ORIGINAL PAPER

"I Need You!" Patients' Care Dependency Patterns During Psychotherapy for Personality Disorders and Its Association with Symptom Reduction and Wish for Treatment Continuation

Naline Geurtzen[1,3] · **Johan C. Karremans[1]** · **Ger P. J. Keijsers[1,2,3]** · **Giel J. M. Hutschemaekers[1,3]**

Abstract

Different views exist regarding the nature of patients' dependency in psychotherapy (trait versus contextual dependency), and its impact on treatment outcome and duration. Therefore we examined whether patients' levels of care dependency changed over time during a 9-month treatment period, and whether care dependency was related to symptom reduction and patients' wish for treatment continuation at the end of the treatment. Participants in this longitudinal study were 113 patients ($M_{age} = 33.6$, 78% female) with personality disorders receiving inpatient or daycare group psychotherapy. Both increases and decreases on different aspects of care dependency were found over the course of treatment. Decreases in dependency were related to larger symptom reduction, and higher levels of care dependency, especially patients' lack of perceived alternative options for the current treatment, were related to patients' stronger wish to continue their treatment. Changes in care dependency during treatment mainly supports the contextual view on patients' care dependency, and decreasing levels of dependency may have beneficial treatment effects. However, dependency may also lead to prolonged treatment duration. Clinical implications for therapists are presented.

Keywords Care dependency · Psychotherapy · Personality disorders · Treatment duration · Symptom reduction · Therapeutic relationship

Introduction

Clinicians in mental health care settings are well known by the fact that some of their patients can be psychologically dependent on them and on their treatment. Patients may lean on the therapist for advice, may be experienced as clingy, and may appeal to continue treatment for several more sessions than needed (e.g., Berk & Parker, 2009; Bornstein, 2005; Clemens, 2010). But, different views exist on both the nature of patients' dependency in mental health care (i.e., personality trait versus iatrogenic, contextual effect)

and the impact it may have on treatment outcomes (negative versus beneficial effect). The current study seeks to contribute to a better understanding of patients' dependency in a mental health care setting by measuring patients' care dependency (i.e., patients' submissive stance in treatment, their need for contact with their therapist, and perceived lack of alternative options besides their current treatment) in a sample of patients with personality disorder (PD) receiving psychotherapy. It was tested whether, in accordance with the contextual approach, patient care dependency levels vary across the time of treatment. Moreover, the current research explores whether patients' care dependency should be seen as an adverse or beneficial effect, by examining whether and how patients' care dependency levels relate to symptom reduction during treatment and patients' wish for treatment continuation.

✉ Naline Geurtzen
   n.geurtzen@propersona.nl

[1] Radboud University, Behavioural Science Institute, P.O. Box 9104, 6500 HE Nijmegen, The Netherlands

[2] Department of Clinical Psychological Science, Maastricht University, Maastricht, The Netherlands

[3] Pro Persona, Mental Health Services, Wolfheze, The Netherlands

Dependency: Trait or Context?

According to the trait approach, patients' dependency on the treatment or therapist in mental health care is seen as a manifestation of the patient's dependent personality characteristics, also referred to as interpersonal dependency (e.g., Bornstein, 2005, 2011). Interpersonal dependency is defined as a "tendency to look to others for nurturance, guidance, protection, and support, even in situations where autonomous functioning is possible" (Bornstein, 2011, p. 124) and is usually considered as a manifestation of normal and adaptive traits and behaviors (Bornstein, 2005). However, some people may be excessively dependent, defined as on others (e.g., Overholser, 1997), or may even be classified with a dependent PD (American Psychiatric Association [APA], 2013).

Within the trait approach to patients' dependency in mental health care, little attention has been given to the specific context of mental health care. According to the contextual approach, patients' dependency is not (only) the result of underlying personality characteristics, but results from the specific mental health care or therapeutic context (i.e., iatrogenic effect). A classic example is the so-called 'hospitalization syndrome', which describes how psychiatric inpatients with a long-term treatment become highly passive and dependent on the health care system and the professionals (Goffman, 1961). Although the mental health care system has changed since then, it is still assumed that certain outpatient as well as inpatient mental health care treatments can actually make patients (more) dependent (Berk & Parker, 2009; Bonavigo et al., 2016; Chow & Priebe, 2013; Clemens, 2010). Indeed, recent empirical studies on adverse psychotherapy effects suggest that patients' dependency can be a potential negative side-effect of psychotherapy treatments (Linden, 2013; Parker et al., 2013; Schermuly-Haupt et al., 2018). To illustrate, it has been found that 5% to 18% of the (ex)psychiatric patients reported to feel (or have felt) highly dependent on their treatment, or were even 'addicted' to their therapist (Leitner et al., 2013; Rheker et al., 2017; Rozental et al., 2016). In addition, about 29% of 134 patients who previously received face-to-face psychotherapy for their depressive disorder, reported to feel worse after therapy has ended, because they missed the conversations with their therapists (Moritz et al., 2019).

Recent studies comparing *care* dependency (i.e., patients' dependency on a mental health care treatment or therapist) and trait dependency levels showed that care dependency levels can indeed be distinguished from trait dependency levels and self-reported symptoms of PDs (Geurtzen et al., 2018, 2019). Also, it was shown that levels of care dependency changed over time during treatment, both in an 8-week outpatient cognitive behavioral therapy (CBT)

program among students (Geurtzen et al., 2019), as well as in an 8-week daycare program for depressed patients (Glanert et al., 2021). The first aim of the current research is to further validate the assumption that care dependency is a contextual construct, by tracking patients' dependency over time during their treatment in a sample of patients with PDs. If dependency levels are indeed influenced by the mental health care treatment, we may expect that levels of dependency in patients fluctuate significantly over time. Alternatively, a trait view on dependency would suggest that levels of dependency are relatively stable across the course of treatment.

Care Dependency: Adverse or Beneficial Treatment Outcomes?

