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Changes in Personality Functioning and Pathological Personality Traits as a Function of Treatment: A Feasibility Study

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Abstract
With the dimensional shift, personality pathology is now commonly conceptualized using a combination of personality functioning and (pathological) personality traits. Personality functioning has been deemed more sensitive to treatment than the specific trait combination of personality problems. To empirically examine just that, the goal of this pilot study was to simultaneously compare changes in personality functioning (LPFS-BF 2.0), pathological traits (PID-5-BF), and normal-range traits (BFI-2) among individuals receiving integrative, dynamic-relational psychotherapy (baseline $n = 52$, follow-up $n = 31$) and a matched control group ($n = 31$). The results showed that clients had stronger changes in personality functioning than in traits when compared to the control group. In addition, clients lower on personality functioning were more inclined to drop-out of therapy. This study points to the unique clinical utility of personality functioning and provides a foundation for future research focusing on the sensitivity of personality functioning and personality traits to changes within the context of psychotherapy.

Keywords Personality · Personality Functioning · Pathological Traits · Sensitivity to Change · Psychotherapy

Introduction

Following the transition from a categorical to a dimensional understanding of personality pathology (Clark, 2007; Widiger & Simonsen, 2005), and psychopathology in general (Kotov et al., 2021), personality pathology is now commonly conceptualized using a combination of personality functioning and pathological personality traits (Ofrat et al., 2018; Skodol, 2012). This model structures both the Alternative Model of Personality Disorders (AMPD, APA, 2013a) and the 11th edition of the International Classification of Diseases (ICD-11, World Health Organization, 2022).

In the AMPD, personality functioning is defined in terms of specific disturbances related to the self (identity and self-direction) and in relating to other people (empathy and intimacy) on a continuum from no disturbance to severe disturbance (Bender et al., 2011; Morey et al., 2022). AMPD pathological traits capture relative stable patterns of dysfunctional thoughts, feelings, and behaviors organized within five broad domains constituting maladaptive extremes of normal-range five factor trait domains: Negative Affectivity (low Emotional Stability), Detachment (low Extraversion), Antagonism (low Agreeableness), Disinhibition (low Conscientiousness), and Psychoticism (low Openness, Krueger, 2019; Krueger et al., 2012). In this model, personality functioning defines personality pathology in terms of a general level of impaired psychological capacity whereas pathological traits depict variation in the behavioral expressions of personality dysfunction (Bender et al., 2011; Zimmermann, 2022). For instance, a person having an impaired capacity for Empathy may be more prone to act callously (a facet of Antagonism). Or a person struggling with Intimacy may be more likely to show withdrawal (a facet of Detachment) or separation insecurity (a facet of Negative Affectivity). The model is intended to facilitate identification of personality related problems and their severity in general clinical practice through assessment of personality functioning. It also provides descriptions of the style of difficulties that can be

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used to plan intervention strategies in specialized settings based on the constellation of maladaptive personality trait levels (Skodol, 2012; Swales, 2022).

Personality functioning can be operationalized with the Level of Personality Functioning Scale (LPFS, APA, 2022; Bender et al., 2011) and pathological traits with the Personality Inventory for DSM-5 (PID-5, APA, 2022; Krueger et al., 2012).

