

## SCP, Dependency, and Symptomatic Distress in PD Patients

### Self-Critical Perfectionism, Dependency, and Symptomatic Distress in Patients with Personality Disorder During Hospitalization-based Psychodynamic Treatment:

#### A parallel process growth modeling approach

Benedicte Lowyck <sup>a,c</sup>, Patrick Luyten <sup>b,d</sup>, Rudi Vermote <sup>a,c</sup>, Yannic Verhaest <sup>a</sup>, and Kristof Vansteelandt <sup>a</sup>

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<sup>a</sup> University Psychiatric Centre, University of Leuven, Campus Kortenberg, Belgium,

<sup>b</sup> Faculty of Psychology and Educational Sciences, University of Leuven, Belgium,

<sup>c</sup> Department of Medicine, Psychiatry, University of Leuven, Belgium,

<sup>d</sup> Research Department of Clinical, Educational and Health Psychology, University College London, UK.

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All correspondence concerning this article should be addressed to the first author, Benedicte Lowyck, University Psychiatric Hospital KULeuven, campus Kortenberg, Leuvensesteenweg 517, 3070 Kortenberg, Belgium, e-mail: [Benedicte.Lowyck@ppw.kuleuven.be](mailto:Benedicte.Lowyck@ppw.kuleuven.be).

**Abstract**

There is growing evidence for the efficacy and effectiveness of psychotherapy in patients with personality disorder (PD), but very little is known about the factors underlying these effects. Two-polarities models of personality development provide an empirically supported approach to studying therapeutic change. Briefly, these models argue that personality pathology is characterized by an imbalance between development of the capacity for self-definition and for relatedness, with an exaggerated emphasis on issues regarding self-definition and relatedness being expressed in high levels of self-critical perfectionism (SCP) and dependency, respectively. This study used data from a study of 111 patients with PD who received long-term hospitalization-based psychodynamic treatment, to investigate whether (a) treatment was related to changes in SCP, dependency, and symptomatic distress; (b) these changes could be explained by pretreatment levels of SCP, dependency, and/or symptomatic distress; and (c) changes in these personality dimensions over time were associated with symptomatic improvement. SCP, dependency, and symptomatic distress were assessed at admission (baseline), at 12 and 24 weeks into treatment, and at discharge. Parallel process multilevel growth modeling showed that (a) treatment was associated with a significant decrease in levels of SCP, dependency, and symptomatic distress, whereas (b) pretreatment levels of each of these three factors did not predict the decreases observed, and (c) changes in SCP, but not dependency, were associated with the rate of decrease in symptomatic distress over time. Implications of these findings for our understanding of therapeutic change in the treatment of PD are discussed.

**Keywords:** Personality disorder, self-critical perfectionism, dependency, psychodynamic psychotherapy, parallel process growth model

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Personality disorders (PDs) are characterized by chronic, pervasive, and inflexible aberrant inner experiences and behaviors (American Psychiatric Association, 2013). Besides pharmacological treatment, guidelines currently recommend psychotherapy as a primary intervention in PDs (e.g., Clarkin, Levy, Lenzenweger, & Kernberg, 2007; Fonagy, 2015). Yet, very little is known about the factors underlying these effects.

Two-polarities models of personality development (e.g., Beck, Epstein, Harrison, & Emery, 1983; Luyten & Blatt, 2013) have provided one of the most productive theory-driven approaches conceptualizing and assessing therapeutic change. According to these models, normal personality development involves a lifelong dialectical interaction between the development of (a) *relatedness*, which refers to the development of increasingly mature, complex, and satisfying interpersonal relationships, and (b) *self-definition*, which refers to the development of an increasingly differentiated, integrated, and essentially positive sense of self. Hence, personality pathology can be defined in terms of a severe imbalance or an exaggerated preoccupation with one developmental line, at the neglect and/or the defensive avoidance of the other. Blatt (2008) introduced the notions of *self-critical perfectionism* (SCP) and *dependency* to refer to imbalances between relatedness and self-definition. Individuals with high levels of SCP are typically strongly concerned with issues of self-definition, achievement, self-esteem, and self-control, while neglecting interpersonal relationships. Individuals with high levels of dependency, in contrast, have strong needs to be loved and cared for, fear of being left alone, and define themselves primarily in terms of the quality of their interpersonal experiences. These formulations are consistent with recent formulations on personality pathology (e.g., Bender, Morey, & Skodol, 2011), with a recent proposal for the conceptualization and classification of PDs in DSM-5 (American Psychiatric Association, 2013), and with studies that have suggested

that personality pathology is indeed associated with impairments in relatedness and self-definition (e.g., Lowyck, Luyten, Verhaest, Vandeneede, & Vermote, 2013; Ouimette, Klein, Anderson, Riso, & Lizardi, 1993). In addition, this view also argues that all effective treatments, regardless of their theoretical orientation, lead to a reactivation of the dialectic interaction between these two capacities, such that higher levels of relatedness lead to higher levels of self-definition and vice versa.

