ($F = 0.09, df = 1,73, P = .763$). Of all personality dimensions of the NEO-FFI, none moderated the course of depressive symptoms, anxiety, or hypochondriasis (all P -values $> .05$).

4 | DISCUSSION

4.1 | Main findings

The 20-week PDT program resulted in large improvements with respect to depression and anxiety but not for hypochondriasis, whereas the ADT program resulted in moderate treatment effects for depression, anxiety, and hypochondriasis. In contrast to our

hypothesis, personality pathology did neither moderate treatment efficacy, nor in the PDT program and in the ADT program. Cognitive impairment, however, negatively interfered with the course of depressive symptoms in the PDT program as we hypothesized.

4.2 | Comparison with literature

Being the only study on transdiagnostic day treatment in later life limits comparison. Nonetheless, some important separate elements have been empirically tested before, especially transdiagnostic approaches and group psychotherapy with mixed diagnostic groups. Most studies focus on a single AXIS 1 disorder with 1 treatment method, often CBT.¹⁶ Our effect-sizes, however, are higher than most studies focusing on depression and anxiety solely. However, a large non-randomized comparison study found larger effects of transdiagnostic CBT compared with disorder-specific CBT protocols in primary care.⁷ We hypothesize that our effect-sizes are partly due to the fact that in the PDT we provide a transdiagnostic approach which also focusses on the underlining nourishing personality and coping aspects. In contrast with meta-regression analyses on individual CBT programs¹⁶ and preliminary data in patients with late-life depression,⁴² personality pathology did not affect treatment outcome. Several aspects of our treatment program may have contributed to this results which probably interact with one another. The first aspect is the structure of the day treatment. The patients can benefit from a multidisciplinary (verbal and nonverbal) holding environment in a group of companions.¹⁰ By paying attention to both interpersonal functioning as well as to group dynamic processes, we strive for a stable, safe, and continuous holding environment. A second aspect is the weekly meetings of all therapists involved. By openly discussing issues of transference and countertransference, we stimulate a clear, respectful, and transparent attitude towards the patients. A third aspect is the integration of both verbal and non-verbal treatment modalities. Especially in later life, non-verbal techniques are an important element of psychotherapy because the oldest of old persons are less likely inclined to express emotional distress verbally. Nonverbal techniques can be used to practice with new behaviour in a safe environment.

TABLE 3 Estimated marginal means (standard error of the mean) of primary outcome parameters among participants of the AEDT estimated by linear mixed models adjusted for covariates*

Variable	Pre-test	Post-test	Statistics	Pre-post Cohen's <i>d</i>
• depression (IDS)	33.3 (2.0)	25.2 (2.3)	$F = 8.2, df = 1,90, P = .005$	0.6
• anxiety (GAI)	11.6 (0.9)	7.8 (1.0)	$F = 7.7, df = 1,77, P = .007$	0.6
• hypochondriasis (WI)	5.5 (0.4)	3.6 (0.5)	$F = 7.7, df = 1,74, P = .007$	0.6

*Only significant covariates ($P < .05$) are included in the presented model, ie, age ($F = 3.91, df = 1,91, P = .051$) and partner status ($F = 4.31, df = 1,91, P = .041$) in case of depression, level of education ($F = 10.1, df = 1,77, P = .002$) in case of anxiety, and none in case of hypochondriasis.

The multidisciplinary team of therapists learn from and can reflect on actual behaviour of the patient in weekly meetings. These nonverbal techniques are considered a powerful instrument to change enduring traits^{43,44} and are highly valued on older persons.⁴⁵

Cognitive impairment, however, did interfere with the course of depressive symptoms in the PDT program. This can most likely be explained by the high demand of this treatment program at the cognitive as well as introspective level. Nonetheless, cognitive impairment did not moderate treatment outcome in the ADT program. This group is externally structured and less demanding in a cognitive and introspective level but still based on CBT-principles of behavioural activation and cognitive restructuring of maladaptive cognitions. Therefore, even (mild) cognitively impaired patients with severe mental illness (at the border of inpatient care) may profit from a therapeutic environment when given in a highly structured format. This finding fits with recent data on the efficacy of (psycho-) therapeutic interventions for gerontopsychiatric patients with cognitive impairment, as evidence in depression⁴⁶ and even for behavioural and psychological symptoms in dementia patients living in nursing homes.⁴⁷ Moreover, cognitive impairment increased mental health care costs for patients with severe psychiatric illness participating in day programming.⁴⁸

4.3 | Methodological considerations

Some limitations should also be acknowledged for proper interpretation. First, being a descriptive study lacking a control group, it remains uncertain which part of the improvement has actually resulted specifically from our program and which part can be attributed to a structured environment only or even to the natural course of the patients. Nonetheless, the large effect-sizes advocate the need for a formal randomized controlled trial.⁴⁹ Second, albeit the heterogeneity of our study population that increases the power to detect important moderators of treatment outcome, our sample size is too small for definitive conclusions. Third, personality disorders were not properly assessed by a semi-structured psychiatric interview. Although the DSM criteria for axis II pathology and the corresponding assessment instruments are mostly based on younger adult groups and thus are ill fitted for older adults.^{50,51} In order to create a more reliable alternative for this problem, our group in fact applied the LEAD procedure, which seems to be a good alternative. A limitation of the LEAD procedure for older adults is often the lack of a reliable hetero-anamnestic informant who knows the patient from his younger years.³² Fourth, cognitive testing has not been standardized (as different screening instruments have been applied). Nonetheless, the classification was based on screening, observation during treatment, and when deemed necessary, formal neuropsychological testing, which can be considered a LEAD procedure for cognitive functioning. Lastly, our study shows the results of a group of relatively young older adults (mean age PDT 65.0 years and AET mean age 67.1 years). Study on the effects of transdiagnostic day treatment for the oldest of old is needed.

5 | CONCLUSION

The moderate to large pre-post effect-sizes of our psychiatric day treatment for late-life affective disorders seems promising. Moreover,

feasibility was high acknowledging the high attrition rates of both programs. Therefore, we advocate for more studies in this field, preferably using randomized controlled study designs as well as addressing the potentially underlying mechanisms for improvement (group dynamics, peer support and the use of verbal and nonverbal treatment elements).

DESCRIPTION OF AUTHORS' ROLES

S.D.M. van Dijk and R.C. Oude Voshaar carried out the statistical analyses and wrote the paper. R. Bouman, R. den Held, S.P.J. van Alphen, and J.C.A.E. Lam contributed with their clinical knowledge of older adults and assisted in writing the paper.

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DECLARATION OF INTEREST

None.

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