This model has been widely studied throughout the world and is becoming the standard model for personality disorder diagnosis (Bach & Tracy, 2022; Zimmermann et al., 2019). While developed in the context of personality pathology, research has repeatedly shown that self-report measures of personality functioning seem to capture impairments that are relevant across mental disorders (Zimmermann et al., in press), and pathological traits are manifested across different types of psychopathology (Kotov et al., 2010; Widiger et al., 2019). This is in line with the original AMPD suggestion, that assessment of personality related problems are relevant across patient groups (Skodol, 2012). Insofar as personality functioning and pathological traits have a cross-diagnostic impact they are potentially relevant for individuals even without a formal personality disorder diagnosis (APA, 2013a, p. 774; Newton-Howes et al., 2022). However, significant gaps remain regarding applied questions about how to use this model for clinical practice. For instance, how can the distinction between personality functioning and pathological traits help guide therapy? It has been suggested that personality functioning should be more sensitive to treatment effects and thus should serve as a treatment target because it reflects the problems a person is having, whereas pathological and normal-range traits reflect aspects of the person that may be less likely or desirable to change (Bach & Simonsen, 2021; Sharp, 2022; Sharp & Wall, 2021). It follows that personality functioning should change more than both pathological and normal-range traits as a function of treatment, however thus far evidence for this effect has been limited. The goal of this pilot study is to provide initial evidence regarding the sensitivity of personality functioning and pathological traits to change in psychotherapy.

Changes in Personality Functioning and Traits as a Function of Psychotherapy

Some longitudinal studies have suggested that personality functioning changes more rapidly compared to traits (Wright et al., 2016), although other research has suggested hat that this distinction does not apply to Negative Affectivity (Haehner et al., 2023). It has been hypothesized that severity of personality functioning should be more sensitive to treatment than the specific trait combination of personality problems (Crawford et al., 2011; Hopwood et al., 2011; Skodol, 2018). Existing research support the sensitivity of personality functioning to psychotherapy. Kraus et al. (2021) assessed personality functioning in a diverse sample of psychiatric clients who received integrative psychoanalytic therapy, with an average treatment duration of 94 days, and found significant improvements from pre- to posttreatment. Kvarstein et al. (2023) investigated longitudinal improvement of personality functioning in a diverse clinical sample assigned to treatment for personality disorder. The study showed overall significant improvement of personality functioning with a moderate effect size ($d = 0.7$) irrespective of treatment duration. There is also evidence that these changes are associated with other clinically significant outcomes. Huber et al. (2017) examined changes in clinician-rated personality functioning (using the Scales of Psychological Capacities) among 67 clients with a current episode of moderate or severe depression. The study showed that changes in personality functioning from pre- to post-treatment predicted depression and general psychiatric distress at the three-year follow-up.

Personality traits show relatively high levels of absolute stability, with pathological traits being somewhat less stable (Bleidorn et al., 2022; Hopwood & Bleidorn, 2018). It has been suggested that traits may be relatively more stable than personality functioning (Wright et al., 2015; Zimmermann et al., 2017) and that psychotherapeutic treatment should focus on helping a person to cope with one's maladaptive trait expressions rather than trying to change the basic traits themselves (Bach & Presnall-Shvorin, 2020). However, there is significant evidence that normal range traits, and particularly neuroticism or negative affect, change in psychotherapy as well (Roberts et al., 2017). Research examining changes in pathological traits in a psychotherapeutic setting is still limited. Niemeijer et al. (2023) found small but significant decreases in both Negative Affectivity and Detachment across 8–14 weeks of cognitive behavioral treatment. Similarly, Rek et al. (2022) found significant decreases in Negative Affectivity, Detachment, and Disinhibition across 7 weeks of treatment for depression. Torres-Soto et al. (2021) also found significant changes in Negative Affectivity, Detachment, Disinhibition, and Psychoticism over a treatment period ranging 3 to 12 months in a sample of inpatients with personality disorder diagnoses.

The Current Study

To summarize, while research studying changes in personality functioning and pathological traits as a function of psychotherapy is scarce, existing studies indicate that different methods of psychotherapy in diverse clinical samples can have positive effects on both constructs. However, three major limitations of existing studies should be noted: (1)

Most studies on personality functioning have not applied measures that specifically operationalize the construct as conceptualized in the AMPD or ICD-11. Instead, related measures from different theoretical traditions have been used, which can complicate comparison of findings. (2) None of the studies applied a control group, which makes it impossible to determine whether the reported changes are due to the psychotherapy provided or primarily is caused by natural temporal changes and fluctuations. (3) To this date, no study has concurrently investigated changes in personality functioning and traits in psychotherapy. In this study, we compared changes in personality functioning, pathological traits, and normal-range traits among individuals receiving psychotherapy and a control group matched on age and gender.