Existing research in this area has focused either on symptom disorders, such as depression and social phobia (e.g., Cox, Walker, Enns & Karpinski, 2002; Hawley, Ho, Zuroff, & Blatt, 2006) or on longitudinal associations between changes in respectively borderline PD symptoms (e.g., Wright, Hopwood, and Zanarini, 2015), and symptoms related to the avoidant personality disorder (e.g., Wright, Pincus, & Lenzenweger, 2013) and changes in normal personality traits. No studies to date have directly investigated the assumption that changes in self-definition and relatedness are associated with symptomatic improvement in PD patients during their treatment.

### **The Present Study**

Using a parallel process multilevel growth modeling approach, this study investigated whether (a) there is a significant decrease in SCP and dependency, and symptomatic distress, from the start to the end of treatment, (b) pretreatment levels of SCP and dependency are negatively associated with symptomatic change, and (c) changes in SCP and dependency are related to change in symptoms during treatment.

## Methods

### Participants

From May 2008 to June 2010, 150 patients consecutively admitted to a specialized treatment program for PDs participated in this naturalistic, prospective study. Inclusion criteria were: (a) primary diagnosis of a PD according to the Structural Clinical Interview for DSM-IV Axis II Disorders (SCID-II; First, Spitzer, Gibbon, Williams, & Benjamin, 1997), (b) age between 18 and 60 years, and (c) Dutch literacy. Seventy-four percent ( $n = 111$ ) of the patients were female, and their mean age was 28.6 years ( $SD = 9.3$ , range 18–59). Most patients (74%) had a cluster B PD (61% borderline PD, 11% narcissistic PD, and 2% theatrical PD). The mean duration of treatment was 38 weeks ( $SD = 12.9$ , range 24–65).

### Treatment

Patients enrolled in a combined residential and day-hospital treatment for PD patients (see Vermote, Lowyck, Vandeneede, Bateman, and Luyten, 2012, for a detailed description), consisting of the following components: (a) group psychodynamic psychotherapy (three times a week for 1.5 hours); (b) nonverbal therapies (music therapy, psychomotor therapy, and creativity therapy; each twice a week for 1.5 hours), (c) family therapy, (d) psychiatric consultation, (e) weekly individual sessions with a nurse, (f) group sessions with nurses (twice a week for 45 minutes), (g) social work, and (h) a weekly patient–staff meeting. All therapies were provided by professionals with an advanced degree in their discipline (MSW, MA, MD, or PhD). Patient progress and adherence to the treatment model were discussed at weekly staff meetings.

## **Procedure**

Patients were contacted by a research assistant during the first week of treatment. After obtaining informed consent and demographic information, two appointments were scheduled within the next week; one for the SCID-I and SCID-II clinical interviews, and the other to complete computerized self-report questionnaires to provide a baseline assessment (see below). Symptomatic distress, SCP, and dependency were also assessed after 12 and 24 weeks, and at discharge.

## **Measures**

The **SCID-I** (First, Spitzer, Gibbon, & Williams, 2002) and **SCID-II** (First, Spitzer, Gibbon, Williams, & Benjamin, 1997) were used to assess symptom disorders and PDs, respectively. Both interviews were conducted by two experienced clinicians who were certified in administering and scoring the Dutch versions of the SCID-I and SCID-II (Weertman, Arntz, & Kerkhofs, 1996).

**Depressive Experiences Questionnaire** (DEQ; Blatt, D’Afflitti, & Quinlan, 1979). The DEQ consists of 66 items, scored on a 7-point Likert-type scale, ranging from 1 (“*I don’t agree*”) to 7 (“*I totally agree*”), assessing SCP and dependency. In this study, the third factor (i.e., Efficacy) was not used. The DEQ factors were scored using the original factor scores of Blatt, D’Afflitti, and Quinlan (1976). The Dutch version of the DEQ has good internal consistency and validity, similar to those of the original DEQ (Luyten et al., 2007). Reliability of the DEQ as measured with the Cronbach alpha coefficient was 0.75.

