On the effectiveness of psychotherapy in personality disorders
Bartak, A.

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Chapter 1

Introduction
This thesis is on the effectiveness of different “dosages” of psychotherapy in patients with personality disorder (PD). It is the first large research project elucidating the impact of dosage, i.e., the amount of therapy, and how this affects treatment outcome in psychotherapy for PDs. In three quasi-experimental effectiveness studies, the effects of different dosages of psychotherapy for cluster A, B, and C PDs are evaluated. These studies aim to contribute to the understanding of psychotherapy for PDs and to refine the toolkit for psychotherapists working with this patient group.

**Definition of PD**

PD nowadays is defined as “an enduring pattern of inner experience and behavior that deviates markedly from the expectations of the individual’s culture, is pervasive and inflexible, has an onset in adolescence or early adulthood, is stable over time, and leads to distress or impairment” (DSM-IV-TR; American Psychiatric Association, 2000).

The roots of the current definition of PD go back to historic documents like the “characters” of Theophrastus (371-287 BC; Pirckeymherus, 1527), the “insanity without delirium” of Pinel (1801), or the “psychopathic personalities” of Schneider (1923), with a first attempt of categorisation. Doctors, researchers, and philosophers have been interested in PDs for centuries, trying to explain this phenomenon and discussing the question of changeability. PDs were first established formally in the third version of the Diagnostic and Statistical Manual of Mental Disorders of the American Psychiatric Association (DSM-III; American Psychiatric Association, 1980). The two important steps achieved in DSM-III were (a) the placement of PDs on a separate axis, which recognises their clinical significance and high prevalence; and (b) the description of explicit diagnostic criteria for each PD encouraging empirical research (Livesley, 1995). This classification system was also adopted by the World Health Organisation (WHO) in their International Classification of Diseases and Related Health Problems (ICD-10; World Health Organization, 1992).

Today in DSM-IV-TR the ten official PDs are classified in three clusters (see Figure 1.1): cluster A — the **odd** cluster, cluster B — the **dramatic** cluster, and cluster C — the **anxious** cluster. Additionally, the classification comprises a category of PD not otherwise specified (PD NOS), including two provisional diagnoses, namely depressive PD and passive-aggressive PD.
Figure 1.1. Classification of PDs according to DSM-IV-TR

DSM-IV-TR Personality Disorders

- **Cluster A**
  - Paranoid PD
  - Schizoid PD
  - Schizotypal PD

- **Cluster B**
  - Borderline PD
  - Narcissistic PD
  - Histrionic PD
  - Antisocial PD

- **Cluster C**
  - Avoidant PD
  - Dependent PD
  - Obsessive-compulsive PD

PD NOS

This classification was designed to simplify professional communication and is currently used by scientists and practitioners throughout the world. However, it has also been subject to criticism. A major revision of the DSM will be published in May 2013 (DSM-5; American Psychiatric Association, 2010), taking this criticism into account. The current PD classification will be largely reformulated with the aim of greater clinical utility (Tyrer et al., 2010). It will most likely be replaced by a general definition of PD, accompanied by (a) five severity levels of personality functioning, (b) five PD types (i.e., antisocial/psychopathic type, avoidant type, borderline type, obsessive-compulsive type, schizotypal type), and (c) a dimensional description of the patient in terms of personality trait domains. The present research, conducted between 2003 and 2006, is still based on the three traditional clusters.

Impairment of PD patients

Research has shown that patients with PD have largely impaired well-being and functioning, and that this impairment is indeed due to the presence of PD (Cramer, Torgersen, & Kringlen, 2006; Soeteman, Verheul, & Busschbach, 2008). What distinguishes PDs from (ego-dystonic) clinical syndromes such as depression or anxiety is their rootedness in the character of the person (Emmelkamp & Kamphuis, 2007). PDs are ego-syntonic: Maladaptive personality traits are the cause of ongoing struggle in a patient’s life. The disorder is much more something they “are” rather than they “have”. In conclusion, patients with PD are a group in need of treatment, but treatment is far from easy as complaints are strongly interwoven with the patient’s character.
Assessment of PD

The most reliable way to assess PD is to conduct a semi-structured interview, such as the Structured Interview for DSM-IV Personality (SIDP-IV; Pfohl, Blum, & Zimmerman, 1997), used in present studies. Self-report questionnaires at most should be screening instruments and cannot replace a diagnosis made by a clinician based on a semi-structured interview (McDermut & Zimmerman, 2008).