Method

Procedure

A convenience sample of clients (i.e., participants who received psychotherapy) were recruited as part of the standard intake procedure of a non-governmental organization (NGO) that provided free counseling and psychotherapy to socially deprived adults in Denmark. Lower socioeconomic status and social deprivation is associated with increased prevalence of personality related problems (Grant et al., 2004; Newton-Howes et al., 2021; O'Donoghue et al., 2023) making it reasonable to assume more pronounced levels of personality dysfunction and pathological traits in socially deprived community samples. Structured clinical assessment was not performed, but treatment applicants were screened by NGO employees with respect to information on demographics, suicidality, and psychiatric history including current diagnoses.

As part of the standard intake phone interview, interested clients were informed about the research project. At the beginning of the first consultation clients were reminded about the research project and invited to participate in the study. Participants then completed a baseline questionnaire during the first half of the initial consultation before the therapy began. After finishing the last treatment session participants were asked to complete the follow-up questionnaire. Therapists were allowed to provide clarification if some of the items were unclear to the participants, but not allowed to assist the client in choosing specific answers for the individual items. Based on the age and gender composition of the client sample, we systematically recruited a nonclinical convenience control sample via social media announcements. Control participants fulfilled a baseline survey online and were invited by email to complete an identical online follow-up survey after eight weeks. Individuals who did not complete the follow-up survey within 7 days was sent a reminder.

Psychotherapy was delivered in one-hour sessions once per week for 8–12 weeks, by fifteen master's students in psychology, two psychotherapists, and two psychologists. Consequently, a total of nineteen therapists ($M = 28.10$ years, $SD = 8.34$, range = 22–50) worked with the clients enrolled in the present study. The therapists were not restricted to specific techniques, but everyone participated in the NGO's training courses focusing on an integrative, relational-dynamic theory framework and short-term intervention. The aim of this treatment framework is to improve current distress severity and support the client in navigating present interpersonal conflicts (e.g., by focusing on improvement in understanding one's own mind and those of others, as well as addressing the client's reenactment of specific positions in social interactions, Allen, 2013; Jørgensen, 2019). Therapists received continuous group supervision from three licensed psychologists, who were certified psychotherapists. The majority of therapists were novices. However, research indicates that the amount of professional experience is not necessarily identical with therapist effectiveness (Berglar et al., 2016; Walsh et al., 2019).

The study was exempt from notification by The Central Denmark Region Committees on Health Research Ethics (c.nr. 1-10-71-1-21). All participants provided written consent and had the opportunity to withdraw from the study at any time without losing their right to receive treatment at the NGO.

Participants

Clients

The target group for the NGO was vulnerable adults with severe functional impairment. Inclusion criteria required that clients were not currently receiving public psychiatric treatment and did not have the finances to afford private psychological counseling, often due to unemployment. The study mirrored the existing exclusion criteria of the NGO: Applicants were excluded from receiving therapy if they had a psychotic disorder, autism spectrum disorder, active substance use disorder, or if they were currently on a public psychiatric treatment waiting list. A total of 52 clients participated at baseline and 21 of these did not complete follow-up measures: one was hospitalized during the course of treatment, and twenty dropped out of treatment. The final client sample, therefore, consisted of 31 individuals ($M = 43.2$ years, $SD = 11.91$, range = 29–78). The average duration of time from baseline to follow-up was 65.03 days ($SD = 13.26$). Sociodemographic information (see Table 1)