**Brief Symptom Inventory** (BSI). The BSI is a self-report questionnaire measuring symptomatic distress expressed in the following domains: anxiety, memory difficulties, depressive feelings, somatic complaints, irritability, suicidal thoughts, problems in relational

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functioning, eating disorders, self-harm, sexual problems, sleeping problems, and substance abuse. In this study, a Dutch version of the inventory (*Korte Klachten Lijst*; Lange & Appelo, 2007) was used. The inventory consists of 13 questions, scored on a 5-point Likert scale, ranging from 0 (*no complaints*) to 4 (*many complaints*). The total score (ranging from 0–52) was calculated by summing the scores for individual questions. The validity and reliability of the inventory have proven to be satisfactory (Lange & Appelo, 2007).

### **Data Analysis**

A multivariate multilevel parallel growth model for change using SAS 9.2. software was applied (MacCallum, Kim, Malarkey, and Kiecolt-Glazer, 1997; Singer & Willett, 2003) to investigate (a) changes in SCP, dependency, and symptoms over the course of treatment (b) whether pretreatment SCP, dependency, and symptomatic distress were predictive of the changes in symptomatic distress over the course of treatment, and (c) whether the process of change in SCP, dependency, and symptomatic distress were related to one another. In this analysis, time was expressed in weeks since admission (with time being zero at baseline). The first three assessments were fixed, that is, scheduled at the same times in all patients: (a) at baseline, (b) after 12 weeks (3 months), and (c) after 24 weeks (6 months). The last assessment was variable, in that patients were assessed at discharge, which differed between patients. The model described above allows the study of individual differences in patterns of change of SCP, dependency, and symptoms over the course of treatment by examining the fixed effects, and the covariance parameters of the random subject-specific intercept and slope parameters of the three involved variables. For the interested reader, a formal and more technical description of the model used is provided as a supplement. Finally, it should be noted that, as missing data are almost inevitable in longitudinal research, inference for the proposed models is valid under the assumption of

missingness at random (Little & Rubin, 2002). Finally, to evaluate the effect of treatment, pre-post standardized mean gain scores were calculated as effect sizes (ESs). The interpretation of these scores is the same as that for Cohen's  $d$  (Cohen, 1988), that is,  $d \leq 0.20$  is considered a small ES,  $d \approx 0.50$  a medium ES, and  $d \geq 0.80$  a large ES.

### Results

#### Relations between Dependency, SCP, and Symptomatic Distress at Baseline

Dependency and SCP were not correlated at baseline (see Table 1). Pretreatment levels of both dependency and SCP were positively correlated with symptomatic distress at intake (see Table 2).

#### Changes in Dependency, SCP, and Symptomatic Distress during Treatment

Levels of dependency decreased linearly during treatment (regression coefficient for past weeks =  $-0.008$  ( $SE = 0.002$ ),  $F(1,548) = 29.81$ ,  $p < .0001$ ;  $ES = 0.32$ ), representing a small ES. There were substantive individual differences in dependency at baseline but all patients showed a uniform decrease in dependency over time. For SCP, a quadratic effect of time was observed, which indicates that the decrease of SCP accelerated over the course of treatment (regression coefficient for time =  $-0.003$  ( $SE = 0.005$ ),  $F(1,97) = 0.34$ ,  $p = .56$ , and for time<sup>2</sup> =  $-0.0003$  ( $SE = 0.00009$ ),  $F(1,548) = 8.74$ ,  $p = .0032$ ; see thick average line in Figure 1). From intake to treatment termination, patients showed, an average decrease of  $0.70$  ( $SE = 0.10$ ) in levels of SCP, ( $t(72) = 6.85$ ;  $p < .0001$ ;  $ES = 0.82$ ), representing a large ES. As illustrated in Figure 1, there were substantive individual differences in SCP at intake (i.e., the intercept) and in terms of the decrease of SCP during treatment (i.e., the slope). Symptomatic distress decreased linearly during treatment (regression coefficient =  $-0.19$  ( $SE = 0.02$ ),  $F(1,97) = 72.87$ ,  $p < .0001$ ), and

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here there were also substantive individual differences in symptoms at intake and in the linear decrease of symptoms during treatment. On average, patients showed a decrease in symptoms of 8.98 ( $SE = 1.10$ ) between admission and discharge ( $t(73) = 8.19, p < .0001; ES = 1.06$ ), representing a large ES.