The second aim of the current study is to explore whether patients' care dependency should be considered unwanted, leading for example to less effective and longer treatments, or whether some degree of patients' dependency benefits treatment outcomes. Traditionally, patients' dependency is assumed to have a negative impact on treatment outcomes, as it has been linked to patients' passive and hopelessness stance in treatment, to negative trait characteristics such as insecurity, jealousy, and interpersonal problems (Berk & Parker, 2009; Clemens, 2010; Spivack, 2008). In line, two recent studies showed that higher levels of care dependency correlated with higher levels of psychiatric symptoms and demoralization (Geurtzen et al., 2018, 2019). These findings hint towards a negative effect of care dependency on treatment outcome. Indeed, Glanert et al. (2021) found that higher levels of care dependency in a sample of depressed patients predicted less favorable treatment outcome.

Moreover, patients' trait and care dependency have repeatedly been associated with difficulties regarding treatment termination because dependent patients may experience "separation anxiety" when treatment termination comes into sight (Berk & Parker, 2009; Bornstein, 2005; Clemens, 2010). To illustrate, Geurtzen et al. (2019) found that students with higher levels of care dependency at the end of a CBT-program wished to continue treatment. Specifically, the less students' perceived alternatives options to their current 'treatment', the stronger their wish for treatment continuation, even when controlled for symptom levels at the end of the treatment. Such findings suggest that even in the absence of severe symptom levels, higher levels of care dependency can potentially lead to treatments continuing longer than necessary, though the association with actual treatment duration was not studied.

In contrast to the negative approach to dependency, it has also been argued that at least a certain level of patients' dependency in mental health care is necessary for good

treatment outcomes. For example, trait dependency levels have been linked to an increased interpersonal sensitivity, better treatment compliance, and to more frequent help-seeking behaviors, which should be considered useful and appropriate within the mental health care context (Bornstein, 2005; Spivack, 2008; Tait, 1997). Also within the contextual view it is argued that a certain degree of patients' care dependency may actually be necessary for the establishment of a good therapeutic relationship, especially in the first phase of treatment (Berk & Parker, 2009; Rozental et al., 2016; Schermuly-Haupt et al., 2018). As the quality of the therapeutic alliance is a clear predictor of better treatment outcomes (Flückiger et al., 2018), higher levels of patients' care dependency may actually lead to better treatment outcomes.

However, empirical evidence is mixed. Bornstein (2005) concluded that both positive and negative effects of trait dependency on treatment outcomes have been found, while other studies failed to show any significant associations (e.g., Lowyck et al., 2017). Regarding care dependency, the two studies by Geurtzen et al., (2018, 2019) showed positive associations between patients' dependency levels and perceived quality of the therapeutic alliance, but were unable to show a direct effect of care dependency levels on symptom reduction in the student sample (Geurtzen et al., 2019).

The Present Research

In summary, two main research questions are central in the current study: (1) Do levels of patients' care dependency change over time during treatment, and if so, how? And (2) do patients' care dependency levels relate to treatment effects with regard to symptom reduction, as well as patients' wish to continue their treatment when the end of treatment comes into sight? To answer these questions, we will administer patients' care dependency in a mental health care facility specialized in the treatment for patients with PDs (i.e., long-term and persistent problems or distress in inter- and intrapersonal functioning, APA, 2013). All patients receive group psychotherapy for nine months (see Dixon-Gordon et al., 2011 for an overview of the effectiveness of different psychotherapy treatment modalities for PDs). Since PDs have been linked to attachment problems, including for example dependency related issues (Lorenzini & Fonagy, 2013), this specific patient sample seems particularly relevant when examining patients' care dependency in clinical practice. In addition, patients indicated their self-perceived level of care dependency.

Method

Participants

Participants were 113 adult patients from a psychotherapy facility that is part of a large mental health care institute in the Netherlands. The facility offers specialized in- and outpatient treatments for patients with a PD as their primary classification, for a time-limited period of 36 weeks (nine months). After this 36-week period, patients receive follow-up aftercare in groups ('resocialization phase') for an extra couple of months, before terminating the treatment completely. Patients are only admitted to the facility when previous treatment attempts had been made and proved unsuccessful. Diagnostic classification was made by means of structured diagnostic interviews (i.e., the SCID-II, based on the DSM-IV Axis II classifications of PDs), administered by an experienced clinician. All patients received a standard program including group psychotherapy based on either cognitive behavioral therapy when mainly experiencing externalizing problems (i.e., group schema-focused therapy according to Farrell & Shaw, 2012), or psychodynamic psychotherapy when experiencing internalizing problems (according to Lemma et al., 2011). Both group psychotherapies were combined with other therapies, such as emotion-regulation training, sociotherapy, creative therapy, and pharmacotherapy whenever appropriate.

The current sample consisted of 88 females (77.9%) and 25 males (22.1%). Their mean age was 33.6 years old ($SD = 9.7$; range 18–65). The most frequent PD within the current sample was a PD not otherwise specified (PD-NOS; $n = 56$; 49.6%), followed by an avoidant PD ($n = 30$; 26.5%), borderline PD ($n = 11$; 9.7%), obsessive compulsive PD ($n = 11$; 9.7%); dependent PD ($n = 4$; 3.5%); and histrionic PD ($n = 1$; 0.9%). The prevalence of PD-NOS in the current sample is relatively high but corresponds with other studies (e.g., Verheul et al., 2007). Most patients ($n = 89$, 78.8%) received an intense treatment consisting of 4 to 5 days of treatment a week, which could be both inpatient or outpatient (daycare). The remaining patients ($n = 24$, 21.2%) received a less intense treatment of 2 days a week. There was no significant association between treatment intensity (four or five days a week versus two days a week of treatment) and treatment cluster (schema-focused therapy versus psychodynamic and mentalization Based Therapy), $\chi^2 = 0.060$, $p = 0.807$, nor between treatment cluster (Schema-focused therapy versus Psychodynamic and Mentalization Based Therapy) and diagnoses (Fisher's exact $= 7.43$, $p = 0.156$), nor between diagnoses and treatment intensity (four or five days a week versus two days a week), Fisher's exact $= 6.81$, $p = 0.200$. Also, there was no association between gender and diagnoses (Fisher's exact $= 3.36$, $p = 0.649$).

Procedure

The current study was approved by the ethical committee of the Faculty of Social Sciences of the Radboud University. Patients who started a new treatment in that particular psychotherapy facility between 29-02-2016 and 29-06-2017 were asked by the care manager to participate in the current study. During the intake phase, the diagnostician explained the content and goal of the current study. Patients received a written information letter and informed consent form. All patients were informed that they could continue treatment without any negative consequence, should they decide not to participating in the study.