Table 1 Sociodemographic characteristics of clients and controls

	Clients $n=31$		Controls $n=31$	
	n	%	n	%
Gender				
Female	20	64.5	20	64.5
Male	11	35.5	11	35.5
Ethnicity				
Danish	22	71.0	28	90.3
Other	8	25.8	3	9.7
Not specified	1	3.2	0	0.0
Marital Status				
Single	15	48.4	4	12.9
Married/Cohabiting	8	25.8	24	77.4
Partnered/non-cohabiting	4	12.9	2	6.5
Divorced/Widowed	4	12.9	1	3.2
Children[a]	20	64.5	23	74.2
Highest educational level				
Primary School	6	19.4	1	3.2
Vocational	6	19.4	10	32.3
High School	2	6.5	2	6.5
Bachelor's degree	11	35.5	9	29.0
Master's degree	6	19.4	9	29.0
Occupational Status				
Unemployed / social security	19	61.3	4	12.9
Employed	4	12.9	21	67.7
Part-time employment	1	3.2	0	0.0
Student	2	6.5	2	6.5
Retired	3	9.7	2	6.5
Other	2	6.5	2	6.5
Number of psychiatric diagnoses				
0 diagnoses	10	32.3	24	77.4
1 diagnosis	10	32.3	6	19.4
2 diagnoses	6	19.4	1	3.2
3 + diagnoses	3	9.7	0	0.0
Not specified	2	6.5	0	0.0
Specific psychiatric diagnoses				
ADHD	6	19.4	2	6.5
Anxiety disorders	5	16.1	1	3.2
Mood disorders	11	35.5	2	6.5
Personality disorders	2	6.5	0	0.0
PTSD / stress-related disorders	1	3.2	2	6.5

[a]Reflects the number and percentage of participants answering "yes" to this question

showed that more than half of the participants were diagnosed with one or more mental disorders. More than half of the participants were either single or divorced, and while the majority had a high-school level education or above, two-thirds of them were unemployed.

Control Group

A total of 39 individuals provided contact information and completed the baseline survey for the study using a secure online software platform (REDCap, Harris et al., 2019). Of these, the first 31 control participants whose age and gender matched a client participant were invited to complete the follow-up survey. Participants were matched 100% on gender with only small differences in age. The final control sample consisted of 31 individuals ($M=42.6$ years, $SD=13.26$, range = 29 to 78). The average duration of time from baseline to follow-up was 60.94 days ($SD=6.69$).

Measures

The *Level of Personality Functioning Scale – Brief Form 2.0* (LPFS-BF 2.0, Weekers et al., 2019) is a 12 item self-report questionnaire assessing self- and interpersonal functioning. Respondents are asked to rate each item on a 4-point scale (from 1 "*very false or often false"* to 4 "*very true or often true"*) with higher scores indicating more severe problems with personality functioning. The Danish version of the LPFS-BF 2.0 used in this study has formerly been validated (Bach & Hutsebaut, 2018). Normative data has been derived from the Danish general population based on total scale scores (Weekers et al., 2022). Cronbach's α for the total score was .89.

The *Personality Inventory for DSM-5 Brief Form* (PID-5-BF, APA, 2013b; Krueger et al., 2012) is a 25 item self-report inventory measuring the five pathological trait domains from the DSM-5 Section III Alternative Model for Personality Disorders: Detachment, Antagonism, Disinhibition, Negative Affect, and Psychoticism. Each trait domain is measured by five items, each scored on a 4-point scale (from 0 *"very false or often false"* to 3 *"very true or often true"*). The official algorithm was used for scoring the 5 domain scales (APA, 2013b). A validated Danish translation of the PID-5 was used (Bach et al., 2016; Bo et al., 2016). Internal consistency ranged from a Cronbach's α of .62 for Antagonism to .76 for Psychoticism.