Prevalence, aetiology, and course of PD

PDs are highly prevalent both in the general community and in psychiatric patients. In the community, the point prevalence of any PD lies between 7.3 and 15.7% (Crawford et al., 2005; Klein et al., 1995; Lenzeweger, Lane, Loranger, & Kessler, 2007; Maier, Lichtermann, Klingler, Heun, & Hallmayer, 1992; Moldin, Rice, Erlenmeyer-Kimling, & Squires-Wheeler, 1994; Samuels et al., 2002; Torgersen, Kringlen, & Cramer, 2001; Zimmerman & Coryell, 1989). The lifetime risk of having a PD is probably much higher: an estimated 30 to 40% (Johnson, Cohen, Kasen, Skodol, & Oldham, 2008; Torgersen, 2009). In (outpatient) populations of psychiatric patients, the prevalence of PD is estimated at 45.5% (Zimmerman, Rothschild, & Chelminski, 2005). Overall, the most common diagnosis in the general community is obsessive-compulsive PD, while in psychiatric populations it is mostly borderline PD (Torgersen, 2009; Zimmerman, et al., 2005).

Researchers have tried to disentangle the influence of genetics and environmental factors on the development of PD. Torgersen, who conducted several twin studies in Scandinavia, found that genetic factors contribute to around 40 to 50% of the variation, with a very small effect of shared family environment (Torgersen, 2009). This implies that PDs seem to be more strongly influenced by genetic effects than almost any Axis I disorder (Torgersen et al., 2000). But so far, as this kind of research still is in its infancy, there are no final conclusions. The answer to the question “How do PDs develop?” most likely lies in the interplay between genetic and environmental factors, together with gene-environment, gene-experiences, and gene-gene interactions (Torgersen, 2009). If we wish to draw further conclusions, longitudinal multivariate genetic studies are needed (Emmelkamp & Kamphuis, 2007).
Contrary to a widely held belief, PD characteristics do change over time (Johnson et al., 2000; Seivewright, Tyrer, & Johnson, 2002). Skodol et al. (2005) showed that some characteristics are more stable and others change more easily. The more impulsive aspects of borderline PD seem to vanish slowly with age, while cluster A and C PD traits seem to become more pronounced (Paris & Zweig-Frank, 2001; Seivewright, et al., 2002). There remains considerable debate about the natural course of PDs and their changeability. However, treatment can significantly accelerate the improvement of harmful characteristics (Perry, Banon, & Ianni, 1999). Research into the merits and methods of PD treatment is therefore important.

**Research on PD and treatment**

In the last 30 years scientific literature on PD has grown steadily (see Figure 1.2), which can largely be attributed to the merits of DSM-III. This new classification considerably stimulated research on the subject of PD.

**Figure 1.2.** Number of publications on PDs (source: http://www.ncbi.nlm.nih.gov/pubmed/)

![Graph showing the increase in publications on PDs from 1976 to 2009](image)

*Search terms: “XXXX”[Publication Date] AND (“personality disorders”[ti] OR “personality disorder”[ti])

The increase in studies on PDs over the last 30 years is paralleled by a steadily rising number of papers on psychotherapeutic treatment of PDs, revitalising the discussion about the changeability of personality and PDs. Particularly in the last decade, many therapies tailored to a PD patient population were designed and validated empirically (see Figure 1.3).
Figure 1.3. Number of publications on psychotherapeutic treatment of PDs (source: http://www.ncbi.nlm.nih.gov/pubmed/)