Within the inclusion period, 204 new patients started their treatment within the center, of which 174 patients were actually asked to participate (85.3%) (some patients were not informed about the study due to absence of the relevant care manager, or because patients started treatment with urgency leading to a divergent intake procedure). Of these 174 patients, 133 patients agreed to participate (76.4% of 174 patients). Of the 133 initially included patients, 20 patients discontinued their treatment within the facility prematurely; three patients who were officially logged as dropouts (i.e., initiative to quit treatment by the patient and not by the therapist), while the treatment of the remaining 17 patients ended for other reasons (e.g., by mutual agreement with therapist, or because of re-assessment and reallocation to another department within or outside Pro Persona). As most of these 20 patients quit treatment in an early phase of treatment, and none of them remained in treatment for a longer period than 6 out of 9 months, we chose to remove all these 20 patients from our dataset. This resulted in the final sample of 113 patients participating in our study.

Participants were asked to complete a set of paper questionnaires, including the Care Dependency Questionnaire (CDQ) and their wish for treatment continuation, multiple times during their treatment: After the first day of the introduction phase (T_0; on average completed 2.05 weeks before the start of the treatment, $SD = 2.40$), as well as immediately after the start of the treatment (T_1; $M = 0.63$ 'weeks' after the start of treatment, $SD = 0.69$), in the first phase of treatment (T_2; $M = 5.47$ weeks, $SD = 1.96$), after three to four months of treatment (T_3; $M = 14.15$ weeks, $SD = 1.88$), after almost 6 months of treatment (T_4; $M = 23.27$ weeks, $SD = 1.98$); and in the final phase of treatment, between eight and nine months of treatment (T_5, $M = 32.21$ weeks, $SD = 1.96$). The responses on these questionnaires were combined with patient information derived from the electronic patients files (e.g., DSM classifications), as well as with patients' responses to other questionnaires that were part of the digitally Routine Outcome Monitoring (i.e., Outcome Questionnaire-45 [OQ-45] and the Severity Indices of Personality Problems-118 [SIPP-118]). Regarding the OQ-45 and the SIPP-118, scores were only used when the questionnaires were completed eight weeks before the treatment or within the first four weeks after the start of treatment for the pre-measurement, and between 28 and 44 weeks after the start of treatment for the post-measurement.

Measures

Care Dependency

Patients' dependency on their treatment or therapists was measured with the Care Dependency Questionnaire (CDQ; Geurtzen et al., 2018). The CDQ consists of 18 items, measuring three dimensions of patients' care dependency. All items were rated on a 7-point Likert scale, ranging from 1 (*totally disagree)* to 7 (*totally agree*). Both the CDQ total score and the CDQ subscales have shown to have adequate reliability and validity (Geurtzen et al., 2018). Since earlier research hinted towards potential different associations between the different subscales and treatment outcome (Geurtzen et al., 2019), we decided to focus primarily on the three subscales separately.

The first subscale, patients' *Submissive Stance,* consists of five items measuring patients' compliant and docile stance in treatment, and patients need for advice of their therapists (e.g., "I present all my decisions to my therapist(s)"). Cronbach's alphas in the current sample ranged from 0.71 (T_4) to 0.80 (T_2). The second subscale, patients' *Need for Contact* with the therapists, consists of four items measuring patients' wish to stay in touch with the therapists (e.g., "I dread ending the contact with my therapist(s) at the end of the treatment"). Cronbach's alphas ranged from 0.77 (T_1) to 0.87 (T_4). The third subscale, patients' *Lack of Perceived Alternatives*, consists of nine items measuring patients' believe that there are no other options besides the current treatment to get rid of their symptoms, as well as patients' feelings that only their therapist(s) can help them to keep going (e.g., "Only my therapist(s) can help me with my problems"). Cronbach's alphas ranged from 0.82 (T_1) to 0.89 (T_5).

Self-perceived Dependency

Next to the CDQ we also measured patients' perceived dependency on their treatment at a very explicit level, by means of the single item "I am dependent on my treatment", answered on a Likert scale ranging from 1 (*totally disagree*) to 7 (*totally agree*).

Personality Psychopathology

To measure the severity of personality psychopathology, the Severity Indices of Personality Problems was used

(SIPP-118; Verheul et al., 2008). The SIPP-118 is an elaborate questionnaire that is standardly administered as the main outcome measure in the specialized treatment center. It's concurrent, convergent, and discriminant validity in the Dutch language are good and the SIPP-188 is sensitive to change over a mid- to long-term treatment periods (Verheul et al., 2008). The SIPP consists of 118 items (e.g., "I can cope very well with disappointments", "I know exactly who I am and what I am worth", "It is hard for me to show affection to other people"), all rated on a 4-point Likert scale, ranging from 1=*fully disagree*, to 4=*fully agree*. The 118 items of the SIPP are part of 16 different facets of personality problems, clustered in five higher-order domains (Verheul et al., 2008). However, since we were mainly interested in one overall score reflecting the severity of personality problems, we used the sum score as our main treatment outcome variable. We pooled the items so that higher scores on the SIPP-118 reflect *more personality pathology*. Cronbach's alphas based on all 118 items were 0.77 (T_0) and 0.89 (T_5).

Mental Symptoms

General symptom severity was measured by means of the Outcome Questionnaire (OQ-45; Lambert et al., 1996; Dutch adaptation by de Jong et al., 2009). The OQ-45 consists of 45 items covering three different domains; symptomatic distress (25 items, e.g. "I feel no interest in things"); complaints or dissatisfaction regarding interpersonal relations (11 items, e.g., "I am concerned about family troubles"); and difficulties in social role (9 items, e.g., "I work/study too much"). All items were rated on a 5-point Likert scale ranging from 0=*never*, 1=*rarely*, 2=*sometimes*, 3=*often*, to 4=*almost always*. Positively formulated items were pooled so that higher scores indicated higher levels of symptoms, more dissatisfaction with interpersonal relationships, and more difficulties in functioning, with a potential range of 0 to 180. Sum scores above 55 indicate a clinically significant impairment, and a decrease of 14 points or more over time should be considered as a reliable change (de Jong et al., 2009). The Dutch translation has shown to have adequate to good psychometric properties (de Jong & Nugter, 2004). Cronbach's alphas in the current sample were 0.88 (T_0), and 0.96 (T_5).