The *Big Five Inventory-2* (BFI-2) (BFI-2, Soto & John, 2017) is a 60-item self-report questionnaire measuring the five-factor trait domains: Extraversion, Agreeableness, Conscientiousness, Negative Emotionality, and Openness to Experience. Each domain is measured by 12 items that are rated on a 5-point scale (from 1 *"Disagree strongly"* to 5 "*Agree strongly"*). For this study the validated Danish version of the BFI-2 was used, which has shown measurement properties comparable to the English-language version (Vedel et al., 2021). Internal consistency ranged from a Cronbach's α of .83 for Agreeableness to .89 for Negative Emotionality.

Data Analysis

Statistical analyses were conducted using SPSS version 28.0.1. (IBM, 2021). Data quality was evaluated within each group by examining skew and kurtosis of scales and inspection of P-P plots.

Independent t-tests were conducted to examine whether the clients and controls who did not participate in the follow-up differed from those that did. Next, independent t-tests were conducted to examine, whether the clients and controls who completed follow-up differed on age and duration of days between completing baseline and follow-up questionnaires.

To test for group-by-time effects in changes of personality functioning, pathological- and normal-range traits from baseline to follow-up, a sequence of Two-Way Mixed Analyses of Variances was conducted. Group (clients and controls) was entered as the between-subjects factor and time (baseline and follow-up) was entered as the within-subjects factor. Levels of significance was set as $\alpha = .05$. Given the small sample size, the findings were fleshed out using pairwise comparisons of estimated marginal means focusing on descriptive effect size differences between groups.

Table 2 Comparison of clients who dropped out and clients who completed follow-up

	Drop-Outs ($n = 21$)	Follow-Ups ($n = 31$)	t	*p*	Cohen's d
	M (SD)	*M* (SD)			
LPFS	2.54 (.74)	2.14 (.43)	2.44	.02	.69
PID					
Detachment	1.25 (.67)	1.00 (.58)	1.44	.16	.41
Antagonism	0.50 (.35)	0.73 (.59)	-1.59	.12	− .45
Disinhibition	0.94 (.70)	0.86 (.57)	.44	.66	.13
Negative Affect	1.88 (.71)	1.37 (.62)	2.75	.01	.78
Psychoticism	1.20 (.75)	0.72 (.52)	2.71	.01	.78
BFI					
Extraversion	2.86 (.63)	3.29 (.70)	-2.57	.01	− .73
Agreeableness	3.79 (.66)	3.83 (.72)	− .44	.67	− .12
Conscientiousness	3.27 (.87)	3.38 (.80)	− .57	.57	− .16
Negative Emotionality	3.84 (.69)	3.32 (.66)	2.86	.01	.81
Openness to Experience	3.61 (.83)	3.47 (.83)	.46	.65	.13

Results

As depicted in Table 2, the 21 clients (40.4%) who did not participate in the follow-up assessment scored significantly higher on baseline LPFS, Negative Affectivity, Psychoticism, and Negative Emotionality while scoring lower on Extraversion. There were no other significant differences between these two client groups. No significant differences were found between those control participants who were not invited to participate in the follow-up assessment and those who were.

There were no differences between groups in age (Client $M = 43.23$, $SD = 11.91$; Control $M = 42.55$, $SD = 13.26$), $t(60) = .21$, $p = .83$ or duration of days between assessments (Client $M = 65.03$, $SD = 13.26$; Control $M = 60.94$, $SD = 6.69$), $t(60) = 1.54$, $p = .13$.

Results for group-by-time effects are depicted in Table 3. At baseline, clients were higher in personality dysfunction, Detachment, Disinhibition, and Negative Emotionality compared to the control group. Over time, clients' levels of personality dysfunction declined significantly, they became less Antagonistic, and showed small, non-significant declines in Detachment, Disinhibition, and Negative Affect. Interestingly, the control group had significant and unexpected decreases in Negative Affectivity as well as small, non-significant declines in Detachment, Antagonism, and Disinhibition. Personality functioning was the only variable with a significant group, time, and interaction effect. Personality functioning changed significantly from baseline to follow-up in the clients (d = .40) but was stable in the control group (d = .01).