### **Role of Pretreatment Levels on Rate of Change during Treatment**

Results showed no significant associations between patients' pretreatment levels (i.e., patient-specific intercepts) of SCP and changes in SCP (i.e., patient-specific slopes) and changes in symptoms during treatment (Table 1). Similarly, there was no significant association between pretreatment symptom levels (i.e., patient-specific intercepts) and changes in symptoms during treatment. In general, there were no significant associations between the levels of dependency, SCP, and symptom distress at baseline, and the changes in these variables over the course of treatment.

### **Dependency, SCP and Symptomatic Distress over the Course of Treatment**

Given the uniform decrease in dependency, the linear decrease of dependency is not associated with the decrease in SCP and symptomatic distress over time. By contrast, a linear decrease in SCP was associated with a decrease in symptomatic distress during treatment, as shown by a strong and highly significant positive correlation between subject-specific slopes for SCP and symptomatic distress,  $r = .81, Z = 2.89, p = .0038$  (see Table 2). As a result, patients who show a stronger (weaker) decrease in SCP are also characterized by as stronger (weaker) decrease in symptomatic distress over the course of treatment. To illustrate these findings, the parallel process between SCP, dependency, and symptomatic distress is depicted for six patients in Figure 2. Patients who show a strong decrease in SCP (Figure 2b) also show strong symptom

reduction (Figure 2c), whereas patients who showed less change in SCP also showed a smaller rate of reduction in symptomatic distress.

### **Discussion**

One of the most vexing questions in psychotherapy research concerns the challenge of understanding the factors that underlie therapeutic change (Kazdin, 2007). Results of this study further contribute to growing insights into these factors. First, in line with two-polarities models (e.g., Blatt, 2008), long-term, hospitalization-based psychodynamic treatment was associated not only with decreases in symptomatic distress, with a large effect size, but also with changes in maladaptive expressions of self-definition and relatedness, that is, SCP and dependency, respectively. For dependency, results showed a linear decrease over time, representing a small effect size. Further, there were no substantial differences among the patients in the rate of change. In other words, patients showed similar, uniform changes in levels of dependency throughout the treatment. SCP also decreased significantly during treatment, representing a large effect size. In contrast to dependency, the rate of change in SCP appeared to accelerate over the course of treatment, with patients reporting progressively fewer problems regarding self-definition (e.g., by reporting being less concerned with issues related to identity, achievement, and failure) as their treatment progressed. Hence, although changes in issues related to self-definition may take some time, they may be considerable and may actually accelerate as treatment progresses (Blatt & Shahar, 2004). This is in line with studies suggesting that SCP is negatively associated with treatment outcome in brief treatment, because patients with these features may need more time to develop a positive therapeutic alliance (Blatt, Zuroff, Hawley, & Auerbach, 2010).

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Second, against expectations, pretreatment levels of SCP, dependency, and symptomatic distress did not predict symptom change during treatment. Although there are substantive differences among patients in the decrease of SCP and symptomatic distress over the course of treatment, these differences cannot be predicted using patients' baseline information on these variables. For example, being extremely high or rather low on SCP at baseline does not yield any predictive information on change in dependency, SCP or symptomatic distress during treatment. Again, differences in pretreatment levels of SCP and dependency might be more important in brief treatments than in longer term treatment, but further research is definitely required in this context.

Finally, results showed that changes in SCP, but not dependency, occurred in concert with symptomatic improvement during treatment. These results are in line with findings of earlier studies in symptom disorders such as social phobia and depression (Cox et al., 2002; Hawley et al., 2006) and extend these findings to the domain of PD pathology.

Despite its strengths, this study had several limitations. First, the focus on changes in general symptomatic distress, as measured with a self-report measure, is an important limitation. Although this measure includes items assessing self-harm and suicidality as well as problems in interpersonal functioning, which are characteristic for personality pathology, future studies should include a more direct focus on personality pathology as conceptualized in Section II or Section III of DSM-5, and this should be assessed at different points in time throughout the treatment. Despite this limitation, the findings are nevertheless informative for both research and clinical practice. Indeed, a growing number of studies suggest that general symptomatic distress may be a good proxy of the general severity of PD pathology (Caspi et al., 2014; Patalay et al., 2015) and may actually overlap with a general psychopathology factor (Caspi et al., 2014). In

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addition, many outcome studies in the field primarily focus on changes in general symptomatic distress as the primary outcome measure (e.g., Clarkin et al., 2007; Leichsenring & Leibing, 2003). Finally, only a brief symptom measure lends itself more easily to multiple assessments across treatment and is more sensitive to modeling change than other features of PD pathology.