Wish for Treatment Continuation

Patients' wish for treatment continuation was based on three additional self-construed items: (1) "Despite the fact that the current treatment is (almost) finished, I would like to continue my current treatment"; (2) "I am very motivated to continue my current treatment"; (3) "If I had the opportunity to continue my current treatment, I would do so". All items were rated on a 7-point Likert scale, ranging from 1

(*completely disagree*) to 7 (*completely agree*). Cronbach's alpha based on these three items was 0.83.

Data Analyses

To validate the assumption that care dependency is a contextual effect, we determined whether care dependency scores varied over time during the treatment by means of a repeated measures MANOVA with Time (T_0 to T_5) as within variable, and the three subscales of the CDQ, i.e., submissive stance, need for contact, and the lack of perceived alternatives, as dependent variables. Next, a repeated measures ANOVA with Time (T_1 to T_5) as within variable, and patients' scores on their self-perceived dependency item as dependent variable was conducted. As nonlinear patterns might be possible, we also explored any significant time-effects on multiple polynomial contrasts.

The second aim of the current study was to examine whether increases or decreases in care dependency during treatment were associated with patients' symptom reduction and patients' wish for treatment continuation. To do that, we first tested whether there were significant reductions in symptoms by means of a repeated measures MANOVA with time (T_0 and T_5) as independent variable and SIPP-118 and OQ-45 as dependent variables. Next, difference scores of the three subscales of care dependency, self-perceived dependency, OQ-45, and the SIPP-118 were calculated (T_5—T_0). Subsequently, two GLM-Multivariate tests were performed, both with the OQ-45 and SIPP-118 differences scores as dependent variables, and either the difference scores of the three care dependency subscales scores, or the difference score of the self-perceived dependency item as predictor variables.

Regarding patients' wish for treatment continuation, we first explored the Spearman's rho correlations (since not all variables were normally distributed) between the CDQ subscales, the self-perceived dependency item, and patients' wish for treatment continuation (all at T_5), and we explored the partial correlations between patients' care dependency and their wish for treatment continuation, while controlling for the OQ-45 and the SIPP-118 scores at T_5.

Results

Care Dependency Levels During Treatment

Table 1 shows the descriptive statistics of the care dependency total score, the three subscales, and patients' responses on their self-perceived dependency item on all time points.

A repeated measures MANOVA on the three subscales of the CDQ showed a significant multivariate effect of time, $F(15, 464.18)=8.88$, $p<0.001$, $\eta_p^2=0.21$, indicating a

Table 1 Descriptive statistics of the study variables

	T0 (n=82) M(SD)	T1 (n=82) M(SD)	T2 (n=88) M(SD)	T3 (n=95) M(SD)	T4 (n=89) M(SD)	T5 (n=78) M(SD)
Care Dependency (total score)	4.10(0.65)	4.05(0.68)	3.99(0.71)	4.05(0.69)	3.92(0.70)	3.91(0.67)
Submissive Stance	3.77(1.01)	3.70(1.01)[a]	3.58(1.04)	3.89(1.00)	3.68(0.94)	3.79(0.96)
Need for Contact	3.49(1.24)	3.51(1.18)	3.47(1.20)[b]	3.82(1.20)	3.99(1.33)	4.33(1.32)
Lack of Perceived Alternatives	4.56(0.79)	4.40(0.97)	4.34(0.97)	4.14(1.00)	3.87(1.00)	3.62(1.06)
"I am dependent on my treatment"	–	4.92(1.34)[c]	4.91(1.21)[d]	4.77(1.27)[e]	4.38(1.27)[f]	3.83(1.49)[g]
OQ-45	88.69(17.99)[h]	–	–	–	–	68.13(28.65)[i]
SIPP	18.45(2.76)[i]	–	–	–	–	15.27(3.31)[j]
Wish for treatment continuation	–	–	–	–	–	4.11(1.73)[k]

All (sub)scales of the CDQ as well as the self-perceived dependency item ("I am dependent on my treatment") and the wish for treatment continuation were rated on a 1–7 point Likert scale

[a] n=81

[b] n=87

[c] n=77

[d] n=86

[e] n=91

[f] n=85

[g] n=72

[h] n=105

[i] n=101

[j] n=82

[k] n=52

Fig. 1 Estimated marginal means of the three subscales of the CDQ, and the self-perceived care dependency item on all time points, whereby T_1 reflects the start of the actual treatment, and T_5 the final phase of the treatment. $N=35$ due to the listwise deletion of the repeated measures (M)ANOVA approach. Please note that the Likert response scales of the CDQ subscales and the self-perceived dependency item all range from 1 (totally disagree) to 7 (totally agree)
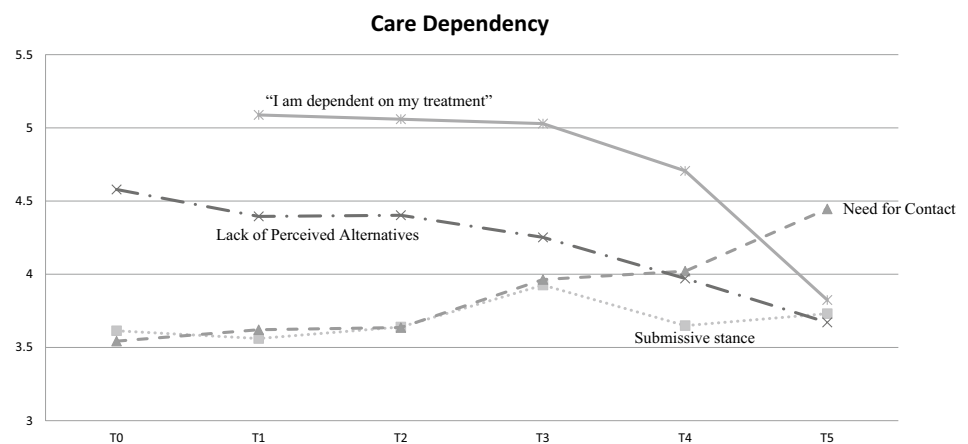
significant change in care dependency over time during the treatment. Examining the CDQ subscales separately, it was found that the univariate test of patients' submissive revealed no significant change over time, $F(3.12, 106.23) = 1.44$, $p = 0.23$. However, exploring the nonlinear within subject contrasts, results showed a significant *curvilinear change* over time, a so called order 4 polynomial effect, $F(1, 34) = 4.44$, $p = 0.043$, $\eta_p^2 = 0.12$. This was due to a small temporary increase at T_3 (see Fig. 1.). The second subscale, patients' need for contact with the therapist, did change