From the increasing numbers of studies on psychotherapeutic treatment of PDs, the consensus has grown that psychotherapy is the treatment of choice for patients with PD (e.g., Landelijke Stuurgroep Richtlijnontwikkeling in de GGZ, 2008; National Institute for Health and Clinical Excellence, 2009a, 2009b). However, when asking *how much* psychotherapy is best for certain groups of PD patients, we have no answer yet. Unfortunately, the concept of dosage, as widely used in pharmacological research, has thus far received little attention. It still plays a negligible role in both research into the most effective treatment for PDs and psychotherapy research in general. This lack of attention is arguable. When it comes to questions of effectiveness and cost-effectiveness, dosage is one of the main determining factors. In a classic study, Howard et al. (1986) showed in a large patient group covering multiple diagnostic groups that after one year of outpatient treatment, 85% of the patients were measurably improved in terms of "global" outcome measures. Different symptomatic classes showed different patterns of recovery, as the authors demonstrated in a later study (Kopta, Howard, Lowry, & Beutler, 1994). Taken together, their research efforts should have cleared the path for the discipline of dose-effect research in psychotherapy (Kopta, 2003), but unfortunately this area of research is still small and —with few exceptions— limited to outpatient settings. For patients with PD, Bateman and Fonagy (2000) argued that effective treatments should be "relatively long-term", but detailed information about the most effective duration is lacking. Like in general psychotherapy research, researchers and health institutions in the PD field were mainly engaged in the establishment of specifically tailored therapies and the comparison of therapies from different therapeutic schools within the same dosage (e.g., 40 sessions of outpatient treatment with therapy A versus 40 sessions of outpatient treatment with therapy B). What we know from these studies is that
almost all specifically tailored therapies show a higher effectiveness than treatment-as-usual or waiting list controls. When different specifically tailored therapies are compared, though, mostly no difference is found (Bartak, Soeteman, Verheul, & Busschbach, 2007). In other words, specialised psychotherapy for PD has effect, but different contents of therapy seem equally effective. This has been shown in most existing effectiveness studies, Emmelkamp (2006) and Giesen-Bloo (2006) being the exceptions. The fact that most of these studies compare equal dosages of therapy is understandable given the difficulty of randomly assigning patients to widely differing treatments (e.g., outpatient vs. inpatient treatment). Randomising patients to treatments of different theoretical schools while keeping dosage constant causes less ethical problems. A consequence is, unfortunately, that dosage as a determining factor has been overlooked. If research wants to be meaningful and applicable to clinical practice, dosage has to be taken into account. The problem of selection bias due to non-randomisation can be tackled by strong statistical control of possible confounders in a so-called “quasi-experimental” study design. The present thesis is based on the first large-scale quasi-experimental study on dosage conducted in the field of PD.

**SCEPTRE — Study on Cost-Effectiveness of Personality Disorder TREatment**

This thesis is based on and a result of the project SCEPTRE, a large prospective psychotherapy study in the Netherlands (Viersprong Institute for Studies on Personality Disorders, 2010). SCEPTRE was initiated by the research department of “De Viersprong”, a psychotherapeutic centre in Halsteren and involved five other mental health sites throughout the Netherlands: Mentrum/Arkin (Amsterdam), Zaans Medical Centre (Zaandam), Altrecht (Utrecht), De Gelderse Roos (Lunteren), and GGZWNB (Bergen op Zoom/Roosendaal). More than 800 patients with personality pathology were included in the study between 2003 and 2006, and were followed for three years. Research was conducted on effectiveness and cost-effectiveness of different dosages of psychotherapy for patients with PD, as well as on treatment selection. SCEPTRE has a high follow-up response, making its results meaningful for clinical practice. Meanwhile, a five-year follow-up is being conducted, with results due in 2011.
Aims of this thesis

1. Explore what we know about psychotherapy for patients with PD, and what we still need to know.
2. Investigate the effectiveness of different dosages of psychotherapy for different groups of PD patients.
3. Examine a method for comparing the effectiveness of widely differing treatments without randomising patients.

Content of this thesis

Chapter 2 summarises the literature on psychotherapy for PDs and lines up current and future research goals. The existing evidence on effectiveness and cost-effectiveness of psychotherapy for PDs is presented and ways to overcome the present difficulties in its recognition and reimbursement in the public health field are discussed.

Chapter 3 explores a statistical method for comparing widely differing treatments when randomisation is not feasible. The propensity score method as a tool for the correction of selection bias is tested on its applicability for psychotherapy research.

Chapter 4 compares the effectiveness of five different treatment modalities for patients with cluster C PDs within a prospective non-randomised research design, using the propensity score method to correct for initial patient differences. The effects of long outpatient treatment, short and long day hospital treatment, and short and long inpatient treatment are compared at 12 months after baseline. Outcome areas in this chapter, as well as in chapters 5 and 6, are psychiatric symptoms, psychosocial functioning, and quality of life.

Chapter 5 compares the effectiveness of three different treatment settings for patients with cluster B PDs. The effects of outpatient, day hospital, and inpatient treatment are compared at 18 months after baseline, using the propensity score method to correct for initial patient differences.

Chapter 6 compares the effectiveness of three different treatment settings for patients with cluster A PDs and shows the limits of the propensity score method. The effects of outpatient, day hospital, and inpatient treatment are compared at 18 months after baseline.

Chapter 7, the general discussion, summarises the results and presents the strengths and limitations of the present studies. The findings are discussed in the light of past and future research, and the issue of clinical applicability is raised.