Discussion

The goal of this study was to simultaneously examine changes in personality functioning, pathological traits, and normal-range traits during short-term, integrative psychotherapy for vulnerable adults. Personality functioning changed more among clients in psychotherapy than traits. Moreover, the difference in level of change between clinical and control groups was only significant for personality functioning, although this might have been due in part to mild improvements in traits in the control group. Furthermore, dropouts had higher levels of personality dysfunction at baseline, suggesting that personality functioning may serve as a useful indicator for dropout risk. These results add empirical evidence for the clinical utility of personality functioning.

Table 3 Means (SD) and Mixed ANOVAs for Personality Functioning, Pathological Traits and Normal-Range Traits

	Clinical Group ($n=31$)			Matched Control ($n=31$)					
Variable	Baseline	Follow-up	d^a	Baseline	Follow-up	d^a	Group	Time	Interaction
LPFS	2.14 (.43)	1.96 (.50)	.40 **	1.73 (.55)	1.72 (.51)	.01	$F(1,60)=7.32^{**}$ $\eta_p^2=.109$	$F(1,60)=4.63^{*}$ $\eta_p^2=.072$	$F(1,60)=4.37^{*}$ $\eta_p^2=.068$
PID									
Detachment	1.00 (.58)	.87 (.55)	.22	.68 (.68)	.55 (.54)	.21	$F(1,59)=5.64^{*}$ $\eta_p^2=.087$	$F(1,59)=3.47$ $\eta_p^2=.056$	$F(1,59)=.001$ $\eta_p^2=.000$
Antagonism	.73 (.59)	.53 (.43)	.38*	.55 (.53)	.43 (.43)	.27	$F(1,59)=1.56$ $\eta_p^2=.026$	$F(1,59)=6.68^{*}$ $\eta_p^2=.102$	$F(1,59)=.266$ $\eta_p^2=.004$
Disinhibition	.86 (.57)	.76 (.54)	.18	.53 (.50)	.43 (.45)	.22	$F(1,59)=7.22^{**}$ $\eta_p^2=.109$	$F(1,59)=5.02^{*}$ $\eta_p^2=.078$	$F(1,59)=.000$ $\eta_p^2=.000$
Negative Affect	1.37 (.62)	1.24 (.60)	.21	1.18 (.76)	.90 (.62)	.41**	$F(1,59)=2.97$ $\eta_p^2=.048$	$F(1,59)=9.95^{**}$ $\eta_p^2=.114$	$F(1,59)=1.50$ $\eta_p^2=.025$
Psychoticism	.72 (.52)	.69 (.58)	.06	.51 (.49)	.48 (.60)	.06	$F(1,59)=2.70$ $\eta_p^2=.044$	$F(1,59)=.312$ $\eta_p^2=.005$	$F(1,59)=.000$ $\eta_p^2=.000$
BFI									
Extraversion	3.29 (.70)	3.20 (.74)	.12	3.57 (.70)	3.50 (.68)	.10	$F(1,57)=2.78$ $\eta_p^2=.047$	$F(1,57)=2.54$ $\eta_p^2=.043$	$F(1,57)=.032$ $\eta_p^2=.001$
Agreeableness	3.83 (.72)	3.91 (.75)	−.12	3.99 (.47)	4.03 (.56)	−.09	$F(1,57)=.785$ $\eta_p^2=.014$	$F(1,57)=1.91$ $\eta_p^2=.032$	$F(1,57)=.181$ $\eta_p^2=.003$
Conscientiousness	3.38 (.80)	3.44 (.83)	−.08	3.72 (.67)	3.73 (.77)	−.02	$F(1,57)=2.70$ $\eta_p^2=.045$	$F(1,57)=.871$ $\eta_p^2=.015$	$F(1,57)=.420$ $\eta_p^2=.007$
Negative Emotionality	3.32 (.66)	3.23 (.60)	.14	2.84 (.85)	2.76 (.90)	.09	$F(1,57)=6.14^{*}$ $\eta_p^2=.097$	$F(1,57)=1.87$ $\eta_p^2=.032$	$F(1,57)=.004$ $\eta_p^2=.000$
Openness to Experience	3.47 (.83)	3.46 (.77)	.02	3.75 (.68)	3.73 (.71)	.03	$F(1,57)=2.27$ $\eta_p^2=.038$	$F(1,57)=.081$ $\eta_p^2=.001$	$F(1,57)=.006$ $\eta_p^2=.000$