significantly over time, $F(2.98, 101.40) = 6.44$, $p = 0.001$, $\eta_p^2 = 0.16$. Tests of within subject contrasts showed a significant and clear *linear increase* over time, $F(1, 34) = 12.34$, $p = 0.001$, $\eta_p^2 = 0.27$. Also the third subscale of the CDQ, the lack of perceived alternatives, showed a significant change over time, $F(2.94, 99.90) = 11.13$, $p < 0.001$, $\eta_p^2 = 0.25$. Tests of within subject contrast showed a significant and clear *linear decrease* over time, $F(1, 34) = 21.91$, $p < 0.001$, $\eta_p^2 = 0.39$.

Last, a repeated measures ANOVA on the self-perceived dependency item was conducted. Results showed a significant change over time, $F(2.99, 98.71) = 9.83$, $p < 0.001$, $\eta_p^2 = 0.23$. Tests for within subject contrasts showed that the time effect fits both a significant *linear decrease* over time, $F(1, 33) = 14.85$, $p = 0.001$, $\eta_p^2 = 0.31$, as well as a significant *quadratic effect* over time, $F(1, 33) = 14.29$, $p = 0.001$, $\eta_p^2 = 0.30$.

Thus, results showed an increase in patients' care dependency during treatment in terms of their need for contact with their therapist, but decreases in care dependency with regard to patients' lack of perceived alternatives and their self-perceived dependency on the treatment. Patients' submissive stance did not show a clear change over time. Figure 1 shows the care dependency patterns, based on the estimated marginal means of the repeated measures (M)ANOVA's.

Care Dependency, Symptom Reduction, and Patients' Wish for Treatment Continuation

Symptom Reduction

Table 1 shows the descriptive statistics of both symptom severity measures, i.e., the OQ-45 and the SIPP-118, both at the beginning and at the end of treatment. A Repeated Measures MANOVA with time (T_0, T_5) and OQ-45 and SIPP-118 as dependent variables showed a significant multivariate time effect, $F(2, 73) = 29.22$, $p < 0.001$, $\eta_p^2 = 0.45$. Univariate tests showed a significant decrease in mental symptoms measured with the OQ-45, $F(1, 74) = 49.70$, $p < 0.001$, $\eta_p^2 = 0.40$ (estimated marginal means: $M_{T0} = 86.37$, $M_{T5} = 66.25$, which is on average a reduction in symptoms of more than 14 points, considered as clinical relevant improvement), as well as a significant decrease in personality pathology as measured by the SIPP-118, $F(1, 74) = 56.79$, $p < 0.001$, $\eta_p^2 = 0.43$ (estimated marginal means: $M_{T0} = 18.33$, $M_{T5} = 15.21$).

Next we tested whether changes in care dependency predicted patients' reduction in symptoms and personality problems. A GLM-Multivariate with the difference scores

of the OQ-45 and the SIPP-118 as dependent variables, and the difference scores of the three subscales of the CDQ as independent variables (covariates), was not significant for patients' submissive stance in treatment and patients' need for contact with their therapist. However, there was a significant multivariate effect of patients' lack of perceived alternatives, $F(2, 41) = 4.57$, $p = 0.016$, $\eta_p^2 = 0.18$. Investigating the outcome variables separately, it was found that patients' decrease in their lack of perceived alternatives was significantly related to a decrease in mental symptoms as measured with the OQ-45, $F(1, 42) = 4.21$, $p = 0.046$, $\eta_p^2 = 0.09$, as well as with a decrease in personality pathology as measured with the SIPP-118, $F(1, 42) = 9.22$, $p = 0.004$, $\eta_p^2 = 0.18$. A second GLM Multivariate test, now including the difference score on patients' self-perceived dependency item as independent variable instead of the three CDQ subscales, also resulted in a significant multivariate effect, $F(1, 38) = 6.34$, $p = 0.004$, $\eta_p^2 = 0.25$. Investigating the outcome variables separately, it was found that the decrease in patients' self-perceived dependency during treatment was associated with the reduction of personality pathology as measured with the SIPP-118, $F(1, 39) = 9.54$, $p = 0.004$, $\eta_p^2 = 0.20$, but not with the OQ-45, $F(1, 39) = 1.36$, $p = 0.25$. Thus, decreases in patients' lack of perceived alternatives and patients' self-perceived dependency were both related to a decrease in patients' personality symptoms, while patients' decrease in their lack of perceived alternatives also predicted a reduction in mental symptoms. No such effects were found for the other subcomponents of care dependency.

Wish for Treatment Continuation

Spearman's rho correlations (Table 2) showed that patients with higher levels of care dependency at the end of their treatment, showed a significantly stronger wish to continue their treatment, as reflected in all subscales of the CDQ (i.e., patients' submissive stance, $r = 0.27$ [marginally significant]; need for contact; $r = 0.34$; and patients' lack of perceived alternatives, $r = 0.40$). Also, higher levels of patients' self-perceived dependency on the treatment were related

Table 2 Spearman's Rho correlations and partial correlations between patients' care dependency and patients' wish for treatment continuation

	Patients wish for treatment continuation[a]	Patients' wish for treatment continuation, controlled for symptom severity[b]
Submissive Stance	$r = .27$, $p = .057$	$r = .12$, $p = .512$
Need for Contact	$r = .34$, $p = .014$	$r = .13$, $p = .469$
Lack of Perceived Alternatives	$r = .40$, $p = .004$	$r = .22$, $p = .201$
"I am dependent on my treatment"	$r = .58$, $p < .000$	$r = .42$, $p = .013$

All variables were measured at T_5, in the final phase of treatment

[a]Spearman's rho correlations, $N = 51$

[b]Partial Correlations, controlled for both severity of mental symptoms (OQ-45$_{T5}$) as well as severity of personality problems (SIPP$_{T5}$), $N = 33$

to patients' wish to continue treatment ($r = 0.58$). When controlled for patients' symptom levels at the end of their treatment (OQ-45 and SIPP-118 at T_5), partial correlations showed that only higher levels of patients' self-perceived dependency were still significantly related to a stronger wish of patients to continue their current treatment ($r = 0.42$).