Two other limitations of the study are (a) that the study did not include a control group, it is impossible to rule out the possibility that these effects are indeed due only to the treatment process, and (b) that all variables are derived from self-report questionnaires, with exception of the SCID-II semi-structured interview, which was used for diagnostic purposes. However, an important limitation is that we did not have exact inter-rater reliability data for the raters, despite the fact that both raters received extensive training in the SCID-II.

In conclusion, this study suggests that psychodynamic hospitalization-based treatment for patients with PDs is associated with reactivation of the normal synergistic interaction between the capacity for autonomy and for relatedness, resulting in lower levels of SCP, dependency, and symptomatic distress. In addition, patients show a parallel process in SCP and symptomatic distress over the course of treatment with patients showing a strong (weak) decrease in SCP also showing a strong (weak) decrease in symptomatic distress. Future studies are needed to investigate to what extent these findings may generalize to other treatments and other patient populations.

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*Table 1.* Correlation matrix for random effects in multivariate multilevel model for change: Dependency, Self-Critical Perfectionism, and Symptomatic Distress.

		<b>Dependency</b>	<b>Self-Critical Perfectionism</b>		<b>Symptomatic Distress</b>	
		PS-intercepts	PS-intercepts	PS-slopes	PS-intercepts	PS-slopes
<b>Dependency</b>	PS-intercepts	1	0.004	0.30	0.52***	-0.15
<b>Self-Critical</b>	PS- intercepts		1	-0.03	0.36**	0.03
<b>Perfectionism</b>	PS-slopes			1	0.07	0.81***
<b>Symptomatic</b>	PS-intercepts				1	-0.16
<b>Distress</b>	PS-slopes					1

*Note:* PS = patient-specific, \*\*  $p < .01$ ; \*\*\*  $p < .001$

Table 2. Multivariate multilevel model for change: Fixed effects for Dependency, Self-Critical Perfectionism, and Symptomatic Distress.

Fixed Effects	Regression Coefficients ( <i>SE</i> )		
	Dependency	Self-Critical Perfectionism	Symptomatic Distress
Overall intercept	0.15 (0.09)	0.90 (0.07)***	25.81 (0.72)***
Past months (linear)	-0.008 (0.002)***	-0.003 (0.005)	-0.19 (0.02)***
(Past months) <sup>2</sup> (quadratic)	NA	-0.0003 (0.00009)***	NA

Note: \*\*\*  $p < .001$ ; NA = Not applicable.

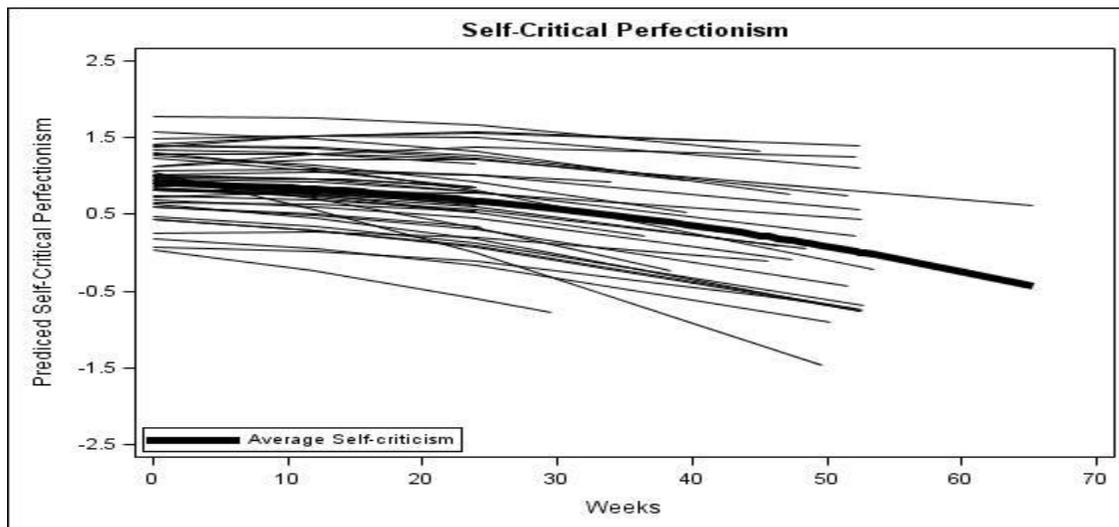


Figure 1. Average (thick black line) and patient-specific (thin black lines) evolution of 50 randomly selected patients for self-critical perfectionism during treatment.