[a] Cohens *d* for changes within groups. $^{*}p<.05$ $^{**}p<.01$.

Relative Sensitivity of Personality Functioning and Pathological Traits to Change

The results of the current study expand upon extant research (cf., Huber et al., 2017; Kraus et al., 2021; Kvarstein et al., 2023) by indicating that short-term psychotherapy for socially deprived adults stimulates changes in personality functioning, and is consistent with the view that personality functioning may be more sensitive to change than traits.

This sensitivity can be understood in terms of theoretical models of personality dysfunction. One point of view suggest that personality functioning encompasses the subjective experience and mental representation of oneself and others (Sharp & Wall, 2021). Building upon this, Zimmermann (2022) proposed that pathological traits may be expressions or consequences of impaired personality functioning, such as reduced capacity for empathy leading to callous actions. Based on this reasoning, changes in personality functioning should be detectable more rapidly than changes in pathological traits, given that alterations in trait expressions rely upon increased personality functioning. In contrast, Clark and Ro (2014; Ro & Clark, 2013) suggested that personality traits are the cause of functioning problems, and personality dysfunction should be viewed as one of the manifestations of these problems. The authors describe personality functioning as a construct that reflect the consequences resulting from the interplay between a person's traits and other factors in their life. Therefore, without assuming that changes in personality functioning must precede changes in traits, more rapid changes in personality functioning may occur as a result of more adaptive transactions between the person and their environment.

From a measurement-based perspective, personality and maladaptive psychopathology constructs have both stable and dynamic aspects (Hopwood et al., 2022). Personality functioning encompasses a strong affective component (i.e., items about internal states and feelings; Nuzum et al., 2019). Affect-related constructs are generally less stable than behavioral (i.e., observable action tendencies) and cognition-related (i.e., thought patterns) constructs. Therefore, measures of personality functioning should capture changes more rapidly than measures of traits, given the latter has a high focus on general behavioral and cognitive tendencies (Anusic & Schimmack, 2016; Nuzum et al., 2019). Consistent with the results of the current study, Haehner et al. (2023), applying a longitudinal design with a non-clinical sample, recently found that the level of both personality functioning and Neuroticism were less stable than traits over a 24-week period following a negative life event (e.g., a friendship breakup, a job loss, etc.). Haehner et al. (2023)

suggest that the higher changeability of personality functioning and Neuroticism was related to its affect-related nature and its close association with personal distress and dissatisfaction. Consequently, in the context of our study, the higher sensitivity to change in self-reported personality functioning compared to pathological traits may be attributed primarily to it capturing (negative) affect-related self-experiences of non-specific psychological distress. These experiences are generally expected to change more in psychotherapy than stable aspects of personality (Connor & Walton, 2011; Noordhof et al., 2018).