Discussion

In this study we addressed two main research questions. First, do levels of care dependency vary over time during treatment, and if so, how? Second, do patients' care dependency levels relate to treatment effects with regard to symptom reduction, as well as patients' wish to continue their treatment when the end of treatment comes into sight? On average, patients' need for contact with their therapist(s), including a fear to end the treatment and the contact with their therapists, *increased* significantly over time during treatment. At the same time, however, significant *decreases* were found with regard to patients' lack of perceived alternative options, as well as their self-perceived dependency levels during treatment, while patients' submissive stance in treatment did not change significantly during treatment. Moreover, decreases in patients' lack of perceived alternatives and patients' self-perceived dependency were associated with reductions in mental symptoms, and/ or patients' personality problems. Finally, all dimensions of patients' care dependency were related to a stronger wish of patients to continue their treatment when the end of treatment came into sight, whereby the association between patients' self-perceived dependency and their wish for treatment continuation remained significant even when controlling for patients' levels of symptoms and personality problems at the end of treatment.

Theoretical Implications

The linear increase in patients' need for contact with the therapist indicates that the longer patients are in treatment, the stronger their need to be in touch with their therapist(s) and the stronger their unease to end contact with their therapist(s). This finding confirms the results of a recent treatment-analogue study amongst students (Geurtzen et al., 2019), and supports the iatrogenic, contextual approach to patients' care dependency. Patients' increased need for contact may be related to a growing bond between patients and therapists during treatment, consistent with previous studies that found positive associations between care dependency (including the need for contact) and the quality of the therapeutic alliance (Geurtzen et al., 2018, 2019). Interestingly, an increasing level of need for contact does not seem to impact treatment *outcome* in either a positive or negative

way. However, as there was a positive association between patients' need for contact with their therapist and their wish for treatment continuation, it does suggest that treatment termination becomes more challenging when patients' have a strong need to stay close with their therapist.

The significant decreases in patients' lack of perceived alternatives options and patients' self-perceived dependency over the course of treatment correspond, again, with the results of Geurtzen et al. (2019). But, these findings do not seem to reflect an adverse effect of care dependency. Actually, these findings could be seen quite optimistic and promising. When treatment progresses, patients' start to see more possibilities besides their current treatment to deal with symptoms and personality problems, such as the help and support of other people in their natural environment. Also, this finding opposes the idea that patients who experience a strong therapeutic relationship start to devaluate other alternative options, resulting in a greater lack of perceived alternatives (comparable to the derogation effect in intimate relationships, see Lydon & Karremans, 2015; and see Geurtzen et al., 2018 for the adoption of this idea in the mental health care setting). A possible explanation is that a reduction of experienced symptoms and personality problems during treatment goes hand in hand with patients becoming more remoralized (i.e., less demoralized, Vissers et al., 2017). Another possible explanation is that in the final phase of treatment, therapists actively discuss treatment discontinuation with their patients, including topics such as support from patients' family and friends, which may lead to an increase of perceived alternative options and thus a decrease of self-perceived dependency on the treatment.

Consistent with an optimistic interpretation of the present findings, we found that decreases in patients' lack of perceived alternatives and patients' self-perceived dependency were related to larger reductions in patients' mental symptoms and personality problems during treatment. Thus, decreasing levels of care dependency may have beneficial effects on symptom reduction during treatment, although the reverse direction (i.e., greater reduction in symptoms leading to a decrease in patients' care dependency) may also be possible. But, patients' care dependency levels, especially the self-perceived dependency levels, were also associated with a stronger wish to continue treatment. These latter results confirm earlier findings (Geurtzen et al., 2019), and are also consistent with the idea that higher levels of patients' dependency may lead to prolonged treatment duration (e.g., Bornstein, 2005; Clemens, 2010). Thus, although *decreases* in patients' self-perceived dependency and their lack of perceived alternatives options, as found in the current study, appear to reflect a beneficial development during treatment, it seems that higher levels of care dependency can still lead to less effective and longer treatments.

As the results showed, patients' need for contact takes a different and independent path as compared to patients' the lack of perceived alternatives. This finding shows an interesting parallel with research on dependency in the science of intimate relationships (e.g., Rusbult et al., 2005; see also Geurtzen et al., 2018), showing that the lack of perceived alternatives predicts relationship continuation irrespective of the current level of satisfaction with the relationship (Rusbult et al., 2005). In line with such findings, one could speculate that although patients' increasing need for contact with their therapist may reflect an increasing satisfaction with the therapist, this tendency might be not problematic because it may not lead to prolonged treatment duration per se as long as patients' lack of perceived alternatives decreases towards to end of treatment. For example because patients had insight into whether or not they needed their treatment or therapist.

The third dimension of patients' care dependency, i.e. patients' submissive stance in treatment, did not show a significant (linear) change during treatment, and appears to be unrelated to symptom reduction during treatment. These results are in contrast to earlier findings (Geurtzen et al., 2018, 2019). More research is needed to fully understand whether this dimension of patients' dependency should be seen as a reflection of a more or less stable personality characteristic, or as part of the care dependency construct.

Strengths

The current study had a number of strengths. It is the first study in which the CDQ, an instrument that specifically measures patients' care dependency on the treatment or therapists, was assessed in a longitudinal design, within a fairly large sample of 113 patients with PDs. As a result, the study not only leads to new theoretical and clinical insights regarding patients' dependency, but is also a further validation of the CDQ, suggesting that two of the three dimensions of the CDQ indeed measure patients' care dependency and not trait dependency, meaning that care dependency levels may be influenced by treatment processes in this naturalistic treatment setting.