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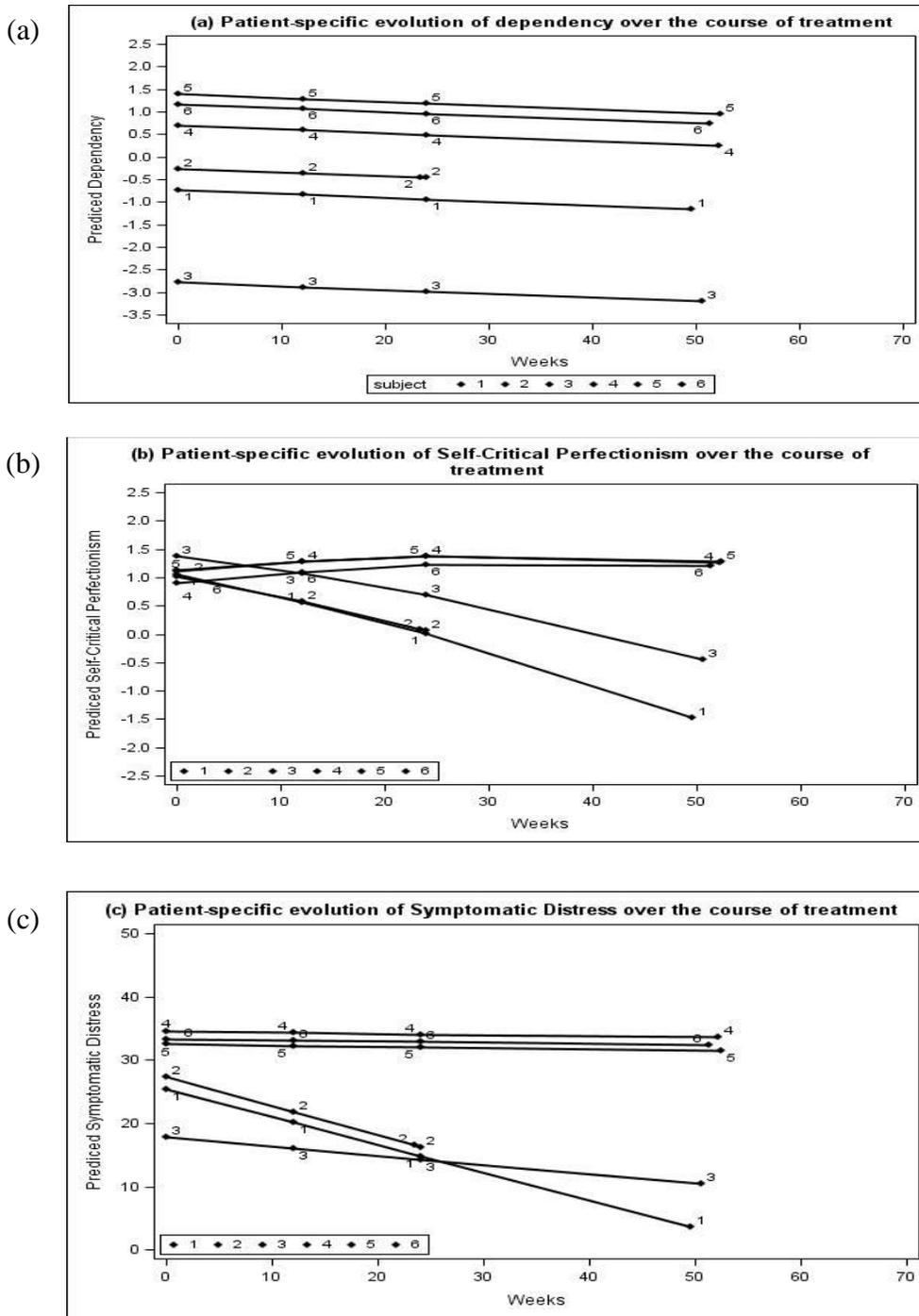


Figure 2. Evolution of (a) dependency, (b) SCP, and (c) symptomatic distress during treatment for six individual patients.