Obviously, the results do not rule out the possibility that the therapy did indeed induce changes in pathological traits. However, the changes reported by the clients could not be distinguished from changes reported by control participants within the study's time period. The potential for long-term effects of psychotherapy on pathological traits was detected by Niemeijer et al. (2023), who found that Negative Affectivity and Detachment showed small yet significant decreases over 8–14 weeks of CBT, with reductions continuing over six month after therapy. It is notable that the control group showed mild improvements in pathological traits, and particularly Negative Affectivity. In contrast to the current findings, former research (Bleidorn et al., 2022) has shown relatively high stability in pathological traits across both short-term (i.e., two weeks, Somma et al., 2020) and long term durations (Stricker et al., 2022; Wright et al., 2015). Based on existing studies and the small sample size, it seems most cautious to interpret the decline in Negative Affectivity traits in the control as caused by sampling error. However, the association between changes in personality functioning and Negative Affectivity was weaker in the control group ($r = .24$) compared to the client group ($r = .39$), perhaps suggesting that changes in traits are linked to improvements in personality functioning for those in treatment more than for those not in treatment. Nevertheless, to better distinguish between the sources of change in both personality functioning and personality traits, the results of our study should be replicated in larger samples with more control groups and long-term follow ups.

Personality Functioning Increases the risk of Dropout from Treatment

The clients of the current study were vulnerable and socially deprived adults. Given that decreases in personality functioning severity are related to heightened well-being and reduced functional impairment (Huber et al., 2017; Skodol, 2018; Wright et al., 2016), it is reasonable to assume that changes in personality functioning hold valuable potential for helping this group of individuals towards a more thriving life. Notably, the clients who dropped out of treatment showed more severe personality dysfunction at baseline, as well as more maladaptive trait scores, compared to the clients who completed treatment. These findings are in line with previous research (Bach & Simonsen, 2021) indicating that people with higher levels of personality dysfunction have a more difficult time staying in treatment. On one side, this may indicate that a certain level of personality functioning is required to participate in psychotherapy (cf., Busmann et al., 2019). On the other side, a treatment should be responsive to the individuals it serves, and among other factors, it is important that the treatment is delivered in a way that suits the client's personality (McMurran et al., 2010). Research suggests that while the number of years a therapists has been practicing does not directly relate to treatment effectiveness, experience and therapeutic flexibility play a more important role when dealing with more severe pathology and personality-related difficulties (Berglar et al., 2016; Busmann et al., 2019; Jørgensen, 2019). This suggests that the influence of severity of personality functioning on dropout rates may be more pronounced in settings where therapists are relatively inexperienced. Typically, more experienced therapists are better equipped to repair and maintain the therapeutic relationship and address the most urgent client needs, thus enhancing client satisfaction and reducing the risk of dropout (Walsh et al., 2019). However, socially deprived adults not only struggle with psychological difficulties but typically also with economic, occupational, and other social factors. Therefore, psychotherapeutic work with this group of people might require a heightened focus on both personality functioning as well as social resources and occupational status. Nevertheless, the higher level of personality dysfunction among clients who dropped out indicates the importance of addressing personality-related issues at the beginning of therapy to enhance treatment engagement and outcomes.

Limitations

The primary limitation of this pilot study was our use of a small sample of vulnerable adults, limiting power to find group differences in change. Firm conclusions cannot be drawn given this limitation, but as a feasibility study, the results have outlined potential effect size estimates to be used for power analyses in future research. While sampling a vulnerable population is a study strength, the specificity of the sample raises questions about generalizability to other clinical settings, patient groups and cultures. Future studies should use multimethod measures and approaches to provide a more comprehensive assessment of patient personality and functioning. Finally, the follow-up interval was relatively brief. Ideally, future research would assess clients

and control groups multiple times over the course of a more extended time period before, during, and after treatment.

Conclusion

This study investigated the sensitivity to change of personality functioning and personality traits in short-term psychotherapy with socially deprived adults and a matched control group. There were three main findings. First, personality functioning significantly distinguished clients who dropped out of treatment. Second, clients showed stronger changes in personality functioning than traits. Third, changes over time across client and control groups were stronger for personality functioning than traits. These findings are suggestive of the unique clinical utility of personality functioning for psychotherapy. However, conclusions are limited by the use of a small and specific sample. This research provides a foundation for future research on the sensitivity of personality functioning and personality traits to changes as a function of psychotherapy.

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