Limitations

However, the study also has some limitations. First, despite the longitudinal approach, the causal direction of the findings remains uncertain. For example, a decrease of patients' lack of alternatives predicted a reduction in symptoms and personality problems during treatment, but the inverse may also be true: a decrease in symptoms may lead to a decrease in patients' lack of perceived alternatives. Second, despite the relatively large sample, we had quite some missing values due to practical issues and organizational changes, which

have resulted for example in therapists forgetting to distribute the questionnaires to the patients. This limitation shows the challenges with recruiting a patient population for scientific research. Since we were interested in the naturalistic course of dependency over time, we were hesitant in using imputation methods and chose to continue with the more conservative and straightforward analyses (e.g., repeated measures) only including those individuals with complete response sets.

Third, we only had limited information about the demographics of the patients in our sample (e.g., no information on marital status, employment, or ethnicity), which limits the interpretability of the current findings. Last, the sample of the current study consisted of patients classified with PDs, in which dependency issues may likely play a role (Lorenzini & Fonagy, 2013), whilst at the same time also receiving psychotherapy targeting these personality problems. That means that both the specific characteristics of this patients sample as well as the type of treatment (i.e., group psychotherapy according to psychodynamic or schema-focused therapy) may have influenced patients' care dependency patterns during treatment. Although comparable results have been found in a clinical sample with depressed patients and other types of treatment (metacognitive therapy versus cognitive behavioral analysis system of psychotherapy, both delivered in an 8-week day treatment program, Glanert et al., 2021), it is still unknown to what extent the current findings can be generalized to other patient groups and to different treatment approaches and treatment modalities.

Directions for Future Research

First, as the current treatment setting was characterized by a time-limited treatment approach, we could only measure patients' wish for treatment continuation at the end of their treatment. Future research is needed to determine whether patients' care dependency levels can predict actual treatment duration. Second, the current study explored whether, *on average*, care dependency levels seemed to change over time during treatment. However, patients' dependency levels may actually result from an interaction between patient characteristics (e.g., trait dependency, attachment style, psychiatric diagnoses, etcetera) and context characteristics (e.g., intensity or duration of care, type of treatment, therapeutic orientation, and so on). An important avenue for future work is to examine which patients would be particularly prone to develop high levels of care dependency, by including multiple patient-characteristics in future studies, and to explore which particular characteristics or circumstances of the mental health care context may elicit or reinforce patients' care dependency.

Conclusion and Clinical Implications

To conclude, the current findings provide compelling support for the idea that patients' care dependency is at least in part a contextual effect, and not merely a stable personality trait of patients. Therapists should be aware that the specific mental health care context, including the contact between them and patients, may influence patients' care dependency levels in treatment. Care dependency may be an indicator or facilitator of a good therapeutic alliance, and thus providing a firm basis for successful treatment. However, it may also cause patients wanting to stay longer in treatment than necessary, and treatment termination may become more challenging. While the current findings also raise additional questions and offer various directions for future research, at this point we would recommend therapists to carefully address potential dependency issues later on in treatment, such as dependency related cognitions and helplessness schemes of patients. Also we argue that it is important to remind patients on the finiteness of the treatment and the therapeutic relation, and increase patients' (perceived) alternatives options for help and support and reinforce their autonomous functioning, in order to reduce patients' care dependency when the end of treatment comes into sight.

Declarations

References

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Author.

Berk, M., & Parker, G. (2009). The elephant on the couch: Side-effects of psychotherapy. *Australian and New Zealand Journal of Psychiatry, 43*(9), 787–794. https://doi.org/10.1080/0004867090 3107559

Bonavigo, T., Sandhu, S., Pascolo-Fabrici, E., & Priebe, S. (2016). What does dependency on community mental health services mean? A conceptual review with a systematic search. *Social Psychiatry and Psychiatric Epidemiology, 51*(4), 561–574. https://doi.org/10.1007/s00127-016-1180-0

Bornstein, R. F. (2005). *The dependent patient. A practitioner's guide.* American Psychological Association.

Bornstein, R. F. (2011). An interactionist perspective on interpersonal dependency. *Current Direction in Psychological Science, 20*(2), 124–128. https://doi.org/10.1177/0963721411403121

Chow, W. S., & Priebe, S. (2013). Understanding psychiatric institutionalization: A conceptual review. *BMC Psychiatry, 13*(1), 169–182. https://doi.org/10.1186/1471-244x-13-169

Clemens, N. A. (2010). Dependency on the psychotherapist. *Journal of Psychiatric Practice, 16*(1), 50–53. https://doi.org/10.1097/01.pra.0000367778.34130.4a

De Jong, K., & Nugter, M. A. (2004). De Outcome Questionaire: Psychometrische kenmerken van de Nederlandse vertaling. [The Outcome Questionnaire: Psychometric properties of the Dutch translation]. *Nederlands Tijdschrift Voor Psychologie, 59*(3), 76–79. https://doi.org/10.1007/BF03062326

De Jong, K., Nugter, M. A., Lambert, M. J., & Burlingame, G. (2009). Handleiding voor afname en scoring van de Outcome Questionnaire (OQ-45.2). [Manual for administering and scoring of the Outcome Questionnaire *(OQ-45.2)].* Salt Lake City. UT: OQ Measures LLC

Dixon-Gordon, K. L., Turner, B. J., & Chapman, A. L. (2011). Psychotherapy for personality disorders. *International Review of Psychiatry, 23*(3), 282–302. https://doi.org/10.3109/09540261.2011.58699

Farrell, J. M., & Shaw, I. A. (2012). *Group schema therapy for borderline personality disorder-A step-by-step treatment manual with patient workbook.* Wiley-Blackwell.

Flückiger, C., Del Re, A. C., Wampold, B. E., & Horvath, A. O. (2018). The alliance in adult psychotherapy: A meta-analytic synthesis. *Psychotherapy, 55*(4), 316–340. https://doi.org/10.1037/pst0000172

Geurtzen, N., Keijsers, G. P. J., Karremans, J. C., & Hutschemaekers, G. J. M. (2018). Patients' care dependency in mental health care: Development of a self-report questionnaire and preliminary correlates. *Journal of Clinical Psychology, 74*(7), 1189–1206. https://doi.org/10.1002/jclp.22574

Geurtzen, N., Keijsers, G. P. J., Karremans, J. C., & Hutschemaekers, G. J. M. (2019). Care Dependency may help and hurt psychological treatment: A treatment-analogue study with students in clinical

training. *Journal of Psychotherapy Integration, 29*(4), 374–388. https://doi.org/10.1037/int0000150

Glanert, S., Sürig, S., Grave, U., Fassbinder, E., Schwab, S., Borgwardt, S., & Klein, J. P. (2021). Investigating care dependency and its relation to outcome (ICARE): Results from a naturalistic study of an intensive day treatment program for depression. *Frontiers in Psychiatry, 12*, 644972. https://doi.org/10.3389/fpsyt.2021.644972

Goffman, E. (1961). *Asylums: Essays on the social situation of mental patients and other inmates*. Penguin Books.

Lambert, M. J., Burlingame, G. M., Umphress, V., Vermeersch, D. A., Clouse, G. C., Yanchar, S. C., & Hansen, N. B. (1996). The reliability and validity of the outcome questionnaire. *Clinical Psychology and Psychotherapy, 3*(4), 249–258. https://doi.org/10.1002/(SICI)1099-0879

Leitner, A., Märtens, M., Koschier, A., Gerlich, K., Liegl, G., Hinterwallner, H., & Schnyder, U. (2013). Patients' perceptions of risky developments during psychotherapy. *Journal of Contemporary Psychotherapy, 43*, 95–105. https://doi.org/10.1007/s10879-012-9215-7

Lemma, A., Target, M., & Fonagy, P. (2011). The development of a brief psychodynamic intervention (dynamic interpersonal therapy) and its application to depression: A pilot study. *Psychiatry: Interpersonal and Biological Processes, 74*(1), 41–48. https://doi.org/10.1521/psyc.2011.74.1.41

Linden, M. (2013). How to define, find and classify side effects in psychotherapy: From unwanted events to adverse treatment reactions. *Clinical Psychology and Psychotherapy, 20*(4), 286–296. https://doi.org/10.1002/cpp.1765

Lorenzini, N., & Fonagy, P. (2013). Attachment and personality disorders: A short review. *Focus, 11*(2), 155–166. https://doi.org/10.1176/appi.focus.11.2.155

Lowyck, B., Luyten, P., Vermote, R., Verhaest, Y., & Vansteelandt, K. (2017). Self-critical perfectionism, dependency, and symptomatic distress in patients with personality disorder during hospitalization-based psychodynamic treatment: A parallel process growth modeling approach. *Personality Disorders: Theory, Research, and Treatment, 8*(3), 268–274. https://doi.org/10.1037/per0000189

Lydon, J., & Karremans, J. C. (2015). Relationship regulation in the face of eye candy: A motivated cognition framework for understanding responses to attractive alternatives. *Current Opinion in Psychology, 1*, 76–80. https://doi.org/10.1016/j.copsyc.2015.01.011

Moritz, S., Nestoriuc, Y., Rief, W., Klein, J. P., Jelinek, L., & Peth, J. (2019). It can't hurt, Right? Adverse effects of psychotherapy in patients with depression. *European Archives of Psychiatry and Clinical Neuroscience, 269*, 577–586. https://doi.org/10.1007/s00406-018-0931-1

Overholser, J. C. (1997). Treatment of excessive interpersonal dependency: A cognitive-behavioral model. *Journal of Contemporary Psychotherapy, 27*(4), 283–301. https://doi.org/10.1023/A:1025614524578

Parker, G., Fletcher, K., Berk, M., & Paterson, A. (2013). Development of a measure quantifying adverse psychotherapeutic ingredients: The Experiences of Therapy Questionnaire (ETQ). *Psychiatry Research, 206*, 293–301. https://doi.org/10.1016/j.psychres.2012.11.026

Rheker, J., Beisel, S., Kräling, S., & Rief, W. (2017). Rate and predictors of negative effects of psychotherapy in psychiatric and psychosomatic inpatients. *Psychiatry Research, 254*, 143–150. https://doi.org/10.1016/j.psychres.2017.04.042

Rozental, A., Kottorp, A., Boettcher, J., Andersson, G., & Carlbring, P. (2016). Negative effects of psychological treatments: An exploratory factor analysis of the negative effects questionnaire for monitoring and reporting adverse and unwanted events. *PLoS ONE, 11*(6), e0157503. https://doi.org/10.1371/journal.pone.0157503

Rusbult, C. E., Olsen, N., Davis, J. L., & Hannon, P. A. (2005). Commitment and relationship maintenance mechanisms. In H. T. Reis & C. E. Rusbult (Eds.), *Close Relationships* (pp. 287–303). Psychology Press.

Schermuly-Haupt, M. L., Linden, M., & Rush, A. J. (2018). Unwanted events and side effects in cognitive behavior therapy. *Cognitive Therapy and Research, 42*, 219–229. https://doi.org/10.1007/s10608-018-9904-y

Spivack, N. (2008). Subgrouping with psychiatric inpatients in group psychotherapy: Linking dependency and counterdependency. *International Journal of Group Psychotherapy, 58*(2), 231–252. https://doi.org/10.1521/ijgp.2008.58.2.231

Tait, M. (1997). Dependence: A means or an impediment to growth? *British Journal of Guidance and Counselling, 25*(1), 17–26. https://doi.org/10.1080/03069889708253718

Verheul, R., Andrea, H., Berghout, C., Dolan, C. C., Busschbach, J. J. V., Van der Kroft, P. J. A., Bateman, A. W., & Fonagy, P. (2008). Severity Indices of Personality Problems (SIPP-118): Development, factor structure, reliability, and validity. *Psychological Assessment, 20*, 23–34. https://doi.org/10.1037/1040-3590.20.1.23

Verheul, R., Bartak, A., & Widiger, T. (2007). Prevalence and construct validity of Personality Disorder Not Otherwise Specified (PDNOS). *Journal of Personality Disorders, 21*(4), 359–370. https://doi.org/10.1521/pedi.2007.21.4.359

Vissers, W., Keijsers, G. P. J., Kampman, M., Hendriks, G.-J., Rijnders, P., & Hutschemaekers, G. J. M. (2017). Symptom reduction without remoralization: A randomized, waiting-list controlled study aimed at separating two beneficial psychotherapy outcome effects. *Journal of Clinical Psychology, 73*(7), 785–796. https://doi.org/10.1002/jclp.22380